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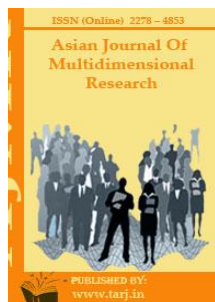
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VISION

The vision of the journals is to provide an academic platform to scholars all over the world to publish their novel, original, empirical and high quality research work. It propose to encourage research relating to latest trends and practices in international business, finance, banking, service marketing, human resource management, corporate governance, social responsibility and emerging paradigms in allied areas of management. It intends to reach the researcher's with plethora of knowledge to generate a pool of research content and propose problem solving models to address the current and emerging issues at the national and international level. Further, it aims to share and disseminate the empirical research findings with academia, industry, policy makers, and consultants with an approach to incorporate the research recommendations for the benefit of one and all.



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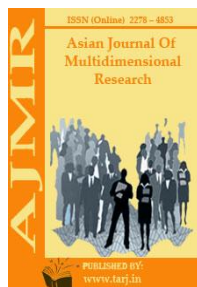
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AN INVESTIGATION OF INDIAN EDUCATION IN JAPAN

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ABSTRACT

The paper is a case study of two Indian international schools in Japan. By examining the background, social influence, comparative advantages and existing problems of the two schools, the paper generalizes the characteristics of these schools in Japan: emphasis on language, mathematics education and the improvement of students' public speaking skill; Teaching in English; and lower tuition fee comparing to other international schools. Furthermore, the school faculty consists largely of the female spouses of immigrant workers in Japanese IT companies. These schools are not exclusive to Indians, but open to the world. Besides transmitting traditional Indian culture and customs, the schools also strive to produce practical personnel who are well versed in English and information technology so that the graduates can adapt the globalizing modern society.

KEYWORDS: *India; Education; International School; Internationalization.*

1. INTRODUCTION

With the development of globalization, the exchanges between Japan and other countries become increasingly active. At the same time, lots of foreigners go to Japan for jobs, communication and sightseeing. Following market-based economic reforms in 1991, much more Indian IT workers and their families flow into Japan. According to the statistics from Japanese Foreign Ministry, the amount of Indian immigrants in Japan has increased to 28,352 until June, 2015, with 19,687 males and 8,665 females. Statistics show that Indian immigrants are mainly distributed in Kanto

region. In a descending order, the top 5 concentrations of Indian immigrants are Tokyo (10,091), Kanagawa (4,074), Hyogo (1,471), Chiba (1,331) and Saitama (1,073). Particularly, Edogawa, among the 23 special wards of Tokyo, has the largest amount of Indian immigrants, which constitutes 10% of the total. However, the Indian immigrants in Japan are still faced with various problems both in life and in work.

After 1990, New India Organization emerges in the Capital Region of Japan. The organization is based on the family unit. The majority of Indian immigrants in Japan are between the age of 25 and 40, and there is a significant increase in the number of Indian children aged 0 to 9 as well. Answering the need of proper Indian education in a foreign land, the Indian immigrants set to build Indian schools. Until now, two India international schools have been founded in Japan.

To the Indian immigrants in Japan, it is very important to have their children educated properly based on an Indian way, learning the culture and tradition of their own country as well as knowing the world. The parents of the enrolled students in these schools are usually from the upper class of Indian society. They are dissatisfied with the local Japanese schools because of the general use of Japanese as the language of instruction. Particularly, they question the Japanese way of mathematics teaching.

Researches on the Indian immigrants in Japan have already been duly conducted by certain scholars. As to the investigation of the Indian international schools in Japan, by contrast, only one relevant research has been carried out by Oyama in 2008. One explanation is that the Indian international schools in Japan are immature. Comparing to the overseas Chinese education in Japan, the Indian education is merely a newborn baby. Moreover, Oyama's research simply focuses on the analysis of the heritage of Indian culture, internationalization and Japanese social relationships. Other important aspects, such as the founding background, general situation and social influence of these schools, have not yet been studied until now.

The paper is based on a thorough qualitative research through study tours in the two India international schools in Japan and interviews with the heads of the two schools and the parents of the students. The paper investigates the differences between the two schools and the reason why Japanese people are so interested in such kind of education as well. Furthermore, the paper provides an insight into the expectations that the students and their parents have for the schools.

The paper is divided into four parts. The first part chiefly introduces the Indian education system and its existing problems. The second part investigates the founding background, general situation and typical characteristics of the India international schools in Japan. Following the second, the third part discusses what the students and their parents expect from the India international schools. The last part expounds the problems in the existing education system in Japan and analyzes the attitudes and expectations of Japanese people towards the India international schools.

2. EDUCATION IN INDIA AND ITS PROBLEMS

2.1 A BRIEF INTRODUCTION OF INDIAN EDUCATION SYSTEM

Following India's independence from British in 1947, the first constitution was adopted and then came into effect in 1950. According to the Constitution of India, Article 45, Provision for free and compulsory education for children The State shall endeavour to provide, within a period of

ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years'. The education system in India includes pre-primary education, primary education, secondary education, higher secondary education and higher education.

In India, pre-primary education helps to foster children's interest in learning through painting and poetry. Primary education covers children aged 5 to 11 years old, starting from grade 1 through grade 5. The four-year secondary education consists of two stages: the first two years are called Secondary, during which the students between the ages of 11 and 14 are in grade 6 to grade 8; the last two years are called Higher Secondary, with students aged 14 to 18 in grade 9 to grade 12. Higher education in India is comprised of universities and graduate schools. Under the influence of the British education system, the universities in India allows a student to complete a bachelor's degree in three years and a master's degree in two years, with no obligation to submit a master's thesis. However, students who want to earn a doctorate degree cannot sign up for the three-year doctorate courses until they have finished a one-year Master of Philosophy (M. Phil) study.

Except for the formal education, the Indian government also provides Non-Formal Education (NFE) for children who cannot receive an ordinary education because of financial difficulties, distance or other reasons. NFE was proposed by the Indian government during the 'Education for All' movement in the second half of 1980. Different from the formal education, the NFE courses are arranged in accordance with the local time. Some educators may not have a teacher certification, but they are well trained or have certain teaching experience. Classes are held at the teacher's home or in the public area of the community in order to provide an opportunity of receiving education to those who cannot. Moreover, the Indian government recognizes the NFE diploma, so that the students can attend a regular school for further learning after completing the education provided by NFE.

The education system in India is run by both the central government and the states. Figure 1 shows the basic constitution of the Indian school system.

Figure 1 Indian School System

Pre-Primary Education	0-5 years old	
Basic Education (Compulsory Education)	Primary Education (5-11 years old)	
	Higher Primary (11-14 years old)	
	Non-Formal Education (5-14 years old)	
Secondary Education	Secondary (14-16 years old)	Vocational Education (14-21 years old)
	Higher Secondary (liberal arts/Science, 16-18 years old)	
Higher Education	Bachelor's Degree (18-21 years old)	Pre-Doctorate Courses (1 or 2 years)
	Master's Degree/Doctorate (21-24 years old)	

Source from: Sasaki (2011:22) and the report 'Higher Education and Talent Cultivation in India' (2001:4-8) by Development Bank of Japan Office in Singapore.

2.2 EXISTING PROBLEMS

India is a great education power in the world, but there are some deficiencies in its education system as well. As it is pointed out by Japanese scholar Sasaki (2011): 'In India, a developing country, inequality in education still persists. A defining evidence of it is the disparity between the qualities of education received by the upper class and by the lower class.' The students in most public schools come from less well-off families. They are taught in the native language with various local accents. Private schools, however, had been built for the children of Indian aristocrats and bureaucrats since the country came under British colonial rule and are much better in education quality by contrast. In some regions, there is no available public school but only the private schools run by individuals or social organizations, each has its own pros and cons. In India; the well-off families usually send the children to private schools, for the reason that private schools have better teaching quality and learning environment.

According to BOP research report from the Incorporated Administrative Agency of Japan External Trade Organization in Delhi, India, the upper class will, in the first 12 school years or before secondary stage, send their children to a municipal private school or international school. The average cost of each school year is about 150,000 rupees to 400,000 rupees (14,580 RMB to 38,880 RMB). On completion of the secondary education, most of these families will send their children to study abroad (in countries such as England and the United States).

The middle-class families tend to send their children to private schools as well. The tuition of the private school they choose varies according to the actual situations of the schools. In general, it will cost 15,000 rupees to 70,00 rupees per year (1,458 RMB to 6,804 RMB). In addition to the tuition fees, however, the parents have to pay for extra tutoring classes, which is about 50,000 rupees per year (4,860 RMB).

Children from the less well-off families usually enroll in a public or government-affiliated school. At these schools the tuition is free. Nevertheless, things have changed in recent years. According to some related research reports, 28% of the local population are now able to go to a private school; and 15.5% of the children aged 6 to 10 are enrolled in private schools, with an annual cost of 650 rupees to 3,000 rupees (63.18 RMB to 291.6 RMB).

From the above analysis, we can see that the education inequality which arises from the social inequality is expanding. It has already become a serious social problem. The upper class can send their children either to the best schools in India or overseas schools for a better education, whereas most children from other social class can only receive an education at a public or government-affiliated school.

3. INDIA INTERNATIONAL SCHOOL IN JAPAN

3.1 GENERAL SITUATION

According to Ze's research report (2004), before the India international schools have been founded in Japan, the children of the Indian immigrants would enroll in native Japanese schools or go back to India or to other international schools in Japan (such as American international schools or British international schools). However, the Indian immigrants think that the

education quality of these international schools are not good enough. The Indian children graduated from these international schools or the native Japanese schools are considered unqualified for the examination conducted by the General Board of Secondary Education (CBSE). Nonetheless, Taking the CBSE examination is a requisite for admission to higher education in India. In order to enable their children to receive an education that is parallel with the education level in India, some of these Indian immigrants started planning the foundation of the India international schools in Japan. At the same time, the fast growth in the number of Indian immigrants in Japan has accelerated the progress of founding the Indian international schools. As a result, two India international schools are founded successively in 2004 and 2005. One of the founders of India International Schools in Japan (IISJ) says in an interview: 'At that time, there were no Indian schools in Japan, and the immigrant IT workers were young people. Their kids needed to go to school, but there would be some difficulties to send the kids to the local Japanese schools or the other international schools. And the tuition of other international schools was too expensive...'

At present, there are two Indian international schools in Japan. One is IISJ, located in Etokawa Ward, Tokyo. The other is the Global Indian International School, Tokyo (GIIS). Both of the two schools are in the Kanto region.

The first India international school in Japan is IISJ, founded in 2004 in Etokawa Ward, Tokyo. In 2009, the branch school of IISJ was opened in Yokohama. Following IISJ, GIIS was founded in 2005 in Edogawa, Tokyo, where the Indian immigrants are densely distributed.

Both IISJ and GIIS are run as Nonprofit Organizations (NPOs). IISJ was founded by some Indian immigrants in Japan, while GIIS was initiated by Global India Foundation (GIF), headquartered in Singapore. The first India international school was built in Singapore in September, 2002. At present, it has an enrolment of more than 4,000 students. Up to now, GIIS has opened 21 India international schools in seven different countries all over the world. In June, 2013, IISJ was admitted by and registered in the International Baccalaureate Organization (IBO).

IISJ provides an education which includes kindergarten, primary school, secondary school and high school, with 360 students enrolled. The tuition of IISJ is 600,000 yen per year (around 35,700 RMB). GIIS covers nursery school, kindergarten, primary school, secondary school and high school, with an enrolment of 250 students. GIIS charges a monthly fee of around 63,630 yen for kindergarten (around 3,785 RMB), 69,143 yen for grade 1 to 5 (around 4,114 RMB), and 82,373 yen for grade 9 to 10 (around 4,901 RMB).

3.2 CHARACTERISTICS OF SCHOOLING

IISJ and GIIS, like the native Indian schools, make their education plans according to the instruction of CBSE. Consequently, the children of the Indian immigrants are able to receive a proper Indian education. It is of great significance for them to learn about the culture and tradition of their own country.

The two India international schools attach great importance to language and mathematics teaching. In addition to English, the language of instruction, the schools teach Hindi, Tamil, French and Japanese as well. The students start learning Hindi and Tamil in first grade, and

French and Japanese in third grade. Moreover, they study arithmetical calculations at the age of 5.

This is a one-day class schedule of a second-grade student in the India international school: (1) mathematics; (2) sociology; (3) Hindi; (4) English; (5) mathematics; (6) music; (7) science. From this schedule, we can see that the student has two language lessons as well as two mathematics lessons each day. As regards the reason, the principal of IISJ says, 'It's very important for each student to have two language lessons and two mathematics lessons each day. Because language is an indispensable tool for the future international talents, and mathematics is relatively abstract so that it entails the gradual cultivation of logical thinking. Moreover, the learning of computer language is also important.'

The majority of the teachers in the India international schools are female spouses of Indian immigrant IT workers. 'The influence of the education at school and the cultural background on students' learning is fifty-fifty. And the highly-educated female teachers, who are spouses of immigrant IT workers, have enough teaching experience and teacher certification,' says the principal of IISJ.

360 students have so far enrolled in IISJ. About 80% of these students have Indian nationality. Students of Japanese nationality take up about 6 % in the rest 20% of the students of other nationalities (such as the Philippines, Nepal and Bangladesh). 250 students are currently enrolled in GIIS, with 58% students of Indian nationality, 31% students of Japanese nationality, and 11% students of other nationalities including Pakistan, Sri Lanka, Brazil, Singapore and America.

As regards to the direction of future studies, the principal of IISJ says, 'the graduates from IISJ usually go to the elite universities in India, British or the United States, which will further broaden their international vision.' In order to equip the students to fit in the international context in the coming future, the India international schools instruct the students to give their own opinions on the latest international news every morning before class. Moreover, the schools offer yoga classes to help the students to concentrate on their work.

To sum up, the India international schools in Japan have the following characteristics. First, the schools attach great importance to language and mathematics teaching. English, as an international language, is used as the language of instruction. Moreover, French, Hindi and other languages are taught in the schools as well. Most international schools only require the students to memorize the multiplication table up to 9×9 , whereas the India international schools require the students to memorize the table up to 20×20 . Furthermore, the schools set up computer courses early since kindergarten. Second, the tuition of the India international schools in Japan is about one third of that of other international schools. In Japan, the annual cost at the other international schools is around 1,500,000 yen to 3,000,000 yen (about 87,900 RMB to 119,600 RMB). Third, the majority of the experienced teachers are female spouses of Indian immigrant IT workers. Fourth, the schools actively communicate with the local Japanese school so as to fit in the Japanese culture. Fifth, the curriculum planning of the schools accords with that of the native Indian schools. Sixth, the schools allow grade skipping for academically talented students. Seventh, the schools make efforts to improve students' public speaking skills. Eighth, the schools pay much attention to the nurturing of international talents by requiring the students to learn information technology in English at an early age. The students start learning about computer

since age 5. By request, all students should be able to carry out simple computer projects by the age of 12. Last but not least, the schools are admitted by the International Baccalaureate Organization (IBO). With a solid foundation of Indian education, the schools are working towards the goal for the cultivation of an internationally competitive generation.

4. THE EXPECTATION OF THE INDIAN STUDENTS AND THEIR PARENTS

Since IISJ and GIIS were founded in Japan, every child from an Indian immigrant family has enrolled in the India international schools. Most of their fathers work in big companies or financial institutions in Japan. Especially in Edogawa, Tokyo, approximately 80% of the Indian immigrants are middle class, and 20% are upper class. In addition, most Indian immigrants are vegetarians, therefore they are considered nobly-born by Japanese people.

The author interviews three students and two parents about their expectations of the India international schools in Japan. The opinions of the three students are as follows:

‘I prepare to go back to India after high school, because I want to study at India Institute of Technology. Therefore, I need to study hard right now,’ says a 12-year-old student (female).

‘I want to be an engineer in the future. However, first I need to learn English and information technology. I hope my dream comes true,’ says a 10-year-old student (male).

‘I want to go to a college in America, because my cousin studies there,’ says an 8-year-old student (male).

Here are the opinions of the two parents.

‘I am very happy that my children can receive Indian education in Japan and my son really interested in math, so the school is a good choice for us,’ says a father of two children (40 years old).

‘My daughter dreams to be a doctor who can also speak English, and we immediately enrolled in after we visited the school,’ says an Indian mother (35 years old).

To sum up, both the Indian students and their parents are dissatisfied with Japanese education and, in contrast, greatly interested in the academic and multi-cultural atmosphere and the teaching methods of the India international schools. In addition, the graduates from the schools can go to the first-class universities in India, England or America, and prepare themselves to fit in the international community.

5. THE ATTITUDE OF JAPANESE PEOPLE TOWARDS THE INDIA INTERNATIONAL SCHOOLS

5.1 PROBLEMS IN JAPANESE EDUCATION SYSTEM: LIBERAL EDUCATION AND LOW ACADEMIC ABILITY

On the whole, Japanese education system maintains a relatively high level with a narrower disparity between social groups. Moreover, the general education level in Japanese public schools outmatches that in Indian public schools as well. However, the implementation of ‘Liberal Education’ has given rise to the problem of ‘Low Academic Ability’. Following the adoption of ‘liberty and enrichment’ as a slogan of Japanese education guidelines in 1977, ‘liberty’ became a key word in the education system. Due to the ‘Skinkansen classroom teaching’

and ‘cramming’, 30% of the primary school students, 50% of the secondary school students and 70% of the high school students fail to grasp what they have been taught.

When it comes to the impact of Japanese ‘liberal education’ on the academic ability of the students in primary schools and middle schools, Kageyama Hideo from the education development support center of Ritsumeikan University makes the following observation. The first of its disadvantages is the neglect of the teaching of rudimentary knowledge. To master the rudimentary knowledge is a precondition for the learning of all kinds of subjects. Nevertheless, Japanese students’ performance in listening, speaking, reading, writing and calculating is rather poor. The Second disadvantage is that the curriculum lacks systematic planning, which leads to the inefficiency in compulsory education during high school. Moreover, as a result of closed moral education and lack of proper instruction in language learning, the students are usually weak in the grammar study of their native language (Japanese). Lastly, not enough attention has been paid to comprehensive study and the study of the society. The schools do not set the subjects of science and sociology until grade 3 in primary school. However, there are no extra tutoring of basic knowledge during comprehensive learning. Consequently, the students need to take classes at home or local educational institutions after five-days study in the school.

Kageyama Hideo summarizes the reasons of the above problems¹: first, the unhealthy lifestyle brings about poor brain function; second, the lack of time and proper instruction in the classroom results in the deficiency of rudimentary knowledge; third, the neglect of the relaxed attitude towards study in recent years; fourth, the deterioration of the academic environment due to inadequate investment.

Other scholars, for instance, Ikeno (2007), Ohama, Zayitsu, Shimizu (2006) and Sato (2012)^[26], have conducted researches and analysis with regard to ‘liberal education’ and ‘low academic ability’ as well. According to their reports, ‘liberal education’ not only reduces the academic ability of the students, but also dulls their enthusiasm towards study and thinking. In this light, the school needs to pay more attention to the cultivation of students’ thinking ability and to break away from ‘liberal education’.

5.2 MEDIA REPORTS OF THE INDIAN EDUCATION IN JAPAN

Since the Japanese government implemented the policy on attracting Indian investment in 2000, the number of Indian companies in Japan has been increasing in recent years. The increase of these companies has boosted the development of Indian education in Japan as well. As a result, more and more Japanese parents become deeply impressed by the Indian education with its high quality.

The Japanese media bombards its audience with reports of Indian education from many different angles. The media comments on the emphasis of the Indian education on language, mathematics and internationalized teaching. For instance, Fuji Television advertised the India international schools and its education as ‘World-Renowned Indian Education’ in 24th, January, 2009. Afterwards, the NHK Tokyo Special followed up in 17th, May, 2013, with this headline: ‘Win Out in a Globalized Society: New Age of International Education’. Furthermore, the Indian education craze even spreads to the publishing industry. The book titled ‘India Education’, ‘Indian Teaching Methods’ and ‘Indian Math Education’ have been published in succession.

According to the articles about India education in the press, the India international schools outmatch the ordinary Japanese schools in the following aspects. First, India international schools lay stress on math education. The duration of mathematics learning in an India international school is 1.5 times longer than that in an ordinary Japanese school. Moreover, the mastery of two-digit multiplication and division is emphasized in Indian education. In addition, there are two classes on information technology every week. Second, the schools use English as the language of instruction. Every class is taught in English. The schools make effort to improve its students' English level and their international awareness through public speaking. Third, the students take a succession of eight classes a day, each class lasts forty minutes. Consequently, many Japanese parents prefer to send their children to the India international schools. Up to now the number of Japanese students enrolled in GIIS has increased to 30%.

5.3 JAPANESE PEOPLE'S EXPECTATION FOR THE INDIA INTERNATIONAL SCHOOLS

Many Japanese people are dissatisfied with the current Japanese education system, and they are deeply impressed with the high standard of Indian education. As a result, more Japanese parents tend towards India international schools for the future development of their children.

In order to know more about what the Japanese parents expect from the India international schools, the author has interviewed with three of them whose children have enrolled in IISJ.

'IISJ requires the students to do much homework and take many tests, but I think it is good for the children who are interested in learning, because it can help them reinforce their study. And I am very satisfied with its teaching quality. I think that there are many problems in Japanese "liberal education"...' (Japanese, female, 30-year-old)

'I send my children to IISJ because I want them to experience different culture, so that they can prepare themselves for higher education.' (Japanese, male, 40-year-old)

'I disagree with Japanese "liberal education". IISJ teaches in English, the children can learn about the knowledge that a Japanese school cannot offer. The school discovers each student's aptitude and teaches accordingly, which is very good. And my son enjoys learning mathematics, so...' (Japanese, female, 36-year-old)

These interviews show that many Japanese have great hopes for the India international schools. They feel more satisfied with Indian education than the Japanese 'liberal education'. However, the India international schools in Japan still face various problems. For instance, the India international schools are not included in 'formal schools' but classified as 'other schools' in Japan. That is to say, Japanese Ministry of Education does not recognize the diploma qualifications of India international schools and offer no subsidy. Therefore, the Japanese students are required to study Indian history and politics, but the schools do not offer classes on Japanese traditional culture and history. Furthermore, the class is small in size, therefore it cannot provide a competitive atmosphere for the students.

However, Indian government and many European countries recognize the IISJ or GIIS diploma. Therefore, the graduates can pursue a higher education in India, England or America, which is exactly what the Japanese parents expect. As to the learning of Japanese culture and history, the Japanese students usually take classes after school.

6. COUCLUSION

Based on the analysis of the general situation and existing problems of Indian education, the paper examines the India international schools in Japan from different angles. The India international schools are characterized as English-speaking, globalized schools, for the reason that they aim not only at spreading Indian culture but also at cultivating the talents who can properly respond to the impact of globalization.

The world is becoming an integral community; along with it, the communication between countries and individuals is facilitated. Many Japanese parents become aware of the shortcomings of Japanese education. Therefore, they tend to send their children to an India international school and to study abroad after graduation. That is to say, the educational concepts of Japanese people are now shifting from 'liberal education' to 'international education'. Therefore, the India international schools receive much attention from all circles in Japanese society.

Although the paper offers a relatively detailed analysis on the background, characteristics and objectives of the India international schools in Japan, it still has some deficiencies. For instance, the analysis is based on the interviews with a small group of people. However, the author will conduct more interviews with a larger group of people for further investigation on this subject.

REFERENCES

1. In June 2015, the Japanese ministry of foreign affairs of Japan (nationality area age of men and women of nationality in the second table of 2) statistics
<http://www.e-stat.go.jp/SG1/estat/List.do?lid=000001139146>
2. In June 2015, the foreign ministry of Japan's ministry of foreign affairs (no. 4 of foreign nationality) statistics
<http://www.e-stat.go.jp/SG1/estat/List.do?lid=000001139146>
3. **Zhou Feifan**; Fujita. A report on the integration of foreigners in local society: the Indian community in Jianghu district is the center. Words culture review [1]. *Chiba university education center*.2007:89
4. **OOtani** .The multi-culture education of international schools in Japan and India: the relationship between the cultural inheritance, internationalization and the host society. *University of Waseda University College of Education*. No. 15 2008(2): 96.
5. Japan policy investment bank Singapore office. India higher education and talent training. 2001:4 to 8.
6. **Sasaki** "Indian education inequality"*Minstone bookstore*, 2011, pp. 20-23.
- 7.**Nakamurashuzou**. The development and future projects of Indian primary education. *The international research of the pavilion*. 2006 (24).
- 8.**Sawamunenori**. The Japanese Indian network and community. Research grants (c)(1) report of the research results of the ministry of education. 2004.
- 9.**Yamada keita**. The Indian community of west ge west: an interview with a family of it technicians. *The annual report of the sociology of the university*, 2007(14): 62.

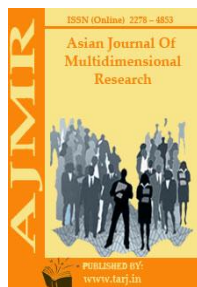
10. The impact and the future of "loose education" : loose education should be necessary. *Meiji University, department of public management, department of public management, 2005:5.*

11. Kakeyamahideo. To improve the programme of education and improve learning ability. National education policy research institute, international mathematics and science, education survey 2007 (timss2007).

12. Iketanoosamu. Study on the topic in English class and the integration of language learning. Journal: Annual review of English Language education in Japan. 2007(18):253-262.

13. Oohamafumihiko · Zaitsuharuko · Shimizuyukari . Science education's "loose education" and educational decline: new study guides and studies on the impact of educational background. University of southwest college of humanities and science. 2006:79-108.

14. Satoutoshiaki A study of the so-called "loose education" students. The study summary of triple university education. 2012 (63) : 2012-63.



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(Double Blind Refereed & Reviewed International Journal)

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**A STUDY ON NON-GOVERNMENT PRIMARY TEACHER EDUCATORS
IN THEIR DIFFERENT DIMENSIONS OF ORGANIZATIONAL
CLIMATES IN WEST BENGAL**

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ABSTRACT

The present study was undertaken with a view, to assess the different organizational climate among the non-government primary teacher educators in their institutions. For this purpose, random sampling technique was adopted and 150 teacher educators from 31 primary teacher education institutions were selected. Standardized tool School Organizational Climate Descriptive Questionnaire (SOCDQ) by Sharma (1973) was used. The data were analyzed by Mean, Standard Deviation and Standard Score (10Z+50). Present study found that there (i) autonomous climate was more open in non-government primary teacher education institutions. (ii) Open climate and control climate did not differ on their openness in non-government primary teacher education institutions. (iii) Control climate was more open than familiar climate in non-government primary teacher education institutions. (iv) 'Disengagement' of non-govt. primary teacher educators was low in familiar climate and high in paternal climate. (v) 'Alienation' was

moderate in non-government primary teacher educators (vi) 'Esprit' of non-govt. primary teacher educators was less in close climate and high in autonomous climate. (vii) 'Intimacy' of non-govt. primary teacher educators was moderate, except low in control climate. (viii) 'Psycho-physical hindrance' of non-govt. primary teacher educators was low in familiar climate and high in close climate. (ix) 'Control' of non-govt. primary teacher educators was low in open climate and high in control climate. (x) 'Production emphasis' of non-govt. primary teacher educators was moderate, except low in autonomous climate. (xi) 'Humanized thrust' of non-govt. primary teacher educators were high in open climate; low in autonomous and close climate. (xii) On the basis of this observation (Present study vs. Sharma's study), that marginal difference of each dimension and each climate on Prototypic Profile due to cause is socio-economic and cultural diffusion.

KEYWORDS:*Different Organizational Climate, Dimensions of Organizational Climate, Non-Government Primary Teacher Educators*

INTRODUCTION

Organizational climate is the core of the Primary teacher education institution. An institution is a learning place, where trainees and their guardians' dreams and ambitions are fulfilled and teacher educators are motivated to function at their best, where everybody is respected and feels attached to the institution. If there are no good linkages between two workgroups, the climate is full of conflict, poor communication and lack of commitment and understanding among groups. Climate cannot be seen or touched, but it is there. In turn, climate affects everything that is occurring in organization. Organizational climate can have positive and negative effects on employees. A climate that does not promote communication upwards or downwards literally leads to fear of expression of ideas and opinions. Absence of an open-door policy can also have negative effect on the climate. Moreover, it differs from organizational culture. Culture refers to the behavioural norms, assumptions and beliefs of an organization, where as climate refers to perception of persons in the organization that reflects those norms, assumption and belief (Hoy, 1990). Each institution has its own unique climate. This is because institutions operate in different ways. The type of climate that prevails in an institution is the blend of the behaviour of the principal, faculties, trainees and guardians in that institution. Therefore, climate differs from institution to institution.

A successful organization has clear cut objectives. Its members pursue goals and objectives that can be achieved efficiently and effectively by the concerted efforts. So organizations are essential to the way our society operates (Gibson and Ivancevich, 1997). Gunter and Furnham (1996) stated that organizational climate can directly cause work outcomes that are either positive or negative. Ren, Huang & Zheng, (2001) and Tang & Chen (2001) stated that the micro mode not only measures organizational climate accurately, but also is of more practical value to the organization. Yusuf and Adigun (2010) revealed that there is a significant relationship between

school climate, teacher's productivity and student achievement. Sharma (1973) asserted leadership behavior as one of the most important predictor of organizational climate.

EMERGENCE OF THE STUDY

As per National Council for Teacher Education (2014) list of recognized Primary teacher education institutions there were 291 (170th ERC Meeting) in West Bengal, in 2016 and 2018 the numbers of institutions increased to 432 (Bartaman Patrika, dt.08.06.16) and 627 (252nd ERC Meeting) respectively. It is amazing to notice that from 2014-2016 and 2014-2018 the growth rates of Primary teacher education institutions are 148.45% and 215.46 % respectively in West Bengal. In recent past there has been mushrooming and catastrophic increase in the number of teacher education institutions, particularly of private managed non-government institutions. Service conditions of teacher educators in non-government institutions are quite different. The working conditions in the institutions affect the performance of teacher educators. If a teacher educator feels stressed on his/her place, s/he can't do best in his/her profession. So, this study is very much essential to find out the factors responsible for determinants of climate of teacher educators in their institutions.

OPERATIONAL DEFINITION AND DESCRIPTION

The non-government primary teacher educators in the field of education are those faculties who do not get any financial support from Government. Instead, these faculties get their remuneration from authorities which come from the fee charged from trainees. Organizational climate of teacher education institutions here refer to the non-govt. institutions which provide D.Ed. /D. El. Ed. course.

OBJECTIVES

1. To study, identify and classify the non-government primary teacher educators, in their institutions belong to different dimensions of organizational climates.
2. To study the comparison of organizational climate of Sharma's with the present study in terms of prototypic profile.

SAMPLE

Simple random sampling technique was adopted. Samples of the present study comprised of 150 non government teacher educators of 31 Primary Teacher Education Institutions were collected in West Bengal.

TOOL

The tool used in this study was School Organizational Climate Description Questionnaire (Sharma, 1973) and its applicability in the Primary Teacher Education Institutions was tested by Kolmogorov Smirnov Two Sample Test.

STATISTICAL TECHNIQUES

For quantitative analysis of data, Mean, Standard Deviation and Standard Score (10Z+50) were applied.

IDENTIFICATION AND CLASSIFICATION OF ORGANIZATIONAL CLIMATE

Here investigator studies that organizational climate of the primary teacher education institutions on the basis of modified OCDQ (Halpin and Croft, 1963) ^[3] which is referred to as SOCDQ

(Sharma, 1973). It depends not only on the Principal and teacher educators, but also relationship between the Principal and teacher educators; and their collective relationship with student-teachers, parents and community members. This SOCDQ was composed of 64 items based on eight different dimensions (sub-test). But of these eight, four dimensions are related to group behaviour characteristics (disengagement, alienation, esprit and intimacy) and other four dimensions are related to leader behaviour characteristics (psycho-physical hindrance, control, production emphasis and humanized thrust).

The teacher educators who response 'Rarely occurs', 'Sometimes occurs', 'Often occurs', and 'Very frequently occurs' would get a score as 1, 2, 3 and 4 respectively. Each respondent's eight sub-test scores are calculated by simple summation of each respondent, item score, subtest by subtest and dividing each of the eight sums by the number of items in the corresponding subtest. These raw scores are then converted into double standardization.

To prepare climate profile for each institution these mean raw scores of each subtest are then converted into double standardized scores, first by normatively and then by ipsatively so that inter- institution variance and the intra institution variance had no scope to be confounded.

Normatively, the subtest scores were standardized across the samples of 31 institutions so that each of the eight subtest scores could be compared on a common scale. Thus each subtest was normatively standardized according to the mean and standard deviation of the total samples for that subtest.

Now these normatively standardized scores were taken and standardized them again- this time ipsatively. Ipsatively, each subtest score was standardized in respect to the mean and standard deviation of the profile scores (obtained from normative standardization scores) for each institution. For both standardization procedures a mean of 50 and a standard deviation of 10 were used. These 8 standard scores for each institution were regarded as institutional climate profile.

Now the profiles of the institutions were ready. The next task was to assign climate type to each institution of the sample. In doing so, these profiles of institutions were compared with the six prototypic profiles and a profile similarity score was calculated for each institution. Then only low similarity scores are taken to make the institutional profile for six organizational climates. There are six organizational climates namely, open climate, autonomous climate, familiar climate, controlled climate, paternal climate and closed climate are identified

DESCRIPTION

To prepare a model profiles, the author has calculated the average scores of each of the eight subtests under each climate type of teacher education institutions. Then Mean and SD of total subtests of each climate are calculated and score ranges of each climate are found on this basis. The average model profiles calculated by the teacher educators for six types of climates have been presented in below.

TABLE 1: COMPARISON OF PROTOTYPIC PROFILE FOR OPEN CLIMATE IN NON-GOVERNMENT PRIMARY TEACHER EDUCATORS IN THEIR INSTITUTIONS (PRESENT STUDY VS. SHARMA'S STUDY)

Present Study	Sharma's Study
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Score Range	Category	Dimensions		Score	Diagrammatic Description	Score	Diagrammatic Description
>60	High (M+1σ above)*	Group Behaviour Characteristic	Disengagement	51	M	47	L
			Alienation	44	M	42	L
			Esprit	59	M	62	H
41-59	Moderate (M±1σ)*	Leader Behaviour Characteristic	Intimacy	59	M	52	M
			Psycho-Physical Hindrance	42	M	52	M
			Control	37	L	37	L
<40	Low (M-1σ below)*		Production Emphasis	46	M	53	M
			Humanized Thrust	63	H	57	H
Similarity Score				01			

*Mean=50.13, SD=8.78

The above table 1 shows that, the open climate in the non-govt. teacher education institutions (10%) as perceived among their teacher educators (10%), their control is low; then disengagement, alienation, esprit, intimacy, psycho-physical hindrance, production emphasis are moderate but humanized thrust is high.

Again it shows that there is a perfect agreement between intimacy, psycho-physical hindrance, control, production emphasis and humanized thrust. But there is a marginal difference in disengagement, alienation and esprit. The above table 1 can be shown in the following figure

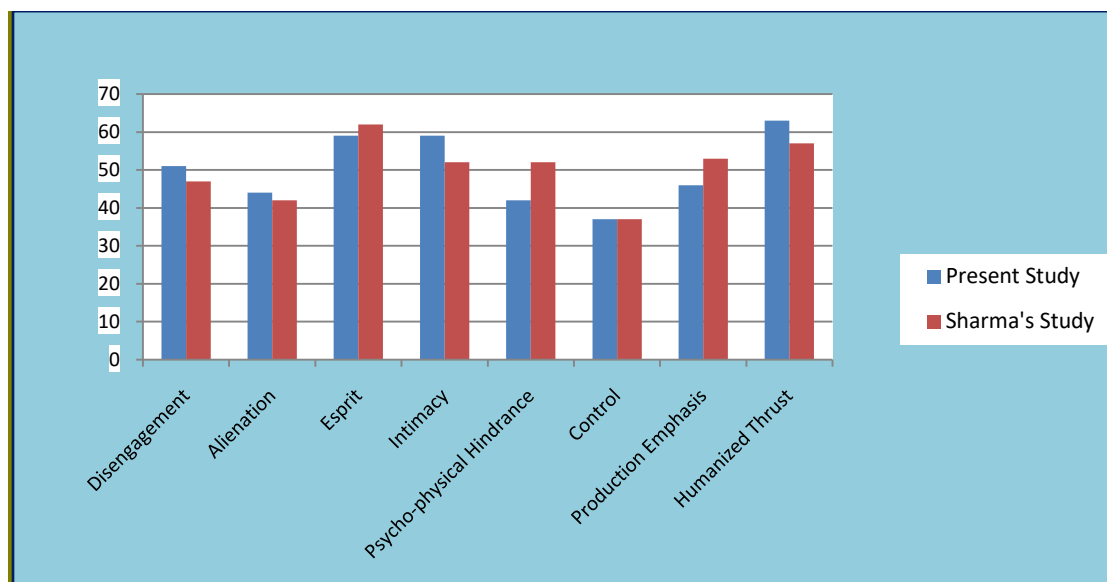


Figure 01: Graph Showing Comparison of Prototypic Profile for Open Climate in Non-Government Primary Teacher Educators in their Institutions (Present Study vs. Sharma's study)

TABLE 2: COMPARISON OF PROTOTYPIC PROFILE FOR AUTONOMOUS CLIMATE IN NON-GOVERNMENT PRIMARY TEACHER EDUCATORS IN THEIR INSTITUTIONS (PRESENT STUDY VS. SHARMA'S STUDY)

Present Study						Sharma's Study	
Score Range	Category	Dimensions		Score	Diagrammatic Description	Score	Diagrammatic Description
>	High (M+1σ above)*	Group Behaviour Characteristic	Disengagement	47	M	43	L
			Alienation	47	M	51	M
			Esprit	61	H	59	H
43-57	Moderate (M±1σ)*	Leader Behaviour Characteristic	Intimacy	46	M	55	H
			Psycho-Physical Hindrance	58	M	57	H
			Control	55	M	49	M
<	Low (M-1σ below)*		Production Emphasis	44	L	44	L
			Humanized Thrust	42	L	42	L

Similarity Score	00
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*Mean=50, SD=6.56

The above table 2 shows that, the autonomous climate in the non-govt. teacher education institutions (16%) as perceived among their teacher educators (21%), their production emphasis and humanized thrust are low; then disengagement, alienation, intimacy, psycho-physical hindrance, control are moderate but esprit is high.

Again it shows that there is a perfect agreement between alienation, esprit, control, production emphasis and humanized thrust. But there is a marginal difference in disengagement, intimacy, and psycho-physical hindrance. The above table 2 can be shown in the following figure

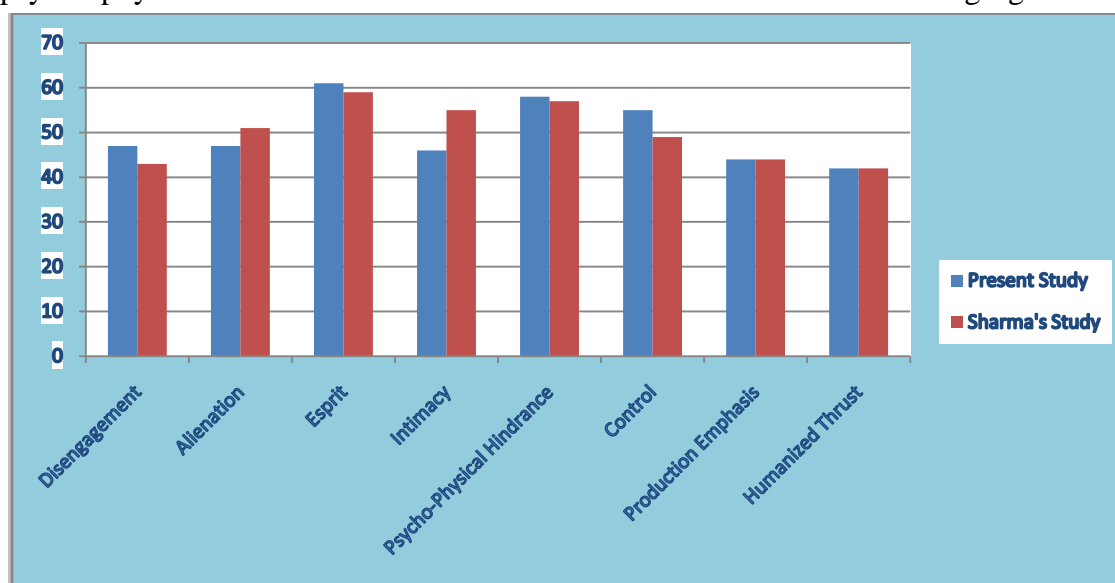


Figure 02: Graph Showing Comparison of Prototypic Profile for Autonomous Climate in Non-Government Primary Teacher Educators in their Institutions (Present Study vs. Sharma's study)

TABLE 3: COMPARISON OF PROTOTYPIC PROFILE FOR FAMILIAR CLIMATE OF THE NON-GOVERNMENT PRIMARY TEACHER EDUCATORS IN THEIR INSTITUTIONS (PRESENT STUDY VS. SHARMA'S STUDY)

Present Study						Sharma's Study	
Score Range	Category	Dimensions		Score	Diagrammatic Description	Score	Diagrammatic Description
>	High (M+1σ above)*)	Group Behaviour Characteristic	Disengagement	39	L	43	L
			Alienation	51	M	55	H
			Esprit	55	M	52	M
			Intimacy	56	M	56	H
43-57	Moderat						

	e ($M \pm 1\sigma$)*	Leader Behaviour Characteristic	Psycho-Physical Hindrance	37	L	42	L
			Control	53	M	49	M
			Production Emphasis	54	M	61	H
			Humanized Thrust	56	M	43	L
<	Low ($M - 1\sigma$ below)*						
Similarity Score				00			

*Mean=50.13, SD=7.18

The above table 3 shows that, the familiar climate in the non-govt. teacher education institutions (26%) as perceived among their teacher educators (29%), their disengagement, psycho-physical hindrance are low; then alienation, esprit, intimacy, control, production emphasis and humanized thrust are moderate.

Again it shows that there is a perfect agreement between disengagement, esprit, psycho-physical hindrance and control. But there is a marginal difference in alienation, intimacy, production emphasis and humanized thrust. The above table 3 can be shown in the following figure

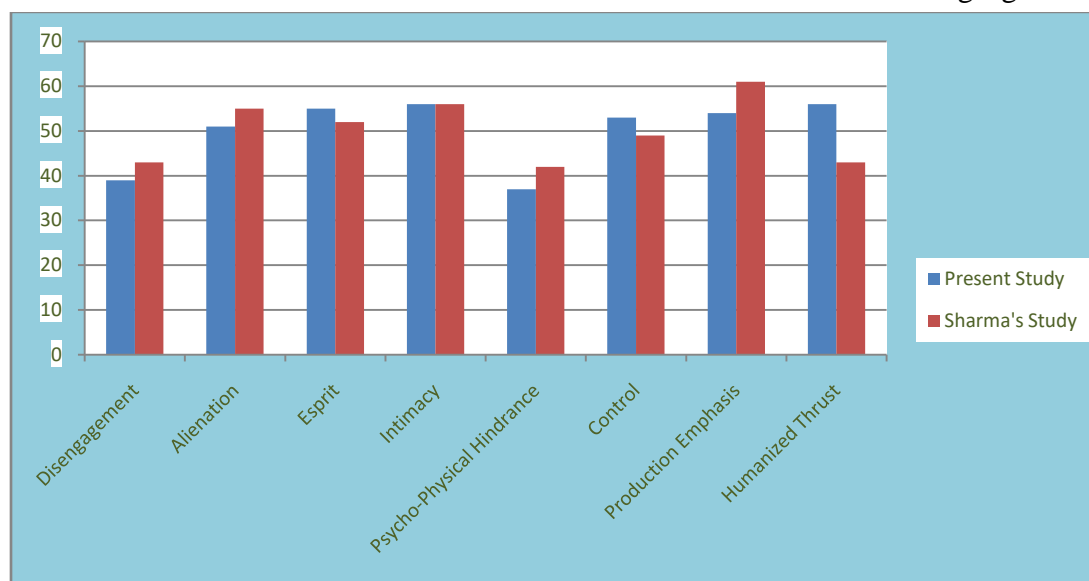


Figure 03: Graph Showing Comparison of Prototypic Profile for Familiar Climate of the Non-Government Primary Teacher Educators in their Institutions (Present Study vs. Sharma's study)

TABLE 4: COMPARISON OF PROTOTYPIC PROFILE FOR CONTROL CLIMATE OF THE NON-GOVERNMENT PRIMARY TEACHER EDUCATORS IN THEIR INSTITUTIONS (PRESENT STUDY VS. SHARMA'S STUDY)

Present Study						Sharma's Study	
Score Range	Category	Dimensions		Score	Diagrammatic Description	Score	Diagrammatic Description
>61	High (M+1σ above)*	Group Behaviour Characteristic	Disengagem ent	59	M	45	L
			Alienation	46	M	49	M
			Esprit	59	M	51	M
40-60	Moderat e (M±1σ)*	Leader Behaviour Characteristic	Intimacy	31	L	41	L
			Psycho-Physical Hindrance	56	M	49	M
			Control	61	H	62	H
<39	Low (M-1σ below)*		Production Emphasis	46	M	57	H
			Humanized Thrust	42	M	45	L
Similarity Score				00			

*Mean=50, SD=9.85

The above table 4 shows that, the control climate in the non-govt. teacher education institutions (03%) as perceived among their teacher educators (3%), their intimacy is low; then disengagement, alienation, esprit, psycho-physical hindrance, production emphasis and humanized thrust are moderate but control is high.

Again it shows that there is a perfect agreement between alienation, esprit, intimacy, psycho-physical hindrance and control. But there is a marginal difference in disengagement, production emphasis and humanized thrust. The above table 4 can be shown in the following figure

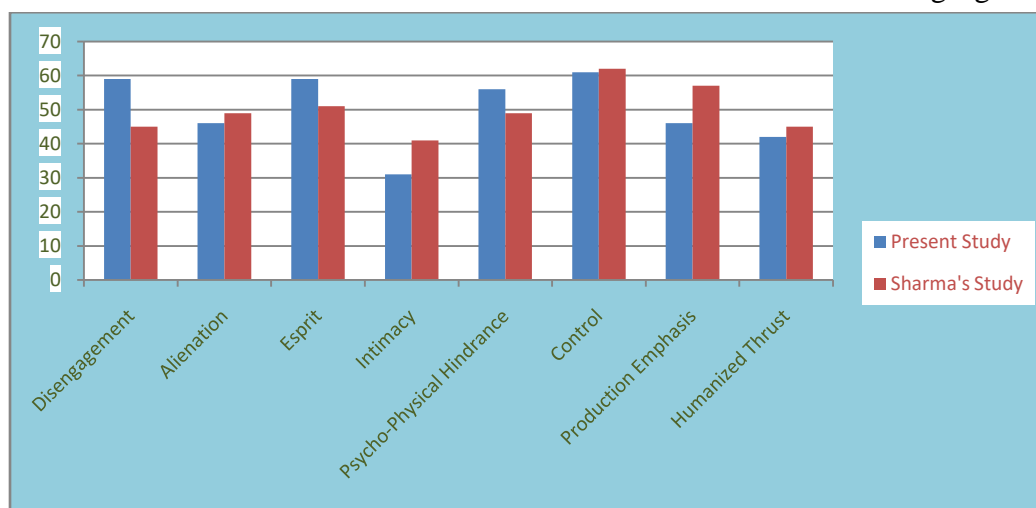


Figure 04: Graph Showing Comparison of Prototypic Profile for Control Climate of the Non-Government Primary Teacher Educators in their Institutions (Present Study vs. Sharma's study)

Table 5: Comparison of Prototypic Profile for Paternal Climate of the Non-Government Primary Teacher Educators in their Institutions (Present Study vs. Sharma's study)

Present Study						Sharma's Study	
Score Range	Category	Dimensions		Score	Diagrammatic Description	Score	Diagrammatic Description
>58	High (M+1σ above)*	Group Behaviour Characteristic	Disengagement	61	H	62	H
			Alienation	43	M	52	M
			Esprit	42	L	45	L
43-57	Moderate (M±1σ)*	Leader Behaviour Characteristic	Intimacy	54	M	46	L
			Psycho-Physical Hindrance	57	M	56	H
			Control	46	M	43	L
<42	Low (M-1σ below)*		Production Emphasis	44	M	42	L
			Humanized Thrust	54	M	56	H
Similarity Score				01			

*Mean=50.13, SD=6.77

The above table 5 shows that, the paternal climate in the non-govt. teacher education institutions (19%) as perceived among their teacher educators (16%), their esprit is low; then alienation, intimacy, psycho-physical hindrance, control, production emphasis, humanized thrust are moderate but disengagement is high.

Again it shows that there is a perfect agreement between disengagement, alienation and esprit. But there is a marginal difference in intimacy and leader behaviour characteristics. The above table 5 can be shown in the following figure

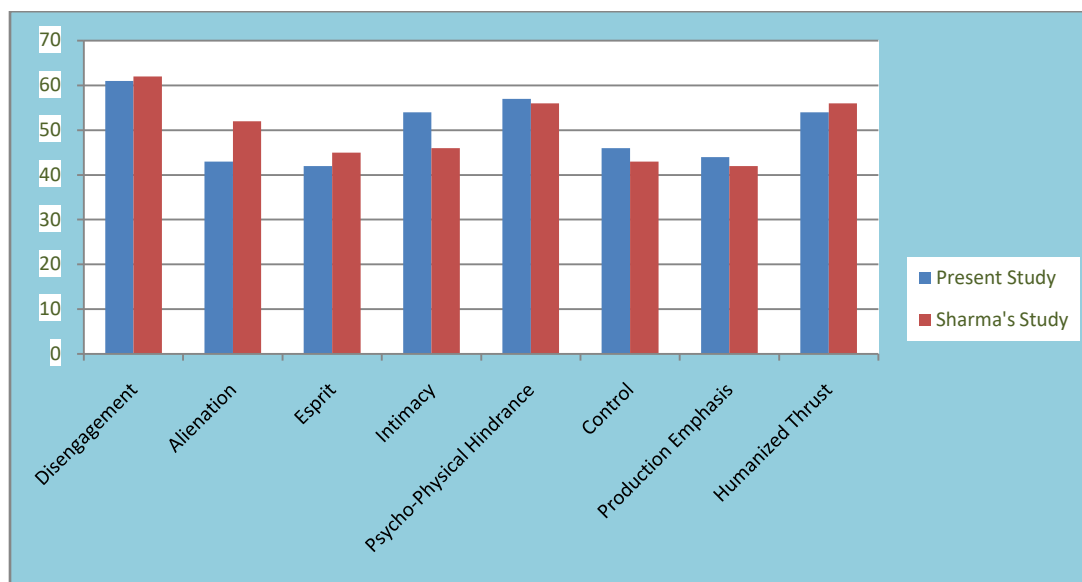


Figure 05: Graph Showing Comparison of Prototypic Profile for Paternal Climate of the Non-Government Primary Teacher Educators in their Institutions (Present Study vs. Sharma's study)

Table 6: Comparison of Prototypic Profile for Close Climate of the Non-Government Primary Teacher Educators in their Institutions (Present Study vs. Sharma's study)

Present Study						Sharma's Study	
Score Range	Category	Dimensions		Score	Diagrammatic Description	Score	Diagrammatic Description
>59	High (M+1σ above)*	Group Behaviour Characteristic	Disengagement	58	M	54	H
			Alienation	56	M	60	H
			Esprit	39	L	37	L
42-58	Moderate (M±1σ)*	Leader Behaviour Characteristic	Intimacy	42	M	40	L
			Psycho-Physical Hindrance	59	H	62	H
			Control	52	M	51	H
<41	Low (M-1σ below)*		Production Emphasis	53	M	53	M
			Humanized Thrust	41	L	41	L
Similarity Score				02			

* M=50, SD=7.58

The above table 6 shows that, the close climate in the non-govt. teacher education institutions (26%) as perceived among their teacher educators (21%), their esprit and humanized thrust are low; then disengagement, alienation, intimacy, control, production emphasis are moderate but psycho-physical hindrance is high.

Again it shows that there is a perfect agreement between esprit, psycho-physical hindrance, production emphasis and humanized thrust. But there is a marginal difference in disengagement, alienation, intimacy and control. The above table 6 can be shown in the following figure

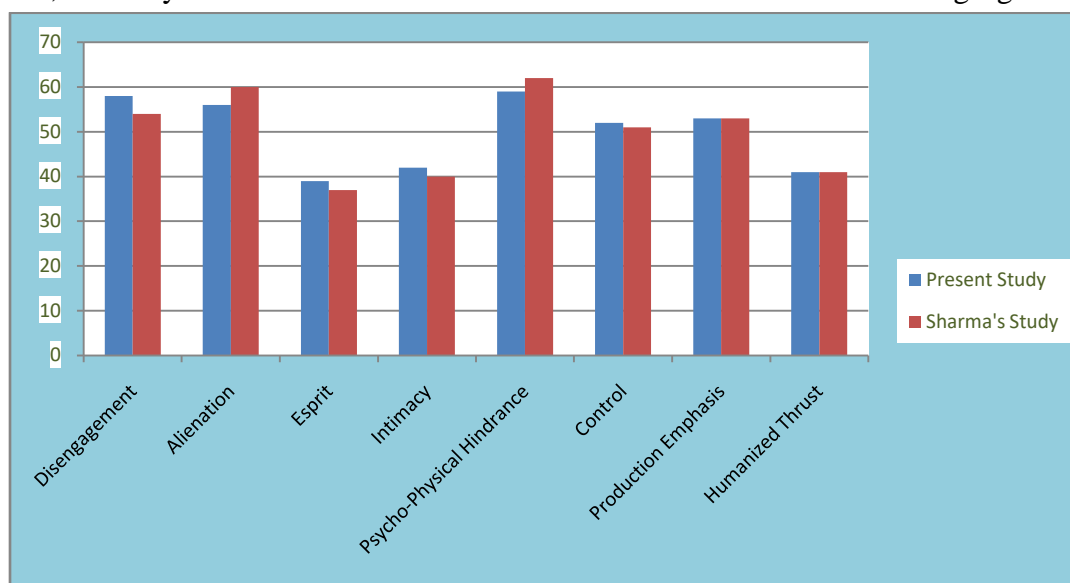


Figure 06: Graph Showing Comparison of Prototypic Profile for Close Climate of the Non-Government Primary Teacher Educators in their Institutions (Present Study vs. Sharma's study)

MAJOR FINDINGS

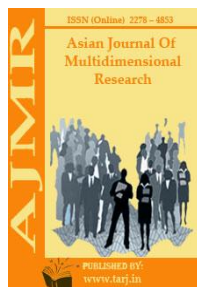
On the basis of above result, present study found that (i) autonomous climate is more open in non-government primary teacher education institutions. (ii) Open climate and control climate does not differ on their openness in non-government primary teacher education institutions. (iii) Control climate is more open than familiar climate in non-government primary teacher education institutions. (iv) 'Disengagement' of non-govt. primary teacher educators is low in familiar climate and high in paternal climate. (v) 'Alienation' is moderate in non-government primary teacher educators. (vi) 'Esprit' of non-govt. primary teacher educators is less in close climate and high in autonomous climate. (vii) 'Intimacy' of non-govt. primary teacher educators is moderate, except low in control climate. (viii) 'Psycho-physical hindrance' of non-govt. primary teacher educators is low in familiar climate and high in close climate. (ix) 'Control' of non-govt. primary teacher educators is low in open climate and high in control climate. (x) 'Production emphasis' of non-govt. primary teacher educators is moderate, except low in autonomous climate. (xi) 'Humanized thrust' of non-govt. primary teacher educators are high in open climate; low in autonomous and close climate. (xii) On the basis of this observation (Present study vs. Sharma's study), that marginal difference of each dimension and each climate on Prototypic Profile due to cause is socio-economic and cultural diffusion.

CONCLUSION

The teacher educators and their leaders or principals must share a relationship based on equality and mutual respect to create a better and positive organizational climate which is very much essential for smooth running of an institution. The findings of the study will help to create conducive climate in the teacher education institutions and it will make the teacher educators conscious of the provision of a proper climate for teaching-learning. The management or administration of teacher education institutions should create a favourable institutional climate in order to enhance for better productivity of teacher educators and better achievement of trainees. That is applying democratic leadership, involving teacher educators in an institution policy-making process, transparency and information disclosure in institutional management, fostering positive values within the organizational climate.

REFERENCES

1. Gibson, J. L. and Ivancevich, J. M.(1997). *Organization: Behaviour Structure Processes* (Ninth Edition). Irwin McGraw Hill, New York. 7-43.
2. Gunter, Y. J and Furnham, P. K. (1996). Individual Differences and Organizational Climate: Measurement of Organizational Climate by the Multi-trait, Multi-rater Matrix. *Personnel Psychology*. 493-512.
3. Halpin, A. W. and Craft, D. B. (1963). *The Organizational Climate of Schools: Midwest Administration Centre. University of Chicago. Chicago. U S A.*
4. Hoy, W. K. (1990). Organizational Climate and Culture: A Conceptual Analysis of the School Workplace. *Journal of Educational and Psychological Consultation*. 7 (2): 149-168.
5. *National Policy on Education. (1986/1992, 2016). Ministry of Human Resource Development, Govt. of India.*
6. Ren, J. G., Huang, G. L. and Zheng, B. X. (2001). Organization Culture and Climate. In B. X. Zheng (Edu). *Staff member's culture*, Taiwan: Yuan-Liou Publishing, 63-170.
7. Sharma M. (1978). *Technical Handbook for School Organizational Climate Description Questionnaire. Surat (Gujrat). India.*
8. Sharma, M. (1973). *An Investigation into Organizational Climate of Secondary Schools of Rajasthan. Unpublished Ph. D. Thesis. Centre for Advanced Study in Education. M. S. University of Baroda.*
9. Tang, J. and Chen, W. Q. (2001). From “Organizational Climate” to “Organizational Culture”. The logic of conceptional development. *Journal of Development in Psychology*, 9 (1), 62-65.
10. Yusuf, M A. (2010). The Influence of School Climate Change on Teachers' Productivity and Students' Achievement. *Journal of Research in National Development*. Vol.8, No. 2.



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LINGUISTIC ANALYSIS OF DISCOURSES IN ECONOMICS: SURVEY, ISSUES AND INSIGHTS

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ABSTRACT

Language plays a profound role in the processes of production, distribution, consumption and exchange of knowledge by humans. Language and its epistemic roles differ in their types and internal constructions across both space and time. Economists too employ a certain kind of language that helps them to communicate their ideas, notions, theories and beliefs about the world clearly and efficiently regarding the domain of knowledge and application of the subject. Given the wide differences between the linguistic strategies and frameworks that Economists of different persuasions use, it might not be an exaggeration to suggest that an analysis of the

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nature, characteristics, structure and forms of languages that Economists employ can throw good amount of insights into the underlying beliefs and value judgements that are being promoted implicitly or explicitly through some philosophical thought and advancement that they have made via empirical research and writings. Accordingly, this study attempts to survey major works that apply linguistic analysis to economics discourse and tries to locate some key linguistic and economic dimensions of these academic undertakings. The aim of this paper is to provide a brief and multi-dimensional overview of this field of study with a strong emphasis on the international context, while also taking a note of the major insights and issues as unearthed through these studies and, finally it attempts to briefly comment on the lacuna of application of linguistics to Economics discourse in the Indian context

KEYWORDS:*Applied Linguistics, Economic Linguistics, Metaphors, Rhetoric. Jel Codes: A12, A20, Z13.*

1. INTRODUCTORY REMARKS

Language plays a profound role in the processes of production, distribution, consumption and exchange of knowledge by humans. Language and its epistemic roles differ in their types and internal constructions across both space and time. Economists too employ a certain kind of language that helps them to communicate their ideas, notions, theories and beliefs about the world clearly and efficiently with each other. The language of economics, however, is not singular, as say that of physics, and different ideological and methodological frameworks in economics require different kinds of semantic and syntactic structures, sometimes even within the same language, with considerable variations in the concepts, notions and their linguistic representatives in the communication and intended interpretation for efficiently¹ communicating with the members of the same school of thought and across different schools. For illustration, a Marxist economist will probably not employ the concepts of demand, supply, marginal utility, optimization, etc. to develop her theoretical arguments. Rather her analysis would depend more upon concepts such as surplus value, labour, valorization of value, exploitation, transformation problem, etc. in order to develop and communicate the economic theories within the same school. Similarly, an Austrian economist would probably employ economic categories such as “human action axiom”, “praxeology”, “scarcity”, etc. to construct and communicate their economic arguments with other members of the same school². Given these wide differences between the linguistic strategies and frameworks that Economists of different persuasions use, it might not be an exaggeration to suggest that an analysis of the nature, characteristics, structure and forms of language that Economists employ can throw good amount of insights into the underlying beliefs and value judgements that are being promoted implicitly or explicitly through some philosophical thought and advancement that they have made via empirical research and writings.

In the context of the inter-links between languages and economics, available evidences point out that language and its structure³ significantly affect both cognition and behaviour and hence can

produce significant implications for economic and social outcomes, which are generally interspersed with the constraints imposed by the economic agent's language itself (Rubinstein, 2004). While the economics of language is a well-established area of research, equally important has been the study of the language of economics which has received active attention from both economists and linguists across its many conceptual and empirical dimensions. In particular, applied linguistic analysis of economics discourse suggests that the linguistic structures that are utilized by economists have undergone considerable changes since the publication of Adam Smith's *Wealth of Nations* and that there are specific characteristics of language which can be seen as quite unique to economists as against other social scientists. The linguistic nature of economics discourse has spanned across last several decades and there are many issues that have been focused upon by the researchers in this area. The application of linguistic analysis, particularly of its sub-fields such as text analysis, rhetoric analysis, pictorial analysis, discourse analysis, etc. have produced good number of insights into the ways in which Economists, particularly of the mainstream persuasion, communicate about their findings and ideas, both among themselves and with policy-makers and the public at large.

A cursory look at the reference to the words "economics", "linguistics", "economics and linguistics" and "linguistics and economics" as a proportion of total words in a year in the Google Books Ngram viewer database from the year 1800 up till 2008 can throw some elementary insights into the changing relative importance of both the disciplines across the corpus of digitized English literature available till date⁴. The data shows that the frequency of use of the word "economics" (all words were searched as insensitive to the case) in English database of the Ngram viewer experienced marked shifts in the mid 1880s and at around 1939, 1942, and finally around 1994, after which the proportion⁵ of references to this word fell down considerably and continuously till 2008. Several events might have dictated these observations. The sharp rise since the mid 1880s could be attributed to the marginalist revolution that was underway and probably the subsequent rise in interest in deep discourse in economics, as expressed in rising research and other written academic insights might have resulted in a continuous increase in reference to this word up till around 1939. Thereafter, the fall in 1939 and the subsequent rise since 1942 and up till 1994 could be attributed to the key macroeconomic developments during this period such as the Great Depression, its aftermath, the Keynesian revolution, the end of the Golden age, the Oil price shock, changing international monetary and economic orders, evolution of the International Monetary Fund (IMF), International Bank for Reconstruction and Development (IBRD), etc. The fall since 1994 and all the way till 2008 might be explained by the possible fall in the quantum of research directed towards economics, the lags involved in the digitizing of writings in economics as compared to the natural sciences, etc. Similarly, important shifts in the proportion of references to linguistics can be located in the years 1940, 1974 and 2005. The rise in the incidence of linguistics in the total English literature in and after the 1970s might be associated with the impact of the Chomsky revolution that started with Chomsky (1957). It is also important to note that the continuous, secular and upward-rising trend in the references made to the word 'linguistics' annually occurred quite late, in around 1940, as compared to economics, which experienced this phenomenon in the mid 1880s itself. This can be attributed to the phenomenal growth in the literature of classical thought and debates continued after the Keynesian revolution including that of Keynes versus Classics. The relative

importance of economics in English discourse, measured as the ratio of the maximum proportion of the word economics in the total words in the database in a year to the maximum value for the word linguistics, worked out to be approximately 4.25 times to that of the highest value for linguistics. In addition to these findings, the appearance of the words economics and linguistics seem to be less focused upon when put together as the average value of their proportion, either as “economics and linguistics” or “linguistics and economics”, in the total words in the database for the year is very less. This might point out to the fact that the inter-disciplinary exchange between both the disciplines might have been quite limited for the period chosen. As more suitable data is not available, in the form of inter and intra disciplinary distributions of the chosen words and also for periods beyond 2008, reliable conclusions for the recent past cannot be derived. However, the fact that their importance in the total discourse when taken together has been very less provides an important motivation to explore their interrelationships and particularly the application of linguistics to economics in the light of considerable evidences already available in this area. Furthermore, the insights that one can gain into the nature of economics discourse by applying the methods and approaches of applied linguistics in themselves embody many benefits and enrichments which makes an attempt to understand the major evidences on this issue a fruitful exercise.

Accordingly, this study attempts to survey the major works applying linguistic analysis to economics discourse and thus tries to locate some key linguistic and economic dimensions of these academic undertakings. The aim of this paper is to provide a brief and multi-dimensional overview of this field of study with a strong emphasis on the international context, while also taking a note of the major insights and issues as unearthed by these studies and, finally it attempts to briefly comment on the lacuna of application of linguistics to Economics discourse in the Indian context.

3. Blending Linguistics with Economics: A cautionary note

Merriam Webster dictionary defines Linguistics as “the study of human speech including the units, nature, structure, and modification of language”. This definition takes into account key components of a language that a linguist might be interested in. Another and a more universal definition of linguistics can be “the scientific study of any aspect of language” (Rowe and Levine, 2016). This definition gives a more general and universally applicable definition of linguistics, though it might not clearly express the scope, subject matter and the limits of the field of linguistics. A classic and still utilized definition of linguistics is by Hockett (1958) who defines it as “the organized body of information about language” which the investigations of linguists produce. The broad outcome of these definitions is that linguistics primarily focuses on language from a technical point of view, i.e. from the perspective of an analyst who is concerned with the nature, structure and evolution of languages. Economists too employ languages, particularly the English language, and the kind of linguistic strategies that they deploy in their discourse can throw light on their underlying non-economic aspects including the non-economic assumptions such as moral, epistemological and ontological constructs, as well as shed light on the ways in which the communication of economic ideas can be made more efficient and productive. The present study defines and looks at linguistics mainly within the domains as set by the above mentioned definitions.

However, some cautions need to be borne in mind whenever reviews of evidences on multidisciplinary research works are undertaken. An important caveat in the present context is that there are two different fields of study, namely Economics of Language and the Language of Economics. Both these disciplines must be differentiated beforehand so as to avoid overlapping their findings and deriving inconsistent inferences. While economics of language primarily attempts to investigate the economic foundations of the structure and evolution of languages by applying economic methods to analysis of languages and studying the economic impacts of language skills and endowments, the language of economics primarily focuses on the application of linguistic approaches such as semantic and syntactic analyses, discourse analysis, text analysis, cognitive linguistics, etc. to the nature, structure and development of economic arguments and discourses. The present work is concerned with the latter issue and does not include much of a discussion on the fascinating field of economics of language due to the restrictions of its scope and objectives.

A final caution that needs to be mentioned beforehand is that the nature of language and its interpretation for an Economist can and does differ considerably from that of a linguist. The ways in which a linguist would look at the words, sentences, and the connoted concepts as employed by economists might have different interpretative values and technical meanings than what the economist meant. Hence, for illustration, if an economist employs a particular technical word such as “poverty” in her study, the interpretation of the same would be different for the economist than for a linguist. A linguistic analysis might thus reveal insights into the use of the word “poverty” which might not have been consciously intended by the economic analyst. Linguistics can thus uncover, as stated earlier, and rightly or wrongly, the underlying non-economic dynamics of the language of economists, which might be inconsistent with the actual intentions and even the underlying non-economic preferences of the economist under scrutiny. These cautions must be appreciated while evaluating the key findings of linguists on the discourses by economists.

4. Approach used in the Collection of evidences

The literature surveyed in this paper was collected by using judgemental sampling with some *a priori* criteria in mind. These included the conscious avoidance of literature on economics of language, trying to achieve an equitable spread of the works across the whole period under investigation which covers studies from mid 1950s up to 2018, deliberate avoidance of excessive concentration of studies from some particular branches of linguistics and an attempt to collect studies that intensely analyze the issues concerned. The intensity of a study was judged by the kind of investigations it carried out, with a slightly more weightage for studies undertaking both quantitative and qualitative analyses in the same study. Furthermore, studies cited in some important works were also collected as a part of the sample. Overall, the studies seem to fairly represent the overall trends and patterns in the analytical concerns of linguists with economics writings. The choice of the beginning of the study period roughly corresponds to another major shift in the importance of linguistics in English discourse, as measured by its incidence in the Google Books Ngram viewer database of millions of digitized books. After around 1955, there was a sharp surge in the incidence of linguistics across the English database and moreover, it

seems that the discourse on this topic was quite limited and probably in its early stage before that year. Hence the studies beginning with roughly 1955 were chosen for this study.

5. Survey of key evidences

The thrust on linguistic foundations of Economics textbooks and other sources of knowledge has been a well-researched area in the International context. Along the lines of investigating the linguistic characteristics of Economics principles textbooks, Gallagher and Thompson (1981) threw some light on the degree of readability of fifteen introductory texts of Economics popularly used during the time they undertook their study. This was done by employing the Flesch Reading Ease (FRE) Test and they found that the scores on this test varied considerably for the various studies and their results showed that majority of the texts had a score lower than 50 points on this scale which implied a relatively difficult readability. However, the authors did not venture deeper into the analysis of other dimensions of readability than those contained in the FRE test.

Romanish (1983) examined the existence of ideological bias in the high school textbooks being majorly used in America and concluded that the insistence on “free enterprises”, “markets”, etc., and the lack of alternative and often competing approaches in the texts among others, implied a bias towards the prevailing market-oriented economic system in the American education system of that time. He also concluded that the textbooks attempted to universalize their proposed ways of thinking about economy and economics probably at the cost of instilling ideological bias. For a detailed criticism of the central tenets and conclusions of this study, one can refer the criticisms proposed by Walstad and Watts 1984.

Watts (1987) ventured into several interrelated issues in the education of economics and among other things stressed on the need for balancing the positive and normative sides of economic ideas in a pre-college level curriculum. The role of ideology and the innate ideological nature of Economics were found to be critical areas of challenge for teachers who introduced the subject to relatively young students. The author suggested that ideological bias may be present even under a wholly positivist curriculum in the form of deliberate misrepresentation of facts and, implicit insistence on certain ends as against others. The author consistently stressed on the need for teachers to maintain a healthy and explicit separation between positive and normative issues and concepts while teaching Economics. This, according to the author, would prevent the normative beliefs of the teacher from mixing with the positivist concepts and theories being examined by them. The paper then dwelled into the issue of whether the classroom teaching of pre-college teachers should be focused upon the domestic (American) economic system or whether the discussion of alternative economic arrangements should also be made. It was found that focusing on domestic issues and economic system would be more efficient as majority of the students would participate and continue living in the domestic economy itself. The paper also suggested that the scarce school resources such as time available for syllabus completion would be better utilized in that way. The author concluded by summarizing the discussions in a simple question asking “whether instruction (in classrooms) can and should be value-free”. However, no clear answer was provided for this question. This study did not delve much deeper into the complexity of the concept of ideology itself and the author seemed to be somewhat biased towards the so-called value-free (positivist) approach to teaching economics in schools.

An analysis of citations of major economists in principles of economics textbooks was undertaken by Hooas and Madigan (1999). The authors selected from the list of two hundred most important economists as prepared by Blaug (1985, 1986). Basic text analysis was employed in the form of counting the number of pages on which an Economist's name was used (as against the name of the schools of thoughts associated with their names) in the chosen textbooks. Among the top three cited economists were John Maynard Keynes, Adam Smith and Milton Friedman. Interestingly, in terms of the authors who were cited across all the ten chosen textbooks, along with the above mentioned top three economists, Karl Marx's name was also prevalent. The authors also found that the "neo-classical economists" such as Marshall, Walras, etc. were under-represented in their sample of textbooks and that the "classical economists" had on an average a higher citation. This study did not move deeper into the analysis of the various linguistic, pedagogic and topical dimensions of the chosen textbooks. Moreover, it might be argued that their sample itself was biased due to their criterion of top-selling books for selecting textbooks for analysis. This might be so because the top-selling books might not fully represent the textbooks that are actually used in classrooms. There are many sources of sales of textbooks and there is no *a priori* reason to believe a strong correlation between sales of textbooks and the popularity of those books in the classrooms.

Kent and Rushing (1999) undertook content analysis of fourteen major principles of economics textbooks in order to locate the prevalence of discussions on "entrepreneurship". The authors constructed an index of word count by using the number of words in the 1950 edition of the classic textbook "Economics" by Paul Samuelson and William Nordhaus as the base. Twenty-three different topics related to entrepreneurship were used to locate the frequency with which entrepreneurship was mentioned and analyzed across the textbooks. The findings of the author suggested that entrepreneurship was not covered widely across the chosen textbooks and that the average proportion of total content devoted to this topic was merely 0.3 percent. The distribution of topics across texts was found to be unequal with only three books covering majority of the twenty-three chosen topics related to entrepreneurship. Still fewer books were found to be discussing entrepreneurship as a separate factor of production. An interesting outcome of this study was the finding that majority of the textbooks did not acknowledge the existence of intrapreneurship, i.e. entrepreneurship within an organization. Very few textbooks were found to be linking entrepreneurship with innovations. The authors also found that majority of the textbooks did not see entrepreneurs as change agent, though they did assert that profits are not the sole motivating factor for entrepreneurs. The study noted that the discussions of entrepreneurship were more of an implied nature as embedded in discussions on risk, market disequilibrium, innovations, etc. Finally, the theoretical links between entrepreneurship and market disequilibrium were touched upon and it was found that more stress upon equilibrium mechanics were probably the reasons that a detailed discussion on the concept of entrepreneurship was largely absent from the chosen textbooks.

Clawson (2002) studied the extent of pictorial representation of Black people in economics textbooks as "poor" and the characterization of "Blacks" as poor compared to that of "Whites" in the chosen economics principles textbooks. The author chose 8 textbooks that discussed about poverty using pictorial representations, out of the 27 that she surveyed, and utilized the



information contained in captions, chapter headings and associated discussions on topics related to poverty in these textbooks. Totally, she found 14 pictures on poverty and 4 on social security. However, it was not readily clear as to how the author chose the 27 textbooks that she surveyed. The criteria based on which she collected the books could have probably explained at least in some proportion the kind of findings that the author arrived at. The pictures that were collected from the textbooks consisted of 45 poor people and 6 Social Security recipients. Race, gender and age were coded for each of the individual in the pictures and analysis was undertaken on their profiles. It is important to note here that some degree of subjectivity would have been involved in this kind of profiling as it is not possible to rely solely on their age and race. The author found that more than 60% people in the images were black, while whites were only 36%. These proportions were not in line with the actual space occupied by blacks and whites in the United States (U.S.) poverty as per the then latest population survey. In terms of the pictorial representation of adult poor getting social security benefits, author found considerable divergences between the true proportion and the pictorially depicted proportion. This was so for whites, African, American, Hispanics and others (Asian American, Native American etc.). African Americans were particularly over-represented as social security beneficiaries. With reference to the age-based pictorial representation of blacks as poor as well as their representation as sympathetic and/or deserving poor for elderly poor, almost correct representation of blacks was found. In terms of gender, adult non-elderly black males were more represented than the females when compared to their actual proportions in the population survey data. Whites were found to be highly depicted as poor during the Great Depression Era.

Moore (2002) ventured into the linguistics and epistemological nature of economics textbooks. The author began the investigation by looking into two kinds of studies in the area of textbook analysis with reference to Economics, Sociology and Physics (ESP). These were the studies that focused on either pedagogical or epistemological aspects of ESP textbooks. The author found considerable differences in terms of the primary objective of these two kinds of the studies with the epistemologically motivated studies found to be focusing more on the fundamental association between knowledge construction and the nature and character of language used in a typical ESP textbook. Drawing on the analytical framework developed by Myers (1992), the author attempted an analysis of the way in which knowledge about a discipline was put forward to UG students across ESP. Two possible ways of presenting key knowledge and ideas about a discipline were hypothesized, namely that of presenting ideas as facts, called the factive form, versus that of presenting knowledge as tentative truths, called the provisional nature of exposition. The author defined the basic framework developed by Latour and Woolgar (1986) who provided a five-fold classification of statement types based on the degree of factual correctness of knowledge that is presented in the published resources. The author notes that factual correctness could not be derived from the differences in the variation in the agencies of clauses, but rather required information on the agent who precisely did the reporting of given knowledge as contained in a statement or in other forms. Another key problem in the popular frameworks used in this context was the difference between propositions that were not attributed to any human agency versus those that were explicitly associated with a human agent. To further resolve this distinction, the author utilized the idea of the so called metaphenomenal discourse as initiated and popularized by Halliday (1994). There, a clear distinction was made between

phenomenal versus metaphenomenal propositions. The former consisted of non-perceptive statements while the latter consisted of the perceptive and linguistic propositions. Clausal realisations that transformed the projecting process into the nominal thing and projecting participants into possessives, among others, were focused upon in order to derive insights into extent to which metaphenomenal discourse was evident in the textbooks of chosen disciplines. The author focused on the textbooks of ESP that were used at UG level at an Australian University.

The above study further looked into the prevalence of metaphenomenal sentences across textbooks of ESP and found considerable variation in both the process and the participant that were analysed. A critical finding of the author was that in terms of the processes that were linguistically depicted across ESP, sociology was found to have had a higher degree of metaphenomenon, while surprisingly economics was found to have had less metaphenomenon than physics. Another key finding of the study was that economics and physics, as against sociology, were characterised by signification verbs that attempted to conventionalize certain modes of thinking rather than just asserting arguable propositions. It was also found that in terms of epistemological closeness, physics and economics were quite closer to each other in terms of being factual about their theoretical and empirical claims, while sociology displayed a more speculative tone. With reference to the metaphenomenal findings, which were measured by the number of participants who were mentioned or appealed to in a textbook, sociology was found to have had the highest number of instances, 225 to be precise, as compared to just 23 and 51 for economics and physics respectively. Finally the author provides some speculative comments on the possible causes of a higher degree of metaphenomenon in sociology as compared to the other two chosen disciplines. Three major frameworks were utilized so as to understand the above findings, namely, the extent of disciplinary maturity, the epistemological boundaries of disciplines and the extent to which ideological differences were suppressed in textual discourse. This study has delved considerably into the issues pertaining to cross-disciplinary differences in the linguistic foundations of key textbooks used across chosen subjects with a special emphasis on the so called metaphenomenal nature of both the disciplinary processes and disciplinary participants as applied to in the chosen textbooks. However, the linguistic framework used in this study seemed to be more focused on the epistemological issues rather than ontological and moral dimensions of the chosen textbooks. Furthermore, the sample size of the study appeared to be quite limited and perhaps a larger sample across the chosen disciplines might have thrown much more intense light on the issues analyzed here.

White (2003) undertook an investigation of the linguistic aspects of the way in which variation in economic aggregates is expressed via the use of metaphors in economics textbooks. The author also made use of collocations on the term “growth” in order to lay down the foundations for the analysis of metaphors and collocations, the author suggested that his focus on specialist economic writings while mainly using the articles of British Press and particularly the financial times for last 10 years were well-founded and to some extent could not reveal similar patterns as evident in journalistic writings on economics. The author analyzed the metaphoric use of the term “growth” in economics and the extent to which it dominated the discourse in its metaphoric form rather than lexicomorphological form. The focus of the author was to understand the varying

metaphoric usages of the term “growth” in economics. The study also analyzed the core sources of the metaphoric use of growth in economics with reference to the world of plants and animals and humans. The key findings included the characterization of growth as an “organic” process linked with plant, animal and particularly with human life and world. Hence, resemblance of usages of growth with those of organic processes such as growing, death, depression, aggression, etc. were observed in the chosen discourses in economics. Additionally, the semantic and syntactic usages of growth varied within and across these different organic metaphors. The author then analysed the mechanical metaphors with reference to which growth was used in selected writings. Prevalence of mechanical metaphorical uses in economics along with natural and organic metaphorical representations was analyzed and various factors, including the semantic similarities between economics and mechanics were studied. It was also found that the natural metaphorical uses of growth represented vertical movements while mechanical uses showed horizontal movements. Furthermore, dynamism and the need to depict continuity dictated the uses of natural versus mechanical characterization of growth in economics. The author investigated the possibility of observing above mentioned results and the connection of “growth” with certain words through lexical priming, and found that the systematicity in observing the combinations of growth and other words in economics could not be fully explained by natural tendencies of associating related words. Moreover, certain unrelated words too appeared with growth and hence the metaphorical use of such combinations of possibly unrelated words, as against their purely lexical use, was found to be predominant in economics discourse. The focus of this study was primarily upon journalistic writings and somewhat partially on economics texts and journal articles. The findings seem to be quite sensitive to the nature of the sample and probably, a more comprehensive picture could have been unearthed, if the author were to include more academic and policy-oriented discourses, rather than mainly focusing upon journalistic discourse on Economics, for the analysis conducted here. Lastly, as Alejo (2010) notes, focus on journalistic writings might not yield results readily appreciable to economics proper.

Robinstein (2004) provided a detailed investigation of the interactions between economics and linguistics by looking into the detailed cross-disciplinary interactions between the both. The first part of this work dwelled deeper into the application of economic methods such as optimization under scarcity constraints, tradeoffs, opportunity costs, game theoretic tools etc. to the nature, development and structure of languages, in particular English language. In the second part of his work, the author applied linguistic analysis to understand how a given language or a finite knowledge could act as another constraint on the decision making behaviour of economic agents. Finally, the author investigated the rhetorical nature of game theory, particularly its use of “strategy” and concluded that game theoretic strategies were more of semantic devices meant to convey an abstract notion of strategic behaviour rather than to represent real-world strategic choices. The language of game theory was thus found to be more driven by linguistic richness and rhetoric rather than real- world considerations.

Kalmi (2007) examined the coverage, disappearance and determinant factors of co-operatives from economics textbooks, covering the economics textbooks used at university of Helsinki during the period 1905-2005. Both the quantity and quality dimensions of coverage of co-

operatives were focused in this study. The author utilised the reference books from his university's official curricula so as to minimize 'selection bias'. The author also hypothesized a shift in the coverage of co-operatives before and after the period of World War-II. The methodology consisted of counting the number of pages that discussed co-operatives and whenever a passing reference was made, a value of '0.25 page' was allotted. However, such counting was not done/included where detailed discussions of co-operatives existed. It may be noted here that the study did not take into account all possible aspects and definitions of co-operatives, though, forms of ownership closer to pure co-operatives were included. Moreover, the sample was solely focused on one university and cross sectional heterogeneities could not be accounted for. The findings of the author were striking. The results revealed that whether "related issues" were included in the main sample or not, quantitatively, the discussions on co-operatives were significantly lesser in the post World War-II period. Not only that, but the average proportion of total pages of a book that discussed about co-operatives had fallen significantly, but remained insensitive to inclusion or exclusion of related issues. The author examined the authenticity and statistical reliability of their sample and concluded that the selected sample was comparable and broadly similar to other possible samples from different origins of books (such as different countries or from other universities). The comparative analysis of the "quality" of discussion on co-operatives, broadly defined as the intensity of discussions, themes covered, number of pages devoted to co-operatives related discussions etc., revealed that after the World War-II, the quality of discussion on this topic deteriorated with more emphasis on shareholder and privately owned firms rather than cooperatively managed economic entities. The causes of these observations were located in the declined economic importance of co-operatives in neoclassical economics in the post World War-II era and the subsequent Keynesian shift that increased the role of state in economic activities, and, the changed role of economists from local solution givers to top-down state managed agents for finding solutions to economic problems. An important criticism of this study could be that it related increased role of state and subsequent "top-down" approach to economic issues with emergence of neoclassical economics only, while ignoring the role of Keynesian revolution in contributing to the fall in attention devoted to co-operatives in economics texts. Besides, the study was restricted to reference books of a single university, while also ignoring the nature of references and discussions of co-operatives from other countries, particularly poor and developing nations where economic role of co-operatives is more prominent than developed countries.

Leet & Lopus (2007) examined the 11 high school economics textbooks used in the U.S. with reference to the 20 voluntary National standards in Economics education of the U.S. Out of their population of all possible high school texts, the authors arrived at 11 texts which were, according to their evaluation, most suitable for their objectives. Their analysis was conducted with the objective of investigating the extent to which the official Voluntary Standards, as published by the U. S. Government, were prevalent in the chosen textbooks and other analytical matters on the nature of contents, structure of the contents and the key topics covered, etc. Among their other findings, they found that most of the 11 chosen texts broadly covered all major standards, while they seemed to be missing sufficient coverage of the issue of "government failure". Another key finding was that most of these texts lacked sufficient analysis/discussion on the differences

between needs and wants in Economics. As far as the accuracy of key concepts as elucidated in the voluntary national standards was concerned, the study found that these were accurately covered & some texts even covered additional concepts other than those officially prescribed. The analysis was not exhaustive in the sense that a very narrow set of “standards” were utilized for evaluation of texts. More controversial and debated dimensions related to the ideological flavours of texts, the extent of pluralism versus monism, diversity with reference to different schools of thoughts, etc. were completely overlooked. Moreover, the reliability of such “standards” as universal criteria for judging the quality of texts seems extremely questionable given the lack of universal character of economic concepts & theories.

Alejo (2010) undertook an analysis of the “container” metaphor in economics from an applied linguistic perspective delving into the prevalence, nature & use of such metaphors in economics discourse. The author first differentiated between economic analysis of metaphors versus their linguistic study stressing on the “bottom-up” approach that tries to pin down the more general & non-specialized sources of metaphorical uses in economics. By using qualitative analysis based on his own understanding about the issue with reference to the usage of the container metaphor, the author selected 8 introductory Economics textbooks, which incidentally had 3 references by Gregory Mankiw. The author defended his focus solely on the container metaphor by examining its relevance for Economics textbooks with reference to its universal nature, topological & spatial flexibilities. Mechanistic representations and analogies in Economics were found to be an important source of prevalence of this metaphor in the discourse. The study found that the physical place connotation of markets was frequent in the chosen texts, with preposition ‘in’ being used frequently with the word market rather than ‘at’ or ‘on’. Furthermore, the verbs collocated with ‘market’ were also of container type metaphors such as enter, go to, have, contain, etc. Another key finding was that the lack of awareness of linguistics foundations & even the implications of using such metaphors resulted in several rhetorical inadequacies in the ways in which Economics was introduced to UG students. However, the author found the linguistic strategy of Samuelson & Nordhaus’ book to be quite appropriately structured and well narrated in terms of its linguistic dynamics such as the semantic and syntactic structure of the sentences introducing market to students, the metonymical strategy of introducing market, proceeding to more abstract notion of the same, etc. Thereafter, the author investigated the notion of economy as a container in a metaphorical sense and concluded, among other findings, that the container metaphor had allowed the co-existence of evidently contradictory metaphors namely organic and mechanistic metaphors in introductory economics discourse. Lastly, the study found that the container metaphor was ignored as a source of metaphoric imagery despite it having moved from a mere terminological usage to a more discursive use in the chosen Economics literature.

Ravallion (2011) did a detailed investigation of the incidence of “poverty” as contained in Google word searches based on the database of Google Books Ngram Viewer, across the period 1800 to 2000 covering large corpus of English books across diverse subjects and areas. As the disaggregated data across different disciplines in any of the covered languages were not available, quantitative insights specific to the different disciplines could not be investigated by the author. The number of times a particular word such as ‘poverty’ and its related words



occurred as a proportion of total number of words in a given year formed the foundation of this study. The findings were extrapolated to the whole population of the world, despite noting some possible biases in the very construction of the Ngram database. The author, among other findings, found two critical temporal shifts in the incidence of poverty as a word in English discourses, namely in around 1770s and then again in 1990s, which he termed as the two Poverty Enlightenments. With reference to the surge in interest in 1950s, the author concluded that increased attention and concern with poverty in developed nations like U.S. and the increasing awareness about extreme deprivation and poverty by public in the developed world contributed to the same. With reference to the increase in interest in poverty during the 1750s and thereafter, as measured by increased incidence of the word 'Poverty' as a proportion of total English words, the author focused on Economic writings of Adam Smith, David Ricardo and some other classical economists to unearth the linguistic quality of their conceptions and views on this issue. The study found that the status of poverty even in the writers' work was largely unchallenging and an absolutist conception of poverty was evident in their works. Moreover, it was evident to the author that insistence on markets and laissez-faire capitalism resulted in the view of classical economists that poverty was an inevitable result of market dynamics. Further, the author located the French Revolution and its aftermath, increasing scientific research on social issues, seminal works by Boothe and Rowntree in the mid and late 19th century, pro-poor views of economists like Alfred Marshall, etc. to be the primary causes for an increase in interest in poverty both during the first Enlightenment stage in around late 18th century and in the time period between both the Enlightenments. Further and lastly, the author investigated the incidence of words related to poverty such as inequality, class, crime, indigence, destitution, "the poor", absolute poverty, relative poverty, welfare dependency, deserving & undeserving poor, unemployment, inflation, poverty gap, political economy, socialism and several others. Attempts were made by the author to analyse the interconnections among the incidence of these words in English and even, to some extent, in French literature across the Google Books Ngram Database. The author concluded that the interest in poverty, as per the measurement criteria adopted and narrated earlier, had increased since the first enlightenment, though it manifested itself in more complex forms as evident by the increase in references to words closely associated with poverty. This study relied solely on the Google Books database which might not be fully representative of the underlying reality on this issue. However, given the lack of any other such large-scale database, the work and efforts of the author deserve great appreciation.

Sleeter & Grant (2011), even though not directly related to Economics, investigated the extent of racial representation and equity across social & pure science books for the books with copyright between 1980 and 1988 in the U.S. The authors undertook their analysis across six different methods namely picture analysis, anthology analysis, "people to study" analysis, language analysis, story-line analysis and miscellaneous methods. The study found that the textbooks studied in the paper displayed a rather poor performance on equitable representation of races & ethnicities and also that books across subjects were returning to a more white & male dominated curricula.

Madsen (2013) undertook an exhaustive text analysis of 12 popularly used principles textbooks by examining the variations over several editions in five major components of these texts,

namely, their preface, index entries, concept entries, summaries & separate chapters on financial crises (if any) over their previous few versions vis-a-vis their current versions. The author noted that fundamental changes, as against adaptive changes, would occur with considerable lags and found that the intermediate texts in Economics were already undergoing the process of paradigmatic shift due to the financial crises shock. The author firstly presented his quantitative analysis in terms of new entries on and related to financial crisis, number of different concepts introduced, number of reused concepts, number of pages and number of pages with boxes. The distribution of books across all these variables varied considerably. However, the textbooks by David Colander and Paul Krugman & Robin Wells emerged dominant in terms of their adaptability and change with reference to the 2007-08 crises. An important result was that financial crisis was treated, across all the 12 textbooks, on an average as a macroeconomic phenomenon. Further, in terms of the qualitative findings, the prefaces were analyzed and only slight changes were found which were hardly corroborated by the structural changes in main text. In terms of concepts related to financial crisis, 'default', financial crises', 'investment bank', and 'lender of the last resort' were found to be the modal concepts across the books chosen. However, in terms of concepts unique to financial crisis are concerned, Troubled Asset Relief Program (TARP), stimulus, and mortgage backed securities were found to be the top three entries in chosen texts. Additionally, "financial crisis" was found to be a new entry in all texts except the 2016 edition of the textbook by David Colander, while in terms of the treatment of financial crisis as a part of the core contents and discussions, most of the texts treated it separately rather than interspersing it into the body proper. When the nature of discussions of crisis was analyzed with reference to the summaries of sample books, it was located that these summaries did not exhaustively or thoroughly mention about the financial crisis. In terms of integration of financial crisis into the main body of the text, author found limited evidence of serious attempts to discuss those, especially in macro sections and summaries with few books focusing Monetary and Fiscal policy angles of the crisis. Finally, the author suggested some strategies to make financial crisis a more important part of the mainstream discussions of principles textbooks.

Mitchell (2016) was an elaborated and exhaustive study of the nature, structure, forms, social characteristics and other aspects of the kind of language employed by economists in analyzing issues pertaining to inequality. The author stressed on the social nature of the constructs and vocabularies employed by economists studying inequality issues. The author found that the linguistic nature of economic writings on these matters displayed an uncritical and universal understanding within a free market framework while ignoring many defects in the mainstream approaches in economics as pointed out by critical discourses such as behavioural economics. In addition to these findings, the author also found, by a critical analysis of various discourses in economics on the issue of inequality, that the transitions from metaphors to facts and vice-versa were many a times characterized by value judgements that were not thoroughly scrutinized and critically analyzed beforehand. Finally, the author found that language of economics in inequality discourse had remained immune to the categories, concepts, linguistic features etc. of other social sciences.

A thought-provoking study that provides some critical insights into linguistics as it has been applied to the domain of economics has been undertaken by Mavisakalyan and Weber (2017) which examined some important and emerging works in the economic analysis of languages and their impacts on economic outcomes. The study focused on the ways in which linguistic structures, as defined by Gender representation, Tense structure, Pronoun use and the Moods of the verbs, determined economic outcomes both at individual and at larger aggregative levels. The study unearthed considerable insights on this issue and found considerable evidences on the theoretically and empirically significant impacts of differences in linguistic structures across economic outcomes of speakers of different languages. Theoretical and Econometric issues in differentiating between systematic as well as non-spurious causal connections among linguistic structures and economic outcomes were also highlighted among other issues. The study provided good amount of bedrock for future attempts in this area.

Dontcheva-Navratilova (2018) examined the sources of rhetorical variations across linguistic and economics research articles by analyzing the variations in the use of epistemic and lexical verbs by English Anglo-phone and Czech scholars which were a part of The Corpus of English & Czech Specialized Discourses (CECSD) with articles published in six linguistics and six economics journals for the period 2006-2018. The author chose 48 articles, 12 per discipline and cultural background to understand links between rhetorical variations and disciplinary & cultural differences. The focus on epistemic lexical verbs allowed the author to understand the degree of 8 strategies used for persuasive writings across chosen disciplines and cultural characteristic. Persuasion is semantically represented by epistemic use of lexical verbs in the form of particular ways of representing and/or communicating claims about knowledge in written discourse. Believe, infer, seem, etc. are some illustrations of epistemic lexical verbs, which are a part of the family of epistemic modalities that consist of epistemic nouns, epistemic adjectives, etc. The analysis focused on 34 epistemic lexical verbs spread across four categories, namely, speculative judgement verb, deductive judgement verbs, evidential quotative verbs and evidential sensory verbs. These sub-types were categorized as judgement verbs, i.e. those expressing the perception/expression of the factive status of events by the writer, and evidential verbs, i.e. those indicating the nature of the source of knowledge. The first category included speculative and deductive verbs, while the other two formed a part of the latter category. The methodology consisted of estimating the normalized rate of occurrence of these verbs as a proportion of total words across discipline and cultural background. Judgement verbs were found to be used more frequently by Economists, while evidential verbs were employed more by linguists. In terms of inter-disciplinary cultural variation, English writers used both judgement and evidential verbs more than Czech authors in Economics discourse, while the same trend was evident in linguistic discourse. The linguistic writers were found to employ epistemic lexical verbs that stressed more upon speculation as compared to Economists in the sample. With reference to the distribution of these verbs across major sections of research articles is concerned, English Economists occupied highest share in Introduction, Results and Discussion sections, while Czech authors occupied a large space in terms of the Method section. The variations in rhetorical choices expressed in the form of using various epistemic verbs clearly displayed cultural and disciplinary heterogeneities in this study. However, the author's sample did not seem fully representative of the population of interest and moreover, the singular focus on verb usage, clusters and structure might not fully

represent the epistemological nature of languages employed by writers from different disciplines and cultures.

6. Insights and Issues in the application of linguistics to Economics discourse

The key issues on linguistic and economic dimensions that have emerged through this survey require great deal of understanding not only for intellectual exercise but also to put things in larger perspective for professional practices. The aim here is to provide some broad overview of the kind of issues, problems and evolution of philosophical ideas for making clear-cut inroad into various pillars on which the linguistic dynamics evolved over the economic analysis. The constructs on the theme, as evident from the above discussion, are presented in the form of critical evaluation.

6.1. Basic Units of Analysis

The primary concern of economic linguistics has been the analysis of a single or a group of similar linguistic units such as textbooks pertaining to foundations of economics, newspaper articles and research articles. The focus has been to bring to light the linguistic dimensions of specific thoughts on economics while the comparative cross-sectional analysis on the variations in linguistic patterns, for example the rhetorical strategies, across different units of analysis such as articles, books, etc. is missing at least in the selected studies. In particular, the studies have focused on the patterns, incidences and broad qualitative features of the writings by academics, while the analysis of writings of economists who are involved mainly in policy-making is limited. In other words, linguists have probably given more weightage to academic discourse in economics, and this might possibly imply that their primary concern has been to understand the ways in which economic knowledge is produced and transmitted, rather than the ways in which it is applied at policy-levels. Comparative studies that account for linguistic variations across different kinds of writings leave considerable scope for future work. Lastly, a large corpus of studies has focused on the developed world with very little attention to the economics writings in developing nations like India.

6.2. Dominance of Mainstream Economics discourse

A common pattern across the studies covered is that the linguistic foundations of popularly used textbooks, articles and other writings in economics have received much more attention than the so-called heterodox or non-mainstream writings. This preoccupation with mainstream economics discourse might be an outcome of the high commercial and academic popularity of such introductory textbooks as those by Samuelson, Mankiw, etc. Moreover, the reach of these books, articles and other writings are very high compared to the non-mainstream economics works. However, given that ideological differences can invite variations in the linguistic strategies employed, lack of focus on writings from other schools of thoughts in economics such as Marxian, post-Keynesian, etc. might provide distortionary picture of the linguistic reality of economics at the cost of the true underlying reality which might not be driven by commercially popular and highly demanded texts and articles. In other words, the ideological sensitivity of

economics can be further investigated by looking at linguistic differentials across writings from different economic ideologies and schools of thoughts.

6.3. Cross-sectional linguistic differences versus temporal linguistic variations

The available discourse on the present topic provides good amount of insights into the variations in linguistic nature of works in economics across spaces such as different units of analysis, different cultures, different disciplines including economics, etc., but the differences in the findings across time for a single spatial unit such as an economics textbook, as well as for multiple spatial units such as textbooks, articles, etc., across different time periods have received very limited focus. While some studies look at the changes in the expository language and its various manifestations in principles of economics textbooks across different editions, this kind of concern has not received much of an exhaustive attention. Such a study can probably shed more light on both the short run and long run sensitivity of the language used by economists to the larger non-economic developments around them, as expressed in the way they put their analysis and arguments on paper and, in other communication mediums.

6.4. Cross-disciplinary and Intra-disciplinary linguistic variations

The language and its forms as evident within the various sub-disciplines in economics and across major social sciences including economics have received inadequate attention, particularly in the last decade or so. Especially, an investigation of the differences in languages of economists of different persuasions remains a grey area in the international context. Studies did focus on the linguistic variations across social sciences and even compared economics with pure sciences such as physics on various linguistic characteristics, but the amount of attention and the intensity of analysis have remained at best insufficient. The ways in which economists from different schools, as well as from different sub-disciplines, develop their arguments and analysis can be helpful in designing more pluralistic academic and training programmes of Economics, which have already become important concerns in the global context particularly after the 2007-08 financial crisis emanating from the United States (U.S.). Good amount of scope for further work remains open on this account.

6.5. Principles of Economics textbooks versus intermediate and advanced writings

The evidences surveyed here reveal that one of the foremost concerns of linguists has been the undergraduate education in economics in terms of the kind of language and linguistic features adopted in popular and major textbooks. These studies have shed light on many dimensions of the ideological, moral, political and other non-economic dynamics of these works. Some authors have gone to the extent of stating that a key feature of the field of economics “has been the number of remarkably similar textbooks written for the introductory-level market place in higher education” (Richardson, 2004). Given such homogeneity in terms of core contents and structure of the undergraduate level textbooks, the limited focus on intermediate and advanced writings of economics, where diversity might be expected to prevail relatively higher also deserves urgent attention. The discourse at more sophisticated levels of analysis in economics might display very different linguistic behaviour and the knowledge of major shifts in the linguistic behaviour that can be used when a student or a reader moves from basic to more matured writings can allow for much better understanding of linguistic disparities across different levels of expositions in economics. The use of metaphors, for example, across undergraduate and post-graduate

economics education can further illuminate the ways in which key economic ideas are communicated to students and the merits and demerits of such communication strategies. However, some studies that have focused on research articles do have taken into account writings used at different levels of academic hierarchy in economics, though such studies are only few.

6.6. Core quantitative approaches used

Studies in the present context have made intense use of frequencies of occurrences of words as a proportion of total words or some kind of ratio variable using similar logic. Even though the very concept of frequencies as causal tools in linguistic analysis has been brought under critical scrutiny (Willems, 2014), their persistent use is probably a hallmark of their importance and computational ease for applied quantitative linguistic analysis of economics discourse. Moreover, it probably also implies that the data in terms of digital written records of economics have been improving continuously and thus the supply of corpus of written material in the forms of verbs, nouns, adjectives, their sub-types, their combinations, metaphorical representations, rhetoric structures, etc. might have been rising. Furthermore, the studies focusing upon textbooks primarily rely upon word count databases such as that of Google Ngram database, while those analyzing research articles have been found to depend on both, suitable word databases of concerned research articles as well as the data on classifications of key topics, keywords, etc. such as those of the Journal of Economic Literature (JEL) in order to understand the cross-sectional and sometimes temporal variations therein. A cautionary note here is that the criticisms levied against economics texts based on their quantitative linguistic patterns by using word count, sentence structure, etc. ignore the costs of adjusting textbooks to linguistic efficiency in terms of possible loss of economic efficiency. This might occur due to scarcity of space in a textbook, article, etc. and the inevitable tradeoffs between linguistic goodness versus economic clarity. Such concerns need to be addressed through an amalgamation of both the linguistic foundations of economics and the economics of languages.

6.7. Metaphorical nature of the language of economics

The use of metaphors in Economics has been an intensely debated and discussed issue. Its impact resonates across major events and perceptions about economic events. Paul Krugman, in one of his article on his New York Times blog, went to the extent of stating that “bad metaphors make for bad policy”. The use of metaphors in economics might result in the overlapping of substantive meanings with mere analogies. Such is the power of analogies that their continued use seems to penetrate the common discourse and probably replace its substantive, context-specific meanings with universal analogies devoid of any underlying solid conceptual base. However, metaphors have also been found to introduce linguistic richness in economics and lend much better communication efficiency when utilized appropriately. As the evidences that are reviewed here reveal, metaphors in economics can be classified into three kinds, namely, organic, mechanistic and hybrids that use both. These metaphors “consequently establish mappings from one domain to another” (Lakoff and Johnsen, 2003) and can thus allow the linguistic flexibility to economists, and particularly to economics teachers, to drive home ideas about technical concepts much easier to the minds of readers and students.

6.8. Text Analysis and Discourse Analysis as dominant methods

The rhetoric, metaphoric, semantic and syntactic and, other linguistic features of the English language as employed by economists have been routed through text analysis and the broader discipline of discourse analysis. Studies have attempted to understand the language of economists not only in purely linguistic terms but also in terms of their natural settings and evolution. The impact of language and its characteristics such as accent, grammatical structure, etc. on economic and non-economic outcomes has received considerable attention. Intricate patterns of epistemic verb usage, for example, have received enhanced focus and the thrust has been to quantify the patterns hidden in not only the groupings of words, but also in the broad qualitative characteristics of the sentences and their combinations as used by different written economic sources. This has led to increased focus on detailed patterns of the usage of different components of languages across the books and articles of economics and, discerning broad regularities while also attempting to link them to non-economic variables such as the cultural backgrounds of writers, among others. The future scope of employing quantitatively more sophisticated linguistic analysis on economics writings is vibrant due to advances being made not only in computer technology but also in fields such as evolutionary linguistics, evolutionary economics⁶, etc.

7. A Note on the Indian Scenario

Languages occupy a significant portion of the overall cultural space in India. India being a multilingual country, the diversity of languages and their accents and dialects are vast. While a limited number of languages are a part of the scheduled languages of the country, large number of other dialects and hybrid languages are spoken across the country and some of which are included in the non-scheduled languages of the country. Among the scheduled languages spoken in India, Hindi, for example, has several different dialects whose linguistic structures in both writing and speaking differ considerably across various states. In terms of non-scheduled languages, English is another example of a language with several dialects such as the American, British and the Indian dialects which vary across the states in India.

A brief look at the evolution of scheduled languages⁷ in India shows that the average number of speakers falling under these languages has increased more than two folds since 1971 and that while the average decadal percentage increase for the country has fallen from 26.71 percent to 15.18 percent per decade, the increase in absolute terms is still large and the average decadal growth rate since 1971 is still positive and significant. Similarly, non-scheduled languages have shown almost a two-fold rise in the average number of speakers across the country and the average decadal growth rate of the same too, despite having fallen from 26 percent per decade to 14 percent per decade since 1971, is significant and positive. Even when looked from the angle of median behaviour of these languages, non-scheduled speakers have risen by 1.6 times since 1971. An important fact is that the distribution of speakers across different non-scheduled languages has become less unequal in 2011 as compared to previous periods. Among the non-scheduled languages, English has shown a 135 percentage rise in absolute terms since 1971 and the average decadal growth rate in the number of speakers of the same have also risen from 5.66 percent in the period 1971-81 to 14.67 percent per decade in the period 2001-2011. English continues to grow substantially in India as its speaker base has risen considerably since 1971 census.

Economics, as it is taught in India, is primarily through English medium across all levels of courses ranging from school education to post-doctoral education. In such a scenario, the increase in base of English speakers in the country, coupled with the improvement in literacy rates in India, possibly implies the future growth in economics discourse relevant to the higher education, assuming that the demand for economics courses in India also continues to grow positively and steadily in years to come. There are already many Indian publication houses that cater to the needs of undergraduate and post-graduate students of economics courses in India, including those of non-economics majors such as management, commerce and other disciplines. Large number of publications on microeconomics, macroeconomics and other sub-disciplines by Indian publishing houses and Indian authors are already present in the markets and their use is also widespread as can be cursorily examined from the official reference books of Indian universities. Given such a background, it is surprising to find that there are no studies that have focused on the linguistic dynamics of economics textbooks and articles specifically published by Indian publishing companies and authors which are mainly targeted at Indian students and readers. In terms of research articles, the articles as published in Indian journals such as the Economic and Political Weekly (EPW), among others, too have not been subjected to any exhaustive linguistic study. Such a lacuna comes as a surprise and they leave good amount of scope for researchers to delve deeper into such an investigation purely in the Indian context.

8. CONCLUDING REMARKS

The analysis conducted above reveals considerable insights into the linguistic features of economics discourses internationally. An important fact that can be noticed in the present study is that microeconomics, at least as it is taught at the undergraduate levels, has remained somewhat immune to linguistic criticisms even after the 2007-08 financial crisis. The differential impact on microeconomics versus macroeconomics of linguistic studies provides a fascinating scope for future works. Stressing more on the nexus between education in economics and linguistic analysis, particularly metaphoric and rhetoric constructions that are used in introducing economics to students, can improve the policy of designing optimal mix of competing thoughts in framing economics courses. Moreover, the international concerns with the need for more pluralistic economics curricula across different levels of education can be achieved more fruitfully if the languages of economics are diversified to cater such needs.

This study has also revealed that language and economics continue to interact in complex manners with the focus of linguists being the verbal, pictorial and textual contents and constructions as deployed by economists. The nature of these enquiries, beginning with the classic works of Donald McCloskey, are continuously evolving and flourishing by inclusion of more detailed quantitative analysis combined with better qualitative insights and cumulatively improved understanding of the language of economics. Issues ranging from the basic unit of analysis to the various methods and approaches used in the study of language and its structure as displayed by writings in economics were briefly touched upon. The applied linguist faces good number of challenges when confronted with economics discourse and further innovations and even theoretical and empirical inventions would be needed to dig out more analytical insights from the verbal and to non-verbal recorded literature in economics.

Finally, apart from our analytical observations, it is important to note the stark lack of attention to this issue in the Indian context and in face it can be fascinating exercise if one could analyze the heterogeneity of linguistic dynamics on economics across all the states. Lack of attention primarily given to the empirical analysis of linguistic dynamics of economics in India partly can be traced to the mechanical application of ideas produced in the developed world and lacklustre attempt to rejuvenate linguistic studies that can give dynamic discourse on Indian economic thought. Notwithstanding the considerable progress in the research on linguistics *per se*, the multidisciplinary aspects of combining sciences, particularly economics, has not been impressive given the fact that research in economics is itself have grown manifold in India. Linguistic applications to economics text, articles and other published works like monographs, edited volumes, etc. should be given priority as the very economic ideologies and policies depend on how well the communication and understanding of the same are created across the mass.

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NOTES

1. The efficiency of a language has been found to be highly conditional upon the economic characteristics of its structure and features that contribute to its long-run survival. A seminal study in this regard was Marschak (1965). It had a long-lasting impact on the research since its publication and continues to resonate in several works in the study of Economics of Language.

2. Problems are expected to arise when intra-disciplinary and inter-disciplinary exchanges of ideas and findings occur. In such scenarios, linguistic equalization of the concepts and categories across different schools of thoughts and different disciplines would be warranted. Metaphors might serve as one medium, among others, for transforming concepts from one conceptual domain into another as suggested by Lakoff and Johnsen (2003). However, research on this aspect with reference to Economics is limited and inadequate.

3. Structure of a language has generally been understood with reference to its semantic and syntactic properties and the combinatorial rules that govern them. Economists have off-lately increased their attention to the application of linguistics to Economics. More analysis on the major works, insights and analytical dimensions on the Economics of Language can be located in Mavisakalyan and Weber (2017).

4. Following Ravallion (2011), this paper looks at the long-run and recent trends in the references to the chosen words as a proportion of total words in that year in the Google Books Ngram database, in order to unearth some interesting patterns and insights related to the change in importance of both the disciplines and their inter-connections. Detailed analysis of the Google Ngram database along with the ways in which it has been constructed can be found in the above mentioned study. The author also discusses some of the key limitations such as presence of noise in the data, its lack of representativeness, etc. and the empirical plausibility of the database for linguistic analysis of economics and other discourses.

5. Frequencies of words as proportion of some total corpus of words form the bedrock of the corpus-based quantitative researches in the application of linguistics to other fields, including economics. However, criticisms have been levied against this approach primarily on account of lack of any a priori and strong correlation between frequencies of words and their actual use in day-to-day life by speakers. More analysis on this theme can be found in Willems (2014).

6. The inter-connections between evolutionary linguistics and evolutionary economics have received some attention off-lately. Hashimoto (2006) provides a brief analysis of the ways in which both the disciplines “can collaborate in understanding of complex evolutionary phenomena”, including the evolution of language of economics across different time periods and spaces.

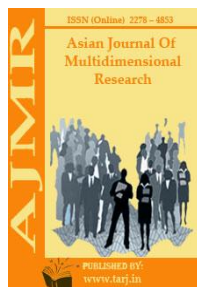
7. The data on the growth and distribution of scheduled and non-scheduled languages of India, as presented in this section, have been collected from the 2011 Population Census, Government of India. As of now, there are 22 scheduled languages and 99 non-scheduled languages in India as per the latest Census.

REFERENCES

1. Alejo, R. (2009). Where does the money go? An Analysis of the Container Metaphor in Economics: The Market and the Economy. *Journal of Pragmatics*, 42, 1137-1150.
2. Blaug, M. (1986). *Great Economists Before Keynes, An Introduction to the Lives & Works of One Hundred Great Economists of the Past*. New York: Cambridge University Press.
3. Blaug, M. (1985). *Great Economists Since Keynes, An Introduction to the Lives & Works of One Hundred Modern Economists*. New York: Cambridge University Press.
4. Chomsky, N. (1957). *Syntactical Structures*, The Hague: Mouton.
5. Clawson, R. (2002). Poor People, Black Faces: The Portrayal of Poverty in Economics Textbooks. *Journal of Black Studies*, 32(3), 352-361.
6. Dadhich, N. (2014). The Indian Plural Mind. *Economic and Political Weekly*, 49(10), 39-46.
7. Dontcheva-Navratilova, O. (2018). Intercultural and interdisciplinary variation in the use of epistemic lexical verbs in linguistics and economics research articles. *Linguistica Pragmensia*, 28(2), 154-167.
8. Feiner, S. F., & Morgan, B. A. (1987). Women and Minorities in Introductory Economics Textbooks: 1974 to 1984. *The Journal of Economic Education*, 376-392.
9. Gallagher, D. and Thompson, G. (1981). A Readability Analysis of Selected Introductory Economics Textbooks. *Journal of Economics Education*, 12(2), 60-63.
10. Gillie, A. (1996). The Origin of the Poverty Line. *The Economic History Review*, 49 (4), 715-730
11. Halliday, M. A. K. (1994). *An introduction to functional grammar* (2nd ed.). London: Edward Arnold.
12. Hao, N. (2018). Literature Review of Language Planning and Language Policy since 21st Century. *Theory and Practice in Language Studies*, 8 (7), 888-892.

13. Hashimoto, T. (2006). Evolutionary Linguistics and Evolutionary Economics. *Evolutionary and Institutional Economics Review*, 3(1), 27-46.
14. Hazen, K. (2015). *An Introduction to Language*. West Sussex: Wiley Blackwell.
15. Hoaas, J. and Madigan, L. (1999). A Citation Analysis of Economists in Principles of Economics Textbooks. *The Social Science Journal*, 36(3), 525-532.
16. Hockett, C. F. (1958). *A Course in Modern Linguistics*. New Delhi: Oxford & IBH Publishing Co.
17. Kalmi, P. (2007). The Disappearance of Cooperatives from Economics Textbooks. *Cambridge Journal of Economics*, 31, 625-647.
18. Kent, L. and Rushing, W. (1999). Coverage of Entrepreneurship in Principles of Economics Textbooks: An Update. *The journal of Economics Education*, 30(2), 184-188.
19. Kosnik, L. (2015). What Have Economists Been Doing for the Last 50 Years? A Text Analysis of Published Academic Research from 1960-2010. *Economics: The Open-Access, Open Assessment E-Journal*, 9, 1- 39.
20. Krugman, P. (2010, December 12). Block Those Metaphors. *The New York Times*.
21. Lakoff, G., & Johnsen, M. (2003). *Metaphors we live by*. London: The University of Chicago Press.
22. Latour, B., & Woolgar, S. (1986). *Laboratory life: the social construction of scientific facts*. London: Sage.
23. Leet, D and Lopus, J. (2007). Ten Observations on High School Economics Textbooks. *Citizenship, Social, and Economics Education*, 7(3), 201-214.
24. Madsen, P. (2013). The Financial Crisis and Principles of Economics Textbooks. *The journal of Economic Education*, 44(3), 197-216.
25. Marschak, J. (1965). The Economics of Language. *Behavioral Science*, 10(2), 135-140.
26. Mavisakalyan, A., & Weber, C. (2017). Linguistic Structures and Economic Outcomes. *Journal of Economic Surveys*, 1-24.
27. McCloskey, D. N. (1995). Metaphors Economists Live By. *Social Research*, 62 (2), 215-237.
28. Mitchell, R. E. (2016). *The Language of Economics*. Palgrave Macmillan.
29. Moore, T. (2002). Knowledge and Agency: A Study of 'Metaphenomenal Disorder' in Textbooks from Three Disciplines. *English for Specific Purposes*, 21, 347-366.
30. Musacchio, M. (2015). Investigating the Language of Economics: A Linguistic Analysis and Translation of "Basic Economics" by T. Sowell. (Chapters 20 and 21). Padua: Anno Accademico.
31. Myers, G. (1992). Textbooks and the sociology of scientific knowledge. *English for Specific Purposes*, 11, 3-17.
32. Ravallion, M. (2011). The Two Poverty Enlightenments: Historical Insights from Digitized Books Spanning Three Centuries. *Poverty and Public Policy*, 3(2), 1-46.
33. Richardson, P. W. (2004). Reading and writing from textbooks in higher education: a case study from Economics, *Studies in Higher Education*, 29(4), 505-521.

34. Romanish, B. A. (1983). Modern Secondary Economics Textbooks and Ideological Bias. *Theory & Research in Social Education* (11:1), 1-24.
35. Rowe, B. M., & Levine, D. P. (2016). *A Concise Introduction to Linguistics*. New York: Routledge.
36. Rubinstein, A. (2004). *Economics and Language: Five Essays*. Cambridge: Cambridge University Press.
37. Sleeter, C. and Grant, C. (2011). Race, Class, Gender, and Disability in Current Textbooks. 183-215.
38. Urban, H. (2001). The Marketplace and the Temple: Economics Metaphors and Religious Meanings in the Folk Songs of Colonial Bengal. *The Journal of Asia Studies*, 60(4), 1085-1114.
39. Walstad, W.B., & Watts, M.W. (1984). A response to Romanish: Ideological bias in secondary economics textbooks. *Theory and Research in Social Education*, 11, 25-35.
40. Watts, M. (1987). Ideology, Textbooks, and the Teaching of Economics. *Theory into Practice*, 26(3), 190-197.
41. White, M. (2003). Metaphor and Economics: The Case of Growth. *English for Specific Purposes*, 22, 131-151.
42. Willems, K. (2014). Is frequency an explanatory causal concept in linguistics? *Energeia V*, 105-112.



PREVENTION OF COMPLICATIONS OF VARICOSE VEINS OF PELVIC ORGANS IN WOMEN OF REPRODUCTIVE AGE

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ABSTRACT

This research aimed to evaluate the effectiveness of Dioflan, the venotonic and radioprotector, in the treatment of pregnant women's varicose disease and its complications. We observed 25 women with the varicose disease (Chronic Venous Insufficiency-0-I) in the 3rd trimester of pregnancy. All women passed duplex angioscanning with small vessels color Doppler mapping and Doppler metric examination of the uterine-fetus-placenta blood circulation. It was established that 70.8% of pregnant women with the varicose disease of the lower extremities had varicosity of the uterine veins. In 64,6% of observations, we diagnosticated the hemodynamic disorders in the system of the uterine-fetus-placental blood circulation of the pregnant women with varicosity in the 3rd trimester. Against Flebodia 600, 79,2% of patients showed the regression of clinic symptoms of Chronic Venous Insufficiency, as well as 66.7%, gave the normalization of indices for uterine-fetus-placenta hemodynamics. Thus, Dioflan, the venotonic and angioprotector, provides a many-sided effect to the venous system of lower extremities and

the pregnant women's, having the varicose disease, hemodynamics state of uterine-fetus-placental blood flow, stimulating the reduction of disorders in the course of pregnancy and childbirth.

KEYWORDS:*Small Pelvic Varicose, Pelvic Pain Syndrome, Dioflan.*

INTRODUCTION

Varicose veins in pregnant women are a widespread pathology diagnosed in every fifth woman of reproductive age, with the development of the disease correlating with childbirth and childbirth in 96% of cases. Most often it appears in the system of a large, rarely - small saphenous vein and begins with the inflow of the vein of the vein on the shin. The influence of the hormonal factor on the venous wall occurs already in the first trimester of pregnancy. The increase in the size of the pregnant uterus from the second trimester increases intra-abdominal and venous pressure in the lower limbs and small pelvis, which is exacerbated by the presence of a large fetus, multiplicity, and polyhydramnios. This influence is especially pronounced in the last weeks before childbirth. As a result, various variants of varicose veins make up 5.6% of the total extragenital pathology during pregnancy. Practical gynecologist in his work often has to deal with patients in whom the clinic of pain in the lower abdomen is caused by varicose veins of the pelvis.

Varicose veins of the pelvis were first described in 1949 by N. Taylor, who noted in his work the relationship between the violation of uterine hemodynamics and the occurrence of chronic pelvic pain in women [1]. By sonographic studies, it was established that the varicose veins of the pelvis occur in 5.4% of conditionally healthy women, in 15.7% of women with diagnosed gynecological pathology [3]. Women with varicose veins of the pelvic floor complain of pain in the lower abdomen of the aching character, which increases with prolonged standing in the vertical position, after physical exertion, hypothermia, during intercourse. Often the pain radiates to the perineum, lumbar region [2]. The risk factors for the development of varicose veins of the small pelvis (VRVMT) are numerous and varied, such as working conditions, age, weakening of the ligamentous apparatus of the uterus and appendages due to obstetrical complications, gynecological diseases [4, 5].

METHODOLOGY

The use of ultrasound methods of investigation presents significant opportunities in diagnosing disorders of venous hemodynamics in pelvic organs in women. The high diagnostic value of ultrasound is the detection of organic damage to the venous system of the small pelvis at the stage of preclinical forms of the disease, which allows us to outline the ways of preventing varicose dilated veins of the small pelvis at the initial stage, and also to evaluate the results of treatment.

Pregnancy is often a trigger factor that manifests or causes symptoms of venous insufficiency and varicose veins. This association (venous insufficiency and pregnancy) is characterized by a rapid onset and appearance of symptoms and partial regression of them after childbirth. Treatment during pregnancy is aimed at eliminating symptoms and preventing complications.

The study aims to develop effective preventive measures to prevent complications in women of reproductive age with varicose veins of the pelvis and chronic pelvic pain syndrome before pregnancy by using the Dioflan preparation.

MATERIALAND METHODS

15 ultimately healthy women of reproductive age from 19 to 38 years old (mean age 32.7 ± 2.1 years) (control group) who applied to the Bukhara regional maternity hospital to prepare for ultrasound diagnostic criteria for assessing the state of the venous network of the small pelvis were examinedplanned pregnancy.The main group comprised 25 women of reproductive age from 20 to 39 years old (mean age 34.6 ± 1.3 years) with complaints of pelvic pain (100.0%), irregular menstrual cycle (36.0%), in whom in all cases of ultrasound examination revealed signs of varicose veins of the pelvic organs.The ultrasound was performed on the scanner SSI 5000 SonoScape (China), using an intravaginal sensor in the modes of ultrasound and dopplerography, including color Doppler mapping and pulsed dopplerometry. The study was conducted before and after a course of drug therapy with duo lane.Treatment of patients with varicose veins of the pelvis and chronic pelvic pain syndrome was performed with one tablet (500 mg) of diophlan twice a day for four weeks. The active substance of the drug - diosmin - 450 mg., Gesperedin - 50 mg., With venotonizing properties, which help to reduce stagnation in the veins, increasing their tone. The drug improves microcirculation, increasing the resistance of capillaries, improves lymphatic drainage, has an anti-edematous and anti-inflammatory effect.

The complex ultrasound study included:

1. Determination of the internal diameter of ovarian, uterine, arched and internal iliac veins (in cm);
2. Determination of peak systolic blood flow velocity in uterine and internal iliac veins (in cm / s).

Main part

Ultrasonic indicators of the state of the venous network of the small pelvis in healthy women (control group) are presented in Table 1.

TABLE 1 ULTRASONIC INDICATORS OF THE PELVIC VENOUS NETWORK IN HEALTHY WOMEN

Ultrasound score	Internal iliac veins	Ovarian veins	Uterine veins	Arched Veins
Diameter of vein, cm	$0,80 \pm 0,10$	$0,25 \pm 0,05$	$0,60 \pm 0,10$	$0,10 \pm 0,05$
Peak systolic blood flow velocity, cm / s	$10,1 \pm 2,6$	—	$6,75 \pm 1,85$	—

RESULTS AND DISCUSSION

The diameter of the left internal iliac, uterine and ovarian veins was on average 10% higher than on the right side. The peak systolic blood flow velocity on the left was on average 12% lower than in the right internal iliac and uterine veins. In the study of patients with varicose veins of the

pelvic organs, isolated enlargement of the ovarian veins (group 1) was revealed in 4 (16%) cases, in 13 (52%) observations - combined expansion of the ovarian, uterine and arched veins (2nd group), in 8 (32%) cases, total pelvic vein enlargement (3rd group) was noted.

In patients of the 1st group who had an isolated enlargement of the ovarian veins, the diameter of the vessels before the treatment ranged from 0.5 to 0.7 cm. After a course of treatment with dioflane, a phlebotonic drug, their diameter decreased to 0.2-0.3 cm.

In patients of the 2nd group, before the treatment, the ovarian veins were expanded to 0.7 cm, the uterine veins to 1.0-1.5 cm, the arched veins to 0.4-0.5 cm. The peak systolic blood flow velocity in the uterine veins from both sides was reduced in comparison with this parameter in the control group by 3.5 times or more and averaged 1.68 ± 0.31 cm / s. After the drug treatment, a significant reduction in the diameter of the examined veins was observed in 11 of 13 patients, i.e. in 84.6% of cases. The peak systolic blood flow velocity in the uterine veins increased by an average of 2 times in comparison with the initial data and amounted to 3.38 ± 0.35 cm / s

Patients of the third group under ultrasound examination showed an increase in ovarian veins to 0.7 cm, uterine veins to 1.0-1.5 cm, arched veins to 0.4-0.5 cm, internal iliac veins to 1.3 -1.8 cm, there was also a decrease in peak systolic blood flow velocity in the iliac and uterine arteries on both sides by 3 times or more.

After the course of reception of dioflana improvement of the venous system of the small pelvis was noted in 6 of 8 patients. The indicators of the state of the venous network of the small pelvis before and after treatment are presented in Table. 2.

TABLE 2 ULTRASONIC INDICATORS OF THE STATE OF THE VENOUS NETWORK OF THE SMALL PELVIS IN WOMEN WITH VARICOSE VEINS OF THE PELVIC ORGANS BEFORE AND AFTER DIOFLAN TREATMENT

Veins of the small pelvis	The diameter of the vein, cm		Bloodflowvelocity, cm / s	
	beforetreatment	aftertreatment	beforetreatment	aftertreatment
Internaliliacveins				
Righ	1,55±0,21	1,14±0,20	3,88±0,67	8,53±0,59*
Left	1,64±0,20	1,21±0,22	3,31±0,74	6,95±0,81*
Ovarianveins				
Righ	0,55±0,09	0,20±0,02*	—	—
Left	0,61±0,10	0,26±0,04*	—	—
Uterineveins				
Righ	1,15±0,20	0,54±0,11*	1,83±0,33	3,51±0,27*
Left	1,26±0,26	0,75±0,18*	1,54±0,29	3,25±0,43*

Archedveins	0,43±0,08	0,11±0,06*	—	—
Note. * - the difference in indices before and after treatment is significant (p <0.05).				

Thus, the obtained data indicate that ultrasound provides significant opportunities in diagnosing violations of venous hemodynamics in the pelvic organs in women, allowing non-invasive examination of the vascular system, its visualization and quantitative analysis of blood flow. The use of pelvic vein ultrasound can provide an idea of the anatomical and topographical relationships of the wall and lumen of the vein with surrounding tissues and organs. The use of CDC and pulse dopplerometry of the pelvic veins allows to determine the degree of similar varicose deformation of the walls and lumen of the vessel, determine the nature of the change in the linear velocity of blood flow in it. The data obtained during the ultrasound study influence the formation of therapeutic phlebological tactics and direct the physician to conduct a long and systematic observation of the patient with varicose veins of the pelvic organs.

The use of dioflan for the treatment of varicose veins of the pelvis in women led to a significant decrease in the specific symptoms of the disease: pain in palpation of the pelvic wall in 21 of 25 (84.0%), vaginal cyanosis in 19 out of 25 (76.0) and painful syndrome in 22 of 25 (88.0%) patients. The most important pathogenetic link in the formation of pain syndrome caused by venous congestion in the pelvic organs is a decrease in the velocity of blood flow in the venous network of the small pelvis.

The result of the use of dioflan was a decrease in the dilated diameter of the veins of the small pelvis and an increase in the rate of blood flow in the internal iliac and uterine veins. A dopplerometric study of utero-fetoplacental blood circulation, against the background of VenotonikDioflan therapy, showed repression of clinical symptoms of chronic venous insufficiency, and in 66.7% of observations, a marked normalization of utero-fruit-placental hemodynamics was noted. A statistically significant therapeutic effect was observed in 21 of 25 patients of reproductive age with varicose veins of the pelvic organs, i.e. in 84% of cases.

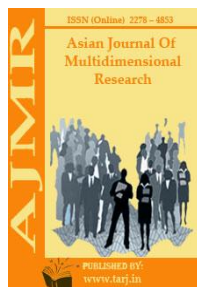
CONCLUSIONS

1. The obtained results testify to the pronounced therapeutic effect of the use of dioflana in patients with varicose veins of the pelvic organs and the presence of pelvic pain syndrome.
2. Diophlan, venotonik and angioprotector, has a multifaceted positive effect not only on the venous system but also on the state of hemodynamics of mother-placenta-fetus in pregnant women with varicose veins.
3. Ultrasound examination provides significant opportunities in diagnosing violations of venous hemodynamics in pelvic organs in women, allowing non-invasive examination of the vascular system, and its visualization of a quantitative analysis of blood flow.
4. The causes of so-called chronic pelvic pain are numerous, and one of the leading places among them is varicose veins of the pelvis. This is often a frequent pathology, which requires further research. Focusing only on the clinical manifestations of the disease, one can suspect the disease only in a small percentage of cases.

5. Ultrasound dopplerometry acts as an irreplaceable assistant in the diagnosis, being a minimally invasive and highly informative method for the diagnosis of varicose veins of the pelvis

LITERATURE

1. Bogachev V.Yu. Varicose veins of the pelvic floor. Consiliummedium 2006; 1: 20-23.
2. Varicose disease and recurrent phlebitis of the pelvis in women. Rymashevsky N.V., Markina V.V., Volkov A.E., and others. Rostov-on-Don 2000; 34-49.
3. Kirienko A.I., Bogachev V.Yu., Prokubovsky V.I. Varicose veins of the pelvic floor. Phlebology. Ed. V.S. Saveliev. M: Medicine 2001; 246.
4. Mayorov M.V. Syndrome of chronic pelvic pain in gynecological practice. The pharmacist 2003; 23: 17-19.
5. Moses V.G., Ushakova G.A. Varicose veins of the small pelvis in women in the main age-biological periods of life: a clinic, diagnosis, prevention. M: Elikom 2006; 104.
6. National leadership: obstetrics. Ed. G.M. Savelieva, E.K. Ailamazyan, V.E. Radzinsky. - Moscow: GEOTAR - Media, 2008.
7. Arzhanova O.N., Kosheleva N.G., Gromyko G.L. Placental insufficiency: Diagnosis and treatment: Proc. allowance. - St. Petersburg, 2001. - 32 p.
8. Murashko A.V., Kumykova Z.Kh. Chronic venous insufficiency and pregnancy. ConsiliumMedicum, Gynecology. - 2007. № 9.c. 50-52.
9. Ochanov R.G., Savelyev V.S., Shalnova S.A., and others. Therapeutic archive. 2006. № 4.c. 68-72.
10. Kirienko A.I., Grigoryan R.A., Bogachev V.Yu., Bogdanets L.I. ConsiliumMedicum. 2000. № 4.c. 16-21.



BETI BACHAO BETI PADHAO: A STEP TOWARDS WOMEN EMPOWERMENT IN HARYANA

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ABSTRACT

As former Prime Minister Pt. Jawaharlal Lal Nehru said, "In order to awaken the people it is the women who have to awaken. Once she is on move, the family moves, the nation moves, Women's role in beautifying the world enriching the earth and soothing the society in all laudable indeed. But the status of women is inferior to men in social, economic and political sphere. Despite all the social hurdles, Indian women stand tall from the of the crowd and are applauded for their achievements in their respective fields. In all aspects the grimmer situation of women welfare in India, has encouraged this study on administration of welfare for girl child in Haryana especially at District level Yamuna Nagar. Beti Bachao, Beti Padhao scheme is specially to prevent gender biased sex selective elimination, protection of the girl child and to ensure education for the girl child. The purpose of the present paper is to discuss the impact of the Scheme BBP at district level for the upliftment and betterment of girl child.

KEYWORDS:*Inequality, Grimmer, Empowerment, Elimination, Encourage.*

INTRODUCTION:

As Pt. Jawahar Lal Nehru said, "In order to awaken the people it is the women who have to awaken. Once she is on move, the family moves, the village moves, the nation also moves." The female crowds in rural area are deprived of minimum facilities of enlightenment and education. In this context, the government of India brought out "an inter-ministerial scheme to reverse the declining CSR (Child Sex Ratio) and improve gender inequality through education, creating awareness and improving public service delivery in women's schemes. Along with the Ministry of Women and Child Development (MWCD), the other ministries involved were Ministry of Health and Family Welfare, Ministry of Human Resource Development and Ministry of Information and Broadcasting. After the new government of India came into power, on 24 July 2014, the MWCD declared that protecting and educating the girl child would a top priority. During the independence day speech delivered by the Prime Minister four schemes were picked out as those under top priority in which Beti Bachao, Beti Padhao (BBBP) was also included along with Jan Dhan Yojana, Swachh Bharat Campaign. Later in the year on 31 October 2014, a district action plan was revealed in the inaugural address of the Ministry of MWCD with District Collectors.

In Haryana where the child sex ratio (CSR) has been dismally low, 12 districts have been chosen. Riwari, Mahendergarh, Bhiwani, Jhajjar, Ambala, Kurukshetra, Rohtak, Panipat, Karnal, Kaithal, Sonapat, Yamuna Nagar. The scheme Beti Bachao Beti Padhao, aims at making girls independent both socially as also financially through education. This approach of the government can facilitate in generating awareness and improving the efficiency of delivery of welfare service meant for women. The Present study has been focused on the scheme Beti Bachao Beti Padhao.

BETI BACHAO BETI PADHAO YOJANA:

It is a government of India scheme that aims at generating awareness and improving the efficiency of welfare services meant for women. The scheme initiated with an initial corpus of Rs 100 Crore. The Child Sex Ratio (CSR) is defined as the number of girls per 1000 boys between 0-6 years of age. It has shown on decline from 976 in 1961 to 918 in 2011. This is an alarming indicator of women disempowerment. It reflects pre-birth discrimination manifested through gender biased sex selection and post birth discrimination against girls. Madhuri Dixit is the Brand Ambassador of this scheme. This scheme falls under the big four i.e Swachh Bharat, PMJDY, Make in India and Beti Bachao, Beti Padhao itself.

LIST OF GENDER CRITICAL DISTRICTS COVERING HARYANA STATE**TABLE NO-1**

SR. NO	STATE	DISTRICTS	CENSUS 2001	CENSUS 2011
1.	Haryana	Mahendragarh	818	775

2.		Jhajjar	801	782
3.		Rewari	811	787
4.		Sonipat	788	798
5.		Ambala	782	810
6.		Kurukshetra	771	818
7.		Rohtak	799	820
8.		Karnal	809	824
9.		Yamuna nagar	806	826
10.		Kaithal	791	828
11.		Bhiwani	841	832
12.		Panipat	809	837

OBJECTIVES OF THE SCHEME BBBP:-

- To present Gender Biased Sex Selective Elimination by stern enforcement of all existing legislations and acts, especially by strengthening the implementation of Pre-Conception and Pre-Natal Diagnostic Techniques (PC & PNDT ACT) with stringent punishment for violation of the law.
- To ensure access and availability of essential requirements related to nutrition, health care, education and protection and elimination of discrimination of girl child which can lead to low self-esteem.
- To ensure education and participation of the girl child.
- Appropriate initiative will be taken to encourage girls to express their views and to be heard, to participate actively, effectively and equally at all levels in social, economic and political leadership.
- Long term intervention for gender equality would focus on creating and enabling environment including employable opportunity, safety and security, mobility & speedy justice.

TARGETS OF THE SCHEME BBBP:-

- Improve the Sex Ratio at birth in 100 gender critical districts by 10 points in a year.
- Reduce Gender differentials in fewer than five children Mortality Rate from 8 points in 2011 to 4 points by 2017.
- Improve the nutrition status of girls by reducing number of underweight and anaemic girls less than 5 years of age.
- Ensure universalization of Integrated Child Development Schemes (ICDS), girl's attendance and equal care monitored, using joint ICDS, NRHM Mother Child Protection Cards.
- Increase the girls' enrolment in secondary education from 76% in 2013-14 to 79% by 2017.
- Provide girls toilet in every school in 100 CSR districts by 2017.
- Promote a protective environment for girl children through implementation of protection of children from Sexual Offences.

The comparative district wise status is as under

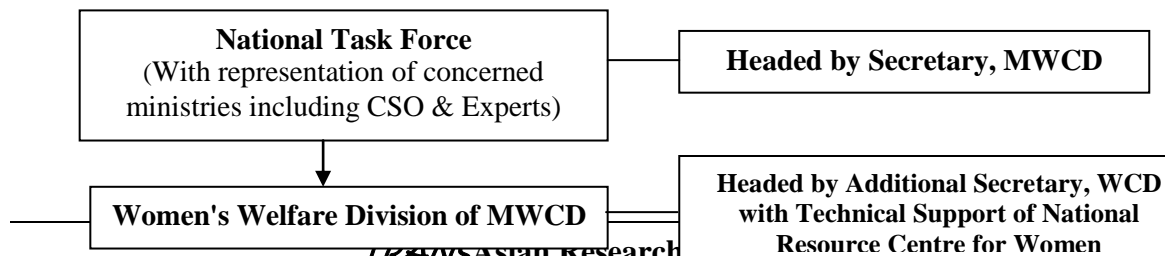
TABLE NO. 2

Sr. no.	Districts	2015 Jan. to Dec.(prov)	Up to Aug. 2017	Comparison(Jan, 2015-august, 2017)
1	Ambala	873	923	50
2	Bhiwani	870	904	34
3	Faridabad	867	891	24
4	Fatehabad	893	907	14
5	Gurgaon	858	890	32
6	Hisar	886	915	29
7	Jhajjar	852	930	78
8	Jind	856	901	45
9	Kaithal	863	879	16
10	Karnal	897	927	30
11	Kurukshetra	860	922	62
12	Mewat	913	905	-8
13	Narnaul	818	857	39
14	Palwal	901	911	10
15	Panchkula	909	911	2
16	Panipat	892	957	65
17	Rewari	824	879	55
18	Rohtak	859	882	23
19	Sirsa	915	935	20
20	Sonipat	867	942	75
21	Yamuna nagar	868	931	63
Total	Haryana state	876	909	33

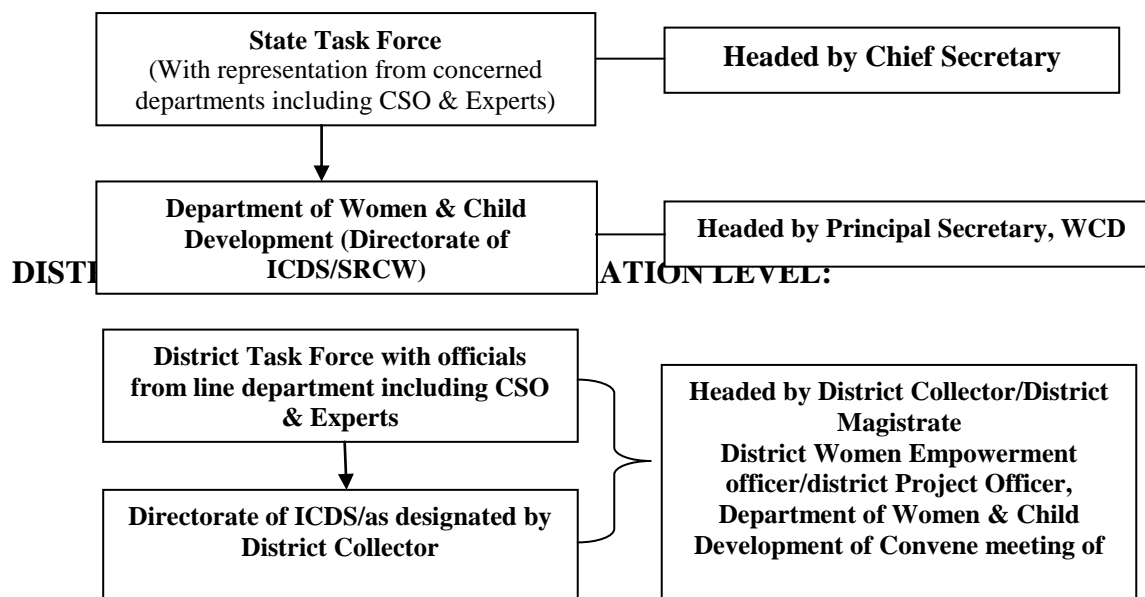
The flow Chart of the administrative set up for implementation of the scheme at various levels are as under

TABLE NO.-3

NATIONAL LEVEL:



SATE/UT LEVEL:



ACTION-POINTS OF BBBP SCHEME:

- Promote early registration of pregnancy in first trimester at Health Centre by ensuring release of 1st installment of (Rs. 3500/-).
- Facilitate effective implementation of Mother & Child Protection Card.
- Improve awareness & utilization by girls for- ICDS, ICPS, IGMSY, Crèche, and Working Women Hostel.
- Sensitize girls, young married couple at the AWC on the issue of decline in CSR & value of girl child.
- Community mobilization through initiatives like celebration of birth of girl child.
- Train existing network of ASHAs to generate awareness on the CSR issue, manage and monitor relevant data, & facilitate convergence on ground.
- Provide legal counseling/aids/awareness on PC & PNDT /Dowry prohibition etc.

Legal action

State government has initiated a campaign to control and check violation of PNDT act and MTP act. Chief medical officers, in liaison with deputy commissioners, are conducting raids and inspecting all ultrasound machines and sex predetermination kits. A special legal expert has been appointed at CM secretariat to follow up each individual case of violation of PNDT and MTP act to ensure conviction. Till now 503 FIRs have been registered under this act

Social activism

The state government has taken various steps to bring all communities, social organizations and non-govt. organization on a common platform for successful implementation of the programme. The activities performed up to august, 2017 are given as under:-

* 67950 awareness rallies, 506676 celebrations of birth of girl child/lohri, 10766 activities such as NUKKAD NATAKS/ folk art, 15204 Gudda-Guddi boards, displayed at anganwadi centres, 5799 Gudda-Guddi boards at panchayat bhawan at village level, 7397 film shows. 46299 Prabhat Pheries, 9247 puppet shows, 63139 signature campaign, 110727 health camps/ baby shows were organized.

1. Orientation programmes on BBBP for doctors, PRI members, NGOs, Sakshar Mahila Samooths, anganwadi workers, SHG members and other stakeholders are organized at the district level in the all BBBP districts. Various training, sensitization and inter-group discussions and workshops were also organized at the state, district and block levels for the various stakeholders.
2. Kua puja is a traditional ceremony for celebrating birth of boy. But in haryana this age old ceremony is now being also observed on the birth of girl child also to bring the spirit of equality in society.
3. "Thali bajao" ceremonies were organized on the birth of girl child to promote the message of the programme and to break age- old tradition.
4. 81 Mascots who have established their name in society by showing extra ordinary skills in the area of social work, cultural activities, sports and academic have been identified.

5. A mega event was organized on 21st July 2015 to promote the Beti bachao Beti Padhao: “call to action” initiative by the state government, reconfirming its commitment of saving and educating its daughters. The chief minister of haryana , Shri Manohar lal , U.S. ambassador to India, Mr. Richard Verma, country representative of UNICEF, Mr. Louis-Georges Arsenault, and renowned Bollywood actress, Parineeti Chopra participated in the important state-level initiative.
6. Organized state level training of trainers for gender based violence and support services in partnership with PSI. Further, training programme organized at divisional and block level will in turn mobilize community on the gender based violence issues.
7. Prepared compendium of women related scheme being implemented in various department of Haryana.
8. Organized sensitization workshop at state and district level for govt. / semi govt. organizations on sexual harassment of women at workplace act.
9. Further taking into consideration health and hygiene component of women, state level workshop for training of trainers of WCD, health and education department organized which will trained district and block level functionaries for mass communication and awareness.
10. Under five year of age mortality rate has been decreased due to increased in the institutional deliveries (98.5%).
11. Immunization increased to 92% in Haryana as health department has also introduced ROTA VIRUS vaccine.
12. For improving the nutritional status of children a pilot project “Swasth Bachpan” has been introduced in Ambala district.

EFFECTIVE IMPLEMENTATION OF BBBP SCHEMES:

- Strengthening of the state PNDT cell with technical human resource.
- Settings up of inspection targets for the state inspection committees.
- Review meetings and field inspections and monitoring in every three months of the identified 100 districts.
- Timely communication to the State Medical Council in case of conviction or charge sheet is secured against any medical doctor to ensure suspension.
- Setting up of a dedicated legal cell at the state level to ensure adequate and prompt defending of all the ongoing PNDT court cases and timely filing of appeals.
- Setting up of Inspection targets for the state inspection committees.
- Mapping of all available ultra- sonography machines in state & district and update of this data after every 03 month.
- Ensure functioning of anonymous online complaint portal by September, 30, 2014.

OUT COMES AND TIMELINE:

- Improved awareness & utilization of Ministry of Women & Child Development schemes by 2015-2017.

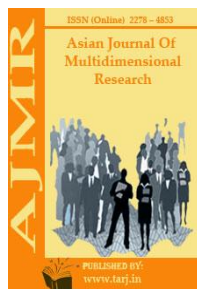
- Implementation of Mother& Child protection card universalized.
- Sensitized community act as community watch groups on CSR issue & enhanced
- Sensitized front line workers on issue of CSR.
- Ultra –sonography machines mapped & updated every 3 months.
- Strengthened PC&PNDT cell by September 2014.
- Increased reporting of complaints under PC& PNDT ACT.
- Standard guidelines /protocols for Girl Child Friendly Schools by 2015.

CONCLUSION

A convergence of policy environment between the centre and the state as well as between various ministries is an appropriate strategy to tackle a deep rooted problem like the declining child sex ratio. Concerted efforts at protecting the girl child at birth and continuing provision of services in nutrition and education should be strictly implemented. Making PRIs the focus of the programme is likely to yield better results because the service delivery and accountability is more effective at the decentralized level.

BIBLIOGRAPHY

1. Report of Ministry of Women and Child Development Government of India, New Delhi
2. Kurukshetra Journal March 2015 Vol. 65, No.:05
3. Guidelines from District Collectors report.
4. Report of Ministry of Human Resource Development.
5. Report of District Programme Officer, Women & Child Development, Yamuna Nagar.
6. Economic Survey of Haryana 2017-18, Issued by: Department of Economic and Statistical Analysis Haryana Yojna Bhawan, Sector-4, Panchkula, 2017.
7. Report of Women and Child Development Deptt. Haryana, 2017



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UGC APPROVED JOURNAL

MEMORY IMPAIRMENT AMONG PEOPLE WITH SUBSTANCE DEPENDENCE

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ABSTRACT

Substance abuse and dependence is one of the major problem that drawn both public and scientific attention in India, especially in Kerala. This study has been conducted to find out whether there is any significant difference between the memory functioning among drug abusers and non-abusers. 30 individuals with substance dependence are taken randomly from the cases reported and diagnosed in different hospitals, Ernakulum, Kerala and 31 non-abusers are selected randomly from Ernakulum district, Kerala. The age group under study is individuals between the age 20-45 years. The scale used was P.G.I Memory Scale(PGIMS) by Dwarka Pershad and N. N. Wig, 1977. It measures remote memory, recent memory, mental balance, attention and concentration, delayed recall, immediate recall, verbal retention for similar pairs,

verbal retention for dissimilar pairs, visual retention and recognition . The result shows that there is a significant difference exists among individuals with substance dependence and individuals without any substance dependence. This research provides more opportunities in the treatment processes of drug abusers.

KEYWORDS:*Memory Impairment, Substance Dependence, Substance Abuse, PGI Memory Scale.*

INTRODUCTION

Drug use and abuse was there from ancient times. Human beings have always had a desire to eat or drink substances that make them feel relaxed, stimulated, or euphoric. Drug use has a mythical past, a very long history, a history of nearly ten thousand years. Nowadays in India, especially in Kerala drug abuse is increasing. Many schools and colleges reported that the drug abuses among students are increasing. They are using and abusing drugs for getting the pleasure, for reducing anxiety, getting relax, and another most important reason among students are peer, influence from others.

Substance abuse means the maladaptive way of using substance and that usage cause clinically significant impairment in that person. And he/she may also experience the tolerance and withdrawal related to that particular drug (Gelder, Mayou, & Cowen, 2001). Substance dependence also a related term. It means steady concentration on a particular drug or abused drug for reducing the withdrawal symptoms. Substance abuse leads to many more physical and psychological problems (Nesse & Berridge, 1997). According to Degenhardt and Hall (2012), the health issues of substance abuse are in four types, (1) the acute toxic effect (e.g. illicit drug overdose and psychosis), (2) the acute effect of intoxication (e.g. accidental injury and violence related to alcohol intake), (3) development of dependence and (4) adverse health effects of continued regular use (e.g. chronic somatic disease and mental disorders). The also says that it has strong association between substance abuse and adverse health effects. But the causality estimation is much difficult and it depends on research methods. It require reliable relation or association between the amount of drug consumed and the health problems (Degenhardt & Hall).

Memory impairment or memory loss may be defined as lack of a person's ability to consistently recollect information to the extent of impairing the daily activities of the person. Drug dependence is a disorder that leads to chronic brain dysfunctions or made changes in brain functions, mainly cognitive dysfunctions, but emotional and motivational problems also accompany with drug addiction (Goldstein & Volkow, 2002; Fernández-Serrano et al., 2010). As drug dependence has high influence on brain functioning, many studies conducted over the past decades for understanding its various effects. Earlier cannabis use and visual scanning deficits has strong connection. It is reported that early onset of cannabis use leads to visual scanning deficits in later life (Ehrenreich et al., 1999) and this result is an evidence of association between substance use and cognitive dysfunction. Intense cocaine use is associated with deficits in visuo-spatial abilities, psychomotor speed and manual dexterity (Bolla, Rothman, & Cadet, 1999., Strickland, Stein, Khalsa, & Andre, 1997). There is also evidence that opium use impair memory

(Hill & Mikhael, 1979). Alcohol addiction leads to a cognitive disturbance known as Wernicke-Korsakoff syndrome. It is the most common alcohol induced memory deficit. So for treating drug dependence these cognitive and neurological deficits should be clear.

Moreover, in people with substance dependence have decreased psychomotor speed and there is a decline in accuracy while performing tasks that require attention, and also performance decline in working memory, implicit memory have been reported (Cairney et al., 2007). From a study it is found that a group of polydrug abusers have impairment in decision making and also have orbital prefrontal pathology (Grant, Contoreggi, & London, 2000., Bechara, Damasio, & Anderson, 1994). A recent study conducted in order to investigate the harmful effects of binge alcohol on the hippocampal neurogenesis in adolescent non-human primates suggested that the liquid drug may interfere with the migration and distribution of hippocampal pre-neuronal progenitors (Taffe et al., 2010).

From the above information it is clear that substance abuse is not only affect the person but also his/her family. And it is not just a physical disease it affects mentally also. Current study is trying to investigate how drug abuse affects different types of memory. As the alcohol and other drug abuse is increasing in Kerala this study has greater relevance.

STATEMENT OF PROBLEM

The present study entitled as “Memory Impairment Among People with Substance Dependence”.

OBJECTIVES

1. To find out whether there is any difference in various memories among drug abusers and non-drug abusers.

HYPOTHESIS

1. There will not be significant difference in memory functioning among drug abusers and non-drug abusers.

METHOD

Sample

30 individuals with substance dependence are taken randomly from the cases reported and diagnosed in different hospitals, Ernakulam district, Kerala and 31 individuals without any substance abuse or use are selected randomly from different areas in Ernakulam district, Kerala among the age group 20-45 years.

Tools

The scale used was P.G.I Memory Scale(PGIMS) by Dwarka Pershad and N. N. Wig (1977).It measures remote memory, recent memory, mental balance, attention and concentration, delayed recall, immediate recall, verbal retention for similar pairs, verbal retention for dissimilar pairs, visual retention and recognition. The scale used was found to have adequate reliability and validity.

Administration

Systematic sampling method was used to collect data. After obtaining verbal consent from the participants the PGI memory scale was administered individually.

Statistical Analysis

Statistical analysis was done using SPSS 16. Descriptive analysis and student 't' test were used to analyze the obtained data.

RESULT AND DISCUSSION

This study has been conducted to find out whether there is any significant difference in memory functioning among individual with substance abuse and normal individuals (without substance abuse). The collected data was analyzed using SPSS version 16 and the obtained results are discussed below.

TABLE 1
THE MEAN SCORE OF SUBSTANCE ABUSERS AND NON-ABUSERS IN PGI MEMORY SCALE SCORE

	Individuals with substance dependence (N=30)		Individuals without substance dependence (N=31)		
	M	SD	M	SD	t
PGI Score	56.70	10.93	83.43	7.33	11.1**

As shown in Table 1, the "t" value obtained between memory impairment among abusers and non-abusers is 11.1** which is significant at 0.01 level. This result gives clear evidence that there is memory impairment in substance abusers while comparing with non-abusers.

A study that get more attention in recent years says that severe drug abusers had severe impairment in different brain area and those areas primarily associated with memory function (Ersche, et al., 2006). The role of cannabinoids in attention and memory processes are very high (Herkenham et al., 1990). Verdejo-Garcia et al., (2005), their work also confirms that drug use and memory are related; they also found that the impairment varies according to the severity of drug abuse. These researches support the findings. And the process underline drug abuse is mostly associated with brain and it affects each and every part of it especially memory.

TABLE 2
THE MEAN SCORE OF 10 SUBTESTS OF PGIMS BETWEEN INDIVIDUALS WITH SUBSTANCE DEPENDENCE AND INDIVIDUALS WITHOUT SUBSTANCE DEPENDENCE

Sub tests	Individuals with drug dependence (N = 30)	Individuals without drug dependence (N= 31)	t
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	M	SD	M	SD	
Remote memory	4.53	0.73	5.65	0.98	4.9**
Recent memory	4.50	0.73	4.81	0.60	1.7
Mental balance	4.13	1.35	7.16	1.44	8.44**
Attention and concentration	7.73	1.46	9.94	2.51	4.16**
Delayed recall	6.23	1.63	8.55	1.43	5.8**
Immediate recall	6.80	3.17	9.68	1.46	4.56**
Verbal retention for similar pairs	3.70	0.98	4.87	0.56	5.7**
Verbal retention for dissimilar pairs	5.80	4.29	12.77	2.23	7.9**
Visual retention	5.80	2.53	9.97	2.56	6.38**
Recognition	7.33	1.95	9.10	1.07	4.38**

Note: *Indicates significant at 0.05 level, **Indicates significant at 0.01 level

Table 2 shows the mean, standard deviation and “t” value of the 10 subtest of PGIMS between abusers and non-abusers. The “t” value obtained in remote memory, recent memory, mental balance, attention and concentration, delayed recall, immediate recall, verbal retention of similar pairs, verbal retention of dissimilar pairs, verbal retention and recognition are of abused and non-abusers is 4.9, 1.7, 8.44, 4, 5.8, 4.56, 5.7, 7.9, 6.38 and 4.38 respectively. All the results are significant and completely error free except recent memory.

Drug addiction has the characteristics of compulsive act that may include wandering of drug, using the drug, abusing it, tolerance etc. and according to Gould (2010), it also included under a

disorder of changing. The main point is the brain areas which has main role in addiction processes are also part of cognitive functions. Many studies found that drug dependence alter those crucial brain areas and it alter its functions later induce the craving for drugs. According to Moriyama et al., 2006, alcohol abuse will leads to attention problems and deficits in working memory. Similarly, cocaine and opioids may leads to problems in cognitive flexibility (Kelley et al., 2005; Lyvers & Yakimoff, 2003). Cannabis users with history of long time use have problems with retention and retrieval and also have problems in long term and short term memory (Solowij et al., 2002). Another finding by Rogers et al., (1999) found that a major area, prefrontal cortex is affected with people with drug abuse. These all findings supports the above results.

In the case of recent memory there is no significant difference is shown. The sample was taken from hospital setting that is those who are undergoing treatment, this may affect the result. And the size of sample also was a problem.

CONCLUSION AND LIMITATION

From this study it can be concluded that there is significant difference in memory impairment among individuals with substance abuse and individuals without any substance abuse. Drug abuse is very much related to memory deficits.

As every research this research also not free of limitations. The sample was drawn from limited area and larger sample would have given more representative results. And the data was collected from de-addiction center and because of that the data may affected by their medication also. If adding the duration of drug use it will provide better deeper knowledge in this area.

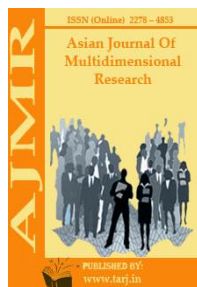
IMPLICATIONS

With better understanding of how the drugs alter the cognitive functions that will helps to improve the therapeutic interventions. Even there are researches in this context the deeper research will give better intervention procedures. By including the severity of drug abuse, focusing the nature of drug etc. will also make the clinical therapeutic process much better.

REFERENCES

- Bechara, A., Damasio, A. R., Damasio, H., & Anderson, S. W. (1994). Insensitivity to future consequences following damage to human prefrontal cortex. *Cognition*, 50(1-3):7-15.
- Bolla, K. I., Rothman, R., & Cadet, J. L. (1999). Dose-related neurobehavioral effects of chronic cocaine use. *J Neuropsychiatry Clinical Neuroscience*. 11(3):361-9.
- Cairney, S., Clough, A., Jaragba, M., & Maruff, P. (2007). Cognitive impairment in Aboriginal people with heavy episodic patterns of alcohol use. *Addiction*, 102:909-915.
- Degenhardt, L., & Hall, W. (2012). Extent of illicit drug use and dependence, and their contribution to the global burden of disease. *The lancet*, 379(9810):55-70. doi: 10.1016/S0140-6736(11)61138-0.
- Ersche, K.D., Clark, L., London, M., Robbins, T.W., & Sahakian, B.J. (2006). Profile of executive and memory function associated with amphetamine and opiate dependence. *Neuropsychopharmacology*, 31:1036-1047.

- Goldstein, R.Z & Volkow, N.D. (2002). Drug addiction and its underlying neurobiological basis: neuroimaging evidence for the involvement of the frontal cortex. *Am J Psychiatry*. 159:1642-1652.
- Grant, S., Contoreggi, C., & London, E. D. (2000). Drug abusers show impaired performance in a laboratory test of decision making. *Neuropsychologia*, 38(8):1180-7.
- Herkenham, M., Lynn, A. B., Little, M. D., Johnson, M. R., Melvin, L. S., De Costa, B. R., & Rice, K. C. (1990). Cannabinoid receptor localization in brain. *Proceedings of the National Academy of Sciences of the United States*, 87:1932-1936.
- Hill & Mikhael. (1979). Computerized transaxial tomographic and neuropsychological evaluations in chronic alcoholics and heroin abusers. *Am. J. Psychiatry*, 136, pp. 598–602.
- Kelley, B. J, et al. (2005). Cognitive impairment in acute cocaine withdrawal. *Cognitive and Behavioral Neurology*. 18(2):108–112
- Lyvers M., & Yakimoff, M. (2003). Neuropsychological correlates of opioid dependence and withdrawal. *Addictive Behaviors*, 28(3):605–611.
- Moriyama Y, et al. (2006). Family history of alcoholism and cognitive recovery in subacute withdrawal. *Psychiatry and Clinical Neuroscience*, 60(1):85–89.
- Nesse, R. M., & Berridge, K. C. (1997). Psychoactive drug use in evolutionary perspective. *Science*, 3;278(5335):63-6.
- Rogers, R. D, et al. (1999). Dissociable deficits in the decision-making cognition of chronic amphetamine abusers, opiate abusers, patients with focal damage to prefrontal cortex, and tryptophan-depleted normal volunteers: Evidence for monoaminergic mechanisms. *Neuropsychopharmacology*, 20(4):322–339.
- Solowij N, et al. (2002). Cognitive functioning of long-term heavy cannabis users seeking treatment. *JAMA*, 287(9):1123–1131.
- Stein, R. A., Strickland, T. L., Khalsa-Dennison, E., & Andre, K. (1997) Gender differences in neuropsychological test performance among cocaine abusers. *Arch Clin Neuropsychol*, 12:410–411.
- Taffe, M. A., Kotzebue, R. W., Crean, R. D., Crawford, E. F., Edwards, S., & Mandyam, C.D. (2010). Longlasting reduction in hippocampal neurogenesis by alcohol consumption in adolescent nonhuman primates. *Proc Natl Acad Sci U S A*, 107:11104-11109.
- Verdejo-Garcia, A. J., Lopez-Torrecillas, F., Arcos, F. A., & Garcia, P. M. (2005) Differential effects of MDMA, cocaine, and cannabis use severity on distinctive components of the executive functions in polysubstance users: A multiple regression analysis. *Addict Behav*, 30(1):89-101.



**Asian Journal of
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ROLE OF GREEN HRM IN BUSINESS

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ABSTRACT

Recently, it is found that there is a growing demand arising within business institutions on the importance of going green and coming up with the latest environment friendly strategies. As the international business is going global, the business is experimenting a change from a traditional financial framework to a latest performance oriented setup which is ready to understand green economic strategies of business. As of now Green Human Resource Management (GHRM) has come up as a prominent business principle for the important institutions where the department of Human Resources is playing a dominant role in going green at the work place. The paper to a large extent emphasizes the importance of the various Green Human Resource Practices such as conservation, recycling, paperless office followed by the institutions all over the world and, explains the simple meaning as well as significance of GHRM. The work also is adding to the existing literature review by explaining future focus of some GHRM functions. In the end the study also comes up with the latest relevant HR startups for Green organizations.

KEYWORDS:Green House management, environment management, paperless office, conservation, recycling

1. INTRODUCTION

Twenty-first century is the era which shows increased interest in the environmental issues all over the world in all domains like commerce, management or politics. The emerging area of interest in environment problems has resulted in different treaties to overcome climatic problems, e.g. Bali 2008, Kyoto 1999, and Copenhagen 2009. Due to the harmful impact of industrial pollution and waste management, which includes harmful chemicals, NGOs and governments all over the world is going for promoting regulations and policies with the aim of reducing as well as to a certain extent lessen the destruction of natural resources and its negative impact on the mankind and the community together (Christmann & Taylor, 2003; Shrivastava & Berger, 2011).

Green initiatives within HRM are forming a wider part of corporate social responsibility. Green HR mainly consists of two major elements which include environment-friendly HR practices and the preservation of knowledge capital (Mandip, 2013). Human resources and the supporting

elements are the basic foundation of any business, be it corporate business or any sustainable business. They are primarily responsible for making plans and implementing those eco-friendly policies in creating a green environment. Without providing the needed human capital and executing sustainable plan of action, creating a green world would be a difficult task.

This paper goes in deep on how corporates are coming up with programmes to implement environment friendly schemes by coming up with new human resource schemes and analyse different strategies associated with green HRM.

1.1. OBJECTIVES

The main aim of this research is to:

Facilitate a basic knowledge of green HRM to the community,

Point out the prominent research done on this domain by other researchers

Explain in detail green practices that can be implemented for building a Green workplace.

Attempting to forward some green plan of action for HR

1.2. METHODOLOGY

The study is primarily based upon the primary data and secondary data. The primary data has been collected by framing a structured questionnaire and distributing among the employees of five reputed firms. For the secondary data a comprehensive literature review taken from different databases, and other available sources were collected. A systematic and deep review of collected literature was done for the study.

1.3. What is Green HRM?

The term Green HRM is the common word used within the business field at present and its importance is increasing rapidly with the passage of time. This term has also an important position as a prominent topic in recent research works since the awareness on environmental problems and sustainable development has been increasingly rising day by day all round the globe. Today the topic Green HRM not only includes a knowledge toward environmental well being, but also stands for the societal as well as economical aspect of both the corporates and the workers within a broader perspective.

1.4. Need for GHRM

For the past few decades there has been an increasing need for a naturalistic environmental management drive all over the world. This effort was undertaken since the deteriorating effects of different pollutants among which the industrial wastes being the major pollutant that has been reducing and depleting our sustainable resources rapidly is proved beyond doubt.

1.5. LITERATURE REVIEW

A deep review of literature in the HR field on the above subject suggests that more and more HR employees are working very hard to modify their companies as such to become prominent environmental friendly organisations. A large amount of analytical research is highlighting the after effect of environment management practices on performance of the organization with the help of various methods (Iraldo, Testa, & Frey, 2010; Yang, Lin, Chan, & Sheu, 2011).

Literature has given significance for adopting environmental procedures which are the most important function of institutional functions making it mandatory to understand the assistance of human resource strategies. (Cherian & Jacob, 2014). It is found that larger is the intensity of green human resource policies, the greater is the extent of adopting environment management systems (EMS) by the various institutions (Bohdanowicz, Zientara, & Novotna, 2012).

Incorporating environmental strategies and methodologies into the overall developmental goals of an institution assists in coming up with an efficient EMS (Haden et al., 2010). There are numerous studies which are behind the HRM practices which are found to be efficient for promoting human resources and are contributing to institutional productivity and giving a cutting edge (Boselie, Paauwe, & Jansen, 2002). Many employees feel that in order to put in place an efficient corporate green management system, it is necessary to come up with a good amount of administrative as well as technical skills among all workers of the institution (Daily et al., 2008; Unnikrishnan & Hegde, 2006). It is very much clear that whatever be the methodology the researchers apply, it is necessary for proper coordination of human resource management objectives with principles of green management in an institution.

Mainly this research is concentrating on GHRM, which according to Dutta (2013) includes two major horizons namely, environment oriented HR practices and the conservation of the knowledge capital. Green human resources refer to giving awareness to employees regarding encouraging sustainability and enhance worker knowledge and a sense of responsibility on the environmental problems (Mandip, 2013). It is the responsibility of the HR department of an institution to make environmental concern a major part of their corporate strategy. The major responsibility of green HRM is to create awareness among the workers about the importance of the environmental management i.e. what strategy should be opted, how it works, and how it is helping the nature. The programme inspires the workers and builds a spirit of pride in them for being a part of the existing exercise.

In the above research paper an attempt has been made to explain some basic functional HRM activities which are associated with the sustainability and the natural resources at the workplace and also provide a chance for the future research.

1.6 Green recruitment

Choosing the right talent and retaining them in the job is the challenge for every employer. (Renwick et al., 2014). Organizations are now starting to understand the importance of getting reputation as a green employer is an efficient means of attracting new employees (Phillips, 2008; Stringer, 2010). German firms such as Siemens, BASF, Bayer and Mannesmann are making use of environment friendly campaigns and a green image to retain high-caliber employees.

Green recruiting is a process where the objective is to give significance to the mother earth and making it an important part of the institution. Recruiting candidates with an environmental friendly outlook make it convenient for institutions to recruit employees who are familiar with the procedure of sustainability and are already familiar with processes like conservation, recycling, and building a more logical world.

1.7 Green performance management

Performance management (PM) is the procedure by which workers are motivated to boost up their professional knowledge that help to achieve the institutional goals and objectives in an efficient way. With the environment having an impact on the international business scenario, PM is also making an impact on the green wave in the most positive sense. Green performance management relates to concerns having an impact on environmental problems as well as schemes of the institutions. It also focuses on use of environmental friendly techniques.

1.8 Green training and development

Training and development is a process that concentrates on developing workers' capabilities, knowledge, and perceptions, avoid decrement of environmental values, skills, and perceptions (Zoogah, 2012). Green training and development makes the workers understand about the significance of EM, train them in working methodology that conserve energy, reduce waste, impart environmental concern within the institution, and give an opportunity for the workers to involve themselves in environmental issues (Zoogah, 2012). It makes them adopt different methods of conservation including waste management within an organization. Moreover it improves the skill of a worker to effectively understand the different environmental problems. The need of the hour is to make the institutions train their workers on best business methods coupled with green ventures.

1.9 Green compensation

Rewards and compensation are the major HRM processes through which workers are motivated to perform their part well. These HR practices are the most powerful techniques which connects an individual's interest to that of the organization.

In the perspective of Green HRM, rewards and compensation can be believed as important weapons for supporting environmental programmes in institutions. While connecting the strategy for reward and administration, modern institutions are coming up with reward systems to encourage eco-friendly motives developed by their workers. They also concluded that long-term company results in connection with salary were associated with greater pollution prevention success. By encouraging elements of green management in the compensation policies, supervisors can enhance the green behaviors among the workers.

2.0 Paperless office

Earlier days much of the work in the office is handled on paper but, with the invention of information technology, the usage of paper has been lowered. Lately E-business and learning have transformed the methodology and practices at workplaces changing them into paperless offices. Paperless office is a work place where the use of paper is either lessened or removed by changing main official paperwork and other documents into automatic workprocesses. The process is greatly reducing the consumption of paper and also save the time.

2.1 Conservation of energy

Conservation of energy in the office has the power for a greater environmental change. In an urge to provide more effective and eco-friendly services, offices around the world have come up with various energy conservation innovations to curtail the environmental concern. The HR departments of prominent companies have started a campaign to turn off PCs, TVs, and lights when leaving, to use 100% renewable energy, and introduced solar lighting.

TABLE 1: KENDALL CORRELATION COEFFICIENTS BETWEEN EMPLOYEE RETENTION RATE AND GREEN HRM PRACTICES

	C-1	C -2	C-3	C-4
Employee Retention Rate	0.18	0.15	0.22	0.24
Green HRM Practices	0.34	0.31	0.38	0.40

(Source: Primary Data)

2.2 CONCLUSION

Human resources are the most important part of an institution that plays a prominent part in taking care of the workers. Green HR efforts have produced better efficacy, cost cutting, worker retention, and better turnover apart from other advantages. The need of the hour is to make the HR managers create awareness in the youth about the Green HRM, Green movement, and helping the corporates to maintain proper environment, and aim for sustainability (Mathapati ,2014).

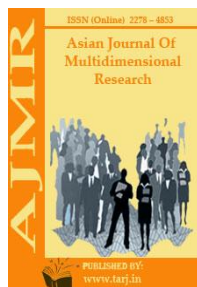
It is very clear that HR has a prominent role to play in contributing to the institution's green movement and plays a prominent part in creating enthusiasm, and motivation for workers to take up green procedures for greener business.

REFERENCES

- Bebbington, J. (2001). Sustainable development: A review of the international development, business and accounting literature. *Accounting Forum*, 25, 128–157.10.1111/accf.2001.25.issue-2
- Beechinor, F. (2007). How to reduce your carbon footprint. *People Management*, 13, 46–47.
- Benz, M., & Frey, B. S. (2007). Corporate governance: What can we learn from public governance? *Academy of Management Review*, 32,
- Berrone, P., & Gomez-Mejia, L. R. (2009). Environmental performance and executive compensation: An integrated agency-institutional perspective. *Academy of Management Journal*, 52, 103–126.
- Bohdanowicz, P., Zientara, P., & Novotna, E. (2011). International hotel chains and environmental protection: An analysis of Hilton's we care! programme (Europe, 2006–2008). *Journal of Sustainable Tourism*, 19,
- Boiral, O. (2002). Tacit knowledge and environmental management. *Long Range Planning*, 35, 291–317.10
- Christmann, P., & Taylor, G. (2002). Globalization and the environment: Strategies for international voluntary environmental initiatives. *Academy of Management Executive*, 16, 121–135.
- Collier, J., & Esteban, R. (2007). Corporate social responsibility and employee commitment. *Business Ethics: A European Review*, 16, 19–33.
- Daily, B. F., Bishop, J. W., & Govindarajulu, N. (2009). Conceptual model for organizational citizenship behavior directed toward the environment. *Business & Society*, 48, 243–256.
- Daily, B. F., Bishop, J., & Steiner, R. (2007). The mediating role of EMS teamwork as it pertains to HR factors and perceived environmental performance. *Journal of Applied Business Research*, 23, 95–109.
- Davies, G., & Smith, H. (2007). Natural resources. *People Management*, 26–31.

- Denis, D. J., Hanouna, P. & Sarin, A. (2006). Is there a dark side to incentive compensation? *Journal of Corporate Finance*, 12, 467–
- Dutta, S. (2012). Greening people: A strategic dimension. *ZENITH: International Journal of Business Economics & Management Research*, 2, 143–148.
- Epstein, M., & Roy, M. (1997). Using ISO 14000 for improved organizational learning and environmental management. *Environmental Quality Management*, 7, 21–30.
- Fernández, E., Junquera, B., & Ordiz, M. (2003). Organizational culture and human resources in the environmental issue: A review of the literature. *The International Journal of Human Resource Management*, 14, 634–656.
- Florida, R., & Davison, D. (2001). Gaining from Green Management: Environmental management systems inside and outside the factory. *California Management Review*, 43, 64–84.
- Forman, M., & Jorgensen, S. (2001). The social shaping of participation of employees in environmental work within enterprises—Experiences from a Danish context. *Technology Analysis & Strategic Management*, 13, 71–90.
- Glavas, A., Senge, P., & Cooperrider, D. L. (2010). Building a Green City on a Blue Lake—A model for building a local sustainable economy. *People & Strategy*, 33, 26–33.
- González-Benito, J., & González-Benito, O. (2006). A review of determinant factors of environmental proactivity. *Business Strategy and the Environment*, 15, 87–102.
- Govindarajulu, N., & Daily, B. F. (2004). Motivating employees for environmental improvement. *Industrial Management & Data Systems*, 104, 364–372.
- Grolleau, G., Mzoughi, N., & Pekovic, S. (2012). Green not (only) for profit: An empirical examination of the effect of environmental-related standards on employees recruitment. *Resource and Energy Economics*, 34, 74–92.
- Gupta, A. (2008). Earth on fire: Implications for corporate responsibility. *American Journal of Business*, 23, 3–4.
- Haden, S. S. P., Oyler, J. D., & Humphrey, J. H. (2009). Historical, practical, and theoretical perspectives on green management. *An Exploratory Analysis Management Decision*, 47, 1041–1055.
- Harmon, J., Fairfield, K. D., & Wirtenberg, J. (2010). Missing an opportunity: HR leadership and sustainability. *People & Strategy*, 33, 16–21.
- Hart, S. (1997). Beyond greening: Strategies for a sustainable world. *Harvard Business Review*, 75, 66–76.
- Hersey, K. (1998). A close look at ISO 14000. *Professional Safety*, 43, 26–29.
- Holtom, B. C., Mitchell, T. R., Lee, T. W., & Eberly, M. B. (2008). 5 Turnover and retention research: A glance at the past, a closer review of the present, and a venture into the future. *The Academy of Management Annals*, 2.
- Huselid, M. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38, 635–672.
- Iraldo, F., Testa, F., & Frey, M. (2009). Is an environmental management system able to influence environmental and competitive performance? The case of the eco-management and audit scheme (EMAS) in the European Union. *Journal of Cleaner Production*, 17.
- Jabbour, C. J. C., Santos, F. C. A., & Nagano, M. S. (2010). Contributions of HRM throughout the stages of environmental management: Methodological triangulation applied to companies in Brazil. *The International Journal of Human Resource Management*, 21.

- Jabbour, C. J., Jabbour, L. S., Govindan, K., Teixeira, A. A., & Freitas, W. R. (2013). Environmental management and operational performance in automotive companies in Brazil: The role of human resource management and lean manufacturing. *Journal of Cleaner Production*, 47.
- Jackson, S., Renwick, D., Jabbour, C. J. C., & Muller-Camen, M. (2011). State-of-the-art and future directions for Green Human Resource Management. *Zeitschrift für Personalforschung: German Journal of Research in Human Resource Management*.
- Kee-hung, L., Cheng, T., & Tang, A. (2010). Green retailing: Factors for success'. *California Management Review*, 52, 6–31.
- Kitazawa, S., & Sarkis, J. (2000). The relationship between ISO 14001 and continuous source reduction programs. *International Journal of Operations and Production Management*, 20.
- Lado, A. A., & Wilson, M. C. (1994). Human resource systems and sustained competitive advantage: A competency based perspective. *Academy of Management Review*, 19.
- Liebowitz, J. (2010). The role of HR in achieving a sustainability culture. *Journal of sustainable development*, 3, 50–57.
- Lin, B., Jones, C., & Hsieh, C. (2001). Environmental practices and assessment: A process perspective. *Industrial Management & Data Systems*, 101, 71–80.
- Mampra, M. (2013). Green HRM: Does it help to build a competitive service sector? A study. In *Proceedings of tenth AIMS International Conference on Management* (pp. 1273–1281)
- Mandip, G. (2012). Green HRM: People management commitment to environmental sustainability. *Research Journal of Recent Sciences*, 1, 244–252.
- Marcus, A., & Fremeth, A. (2009). Green management matters regardless. *Academy of Management Perspectives*, 23, 17–26.
- Marhatta, S., & Adhikari, S. (2013). Green HRM and sustainability. *International eJournal Of Ongoing Research in Management & IT*.
- Massoud, J. A., Daily, B. F., & Bishop, J. W. (2008). Reward for environmental performance: *International Journal of Environment, Workplace and Employment*, 4.



**A s i a n J o u r n a l o f
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CYRILLIC ALPHABET LETTERS IDENTIFICATION WITH THE HELP OF ARTIFICIAL NEURONS

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ABSTRACT

This article describes the work stages, advantages and disadvantages of the Xopfild and Xemming neural models. Also, the order of operation of two directed associative memory is listed and its properties are listed in determining the accuracy of the image. The shortcomings of each model, the procedures for the compilation and use of standards of attributes are explained. The description of the program based on the Xopfild model in the builder environment is given. The Xopfild model of two directed associative memory is used.

KEYWORDS: *Neural Network, Xopfild Model, Xemming Model, Classification, Structure, Network, Activation Function, Memory.*

1. INTRODUCTION

Artificial neural network concepts do not meet the principles of classroom teaching in terms of teaching instructional techniques and teaching without teacher. In this case, the weight coefficients using the processed information to find and consider all the teachings of the same. • prior information should be regarded as a teacher's aid on the one hand, on the other hand, the network until the real info is stored in memory. In such networks as the logical connections Xopfild and Xemming well known in the nets.

2. Hopfild's network.

The following is a single-layered neuronal network, which has the single shoot and output.

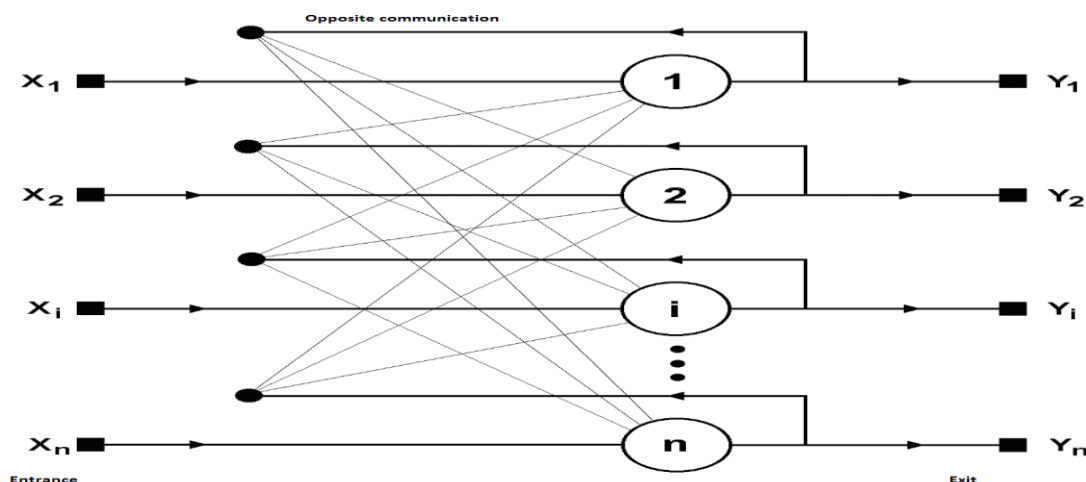


Figure.1 Structural scheme of Hopfield's network.

As in the case of associative memory, the issue to be solved in this industry will be as follows. Let's get some kind of binary signals in the shape view (representing garyons or objects, such as images, numeric sounds). Please note that the network may disassociate itself from the imprinted video as it is inaccessible or the incoming information is incompatible with any form.

In general, an optional alarm $\mathbf{X} = \{ x_i; i=0...n-1 \}$ vektor, n – the number of neurons in the network, the volume of incoming and outgoing vectors. For each x_i element $+$ or -1 per equitation. k – The vector representing the shape \mathbf{X}^k . Let us describe the vector and its components – x_i^k , $k=0...m-1$, m – number of shapes. If it recognizes the form based on the information provided to the network, then it is inappropriate information $\mathbf{Y} = \mathbf{X}^k$ will be, here \mathbf{Y} network accessory $\mathbf{Y} = \{ y_i; i=0,...n-1 \}$ vektor value. Otherwise, the outgoing vector is incompatible with any custom form.

If, for example, the signals represent some form, then when entering the network it is graphically represented and determines whether it matches any form of the sample.

When calculating network values, the weight coefficient is expressed in the form below [6-20]:

$$w_{ij} = \begin{cases} \sum_{k=0}^{m-1} x_i^k x_j^k, & i \neq j \\ 0, & i = j \end{cases} \quad (1)$$

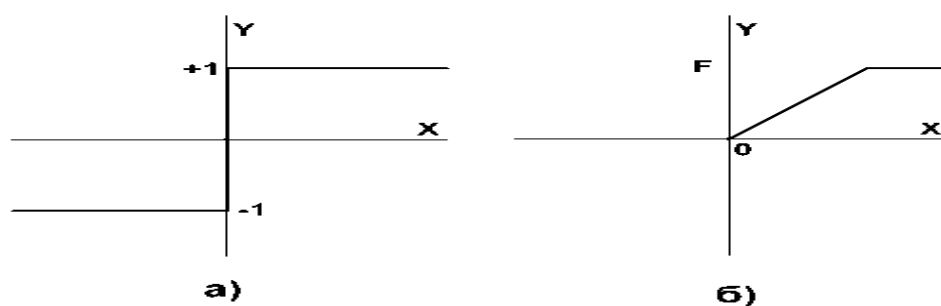
Here i, j - indexes, respectively, in the presence of old and unconscious neurons; x_i^k, x_j^k – i - va j , k - elements of the shape vector.

The algorithm of the network work (p - iterative number):

1. A signal will be given to access the network. The axons are given to him:

$$y_i(0) = x_i, \quad i = 0...n-1, \quad (2)$$

so the unwanted snaps in the network scheme are conditional. Zero indicates zero intensity of the network.



Picture 2. Activating function

2. New condition of neurons

$$s_j(p+1) = \sum_{i=0}^{n-1} w_{ij} y_i(p), j=0 \dots n-1 \quad (3)$$

and new axons values

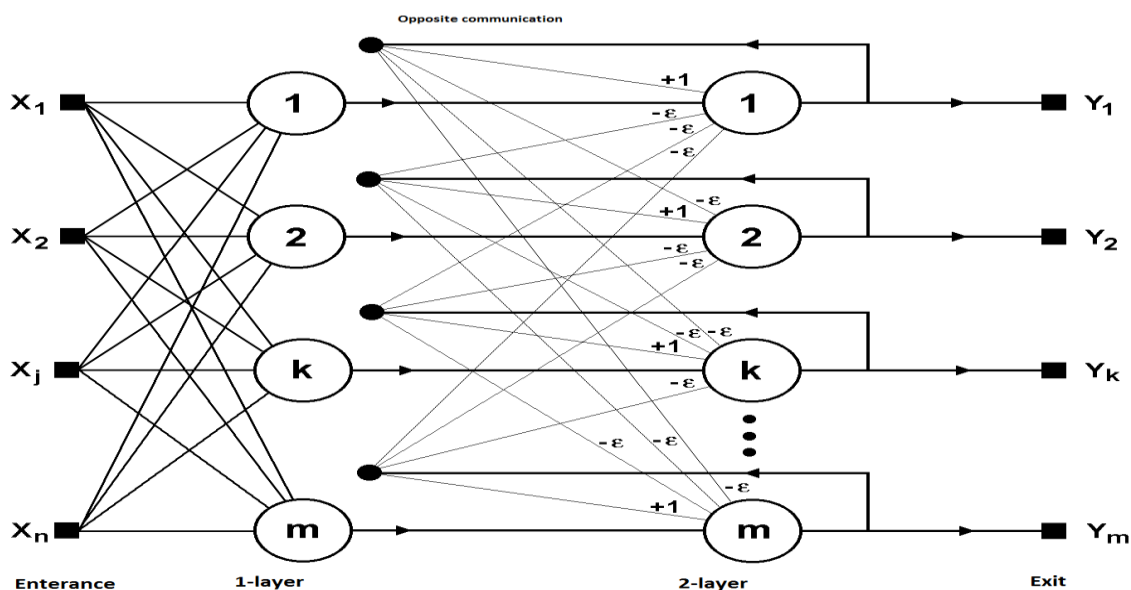
$$y_j(p+1) = f[s_j(p+1)] \quad (4)$$

here f – jump-up activator function, its photo 2- picture illustrated.

3. In the last iteration, the axons value is checked. If yes, then move to step 2 otherwise it will be completed. In this case, the outgoing vector will have the same shape as the pattern.

3. Describe the distribution of Xemming neural networks

As mentioned earlier, the network may not be able to identify the form at all, and the value of an incorrect shape. This means that the network is restricted. The number of forms stored in the network of Hopfyl should not exceed m , $0.15 \cdot n$. Moreover, if two A and B shapes are very similar, then they form associations that are intersecting in the network, that is, they give the value A to the network, or vice versa.



Picture 3. Structural scheme of Xemming network.

If the network generates the exact number of the form then the associative memory will use the Ximming network sufficiently (Figure 3).

The network consists of two layers. The first and second layers consist of neurons, where the number of forms. The neurons in the first layer consist of synapses that are associated with n networking. The neurons in the second layer are linked to the synapses that are in contact. The only positive positive feedback is coupled with its neurons.

The purpose of a network work is to find the cache between the images being tested by all the images. The distance from the Xemming is the difference in bits of these two binary vectors. The network selects the minimum distance between the samples and the missing images, and as a result, a neuron that fits the image becomes active.

Assessment of the weight coefficients and the activating function for the first layer is carried out as follows:

$$w_{ik} = \frac{x_i^k}{2}, i=0...n-1, k=0...m-1 \quad (5)$$

$$T_k = n/2, k = 0...m-1 \quad (6)$$

Here x_i^k – k - shape i -element.

The sine peak coefficients are the second layer $0 < \varepsilon < 1/m$ it accepts the value. The neural synapse associated with an ankle +1 has the weight.

The algorithm for the work of the Xemming Network:

1. The node that has been calculated on the first layer of the network and its value $X = \{x_i; i=0...n-1\}$, the vector is inserted (indicates the upper-key layer number):

$$y_j^{(1)} = s_j^{(1)} = \sum_{i=0}^{n-1} w_{ij} x_i + T_j, j=0...m-1 \quad (7)$$

After that, the axis of the second layer are based on the values obtained:

$$y_j^{(2)} = y_j^{(1)}, j = 0...m-1 \quad (8)$$

2. The new state of the second layer is:

$$s_j^{(2)}(p+1) = y_j(p) - \varepsilon \sum_{k=0}^{m-1} y_k^{(2)}(p), k \neq j, j = 0...m-1 \quad (9)$$

and the value of its axons:

$$y_j^{(2)}(p+1) = f[s_j^{(2)}(p+1)], j = 0...m-1 \quad (10)$$

The value of the activator f (Figure 2b) is obvious, where F is sufficiently large and the value of an arbitrary argument does not exceed.

3. In the last iterative it is checked whether the value of the second layer varies, or if yes, then step 2, otherwise the cycle is stopped.

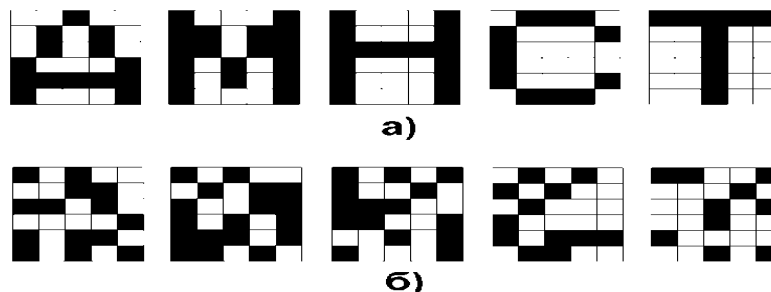
The evaluation of the algorithm shows that the first layer is of paramount importance: in the first step we use the values of the coefficients of the weight, so the first layer is removed from the network as it is indicated.

The Xmmming Network programming model is based on the selection of special classes.

NetHN the following elements have been identified:

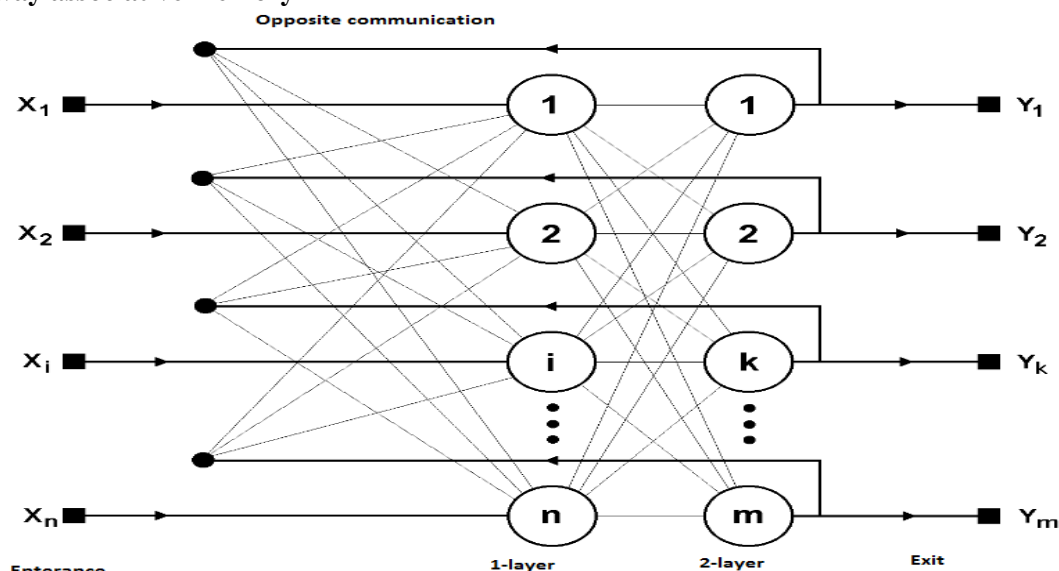
Nin va Nout – the number of shapes and sizes of unwanted vectors in accordance with the data;

dx and dy – dimensions of unwanted forms through two coordinates, $dx*dy = Nin$ these functions LoadNextPattern used to input data from the file; Here, the second layer is used to identify five letters



Picture 4. Exemplary and tested forms.

4. Two-way associative memory



Picture 5. Structural scheme of two-way associative memory (IYAX)

The program was tested in Borland C ++ 6 environment. The offered classes are also suitable for the larger Hemmagian networks. At this point, the IXX network is a logical continuation of Hopfield network, adding a second layer for this.

The (IYAX). structure is shown in Figure 5. The network has the ability to preserve pairs of associative forms. Let's suppose double forms

$\mathbf{X}^k = \{x_i^k; i=0...n-1\}$ va $\mathbf{Y}^k = \{y_j^k; j=0...m-1\}$ vector illustration, $k=0...r-1$, here r – couples quantity. Imaginable $\mathbf{P} = \{p_i; i=0...n-1\}$ Entering the vector in the network is different from the second layer $\mathbf{Q} = \{q_j; j=0...m-1\}$ The vector is formed and again enters the first layer.

The two vectors in each cycle go straight to the exemplary pair forms, the first \mathbf{X} the entrance is given \mathbf{P} and the other is associative \mathbf{Y} compatible with The association between the first layer vectors $\mathbf{W}^{(1)}$

weighted matrix. Weight matrix in the quadratic layer $\mathbf{W}^{(2)}$ is the first matrix $(\mathbf{W}^{(1)})^T$ is equal to the truncated value. Network training is similar to the network in the Hopfield network \mathbf{W} matrix elements:

$$w_{ij} = \sum_k x_i y_j, i = 0 \dots n-1, j = 0 \dots m-1 \quad (11)$$

This formula is an extended view of the matrix equation listed below

$$\mathbf{W} = \sum_k \mathbf{X}^T \mathbf{Y} \quad (12)$$

Specifically, when the forms are written in vector form, the magnitudes of multiplication are respectively $[n * 1]$ and $[1 * m]$ and formulas (11).

In summary, it can be said that Hopfield, and Himmeng and IYAX have an effective and simple restoration of non-widespread and distorted images. The small size of the network, not only the images, but also their generalization, such as the Xemming network, is based on maximum emission standards [3].

The use of neural networks is carried out in two stages:

- 1) Neural Architecture Selection.
- 2) Selecting weight coefficients of neural networks.

In the first step, you will need to select one of the following:

- a) Which neurons do we use (number of entries, activating function)?
- b) how to link them;
- c) What to do to enter and exit the neural network.

In the second step, you will need to "train" the selected neural network, which means that you should find a weight coefficient for it to work.

5. Methods of development and use of neural networks software

The programmable tool is written in C ++ programming language so that we can install elements of the interface in the Borland C ++ Builder programmable environment (figure 6), which we call "English Font" and we will install StringGrid1, StringGrid2, and StringGrid3. Then, put the required keys on the interface.

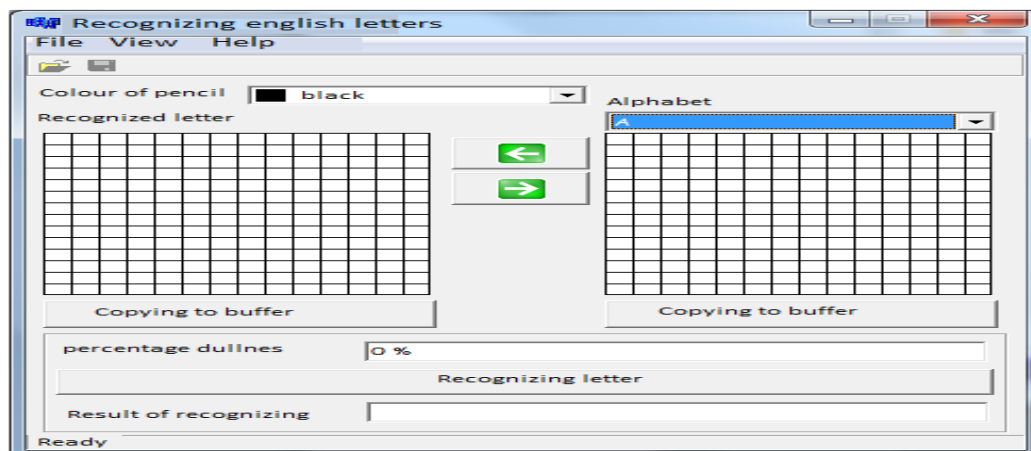


Figure 6. Hofffield Neural Network Interface.

We will create a "Matrix dimensions" that will be displayed in the form of the program, in which case the program will calculate the number of rows in the matrix, the number of columns, the size of the boxes in

the form, the size of the boxes in the Insert dialog box, move them to the buffer from the launch buttons, the color of the pencil, the menu bar, and the corresponding output keys and the exit buttons and insert the appropriate program codes (Figure 6)

Picture 7. View the menu bar.

We create a form that provides software information so that by using Simple Label elements, we provide information about the program name, software version, location, language, and identity, and we assign these elements as appropriate.

This form is used to extract all data about the program being created. In silent mode, to set the Latin alphabet letters, select the section in silent mode on the menu bar and form the help code for creating templates from the template. We use the elements RadioGroup, StringGrid, and Button to create this shape, which are used to create the form, to process the way it is done, and to perform the tasks assigned to it. We create a code key that is used to import, clear, invert, and execute the task.

We identify the letters of each letter in the identification of the letters. In the Latin chart, each of the ten letters of the case is studied in ten different ways. These tracks are used to recognize letters. A vector consisting of 0 and 1 is created according to the black and white image of each picture alignment image. Based on the vectors created, the font resembles the similarity.

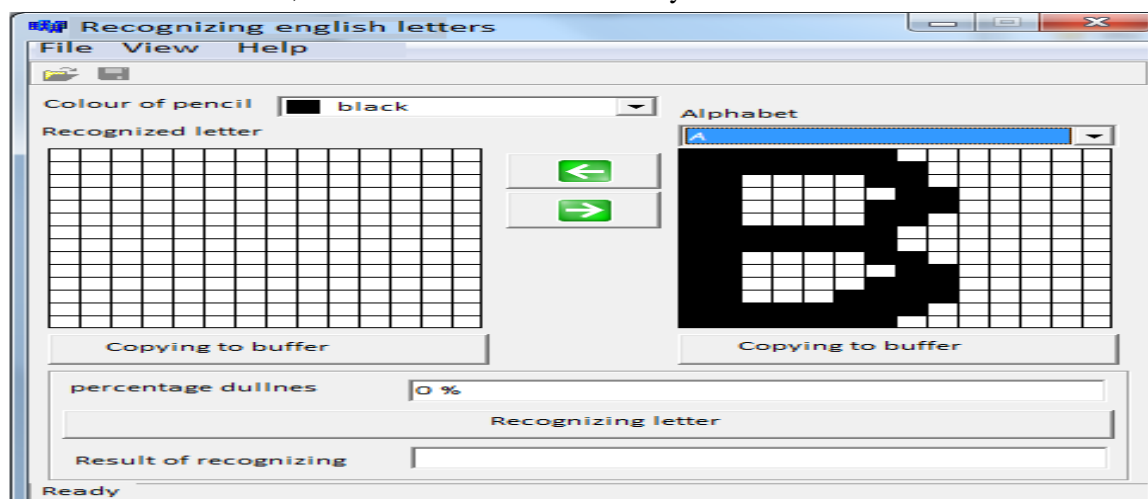


Figure 8. How to add letters.

This interface is used to identify the Latin alphabet (Figure 8).

In the Letter to Underline letter is drawn and copied to the buffer. This relocation is adapted to the letters you have read. That is, the image is drawn in different ways and is moved closer to the standard by moving its point of view. In this case, the percentage of opacity is determined depending on the distance and appearance of the letter image.

Through the recognition of the letter, Hopfle uses the neural model to identify the image using the tag. Through this program, it helps to identify teacher trainers. If you do not enter letters, you will not be able to recognize them. The accuracy of the image of the letters is important. Up to 97% of the program's clarity can be achieved by recognizing existing letters.

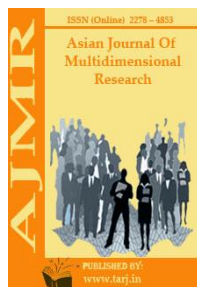
SUMMARY

Through the Hopfield network, software tools for familiarizing images have been created. The Hopfield net, which produces and tests the neuro-matched database, has been created. An algorithm working on artificial neural networks has been studied and its block diagram, model design, and software applications

that meet the requirements of the given method have been created. This software application is made only on a teacher-friendly basis, based on the training guidelines. Each derivative graphic letters are read by buffer. Based on these rules, the new object, namely the recognition of the letter, is based on the Hopfield model.

REFERENCES

1. Dj.Tu., Gonzalez R. Принципы распознавания образов.Перевод с английского I.B.Gurevicha. М.: Mir.1978 г. 412 p.
2. Berkinblit M.B. Neural sets. Uchebnoe posobie. M: MIROS i VZMSh RAO, 1993. -96 p.
3. Neural Sets: theory of the theory of invasion. Kn. 5: Ucheb. posobie для вузов. / Pod obshchey red. AI Galushkina, Ya.Z. Tsypkina. - М.: IPRJR, 2001. - 840 h.
4. Kruglov V.V., Borisov V.V. Iskestvenny neuronnyye set. Tioriya i praktika.- 2-e izd.-M.: Goryachaya line-telecom. 2002 g. 382 hr.
5. Kallan R. Основные концепции нейонных сетей.: Per. S angl.-M.: Izdatelskiy dom "Vilyams", 2001 г. 287 p.
6. Sergios Theodoridis, Konstantinos Koutroumbas, *Pattern Recognition*,third edition.(ISN 0-12-369531-7), 2006 Elsevier (USA).
7. Brijesh Verma, 2003, "A Contour Code Feature Based SegmentationFor Handwriting Recognition," *Proceedings of the SeventhInternational Conference on Document Analysis and Recognition(ICDAR 2003)* 0-7695-1960-1/03 \$17.00 © 2003 IEEE
8. Prof. Dr. Horst Bunke, 2006, *Off-line Cursive Handwriting RecognitionUsing Synthetic Training Data*.
9. A. Cheung, M. Benna, N. W. Bergmann, 1998, *A Recognition-Based Arabic Optical Character Recognition System*, Systems, Man, and Cybernetics, 1998. 1998 IEEE International Conference on, 0-7803-4778-1 198 1998 IEEE.
10. Hermineh Y.Y. Sanossian, 1996, *An Arabic Character RecognitionSystem Using Neural Network*, Neural Networks for SignalProcessing [1996] VI. Proceedings of the 1996 IEEE SignalProcessing Society Workshop, 0-7803-3550-3/96\$5.000 1996.
11. A. Benouareth,1 A. Ennaji, andM. Sellami, "Arabic HandwrittenWordRecognition Using HMMs with Explicit State Duration,"*EURASIP Journal on Advances in Signal Processing*, Volume2008, Article ID 247354.
12. A. M. Gillies, *Cursive word recognition using hidden Markov models*,in Proceedings of the 5th U.S. Postal Service AdvancedTechnology Conference, pp. 557–562, Washington, DC, USA.
13. M. Mohamed and P. Gader, "Handwritten word recognitionusing segmentation-free hidden Markov modeling and segmentation-based dynamic programming techniques," *IEEE Transactionson Pattern Analysis and Machine Intelligence*, vol. 18, no. 5,pp. 548–554, 1996.
14. Somaya Alma'adeed, Colin Higgins, and Dave Elliman, *Recognitionof Off-Line Handwritten Arabic Words Using Hidden MarkovModel Approach*, 1051-4651/02 2002 IEEE.
15. Sabri A. Mahmoud and Sameh M. Awaida, "Recognition Of Off-Line Handwritten Arabic (Indian) Numerals Using Multi-ScaleFeatures And Support Vector Machines Vs. Hidden MarkovModel", October 2009, *The Arabian Journal for Science and Engineering*, Volume 34, Number 2B.
16. A. Benouareth,1 A. Ennaji, andM. Sellami," Arabic HandwrittenWordRecognition Using HMMs with Explicit State Duration,"*EURASIP Journal on Advances in Signal Processing*, Volume2008, Article ID 247354.



LIFE INSURANCE CORPORATION OF INDIA: A CRITICAL ANALYSIS

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ABSTRACT

Safety and security has become the prime concern of everybody in the society. India has considerably developed economy and a section of people still feel unsafe and insecure. Insurance has come up as an important financial service in most part of the world. In fact, insurance is considered as one of the important segments in the economy for its growth and development. Life insurance is an important form of social safety and security. The insurance industry has witnessed many phases of a giant shape after privatisation of insurance industry. The result of foreign direct investment of 49 per cent in insurance has increased competition for the Life Insurance Corporation of India. In the recent years, the public has made criticism on the performance of LIC of India at it has failed to achieve the objectives for which it came into being. The criticism is due to the advent of many insurance schemes like – linked bank deposit, postal insurance and high rate of interest in the money market.

KEYWORDS: Life Insurance, Financial Performance, Social safety, Insurance Penetration, Insurance Density

INTRODUCTION

Social Safety and security has become the prime concern in the life of every-individual in the society. India has a developed economy and still a section of people feel unsafe and insecure. A

thriving insurance sector is of vital importance to every modern economy in terms of encouraging the savings habit and providing a safety-net to people; perhaps the most importantly generating the long-term invisible funds for infrastructure building of the country. Insurance is a major among the service sectors contributing to the financial savings of the household sector of the country and such savings are channelized into various investment avenues. [1] The insurance business was carried on by 154 Indian and 16 non-Indian insurance companies, and 75 provident societies in 1956. The financial crisis and the economic down turn severely, impacted the sales of single premium and unit-linked products. Resultantly, profitability of insurers deteriorated in 2008 due to low investment yields, high cost of guarantees and low revenues from asset management. However, solvency was collision and access to capital became difficult. In the recent years, the public has made criticism on the performance of LIC of India at it has failed to achieve the objectives for which it came into being. The criticism is due to the advent of many insurance schemes like – linked bank deposit, postal insurance and high rate of interest in the money market.

By passing the Life Insurance Act of 1956, the Indian Parliament has nationalised the insurance business and created the Life Insurance Corporation of India on September 1, 1956 with the objective of spreading life insurance more widely to reach all insurable persons in the country at reasonable cost. On the occasion of Life Insurance Corporation's nationalisation, the then Prime Minister Jawaharlal Nehru said thus: The nationalisation of life insurance is an important step in our march towards a socialistic society; its objective will be serving to the individual and the State. We require life insurance to spread rapidly all over the country and to bring a measure of security to our people. An attempt is made to analyse the parameters such as insurance penetration, insurance density, number of policies, sum assured business, claims settlements of Life Insurance Corporation of India in this competitive age.

The main feature of insurance players is cash flow constantly whereas the payout is deferred which makes them the biggest investment in long-gestation infrastructure development projects in all development aspects of nation. Huge fund collected by way of premium from millions of policyholders and the amount retained by the insurance players as solvency fund to meet the unforeseen contingencies which invariably need investment as per prudential norms.

Life insurance has also undergone significant rapid changes from implementation of reforms in the country which has a most remarkable record. Group insurance of employees through their employers has shown swift progress during the past five decades. Great Depression of the 1930's with less than one-tenth of one per cent of policyholders' funds lost during this period. Many life-insurers in the late 1960's were expanded their corporate structure including mutual funds with widened financial services.

The Life Insurance Corporation of India was the sole player in the life insurance industry for the last five decades. The entry of private insurance players and allowing foreign direct investment in insurance industry affects the performance of LIC of India in the near future. The private insurance players have become joint ventures between major business houses or banks in India and renowned international insurance giants. [2] At this juncture, it became necessary to appraise the financial and operating performance of LIC of India as it supposed to compete with its counter parts within country and abroad. Thus, the LIC public sector giant which never faced

competition earlier now has to compete with the private insurance players who boast of the rich and long experience of their partners from the developed countries of the world. It becomes imperative at this instance to apprise of the analytical performance LIC of India in terms of (a) business expansion, (b) market penetration and market density and (c) investment.

LITERATURE REVIEW

Ravi N Kadam critically examined the importance of life-insurance in risks management and performance competitors for LIC of India focussing the measure of insurance business on the basis of gross premium and net premium income. [3] On the descriptive ratio performance of LIC of India from 2008-09 to 2012-13 in a competitive market environment, Prachi Agnihotri has thrown light on the overall performance evaluation of LIC of India. He observed the performance of life insurance is consistent and suggested to have more service standards to maintain the market value of products.[4] K. Ramanathan in his research paper studied the cost control efficiency of LIC of India through Data Envelop Analysis (DEA) and observed the score rank is high and maintained consistency compared to the private insurance companies.[5] Sonal Nena in his study justified the performance of LIC of India so to include that “ the LIC of India is doing good job, managing the products and related marketing strategies effectively”. [6]

LIFE INSURANCE CORPORATION OF INDIA

The Life Insurance Corporation of India established with Headquarter in Mumbai in 1956 and is the largest life insurance company in India owned by the Government of India. It has acquired almost monopoly power in solicitation and sale of insurance policies in India and also extended its activities in 12 foreign countries with motto of catering to the insurance needs of Non-Resident Indians. The enforcement of New Economic Reforms in 1991 coupled with the formation of Insurance Regulatory and Development Authority Act of 2000 and started issuing licences to the private insurers. It is only insurance company belonging to the public sector now has to compete with several other corporate entities of its kind which often are heavyweight in the country and Multinational Life Insurance Brands in themselves. India with its huge middle class households has exhibited growth potential for the insurance industry. Saturation of markets in many developed economies has made the Indian market more attractive even for the global insurance sector. The insurance market in India has witnessed the dynamic changes including the entry of a number of global insurers.

LIC has also leveraged on telecommunications and information technology to set up call centres, internet enabled services, information kiosks etc. With an intention of providing quicker and better services to the policyholders, approximately 97 per cent of the total branches of LIC have front end computerization for giving on-line service to policyholders. In addition to this, New Delhi, Chennai, Bangalore and Mumbai have installed Metro Area Network (MAN) and interactive Voice Response System (IVRS). A specialized position known as Customer Relations Executive to ensure a customer base with is loyal and satisfaction in achieving to:

- Delight the customers with steadfast loyalty to the organization
- Reduce the number of customer grievances and service delivery failures
- Impart customer centric culture across the organization
- Increase the customer base

NEW MILLENNIUM GROWTH

Advent of automobile age, mass production techniques of modern industry, introduction of air plane, railroads expansion and changing the social consciousness of an affluent society and more closely affected the rise of insurance as a major business of new millennium. Development in casualty insurance is rise of workmen's compensation insurance business and also growth of automobile insurance to insure millions of drivers and automobiles. Laws of negligence have increased the need for many other forms of liability insurance. High medical costs and loss of income have skyrocketed health insurance to a multibillion-rupees towards the casualty of insurance field. The modern concept of business creates customers though sounds simple but has great implications. The customer is not only the buyer but whose loyalty towards the organization has greater invisible force. It implies customer is considered a pivotal factor for the growth and survival of the services sector.

ANALYSIS OF DATA

Life Insurance Corporation of India is doing yeoman services of insurance services in India. By providing insurance, it is securing the value of human life and gives security to the person having insurance policy. The growth of Life Insurance Corporation of India can be assessed in terms of number of policies issued, sum assured and annual premium, claim settlement and commission paid. Data on number of policies with sum assured, annual premium, commission paid to Agents and Development Officers and settlement of claims are presented in Table 1. The performance of LIC of India is analysed with the help of compound growth rate by using the regression function of $Y = ab^t$. The compound growth rate is equal to $(\text{Antilog of } b - 1) \times 100$. This is written as: $\log Y = \log a + \log b (t)$. Where, Y = Variable, t = time variable, a and b = parameters.

TABLE 1 PERFORMANCE OF LIC OF INDIA

(₹ In crore)(Policies in lakh)

Year	No. of Policies	Sum Assured	Annual premium	Claims settled		Commission paid
				No.	% claims settled to filed cases	
2000-01	196.57	124772	8852	11667	3.70	3256
2001-02	224.91	192569	16009	14359	1.90	4595
2002-03	242.67	179504	12504	17062	1.12	4999
2003-04	264.56	198707	12541	19607	0.91	5734
2004-05	239.74	187132	11861	23642	0.80	6245
2005-06	313.86	288522	15635	28473	0.83	7095
2006-07	382.21	303231	24489	36486	0.68	9169
2007-08	376.13	279693	24438	37206	0.96	9568
2008-09	358.00	395755	20982	40706	1.03	10033

2009-10	386.51	43478	26193	44129	1.11	12110
2010-11	370.57	47311	26483	47556	1.14	13309
2011-12	357.36	51076	26189	51914	1.12	14036
2012-13	366.53	51525	25693	54945	1.19	14768
2013-14	344.91	557092	31904	58108	1.21	16681
2014-15	359.52	508458	23112	41443	0.96	15092
2015-16	411.31	557700	25350	42222	0.99	15478
2016-17	421.57	561150	25507	43486	0.96	20866
2017-18	431.58	572044	26004	44330	0.97	21275
Mean	333.99	283318	21319	36519	1.20	11351
Growth	119.40	149.0	193.8	280.2		554.2

Source: LIC of India, Various Annual Reports

Table 1 shows the components performance of Life Insurance Corporation of India. The number of insurance claims settled is 11667 lakh in 2000-01 which increased to the highest number position of ₹ 44330 lakh in 2016-17 which a rise by 379.96 lakh policies or 2.26 per cent. Commission is the percentage of premium paid to an insurance agent by insurer as compensation for completing the sales. The commission has increased from ₹ 3256 crore in 2000-01 to ₹ 21275 crore in 2016-17. Likewise, the annual premium from ₹ 8852 crore in 2000-01 to ₹ 26004 crore in 2016-17, policies sum assured from ₹ 124772 crore in 2000-01 to ₹ 572044 crore in 2016-17 and number of policies from 196.57 lakh in 2000-01 to 210.58 lakh in 2016-17. An increase in 2016-17 to the position of 2000-01 is accounted by 553.41 per cent, 62.43 per cent, 358.47 per cent and 7.13 per cent respectively for the above components respectively. Table analysis for the data during the period from 2000-01 to 2017-18 discloses that the average number of insurance policies, sum assured, annual premium and commission paid is accounted for 333.99 lakh, ₹ 283318 crore, ₹ 21319 crore and ₹ 11351 crore respectively.

An inference that could draw from the analysis of Table 1 is that the progress of sum assured has increased significantly followed by annual sum assured and number of life-insurance policies. The achieved growth is accounted for 119.40 per cent, 149.0 per cent, 193.80 per cent, 280.2 per cent and 554.40 per cent for number of policies, sum assured, annual premium and commission paid respectively. The increased progressive performance in claims settlement is much higher followed by annual premium and sum assured compared to other components enlightening the LIC of Corporation effective measures in ensuring social safety as well as social security.

INSURANCE PENETRATION AND DENSITY

The potential performance of insurance sector is assessed through two factor-analyses namely insurance penetration and insurance density. Ratio of premium underwritten in a given year to

the gross domestic product is termed as insurance penetration. As GDP per capita rises, it is expected that individuals will purchase more insurance. The insurance penetration measures the level of insurance activity relative to the size of the economy. Insurance density is defined as the ratio of premium underwritten in a given year to the total population. Data analysis of insurance penetration and density are presented in Table 2.

TABLE 2INSURANCE MARKET PENETRATIONS AND DENSITY

Year	Insurer penetration	Insurer density
2005-06	4.10	33.20
2006-07	4.00	40.40
2007-08	4.00	41.20
2008-09	4.60	47.70
2009-10	4.40	55.70
2010-11	3.40	49.00
2011-12	3.17	42.70
2012-13	3.10	41.00
2013-14	2.60	44.00
2014-15	2.78	44.62
2015-16	2.72	45.08
2016-17	2.75	45.12
Mean	3.47	44.14

Source: Annual Reports, LIC of India

Table 2 discloses the insurance penetration in India for 2005-06 to 2016-17. The life-insurance penetration is 4.10 per cent in 2005-06 whereas it 2.75 in 2016-17. The insurer density is 33.20 in 2005-06 and 45.12 in 2016-17. During the period from 2005-06 to 2016-17, the average life-insurance penetration is worked out at 3.47 and 44.14 for insurer density. An observation that could make is that though the insurance penetration has increased at a diminishing by 0.63 in 2016-17 to that of 2005-06 position in spite of having a good premium record observed from Table 2. In terms of insurance density, it is 33.20 in 2005-06 and 44.14 in 2016-17 which implies more number of people got insured on account of popularity of the life insurance scheme not only as safety and security but also awareness of savings too among the people to become policyholders.

INVESTMENT

The motto of Life Insurance Corporation of India is to become a nation builder. It has mobilised the funds invested by the people in the form of life insurance premium for the socio-economic benefit of community at large. The Corporation has deployed its funds to the best advantage of the policyholders and the community as a whole. The national priorities as well as obligation of reasonable return to the policyholders are the main broadened criteria of investment by the LIC of India. Therefore, the insurer needs to make a sound investment frame for healthy growth of

business on the business principles and to safeguard the interests of policyholders too in terms of payment of assured amount plus bonus, etc., and plough of profit into the insurer for steady growth and sustenance. By means investment in the Government and infrastructure and the social sector certainly help a smooth growth of economy. Tap funds mobilisation and invest on sound lines for health growth is a strategic approach to the LIC of India. Data on investments made by the LIC of India is presented in Table 3

TABLE 3LIC INVESTMENTS(₹ In crore)

Year (1)	Central Govt. (2)	State Govt and other guarante ed marketab le securities (3)	Infrastructure and Social sector investment						Grand Total (10)
			Housin g (4)	Power (5)	Irrigat ion etc (6)	Transp ort (7)	Other s (8)	Total (9)	
2005-06	236959 (66.12)	58928 (31.68)	19807 (31.68)	29740 (47.57)	8288 (13.26)	725 (1.16)	3954 (6.32)	62514 (17.44)	358401 (100.00)
2006-07	272498 (66.38)	64285 (15.66)	22451 (30.44)	37881 (51.37)	7500 (10.17)	1516 (2.05)	4398 (5.96)	73746 (17.96)	410529 (100.00)
2007-08	297943 (63.50)	89234 (19.02)	24325 (29.66)	41120 (50.13)	6649 (8.11)	1154 (1.41)	8774 (10.69)	82022 (17.48)	469199 (100.00)
2008-09	318673 (60.12)	110697 (20.88)	34185 (33.93)	48090 (47.71)	6022 (5.97)	7218 (7.16)	5274 (5.23)	100789 (19.00)	530159 (100.00)
2010-11	147859 (55.87)	33045 (39.44)	4482 (5.35)	76167 (90.90)	25 (0.03)	686 (0.82)	2427 (2.90)	83787 (31.65)	264691 (100.00)
2012-13	130888 7 (92.64)	83746 (5.93)	4222 (20.83)	10995 (54.26)	36 (0.18)	-	5012 (24.73)	20265 (1.43)	141289 8 (100.00)
2014-15	177693 9 (94.77)	63158 (3.37)	7392 (21.21)	15840 (45.44)	33 (0.09)	77 (0.22)	11515 (33.03)	34857 (1.86)	187495 4 (100.00)
2016-17	231895	44262	6414	298	34	13859	382	20987	238420

	2 (97.26)	(1.86)	(30.56)	(1.42)	(0.16)	(66.04)	(1.82)	(0.88)	1 (100.00)
Mean	834839	68419	15410	32516	3573	3605	5217	59871	963129

Source: LIC of India, Various Annual Reports

Figures in brackets in columns 4, 5, 6, 7 and 8 are percentages to total figure in columns 9; and in columns 2, 3 and 9 are percentage to figure in column 10

Table 3 unfailing reveals the Life Insurance Corporation of India as premier insurance insurer and has shown interest in protecting the policyholders' interest in terms of safe and security for their premium paid by means of investment in the Central Government, State Governments and infrastructural and social sector investment. It has invested a sum of ₹ 236959 crore in 2005-06, ₹ 58928 crore, ₹ 62514 crore in Central Government, State Governments and infrastructure and social sector investment respectively. The corresponding figures in 2016-17 are ₹ 2318952 crore, ₹ 44262 crore and ₹ 20987 crore in 2016-17 respectively for the above. An increase in terms of grand total amount is accounted for by ₹ 2025800 crore or by 465.23 per cent. Total investment in infrastructure in social sector is accounted for ₹ 62514 crore in 2005-07 while the figure is in 2016-17 is ₹ 20987 crore which means a decrease of ₹ 41527 crore or by 66.43 per cent. Investment growth of LIC of India is at an increasing trend in the securities of Central Government and State Governments, and also in infrastructure investment like housing and power followed decreasing trend in irrigation.

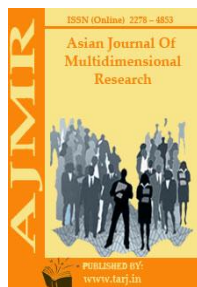
CONCLUSION

As a primary function, insurance with aim of protection with safety and security by assessing the risk and sharing the same with risk-sharing should be yardstick of LIC of India which goes beyond its primary purpose of spreading the risk and thereby minimising the loss. Besides, the basic functions, the subsidiary responsibilities should offered so as to prevent loss and also aid to the economic development of the country through the investment of funds under the international prudential norms. Claims settlement should be made easy and within specific time limit. Huge premium collection from million-policyholders and amount retained by them as solvency fund to meet the unforeseen contingencies should invariably be invested in income results-oriented securities adopting the sound financial management norms.

A strategic role of LIC of India in investment should be 6: 2: 2 in Central Government and State Government and Business respectively which combine the principle of safety and return so that the insurer should become a strong-hold agent in the country. In addition social security and safety, the LIC should take a provision of health-insurance scheme at least the policyholders with additional premium for the certain specified health diseases so that the entire gamut of social security, social safety and health coverage within the ambit of Life Insurance Corporation of India. Then only the catalytic role insurance would shape the nation's socio-economic development and thereby insuring the economic safety and social security of people with happiness for their well-being and welfare. Added, the insurer ought to implement good customers' relation to emanate CRM as it helps expand business, streamline and automate the process with facility of instant information and facts without a hassle.

REFERENCES:

1. Agarwal A.N., “Life Insurance in India – A Historical and Analytical Study”, Allahabad: Law Journal Press. 1961.
2. Anderson et.al. Thesis and Assignment Writing, New Delhi: Wiley Eastern Limited, 1986.
3. Ravi N Kadam, “Life Insurance Corporation of India: A Giant in India’s Insurance Sector”, IJPSS, 2(6) 2012, pp316-325.
4. Agnihotri Pranchi, “The Impact of Privatisation on Life Insurance Corporation of India,” Altus Shodh Journal of Management and Commerce, 1(1) 2014, pp.1-9
5. Ramanathan, K., “A Study on the Cost Control Efficiency of LIC of India”, Asia Pacific Journal of Research, 1(14) 2014, p.172-179.
6. Sonal Nena, “Performance Evaluation of Life Insurance Corporation of India”, International Journal of Advance Research in Computer Science and Management Studies, Vol.1, Issue 7, December 2013.



ASYMMETRIC RESPONSE OF FOREIGN CAPITAL VOLATILITY IN NEW ECONOMY-A TIME SERIES ANALYSIS

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ABSTRACT

Introduction: It is known that the growth in FDI and FPI are increasing at the global scenario. Especially in the developing countries like India, FDI and FPI increased significantly in last two decades. The current study will investigate the effect of Foreign Direct Investment and Foreign Portfolio Investment on the economic indicators in India.

Objectives:

1. To study the pattern of FDI and FPI in Indian economy in the last twenty four years.
2. To find out the impact of FDI on leading Economic indicators in Indian scenario.
3. To find out the impact of FPI on leading Economic indicators in Indian relevance.
4. To analyze the relationship between FDI and FPI.

Research Methodology: The data of FDI, FPI, GDP growth, BSE SENSEX, NSE NIFTY and FCA from 1992 to 2015, have been used for the purpose of study. Various statistical tools i.e., Mean, Standard Deviation, have been used to show the nature of the data. Correlation and Regression analysis have been used to study the relationship and dependency of these variables.

Findings: The findings revealed that there is a visible effect of FDI and FPI on the economic indicators. The result of the correlation and regression analysis shows the significant impact of the FDI and FPI on the Indian economic indicators.

KEYWORDS: Fdi, Fpi, Gdp

INTRODUCTION

Investment plays an important role in accelerating economic expansion of any economy. Indian economy opened up to the universal world in 1991 through allowing foreign investors to invest in India. The foreign investments can be channelized either in the listed companies' share through financial markets (called Foreign Institutional Investors) or through directly investment in capital structure of the listed/unlisted companies in India (called Foreign Direct Investment). Foreign investment helps the domestic investments by increasing economic activities and capital formation and it makes the domestic market more competitive. Foreign institutional Investors (FIIs) boost up the domestic investment by increasing capital inflows through the secondary markets and by nature, it is very volatile. On the other hand Foreign Direct Investment (FDI) plays more important role than FIIS in progress of any developing country especially like India. It contributes significantly to human capital such as managerial skills and research and development (R&D)

For the investors, India is being considered as the second most important FDI destination after China for transnational corporations during 2010-12. Although both types of investments provide an momentum for economic and industrial expansion, but now India give more emphasis on attracting FDI as it stays for longer period, for its exist policy is not as easy as for FIIs. Availability of highly qualified human resource, huge untapped potential domestic markets, low-cost manufacturing, makes India a favorable destination for foreign investors

Growth of FDI and FPI

During the last five decades in India, there have been momentous changes in approaches towards FDI policies. The FDI policy was modified as per the developments of industrial policies and the foreign exchange situation.

The first phase (1950-1967) emphasized on import substituting industrialization. The attitude towards FDI was very limited due to limited availability of capital, technology, skills, etc.

Due to the foreign exchange crisis in 1957-58, FDI policies were further modified and highlighted on incentives and tax concessions. The market Seeking FDI was encouraged by locational advantage in production.

The second phase (1967-1980) the investment in various industries sectors was increased. India's technological knowledge and base were developing and human resource skills were getting more skilled. Due to this reason, Indian government showed liberal attitude towards foreign capital from developed countries like U.S.A., Japan, Germany, etc. To examine and scrutinized this flow of capital the Foreign Exchange Regulation Act (FERA), 1973 was setup during this period.

The third phase (1980-1990), there was a need to reevaluate and re examined the foreign policy in India. The elevated oil prices across the world, India failed to boost her manufactured exports which lead to deterioration in the Balance of Payment. To overcome this situation, Indian policy maker framed the foreign policy in such a way so that it attracts more foreign investors holding equity in export-oriented units.

In the early period of the fourth phase (1991 onwards), the external foreign debts were the highest and the foreign reserves were not enough to balance the debt. At that time there was a paradigm shift in the policies on foreign investment and trade across the globe. In this critical situation, the

former Prime Minister of India, Dr. Manmohan Singh with the help of World Bank and IMF was taken an initiative to introduce the macro- economic stabilization and structural adjustment program.

Industrial Policy statement of July 1991 was reframed as “foreign investment and technology collaboration will be welcomed to obtain higher technology to increase exports and to expand production base”. As a result, these initiatives turned into favorable policy environment for foreign investment, foreign technology collaboration, foreign trade and foreign exchange in the country.

In this phase India tried different routes to attract more FDI like investment in tax-incentives backward districts, public private partnerships, and then special economic zones. Automatic approval was granted in specified high-priority industries for up to 51 per cent direct foreign investment and in trading companies’, associated primarily in export activities. Introduction of FII was a major revolution in this scenario. An FII may invest in the capital of an Indian Company under the Portfolio Investment Scheme which limits the individual holding of an FII to 10% of the capital of the company and the aggregate limit for FII investment to 24% of the capital of the company. To make it more easy and understandable, Arvind Mayaram committee was set up in recent years. As per their recommendation, Where the stake is less than 10% it would be termed as FII and where it’s more than 10% it would be termed as FDI.

ECONOMIC INDICATORS FDI AND FPI (FII)

It has been a well established fact that the growth of foreign direct investment (FDI) escalates the economic growth of a country. The impact of FDI on the economic factors-GDP, Currency, Stock Market, Foreign Exchange Reserves, Interest Rate, Current Account, Exports, Imports, and Unemployment Rate has been phenomenal.

Market Size (Gross Domestic Product): if the market size (GDP) of a country is large it will attract more FDI and vice versa. There is positive correlation between GDP and FDI which is matched with the objective to achieve higher growth in terms of GDP and FDI.

Availability of Human Resources (Wages Paid): Availability of human resources is another factor which has influenced on any country’s economy. It is noted there is positive correlation between Wages paid and FDI inflow, it mean if there is 1% change in wage rate it causes positive changes in FDI too.

Economic Stability (Deficit Balance of Payment): Balance of Payment is one of the pull factors of FDI inflow. The economic theory suggested the negative elasticity coefficient between FDI and Deficit in Balance of Position.

Government Policies (Trade Openness): Government policies are one of the major factors which determine the flow of FDI in Countries .Degree of trade openness means ratio of total trade to real GDP of Economy. As the government policies are liberal then there is high probability of inflow of FDI into the country.

Exchange Rates: Exchange rate can be defined as the admiration of Indian Rupee in international market which encourages the foreign investors firms to obtain the specific assets required at cheap rates and earn higher profits.

Inflation: A reliable economy can be defined if the inflation rate is low. Any changes in inflation rates of home country and foreign country are probably alter the most favorable investment decisions and gives negative impact on FDI.

BSE & NSE index: Financial indexes are constructed to measure price movements of stocks, bonds, T-bills and other forms of investments. Stock market indexes are meant to capture the overall behavior of equity markets. A stock market index is created by selecting a group of stocks that are representative of the whole market or a specified sector or segment of the market. An Index is calculated with reference to a base period and a base index value. On the other hand FDI and FPI play an important role for the movement of these indices.

Scope of the Study:

FDI and FII have a major role to play in India's economic development. Many sectors have seen the growth of foreign investment in the form of FDI and FII, over the past few years. New reforms /policies are being taken by the Government to promote FDI due to which a consistent and rapid growth has been recorded in India. The present study takes into consideration FDI and FII inflows in the country in the last twenty four (1992-2015) years. The relationship between FDI, GDP and Market Indices and FII, GDP and Market Indices were examined. GDP is taken as the proxy for economic growth. NIFTY and SENSEX were taken as the proxies for stock market movements. FCA is taken as the proxy of Foreign Exchange Reserve. Trend in the flow of FDI and FII is studied and its impact on country's economic growth is considered to evaluate the country's current liberalized FDI and FII regime.

REVIEW OF LITERATURE

Mucuk and Demirsel (2013) conducted a study to find out the impact of FDI on the unemployment rate in seven developing countries. The result disclosed that, most of the foreign investors come to the country and associate with a company that are already existence, so FDI usually causes an negative effect on the unemployment rate in the country.

Laskiene& Pekarskiene (2011) have conducted a study and shown that FDI has a positive effect on the investment of host country's labour productivity. But the growth of productivity is not the same in different areas of economic activity.

Kumar & Pradhan (2002) conducted a study to find out the effects of FII inflows on the Indian stock market and concludes that FII investments are more driven by Fundamentals and do not respond to short-term changes or technical position of the market

Balasubramanyam et al. (1996) reveals significant results to support the assumption that FDI is more important for economic growth in export promoting than in importing substituting countries. This stated that the impact of FDI varies across countries and trade policy can affect the role of FDI in economic growth.

Pal (1998) in his study highlighted that FII flows have failed to invigorate the stock market in India. It further analyses the linkages between the stock market and domestic saving rate both theoretically and at empirical level in context of Indian experience.

Alfaro et al. (2004) reveal that FDI plays an important role in contributing to economic growth but the level of development of local financial markets is crucial for these positive effects.

Afees (2004) reveal that inflation, debt structure, and exchange rate significantly influence FDI flows in Nigeria. The study stated the government to pursue prudent fiscal and monetary policies that will be uplift towards attracting more FDI and enhancing overall domestic productivity.

Miguel D. Ramirez (2006) conducted a study and unearth that that increase in both private and foreign investment per worker have a positive and economically significant effect on the rate of labour productivity growth.

Mohan (2005) highlighted that flows of private capital in form of FII in recent years have amplified the Forex reserves in emerging markets and helped in enhancing capital markets in India. The study further analyses the implications of an enlarged FII presence in terms of stock market and macroeconomic volatility. The study concluded that drastic increased in FII flows in Indian economy has shifted the focus of equity market from mutual funds to FII inflows.

RESEARCH GAP:

Growing India needs abundant foreign capital in the form of FDI & FII for the development of basic infrastructure like Roads, Railways, Sea Ports, Warehouses, Banking Services and Insurance Services etc. Moreover, rapid industrialization since 1991 has further strengthened the need of foreign capital across various industries. Many developing countries suffer from severe scarcity of funds in highly capital intensive areas such as infrastructure. This problem can be diverted to the foreign capitalists by allowing them to invest. Other words, foreign capital are the panacea for the scarcity of all resources. Foreign capital is an easy route to reduce the cost of capital. Thus investors tend to invest in countries like India where they can gain maximum return on their investments. Gradual Integration of global financial markets ultimately results in explosive growth of FDI around the globe.

The results of macroeconomic studies on FDI and growth have generally been mixed. Though most studies find some positive correlation between FDI and growth but some are not. But till now no combined study have been found to compare FDI and FII jointly and show their impact on growth and stock market indices in India.

OBJECTIVES

The present study tries to do a comparative analysis of FDI and FII and discern their contribution towards economic growth. Nominal GDP is used as a proxy for economic growth; annual FDI and FII investment data have been taken. In today's times of rapid growth both FDI and FII are an important source of foreign funds for any country especially developing country like India. India is rapidly growing for which it needs to channelize foreign funds from all over the world. Thus, the Indian economy is increasingly becoming part of global inter-connectedness, with

changes in policy contributing to changes in both the nature and magnitude of capital flows. However, the current financial crisis has emphasized upon the volatile nature of foreign capital flows to developing countries with changes in risk perception and attitudes towards investment in countries most affected by global financial turbulence. The volatile nature of foreign funds affects the flow of FII and FDI in varying degrees. The continuous adjustments in investment inflows and outflows of foreign funds in India, strongly affects the economic growth of the country. Thus, new policy changes have to be adopted and old one has to be amended from time to time in order to have robust growth of the country. The recent amendments in FDI policies indicate the same. The study attempts to discover the implications of FDI and FII flow on Economic growth of India. The policies are changed with changing economic environment in order to attract foreign funds to increase the speed of economic growth in India. Hence, following are objectives of this study.

The research aims

5. To study the pattern of FDI and FII in Indian economy in the last twenty four years.
6. To find out the impact of FDI on leading Economic indicators in Indian scenario.
7. To find out the impact of FPI on leading Economic indicators in Indian relevance.
8. To analyze the relationship between FDI and FPI.

RESEARCH METHODOLOGY

Data collection:

The present research will investigate the relation of economic indicators and FDI for Indian subcontinent. The study is based on the secondary data. The Indian data of Gross Domestic Product growth, BSE SENSEX, NSE NIFTY Foreign exchange reserve(FCA) from 1992 to 2015 have been used to perform the analysis.

Analytical tools:

A line in a two-dimensional or two-variable space is defined by the equation $Y=a+bX$; in full text, the Y variable can be expressed in terms of a constant (a) and a slope (b) times the X variable. The constant is also referred to as the intercept, and the slope as the regression coefficient or B coefficient.

DATA ANALYSIS:

Obj: To study the pattern of FDI and FII in Indian economy in the last twenty four years

Tab 1: FDI FROM 1992-2015

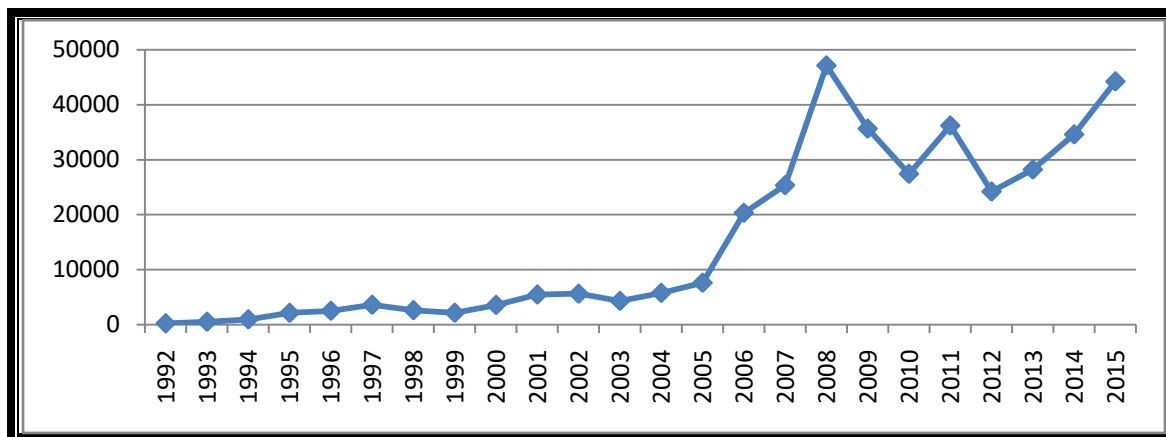


Figure 1: Trend of FDI Inflows

Interpretation:

The above line chart depicts the growth of FDI in Indian economy. From 1992 to 2004, there was no significant movement of FDI. In the year of 2008, it was significantly increased whereas in 2012 there was a gradual drop down. But for the next two consecutive years 2013 and 2014 it raised again. Hence, the equation of the model is polynomial which fits best among the regression model. The R^2 value being 0.787, explains about 78.8% of the total variation of the dependent variable by the independent variable.

$$y = 62.20x^2 + 372.5x - 1921. R^2 = 0.787$$

Tab 2: FPI FROM 1992-2015

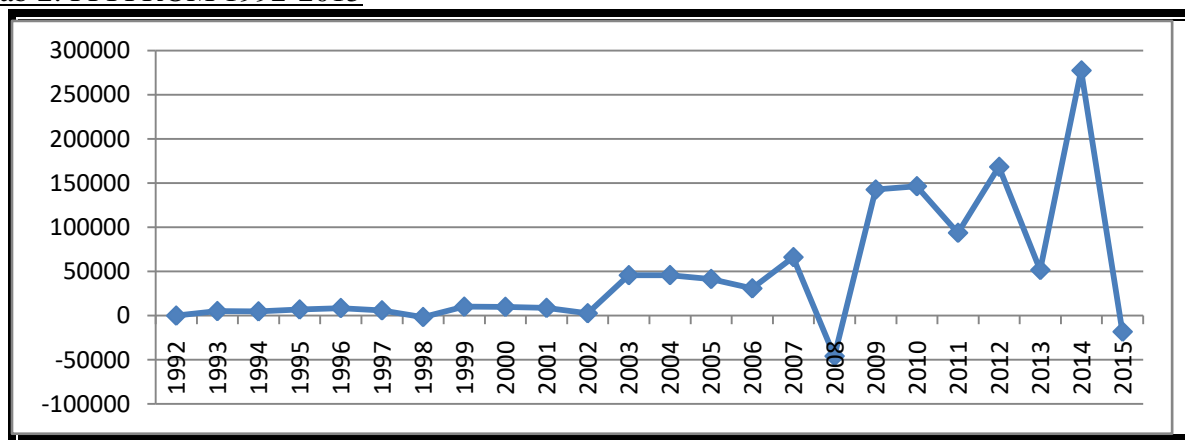


Figure 1: Trend of FDI Inflows

Interpretation:

The above line chart depicts the growth of FPI in Indian economy. From 1992 to 2002, there was no significant movement of FPI. In the year of 2008, it was significantly negative, having a rise in the next two consecutive years, i.e. 2009 and 2010 whereas again in 2011 there was a gradual drop down. In 2013 it increased significantly. Hence, the equation of the model is polynomial

which fits best among the regression model. The R^2 value being 0.440, explains about 44% of the total variation of the dependent variable by the independent variable.

$$y = -11.17x^4 + 516.1x^3 - 7271x^2 + 36783x - 43730$$

$$R^2 = 0.440$$

Tab 3: Correlation Matrix

Correlations		FDI	FII	GDP	FCA	NSE	BSE
FDI	Pearson Correlation	1	.896**	.889**	.842**	.889**	.898**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	24	24	24	24	24	24
FII	Pearson Correlation	.896**	1	.977**	.947**	.977**	.881**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	24	24	24	24	24	24
GDP	Pearson Correlation	.889**	.977**	1	.988**	1.000**	.902**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	24	24	24	24	24	24
FCA	Pearson Correlation	.842**	.947**	.988**	1	.987**	.904**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	24	24	24	24	24	24
NSE	Pearson Correlation	.889**	.977**	1.000**	.987**	1	.902**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	24	24	24	24	24	24
BSE	Pearson Correlation	.898**	.881**	.902**	.904**	.902**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	24	24	24	24	24	24

** . Correlation is significant at the 0.01 level (2-tailed).

Interpretation:

The above table depicts the statistical relationship between the variables FDI, FII BSE SENSEX, GDP, NSE NIFTY and Foreign Currency Assets. From the above table it can be concluded that there is very strong positive correlation between FDI and BSE SENSEX (0.89), FDI and GDP (0.88), FDI and NSE NIFTY (0.889), FDI and Foreign currency Assets (0.847), FII and BSE SENSEX (0.881), FII and GDP (0.977), FII and NSE NIFTY (0.977), FII and Foreign currency Assets (0.947). The correlation is ascertained significant at 1 percent level of significance.

Obj: To find out the impact of FDI on leading Economic indicators in Indian scenario.

The following Equations are being formulated to measure the relationship between FDI and other economic indicators. Where Economic indicators are dependent variable and FDI is independent variable.

$$1. \text{GDP} = \alpha + \beta_1 \text{FDI} + e \quad (1)$$

$$2. \text{NSE (NIFTY)} = \alpha + \beta_1 \text{FDI} + e \quad (2)$$

$$3. \text{BSE (SENSEX)} = \alpha + \beta_1 \text{FDI} + e \quad (3)$$

$$4. \text{FCA} = \alpha + \beta_1 \text{FDI} + e \quad (4)$$

Impact of FDI on GDP:**Tab 4: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.889 ^a	.791	.781	1109.18143

a. Predictors: (Constant), FDI

According to Table – 4, manifests the regression model fit summary, the value of R, .889, signifies that 88.9% of correlation is present between the dependent and independent variables. The value of R², 0.791 depicts linear regression and further explains that 79.1% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the adjusted value of R², .781 depicts that 78.1% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 5: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102240467.161	1	102240467.161	83.103	.000 ^b
	Residual	27066235.690	22	1230283.440		
	Total	129306702.851	23			

a. Dependent Variable: GDP

b. Predictors: (Constant), FDI

According to the Table – 5, the F-test depicts a high value of 83.103 along with degree of freedom (df), 23, which means there is no linear relationship between any of the two variables in the model. The p-value (Sig.) is .000 i.e. less than 0.05, which indicates that the regression model is statistically significant and predicts the outcome variable.

Tab 6: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	949.110	321.318		
				2.954	.007

FDI	.135	.015	.889	9.116	.000
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a. Dependent Variable: GDP

According to Table – 6, the independent variable “FDI” is having a beta value of 0.135. Hence, a unit increase in the variable X1 (FDI) will lead to increase 0.135 unit in the variable Y (GDP).

$$Y = 949.110 + 0.135X_1$$

Impact of FDI on NSE:

Tab 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.889 ^a	.791	.781	1109.05906

a. Predictors: (Constant), FDI

Table – 7, manifests the regression model fit summary, the value of R, .889, signifies that 88.9% of correlation is present between the dependent and independent variables. The value of R², 0.791 depicts linear regression and further explains that 79.1% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the adjusted value of R², .781 depicts that 78.1% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 8: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102188118.031	1	102188118.031	83.079	.000 ^b
	Residual	27060263.855	22	1230011.993		
	Total	129248381.886	23			

a. Dependent Variable: NSE

b. Predictors: (Constant), FDI

According to the Table – 8, the F-test depicts a high value of 83.079 along with degree of freedom (df), 23, which means there is no linear relationship between any of the two variables in the model. The p-value (Sig.) is .000 i.e. less than 0.05, which indicates that the regression model is statistically significant and predicts the outcome variable.

Tab 8: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	950.157	321.283		2.957	.007
	FDI	.135	.015	.889	9.115	.000

a. Dependent Variable: NSE

According to Table – 8, the independent variable “FDI” is having a beta value of 0.135. Hence, a unit increase in the variable X1 (FDI) will lead to increase 0.135 unit in the variable Y (NSE).

$$Y = 950.157 + 0.135X_1$$

Impact of FDI on BSE:

Tab 9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898 ^a	.807	.798	1362.78613

a. Predictors: (Constant), FDI

Table – 9, manifests the regression model fit summary, the value of R, .898, signifies that 89.8% of correlation is present between the dependent and independent variables. The value of R^2 , .807 depicts linear regression and further explains that 80.7% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the adjusted value of R^2 , .798 depicts that 79.8% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 10: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	170746350.187	1	170746350.187	91.938	.000 ^b
	Residual	40858092.714	22	1857186.032		
	Total	211604442.900	23			

a. Dependent Variable: BSE

b. Predictors: (Constant), FDI

According to Table – 10, the F-test depicts a high value of 91.938 along with degree of freedom (df), 23, which means there is no linear relationship between any of the two variables in the model. The p-value (Sig.) is .000 i.e. less than 0.05, which indicates that the regression model is statistically significant and predicts the outcome variable.

Tab 11: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1663.323	394.785		4.213	.000
	FDI	.174	.018	.898	9.588	.000

a. Dependent Variable: BSE

According to Table – 11, the independent variable “FDI” is having a beta value of 0.174. Hence, a unit increase in the variable X1 (FDI) will lead to increase 0.174 unit in the variable Y (BSE).

$$Y = 1663.323 + 0.174X_1$$

Impact of FDI on FCA:

Tab 12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.842 ^a	.709	.695	4587.27417

a. Predictors: (Constant), FDI

Table – 12, manifests the regression model fit summary, the value of R, .842, signifies that 84.2% of correlation is present between the dependent and independent variables. The value of R^2 , .709 depicts linear regression and further explains that 70.9% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the adjusted value of R^2 , .695 depicts that 69.5% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 13: ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1126443847.440	1	1126443847.440	53.530	.000 ^b
Residual	462947855.605	22	21043084.346		
Total	1589391703.045	23			

a. Dependent Variable: FCA

b. Predictors: (Constant), FDI

According to Table – 13, the F-test depicts a high value of 53.530 along with degree of freedom (df), 23, which means there is no linear relationship between any of the two variables in the model. The p-value (Sig.) is .000 i.e. less than 0.05, which indicates that the regression model is statistically significant and predicts the outcome variable.

Tab 14: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3585.179	1328.885		2.698	.013
FDI	.447	.061	.842	7.316	.000

a. Dependent Variable: FCA

According to Table – 14, the independent variable “FDI” is having a beta value of 0.447. Hence, a unit increase in the variable X1 (FDI) will lead to increase 0.447 unit in the variable Y (FCA).

$$Y = 3585.179 + 0.447X_1$$

To probe the impact of FPI on leading Economic indicators in the Indian scenario.

The following Equations are being formulated to measure the relationship between FDI and other economic indicators. Where Economic indicators are dependent variable and FDI is independent variable.

$$1. \text{ GDP} = \alpha + \beta_1 \text{ FPI} + e \quad (1)$$

$$2. \text{ NSE (NIFTY)} = \alpha + \beta_1 \text{ FPI} + e \quad (2)$$

$$3. \text{ BSE (SENSEX)} = \alpha + \beta_1 \text{ FPI} + e \quad (3)$$

$$4. \text{ FCA} = \alpha + \beta_1 \text{ FPI} + e \quad (4)$$

Impact of FPI on GDP

Tab 15: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.977 ^a	.955	.953	515.93428

a. Predictors: (Constant), FPII

Table – 15, manifests the regression model fit summary, the value of R, .977, signifies that 97.7% of correlation is present between the dependent and independent variables. The value of R^2 , .955 depicts linear regression and further explains that 95.5% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the adjusted value of R^2 , .953 depicts that 95.3% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 16: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	123450562.784	1	123450562.784	463.772	.000 ^b
	Residual	5856140.066	22	266188.185		
	Total	129306702.851	23			

a. Dependent Variable: GDP

b. Predictors: (Constant), FPI

According to Table – 16, the F-test depicts a high value of 463.772 along with degree of freedom (df), 23, which means there is no linear relationship between any of the two variables in the model. The p-value (Sig.) is .000 i.e. less than 0.05, which indicates that the regression model is statistically significant and predicts the outcome variable.

Tab 17: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-301.596	187.055		-1.612	.121
	FPI	.004	.000	.977	21.535	.000

a. Dependent Variable: GDP

According to Table – 17, the independent variable “FPI” is having a beta value of 0.004. Hence, a unit increase in the variable X1 (FDI) will lead to increase 0.004 unit in the variable Y (GDP)

$$Y = -301.596 + 0.004X_1$$

Impact of FPI on NSE

Tab 18: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1				

1	.977 ^a	.955	.953	516.06205
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a. Predictors: (Constant), FII

Table – 18, manifests the regression model fit summary, the value of R, .977, signifies that 97.7% of correlation is present between the dependent and independent variables. The value of R², .955 depicts linear regression and further explains that 95.5% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the adjusted value of R², .953 depicts that 95.3% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 19: ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	123389341.047	1	123389341.047	463.312	.000 ^b
Residual	5859040.838	22	266320.038		
Total	129248381.886	23			

a. Dependent Variable: NSE

b. Predictors: (Constant), FPI

According to Table – 19, the F-test depicts a high value of 463.312 along with degree of freedom (df), 23, which means there is no linear relationship between any of the two variables in the model. The p-value (Sig.) is .000 i.e. less than 0.05, which indicates that the regression model is statistically significant and predicts the outcome variable.

Tab 20: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-300.256	187.101		-1.605	.123
	FPI	.004	.000	.977	21.525	.000

a. Dependent Variable: NSE

According to Table – 20, the independent variable “FPI” is having a beta value of 0.004. Hence, a unit increase in the variable X1 (FDI) will lead to increase 0.004 unit in the variable Y (NSE)

$$Y = -300.256 + 0.004X_1$$

Impact of FPI on BSE

Tab 21: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.881 ^a	.776	.766	1467.06612

a. Predictors: (Constant), FPI

Table – 21, manifests the regression model fit summary, the value of R, .881, signifies that 88.1% of correlation is present between the dependent and independent variables. The value of R², .776 depicts linear regression and further explains that 77.6% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the

adjusted value of R^2 , .776 depicts that 76.6% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 22: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	164254216.998	1	164254216.998	76.316	.000 ^b
	Residual	47350225.903	22	2152282.996		
	Total	211604442.900	23			

a. Dependent Variable: BSE

b. Predictors: (Constant), FPI

According to Table – 22, the F-test depicts a high value of 76.316 along with degree of freedom (df), 23, which means there is no linear relationship between any of the two variables in the model. The p-value (Sig.) is .000 i.e. less than 0.05, which indicates that the regression model is statistically significant and predicts the outcome variable.

Tab 23: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	509.182	531.893		.957	.349
	FII	.004	.000	.881	8.736	.000

a. Dependent Variable: BSE

According to Table – 23, the independent variable “FII” is having a beta value of 0.004. Hence, a unit increase in the variable X1 (FDI) will lead to increase 0.004 unit in the variable Y (BSE)

$$Y = 509.182 + 0.004X_1$$

Impact of FPI on FCA

Tab 24: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.947 ^a	.898	.893	2720.48423

a. Predictors: (Constant), FPI

Table – 24, manifests the regression model fit summary, the value of R, .947, signifies that 94.7% of correlation is present between the dependent and independent variables. The value of R^2 , .898 depicts linear regression and further explains that 89.8% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the adjusted value of R^2 , .893 depicts that 89.3% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 25: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1426568945.288	1	1426568945.288	192.753	.000 ^b
	Residual	162822757.757	22	7401034.444		
	Total	1589391703.045	23			

a. Dependent Variable: FCA

b. Predictors: (Constant), FPI

According to Table – 25, the F-test depicts a high value of 192.753 along with degree of freedom (df), 23, which means there is no linear relationship between any of the two variables in the model. The p-value (Sig.) is .000 i.e. less than 0.05, which indicates that the regression model is statistically significant and predicts the outcome variable.

Tab 26: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-832.943	986.326		-.844	.407
	FII	.012	.001	.947	13.884	.000

a. Dependent Variable: FCA

According to Table – 26, the independent variable “FII” is having a beta value of .012. Hence, a unit increase in the variable X1 (FDI) will lead to increase .012 unit in the variable Y (FCA)

$$Y = -832.943 + 0.012X_1$$

CONCLUSIONAL OBSERVATION:

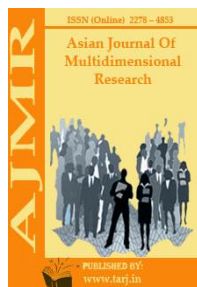
1. This research manifested that FDI and FPI have positive impact on stock market development indicators (BSE and NSE). The correlation result depicts that there is a positive correlation among the economic indicators FDI, BSE and NSE (0.798, 0.781) and are also statistically significant with p value being less than 0.05 whereas FPI also have a positive relation with the economic indicators BSE and NSE (0.953, 0.766) and are also statistically significant with p value being less than 0.05. **Dhiman & Sharma (2013)** probed that the influx of capital in terms of foreign direct investment (FDI) has a positive impact on the economy as well as the capital markets. They concluded that there is strong degree of correlation between FDI & Sensex, and FDI & Nifty.

2. Another observation of this research manifested that FDI and FPI have positive impact on GDP in India. The correlation result depicts that there is a positive correlation among the economic indicators FDI and GDP (0.781) and is also statistically significant with p value being less than 0.05 whereas FPI also have a positive relation with the economic indicator GDP (0.953) and is also statistically significant with p value less than 0.05. **Yameen & Ahmad (2015)** have conducted a study and concluded that there is a strong positive relation among FDI and GDP and FPI and GDP

3. The third observation of this research manifested that FDI and FPI have positive impact on FCA in India. The correlation result depicts that there is a positive correlation among the economic indicators FDI and FCA (0.695) and is also statistically significant with p value being less than 0.05 whereas FPI also have a positive relation with GDP (0.893) and is also statistically significant with p value less than 0.05. **Kotishwar (2016)** found that FII and FDI are having the significant impact on foreign reserves.

REFERENCES

1. Alfaro, L., Kalemli-Ozcan, S., & Volosovych, V. (2014). Sovereigns, upstream capital flows, and global imbalances. *Journal of the European Economic Association*, 12(5), 1240–1284.
2. Balasubramanyam, V. N., Salisu, M., and Sapsford, D.(1996). Foreign direct investment and growth in EP and IS countries, *Economic Journal*, 106, 92–105.
3. Kumar N. and Pradhan J.P. (2002).“Foreign direct investment, externality and economic growth in developing countries: Some empirical explorations and implications for WTO negotiations on investment” Research and information system, New Delhi India.
4. Laskiene D., Pekarskiene I. (2011). Host Country Impacts Of Inward FDI: Why Such Different Answers? Institute for International Economics, chapter 2, p. 23-44.
5. Miguel D. Ramirez (2006): Is Foreign Direct Investment Beneficial for Mexico? An Empirical Analysis, 1960-2001, *World Development* Vol, 34, No 5, pp. 802-817.
6. Mohan, T. T. (2005,). Taking Stock of Foreign Institutional Investors. *Economic and Political Weekly*, 40(24).
7. Mucuk, M., Demirsel, M.T. (2013). The effect of foreign direct investments on unemployment: Evidence from panel data for seven developing countries.*Journal of Business, Economics & Finance*, 2 (3), pp. 53-66.
8. Pal, P. 2006. Foreign Portfolio Investment, Stock Market and Economic Development: A Case Study of India, Draft paper submitted for the Annual Conference on Development and Change Mission: Promoting Development in a Globalized World, Sao Paulo, Brazil.
9. Salisu A. Afees (2004). "The Determinants and Impact of Foreign Direct Investment on Economic Growth in Developing Countries: A Study of Nigeria". *Indian Journal of Economics*, pp. 333-342.



PROFITABILITY ANALYSIS OF A MICRO AND PROPRIETARY ENTERPRISE - A CASE STUDY OF NAGAS ELASTOMER WORKS

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ABSTRACT

Owners and Managers are naturally interested in financial soundness of their Business Enterprise. Financial soundness can be measured in terms of operating efficiency. Operating efficiency of an enterprise means its ability to earn adequate returns to owners and depends ultimately on the profits earned by the enterprise. The profitability of an enterprise is measured by profitability ratios. In this paper, an attempt is made to do Profitability Analysis of Nagas Elastomer Works. Nagas Elastomer Works is a Micro and Proprietary Enterprise in Andhra Pradesh state of India. Nagas Elastomer Works was started in 2002. This Micro and Proprietary Enterprise is manufacturing Retread Rubber. Profitability analysis was done through analyzing various profit margins, Profitability ratios relating to

investments and Profitability ratios relating to various expenses. Profit margins covered include Gross Profit Margin, Operating Profit Margin and Net Profit Margin. Profitability ratios relating to investments include Return on Assets (ROA), Return on Capital Employed (ROCE) and Return on Share holder's equity (ROSE). Profitability ratios relating to various expenses include Cost of Goods sold Ratio, Operating Expenses Ratio, Administrative Expenses Ratio, Selling Expenses Ratio and Financial Expenses Ratio. Chi-square test is used for testing the hypotheses formed.

KEYWORDS: *Cost Of Goods Sold Ratio, Financial Expenses Ratio, Gross Profit Margin, Operating Profit Margin, Return On Assets (ROA), Return On Capital Employed (ROCE).*

INTRODUCTION

Owners and Managers are naturally interested in financial soundness of their Business Enterprise. Financial soundness can be measured in terms of operating efficiency. Operating efficiency of an enterprise means its ability to earn adequate returns to owners and depends ultimately on the profits earned by the enterprise. The profitability of an enterprise is measured by profitability ratios. There are three important profitability ratios namely profitability ratios relating to sales, profitability ratios relating to investment and profitability ratios relating to expenses. In this paper, an attempt is made to do Profitability Analysis of Nagas Elastomer Works. Nagas Elastomer Works is a Micro and Proprietary Enterprise in Andhra Pradesh state of India. Nagas Elastomer Works was started in 2002. This Micro and Proprietary Enterprise is manufacturing Retread Rubber. It has a man power of eight. It procures raw materials from Kerala, Tamil Nadu and Telangana. The total assets of the enterprise are Rs. 129.9 lakhs and total liabilities are Rs. 129.9 lakhs as per 2015-16 annual accounts. The turnover of this Company is 76.0 lakhs.

REVIEW OF LITERATURE

Gangadhar (1982)¹ had conducted the profitability Analysis of large public limited cement companies in India. V. K. Purohit (1982)² had examined the profitability trends of manufacturing industries in Indian corporate sector during 1950-51 to 1970-71. Sindhu Rani (1998)³ had examined the factors affecting profitability in Indian textile industry. Md. Rafiqul Islam (2000)⁴ had conducted a study on the profitability of Fertilizer Industry in Bangladesh from 1985-86 to 1994-95. Manorselvi and Vijayakumar (2007)⁵ had examined the trends in of profits of the selected Indian automobile companies during the period 1991-92 to 2003-04. Hyz and Gikas(2012)⁶ had done profitability analysis of SME sector in Poland. Oni Timothy Olukunle (2017)⁷ had done Profitability Analysis of Small scale Fishery Enterprise in Nigeria. Venkateswararao.Podile (2017)⁸ had examined the recent MSME policy of Andhra Pradesh. Venkateswararao.Podile et al., (2017)⁹ examined working capital management in PL Plast Pvt Ltd. Venkateswararao.Podile et al., (2017)¹⁰ had examined various Government schemes supporting MSMEs in India. Venkateswararao.Podile et al., (2018)¹¹ examined working capital management in Sri Rama Chandra Paper Boards Ltd. Venkateswararao.Podile (2018)¹² examined working capital management in Tulasi seeds Pvt.Ltd. Venkateswararao.Podile et al., (2018)¹³ studied working capital management in Sri Nagavalli solvent oils Pvt. Ltd. Venkateswararao.Podile et al., (2018)¹⁴ analysed working capital management in Naga Hanuman Solvent Oils Private Limited. Venkateswararao.Podile (2018)¹⁵ examined working capital management in Cuddapah Spinning Mills Ltd. Venkateswararao.Podile et al., (2018)¹⁶ studied working capital management in Kristna Engineering Works. Venkateswararao.Podile et al., (2018)¹⁷ examined working capital management in Radhika Vegetables Oils Pvt. Ltd. Venkateswararao.Podile et al., (2018)¹⁸ examined working capital management in Power Plant

Engineering Works in Andhra Pradesh. Venkateswararao.Podile et al., (2018)¹⁹ examined working capital management in Nagas Elastomer Works. Venkateswararao.Podile et al.,(2018)²⁰ had studied working capital management in M.G.Metallic Springs Pvt. Ltd. Venkateswararao.Podile et al., (2018)²¹ had studied working capital management in Sri Srinivasa Spun Pipes Company.Venkateswararao.Podile et al.,(2018)²²had studied working capital management in Raghunath Dye Chem Pvt. Ltd.Venkateswararao.Podile et al.,(2018)²³ had examined working capital management in Maitreya Electricals Pvt. Ltd. Venkateswararao.Podile et al.,(2018)²⁴had examined working capital management in Laxmi Vinay Poly Print Packs Pvt. Ltd.Venkateswararao.Podile et al.,(2018)²⁵ had done capital structure analysis of M.G.Metallic Springs Pvt. Ltd.Venkateswararao.Podile et al.,(2018)²⁶had done capital structure analysis of Naga Hanuman Solvent Oils Private Limited. Venkateswararao.Podile et al.,(2018)²⁷had done capital structure analysis of Raghunath Dye Chem Pvt. Ltd. Venkateswararao.Podile et al.,(2018)²⁸had done capital structure analysis of Nagas Elastomer Works. Venkateswararao.Podile et al.,(2018)²⁹had done capital structure analysis of Tulasi Seeds Pvt. Ltd. Venkateswararao.Podile et al.,(2018)³⁰had done capital structure analysis of Maitreya Electricals Private Limited.Venkateswararao.Podile et al.,(2018)³¹had done capital structure analysis of Bharat Cashew Manufacturing Company.Venkateswararao.Podile et al.,(2018)³²had done capital structure analysis of Sri Rama Chandra Paper Boards Limited. Venkateswararao.Podile et al.,(2018)³³had done capital structure analysis of Power Oxides Private Limited. Venkateswararao.Podile et al.,(2018)³⁴had done capital structure analysis of Laxmi Vinay Poly Print Packs Private Limited. Venkateswararao.Podile et al.,(2018)³⁵had studied working capital management in Power Oxides Pvt. Ltd. Venkateswararao.Podile et al.,(2018)³⁶had done capital structure analysis of Radhika Vegetable Oils Private Limited. Venkateswararao.Podile et al.,(2018)³⁷had done capital structure analysis of Sri Nagavalli Solvent Oils Private Limited. Venkateswararao.Podile et al.,(2018)³⁸had done capital structure analysis of P.L.Plant Private Limited. Venkateswararao.Podile (2018)³⁹ had done capital structure analysis of Power Plant Engineering Works. Venkateswararao.Podile (2018)⁴⁰ had done Profitability Analysis of Bharat Cashew Manufacturing Company. Venkateswararao.Podile (2018)⁴¹ had done Profitability Analysis of Sri Ramachandra Paper Boards Private Limited. Venkateswararao.Podile (2018)⁴² had done Profitability Analysis of Tulasi Seeds Private Limited. Venkateswararao.Podile (2018)⁴³ had done Profitability Analysis of Power Plant Engineering Works. Venkateswararao.Podile et al.,(2018)⁴⁴ had done Profitability Analysis of Maitreya Electricals Private Limited. Venkateswararao.Podile et al.,(2018)⁴⁵ had done Profitability Analysis of P.L.Plant Private Limited. Venkateswararao.Podile et al.,(2018)⁴⁶ had done Profitability Analysis of M.G.Metallic Springs Private Limited. Venkateswararao.Podile,(2018)⁴⁷ had done Profitability Analysis of Power Oxides Private Limited. Venkateswararao.Podile,(2018)⁴⁸ had done Profitability Analysis of Laxmi Vinay Poly Print Packs Private Limited. It was found that most of the studies dealt with Profitability analysis of different large Enterprises and of sectors in India and abroad. Some of the studies dealt with MSME policies. Some other studies though dealt with MSMEs, they were confined to working capital management and capital structure analysis. Few studies dealt with profitability analysis. There was no study on Profitability analysis of a Micro Enterprise which is manufacturing Retread Rubber. Hence, this study is taken up.

OBJECTIVES

The general objective of the study is to do Profitability Analysis of Nagas Elastomer Works. The specific objectives include the following.

1. To examine Gross profit margin, Operating profit margin and Net Profit Margin of Nagas Elastomer Works during the period of study.
2. To investigate into various profitability ratios relating to investment in Nagas Elastomer Works during the period of study.
3. To analyze various profitability ratios related to expenses in Nagas Elastomer Works during the period of study.
4. To examine the overall profitability of Nagas Elastomer Works during the period of study.
5. To offer suggestions for improvement of profitability of the Enterprise, if required.

HYPOTHESES

H₀₁: Gross Profit Margin of Nagas Elastomer Works is uniform during the period of study.

H₀₂: Operating Profit Margin of Nagas Elastomer Works is uniform during the period of study.

H₀₃: Net Profit Margin of Nagas Elastomer Works is uniform during the period of study.

H₀₄: Return on Assets (ROA) in Nagas Elastomer Works is uniform during the period of study.

H₀₅: Return on Capital Employed (ROCE) in Nagas Elastomer Works is uniform during the period of study.

H₀₆: Return on Share holder's equity (ROSE) in Nagas Elastomer Works uniform during the period of study.

H₀₇: Cost of Goods sold Ratio in Nagas Elastomer Works is uniform during the period of study.

H₀₈: Operating Expenses Ratio in Nagas Elastomer Works is uniform during the period of study.

H₀₉: Administrative Expenses Ratio in Nagas Elastomer Works is uniform during the period of study.

H₁₀: Selling Expenses Ratio in Nagas Elastomer Works is uniform during the period of study

H₁₁: Financial Expenses Ratio in Nagas Elastomer Works is uniform during the period of study.

METHODOLOGY

The present study is mainly based on secondary data. The data is taken from the financial statements including balance sheet, trading account and profit and loss account of Nagas Elastomer Works. The period of study is ten years covering the financial years from 2006-07 to 2015-16. The data gathered is analyzed through the ratios relating to profitability of the enterprise. Profitability analysis was done through analyzing various profit margins, Profitability ratios relating to investments and Profitability ratios relating to various expenses. Profit margins covered include Gross Profit Margin, Operating Profit Margin and Net Profit Margin. Profitability ratios relating to investments include Return on Assets (ROA), Return on Capital Employed (ROCE) and Return on Share holder's equity (ROSE). Profitability ratios relating to various expenses include Cost of Goods sold Ratio, Operating Expenses Ratio, Administrative Expenses Ratio, Selling Expenses Ratio and Financial Expenses Ratio. Chi-square test is used for testing the hypotheses formed.

PROFITABILITY ANALYSIS WITH PROFIT MARGINS

Profit Margins are based on the assumption that an Enterprise should earn sufficient profit on each Rupee of sales.

Gross Profit Margin

Gross Profit Margin has varied between 12.4 and 28.4 during the period of study. Gross Profit Margin is low during the study period except during 2016. This is due to high cost of production. Management

needs to put efforts in reducing cost of production. It is found in the significance test that Gross Profit Margin is uniform during the period of study.

TABLE-1: GROSS PROFIT MARGIN(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gross Profit	18.1	20.9	19.9	21.3	21.6	22.7	23.1	21.0	16.5	21.6
Sales	114.6	126.0	139.0	157.2	173.7	158.1	158.1	113.3	71.2	76.0
Gross Profit Margin	15.8	16.6	14.3	13.5	12.4	14.4	14.6	18.5	23.2	28.4

Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for Gross Profit Margin = 13.1. Calculated value is less than critical Value at 5% level of Significance i.e., $13.1 < 16.919$. Hence, H_{01} is accepted.

OPERATING PROFIT MARGIN

Operating Profit Margin has varied between 2.7 and 11.1 during the period of study. Operating Profit Margin is low during the period of study. This is due to high cost of production indicating that management needs to put efforts in reducing cost of production. It is found in the significance test that Operating Profit Margin is uniform during the period of study.

TABLE-2: OPERATING PROFIT MARGIN(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
EBIT	4.0	3.4	7.3	10.2	10.0	9.7	9.9	8.9	6.7	8.4
Sales	114.6	126.0	139.0	157.2	173.7	158.1	158.1	113.3	71.2	76.0
Operating Profit Margin	3.5	2.7	5.3	6.5	5.8	6.1	6.3	7.9	9.4	11.1

Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for Operating Profit Margin = 8.8. Calculated value is less than critical Value at 5% level of Significance i.e., $8.8 < 16.919$. Hence, H_{02} is accepted.

Net Profit Margin

Net Profit Margin has varied between 1.5 and 10.8 during the period of study. Net Profit Margin is low during the period of study except during 2016. This is due to high cost of production indicating that management needs to put efforts in reducing cost of production. It is found in the significance test that Net Profit Margin is uniform during the period of study.

TABLE-3: NET PROFIT MARGIN(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Net Profit	1.7	2.6	6.6	8.6	9.5	9.6	9.6	8.7	6.5	8.2
Sales	114.6	126.0	139.0	157.2	173.7	158.1	158.1	113.3	71.2	76.0
Net Profit Margin	1.5	2.1	4.7	5.5	5.5	6.1	6.1	7.7	9.1	10.8

Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for Net Profit Margin = 12.4. Calculated value is less than critical Value at 5% level of Significance i.e., $12.4 < 16.919$. Hence, H_{03} is accepted.

PROFITABILITY ANALYSIS WITH PROFITABILITY RATIOS RELATED TO INVESTMENT

Profitability ratios relating to investment are based on the assumption that an Enterprise should earn good profit on its investment.

Return on Assets (ROA)

Return on Assets Ratio has varied between 2.9 and 13.8 during the period of study. It is found in the significance test that Return on Assets Ratio is uniform during the period of study. Return on Assets Ratio is less than 10 during first two years and last two years of the study period, which indicates that management should put efforts for better profitability management.

TABLE-4: RETURN ON ASSETS (ROA)(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Net Profit	1.7	2.6	6.6	8.6	9.5	9.6	9.6	8.7	6.5	8.2
Average Total Assets	58.5	55.8	60	67.3	69.0	69.5	85.4	77.3	118.7	129.9
ROA	2.9	4.7	11.0	12.8	13.8	13.8	11.2	11.3	5.5	6.3

Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for ROA = 15.9. Calculated value is less than critical Value at 5% level of Significance i.e., $15.9 < 16.919$. Hence, H_{04} is accepted.

Return on Capital Employed (ROCE)

Return on capital employed has varied between 5.6 and 15.2 during the period of study. It is found in the significance test that Return on capital employed is uniform during the period of study. Return on Capital Employed is less than 20 during all years of the study, which indicates that management should put efforts for better profitability management.

TABLE-5: RETURN ON CAPITAL EMPLOYED (ROCE)(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
EBIT	4.0	3.4	7.3	10.2	10.0	9.7	9.9	8.9	6.7	8.4
Average Total Capital	58.5	55.8	60	67.3	69.0	69.5	85.4	77.3	118.7	129.9
ROCE	6.8	6.1	12.2	15.2	14.5	14.0	11.6	11.5	5.6	6.5

Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for ROCE = 12.3. Calculated value is less than critical Value at 5% level of Significance i.e., $12.3 < 16.919$. Hence, H_{05} is accepted.

Return on Share Holders' Equity (ROSE)

Return on Shareholders' Equity has varied between 5.5 and 19.5 during the period of study. Return on Shareholders' Equity is less than 10 during first and last two years of the study. This is not good for owners. Management should put efforts for better profitability management. There are wide fluctuations in this variable during the period of study. Hence, Return on Shareholders' Equity is not uniform during the period of study.

TABLE-6: RETURN ON SHARE HOLDERS' EQUITY (ROSE)(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Net Profit	1.7	2.6	6.6	8.6	9.5	9.6	9.6	8.7	6.5	8.2
Average Share Holders' Equity	30.7	34.5	39.3	45.5	48.7	56.3	64.3	71.1	118.3	129.1
ROSE	5.5	7.5	16.8	18.9	19.5	17.1	14.9	12.2	5.5	6.4

Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for ROSE = 23.8. Calculated value is greater than critical Value at 5% level of Significance i.e., $23.8 > 16.919$. Hence, H_{06} is rejected.

PROFITABILITY ANALYSIS WITH PROFITABILITY RATIOS RELATED TO EXPENSES

These ratios are based on the assumption that Enterprise should reduce its expenses in relation to sales.

Cost of Goods Sold Ratio

Cost of Goods Sold Ratio has varied between 71.6 and 87.6 during the period of study. Cost of goods sold ratio is high during the study period except during 2016. Management needs to put efforts for reducing cost of production. It is found in the significance test that Cost of Goods Sold Ratio is uniform during the period of study.

TABLE-7: COST OF GOODS SOLD RATIO(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Cost of Goods sold	96.5	105.1	119.1	135.9	152.1	135.4	135	92.3	54.7	54.4
Sales	114.6	126.0	139.0	157.2	173.7	158.1	158.1	113.3	71.2	76.0
Ratio	84.2	83.4	85.7	86.5	87.6	85.6	85.4	81.5	76.8	71.6

Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for Cost of Goods sold Ratio = 2.7. Calculated value is less than critical Value at 5% level of Significance i.e., $2.7 < 16.919$. Hence, H_{07} is accepted.

Operating Expenses Ratio

Operating Expenses Ratio has varied between 6.1 and 16.4 during the period of study. A relatively low Operating Expenses Ratio except during last year is indicating that management is making good efforts to reduce Operating expenses. It is found in the significance test that Operating Expenses Ratio is uniform during the period of study.

TABLE-8: OPERATING EXPENSES RATIO(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Operating Expenses	14.6	16.2	11.6	11.0	10.6	11.9	12.7	11.2	9.1	12.5
Sales	114.6	126.0	139.0	157.2	173.7	158.1	158.1	113.3	71.2	76.0
Ratio	12.7	12.9	8.3	7.0	6.1	7.5	8.0	9.9	12.8	16.4

Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for Operating Expenses Ratio = 10.0. Calculated value is less than critical Value at 5% level of Significance i.e., $10.0 < 16.919$. Hence, H_{08} is accepted.

Administrative Expenses Ratio

Administrative Expenses Ratio has varied between 4.4 and 12.2 during the period of study. A low Administrative Expenses Ratio is indicating that management is making good efforts in reducing Administrative expenses. It is found in the significance test that Administrative Expenses Ratio is uniform during the period of study.

TABLE-9: ADMINISTRATIVE EXPENSES RATIO(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Administrative Expenses	6.5	5.6	8.8	8.9	8.6	9.2	10.1	9.0	7.1	9.3
Sales	114.6	126.0	139.0	157.2	173.7	158.1	158.1	113.3	71.2	76.0

Ratio	5.7	4.4	6.3	5.7	5.0	5.8	6.4	7.9	10.0	12.2
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Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for Administrative Expensive Ratio = 7.7. Calculated value is less than critical Value at 5% level of Significance i.e., $7.7 < 16.919$. Hence, H_{09} is accepted.

Selling Expenses Ratio

Selling Expenses Ratio has varied between 1.2 and 8.4 during the period of study. A low Selling Expenses Ratio is indicating that management is making good efforts in reducing selling expenses. Selling expenses ratio showed wide fluctuations. Hence, it is found in the significance test that Selling Expenses Ratio is not uniform during the period of study.

TABLE-10: SELLING EXPENSES RATIO(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Selling Expenses	8.1	10.6	2.8	2.1	2	2.7	2.6	2.2	2	3.2
Sales	114.6	126.0	139.0	157.2	173.7	158.1	158.1	113.3	71.2	76.0
Ratio	7.1	8.4	2.0	1.3	1.2	1.7	1.6	1.9	2.8	4.2

Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for Selling Expenses Ratio = 18.3. Calculated value is greater than critical Value at 5% level of Significance i.e., $18.3 > 16.919$. Hence, H_{10} is rejected.

Financial Expenses Ratio

Financial Expenses Ratio has varied between 0.1 and 1.7 during the period of study. A low Financial Expenses Ratio is indicating that management is making good efforts in reducing financial expenses. It is found in the significance test that Financial Expenses Ratio is uniform during the period of study.

TABLE-11: FINANCIAL EXPENSES RATIO(Figures in Lakhs)

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Financial Expenses	1.9	0.4	0.4	0.4	0.5	0.3	0.2	0.1	0.1	0.1
Sales	114.6	126.0	139.0	157.2	173.7	158.1	158.1	113.3	71.2	76.0
Ratio	1.7	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1

Source: Annual Reports of Nagas Elastomer Works from 2006-07 to 2015-2016.

Calculated value of Chi-Square for Financial Expenses Ratio = 6.0. Calculated value is less than critical Value at 5% level of Significance i.e., $6.0 < 16.919$, Hence, H_{11} is Accepted.

CONCLUSION

Gross Profit Margin, Operating Profit Margin, Net Profit Margin, Return on Assets Ratio, Return on Capital Employed Ratio, Cost of Goods sold Ratio, Operating Expenses Ratio, Administrative Expenses Ratio and Financial expenses Ratio are uniform during the period of study. Return on Share holder's Equity Ratio and selling expenses ratio are not uniform during the period of study. Gross Profit Margin and Net Profit Margin are low during study period except during last year. Operating Profit Margin is low during entire study period. This is due to high cost of production. Management should put efforts in reducing cost of production. Return on Assets ratio and Return on share holders' equity ratios are low during first two and last two years of the study period. Return on capital employed ratio is low during the entire period. There is need for better profitability management in the enterprise. Management is making good efforts in reducing administrative, selling and financial expenses.

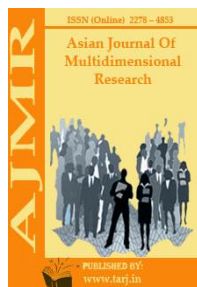
REFERENCES

1. Gangadhar, "Cement Industry-Some aspects of Profitability", *The Management Accountant*, Vol.4, No.2, 1982.
2. Vishnu Kanta Purohit, "Profitability in Corporate Sector", *ArthaVijnana*, Vol.24, No.1, 1982, pp.50-66.
3. H S SindhuRani, "Factors affecting profitability in Indian Textile Industry", *The Indian Economic Journal*, Vol.1, No.3, 1998, pp.137-143.
4. Mohammed RafiquIslam, "Profitability of Fertilizer Industry in Bangladesh", *The Management Accountant*, 2000, pp.338-345.
5. Manor Selvi and Vijayakumar, "Structure of Profits Rates In Indian Automobile Industries-A Comparison", *The Management Accountant*, Vol.42, No.10, 2007, pp.784-789.
6. A.Hyz and G.Gikas, "Profitability Analysis of SME sector in Poland", *Alpapha Ekohomika*, T.5, No.3-4, 2012, pp.26-33.
7. Oni Timothy Olukunle, "Profitability Analysis of Small Scale Fishery Enterprise in Nigeria", *Journal of Agricultural Science*, Vol. 9, No. 3, 2017, pp.107-116
8. Dr. Venkateswararao.Podile, "MSME Policy of Andhra Pradesh – A fillip to MSME sector", *International Journal of Business and Administration Review*, Vol.3, Issue.18, 2017, pp.67-69.
9. Dr. Venkateswararao.Podile, Surya Chandrarao.D and HemaVenkata Siva Sree.Ch, "Working capital Management in P.L.Plant Pvt Ltd", *IOSR Journal of Business Management*, Vol.19, Issue No.4, 2017, pp.61-65.
10. Dr. Venkateswararao.Podile, Surya Chandrarao.D and HemaVenkata Siva Sree.Ch, "Vigorous attempts to boost and buoying up MSMEs in India", *IOSR Journal of Business Management*, Vol.19, Issue No.5, 2017, pp.24-28.
11. Venkateswararao.P, and HemaVenkata Siva Sree.Ch, "Working capital Management in Sri Rama Chandra Paper Boards Ltd", *International Journal of Research in Management, Economics and Commerce*, Vol.8, Issue.2, 2018, pp.54-59.
12. Dr. Venkateswararao.Podile, "Working capital Management in Tulasi seeds Pvt.Ltd- A case study in Andhra Pradesh", *International Journal of Research in Management, Economics and Commerce*, Vol.8, Issue.2, 2018, pp.262-266.
13. Dr. Venkateswararao.Podile, and Hema Venkata Siva Sree.Ch, "Working capital Management in Sri Nagavalli solvent oils Pvt. Ltd", *IOSR Journal of Business Management*, Vol.20, Issue.2, 2018, pp.79-84.
14. Dr. Venkateswararao.Podile, and Hema Venkata Siva Sree.Ch, "Working capital Management in Naga Hanuman Solvent Oils Private Limited- A case study of Andhra Pradesh", *International Journal of Research in Management, Economics and Commerce*, Vol.8, Issue.3, 2018, pp.114-119.
15. Dr. Venkateswararao.Podile, "Working capital Management in Cuddapah Spinning Mills Ltd- A case study in Andhra Pradesh", *International Journal of Research in Engineering, IT and Social Sciences*, Vol.8, Issue.3, 2018, pp.1-5.
16. Dr. Venkateswararao.Podile, and Hema Venkata Siva Sree.Ch, "Working capital Management in Krishna Engineering Works - A case study in Andhra Pradesh", *International Journal of Research in Engineering, IT and Social Sciences*, Vol.8, Issue.3, 2018, pp.61-66.
17. Dr. Venkateswararao.Podile, and Hema Venkata Siva Sree.Ch, "Working capital Management in small enterprise- A case study in Radhika Vegetables Oils Pvt. Ltd", *IOSR Journal of Business Management*, Vol.20, Issue.3, 2018, pp.69-74.

18. Dr. Venkateswararao.Podile, and Hema Venkata Siva Sree.Ch, "Working capital Management in Power Plant Engineering Works- A case study of Andhra Pradesh", *International Journal of Exclusive Management Research*, Vol.8, Issue.4,2018, pp.1-7.
19. Dr. Venkateswararao.Podile, Hema Venkata Siva Sree.Ch, and N.Janardhanarao "Working capital Management in a Micro Enterprise- A case study of Nagas Elastomer Works", *International Journal of Scientific Research and Review*, Vol.7, Issue.7,2018, pp.275-282.
20. Dr. Venkateswararao.Podile, Dr. Hema Venkata Siva Sree.Ch, and Gaddam. Sravan Kumar, "Working capital Management in M.G.Metallic Springs Pvt. Ltd. - A case study in Andhra Pradesh", *International Journal of Research in Engineering, IT and Social Sciences*, Vol.8, Issue.7, 2018, pp.108-113.
21. Dr. Venkateswararao.Podile, Dr. K. Sudha Rani and Dr. Hema Venkata Siva Sree.Ch "Working capital Management in a Micro Enterprise - A case study of Sri Srinivasa Spun Pipes Company", *Asian Journal of Multidimensional Research*, Vol.7, Issue.7, 2018, pp.185-194.
22. Dr. Venkateswararao.Podile, Dr. Hema Venkata Siva Sree.Ch and Gaddam. Sravan Kumar , "Working capital Management in a Small Enterprise- A case study of Raghunath Dye Chem Pvt. Ltd. ", *International Journal of Management, IT & Engineering*, Vol.8, Issue.8, 2018, pp.331-337.
23. Dr. Venkateswararao.Podile, Dr. K. Sudha Rani and Dr. Hema Venkata Siva Sree.Ch "Working capital Management in Maitreya Electricals Pvt. Ltd.- A case study of Andhra Pradesh", *ZENITH International Journal of Multidisciplinary Research*, Vol.8, Issue.8,2018, pp.296-304.
24. Dr. Venkateswararao.Podile, Dr. K. Sudha Rani and Dr. Hema Venkata Siva Sree.Ch "Working capital Management in a Micro Enterprise - A case study of Laxmi Vinay Poly Print Packs Pvt. Ltd.", *International Journal of Research in Engineering, IT and Social Sciences*, Vol.8, Issue.8, 2018, pp.1 - 6.
25. Dr. Venkateswararao.Podile and Dr. Hema Venkata Siva Sree.Ch, "Capital Structure Analysis of a Small Enterprise - A Case Study of M. G. Metallic Springs Pvt. Ltd.", *International Journal of Research in Engineering, IT and Social Sciences*, Vol.8, Issue.8, 2018, pp.149-154.
26. Dr. Venkateswararao.Podile, Fr. Kataru.Anil Kumar and Hema Venkata Siva Sree.Ch, "Capital Structure Analysis of a Small Enterprise - A Case Study of Naga Hanuman Solvent Oils Private Limited", *International Journal of Scientific Research and Review*, Vol.7, Issue.8, 2018, pp.548-555.
27. Dr. Venkateswararao.Podile, Fr. Kataru Anil Kumar and Dr. Hema Venkata Siva Sree.Ch "Capital Structure Analysis of A Small Enterprise - A Case Study Of Raghunath Dye Chem Pvt. Ltd.", *Asian Journal of Multidimensional Research*, Vol.7, Issue.8, 2018, pp.281-292.
28. Dr. Venkateswararao.Podile, Fr. Kataru.Anil Kumar and Dr. Hema Venkata Siva Sree.Ch, "Capital Structure Analysis of a Micro and Proprietary Enterprise - A Case Study of Nagas Elastomer Works ", *International Journal of Research in Engineering, IT and Social Sciences*, Vol.8, Issue.8, 2018, pp.269-275.
29. Dr. Venkateswararao.Podile, Fr. Kataru.Anil Kumar and Dr. Hema Venkata Siva Sree.Ch, "Capital Structure Analysis of a Large Enterprise - A Case Study of Tulasi Seeds Pvt. Ltd. ", *Journal of Emerging Technologies and Innovative Research*, Vol.5, Issue.8, 2018, pp.973-979.
30. Dr. Venkateswararao.Podile, Fr. K. Anil Kumar and Dr. Ch. Hema Venkata Siva Sree, "Capital Structure Analysis of a Small Enterprise – A case study of Maitreya Electricals Private Limited", *RESEARCH REVIEW International Journal of Multidisciplinary*, Vol.3, Issue.9, 2018,pp.179–185. <http://doi.org/10.5281/zenodo.1412759>.
31. Dr. Venkateswararao.Podile, Fr. Kataru Anil Kumar and Dr. Chinta. Hema Venkata Siva Sree, "Capital Structure Analysis of a Micro and Partnership Enterprise- A case study of Bharat Cashew Manufacturing Company", *International Journal of Scientific Research and Review*, Vol.7, Issue.9, 2018, pp.26-33.

32. Dr. Venkateswararao.Podile, Fr. Kataru Anil Kumar and Dr. Chinta. Hema Venkata Siva Sree, "Capital Structure Analysis of a Small Enterprise- A case study of Sri Rama Chandra Paper Boards Limited", *International Journal Research and Analytical Reviews (IJRAR)*, Vol.5, Issue.3, 2018, pp.1-7.
33. Dr. Venkateswararao.Podile, Fr. Kataru Anil Kumar and Dr. Chinta. Hema Venkata Siva Sree, "Capital Structure Analysis of a Small Enterprise - A Case Study of Power Oxides Private Limited", *International Journal of Research in Engineering, IT and Social Sciences*, Vol.8, Issue.9, 2018, pp.23-29.
34. Dr. Venkateswararao.Podile, Fr. Kataru Anil Kumar and Dr. Chinta. Hema Venkata Siva Sree, "Capital Structure Analysis of a Micro Enterprise - A Case Study of Laxmi Vinay Poly Print Packs Private Limited", *Journal of Emerging Technologies and Innovative Research*, Vol.5, Issue.9, 2018, pp.457-463.
35. Dr. Venkateswararao.Podile, Hema Venkata Siva Sree.Ch. and N.Janardhanarao, "Working capital Management in a Small Enterprise- A case study of Power Oxides Pvt. Ltd", *International Journal of Scientific Research and Reviews*, Vol.7, Issue.3, 2018, pp.607-617.
36. Dr. Venkateswararao.Podile, Fr. Kataru Anil Kumar and Dr. Chinta. Hema Venkata Siva Sree, "Capital Structure Analysis of A Small Enterprise - A Case Study of Radhika Vegetable Oils Private Limited", *Asian Journal of Multidimensional Research*, Vol.7, Issue.9, 2018, pp.198-209.
37. Dr. Venkateswararao.Podile, Fr. Kataru Anil Kumar and Dr. Hema Venkata Siva Sree.Ch., "Capital Structure Analysis of A Small Enterprise - A Case Study of Sri Nagavalli Solvent Oils Private Limited", *ZENITH International Journal of Multidisciplinary Research*, Vol.8, Issue.10, 2018, pp.27-36.
38. Dr. Venkateswararao.Podile and Dr. Hema Venkata Siva Sree.Ch., "Capital Structure Analysis of A Small Enterprise - A Case Study of P.L.Plant Private Limited", *International Journal of Management, IT & Engineering*, Vol.8, Issue.10, 2018, pp.183-198.
39. Dr. Venkateswararao.Podile, "Capital Structure Analysis of a Micro and Partnership Enterprise – A case study of Power Plant Engineering Works", *RESEARCH REVIEW International Journal of Multidisciplinary*, Vol.3, Issue.9, 2018, pp. 376–382.<https://doi.org/10.5281/zenodo.1421852>
40. Dr. Venkateswararao.Podile, "Profitability Analysis of a Micro and Partnership Enterprise - A Case Study of Bharat Cashew Manufacturing Company", *International Journal of Research in Engineering, IT and Social Sciences*, Vol.8, Issue.10, 2018, pp.96-102.
41. Dr. Venkateswararao.Podile, "Profitability Analysis of a Small Enterprise- A case study of Sri Ramachandra Paper Boards Private Limited", *International Journal of Scientific Research and Review*, Vol.7, Issue.10, 2018, pp.582-589.
42. Dr. Venkateswararao.Podile, "Profitability Analysis of a Large Enterprise – A case study of Tulasi Seeds Private Limited", *RESEARCH REVIEW International Journal of Multidisciplinary*, Vol.3, Issue.10, 2018, pp. 468–474.<https://doi.org/10.5281/zenodo.1467838>
43. Dr. Venkateswararao.Podile, "Profitability Analysis of a Micro and Partnership Enterprise - A Case Study of Power Plant Engineering Works", *Journal of Emerging Technologies and Innovative Research*, Vol.5, Issue.10, 2018, pp.180-186.
44. Dr. Venkateswararao.Podile, Dr. R.Padmavathy and Dr. Hema Venkata Siva Sree.Ch., "Profitability Analysis of a Small Enterprise - A Case Study of Maitreya Electricals Private Limited", *International Journal of Research in Engineering, IT and Social Sciences*, Vol.8, Issue.10, 2018, pp.177-183.
45. Dr. Venkateswararao.Podile, Dr. R.Padmavathy and Dr. Hema Venkata Siva Sree.Ch., "Profitability Analysis of a Micro Enterprise- A case study of P.L.Plant Private Limited", *International Journal of Scientific Research and Review*, Vol.7, Issue.10, 2018, pp.788-795.

46. Dr. Venkateswararao.Podile, Dr. R.Padmavathy and Dr. Hema Venkata Siva Sree.Ch., “Profitability Analysis of a Small Enterprise- A case study of M.G.Metallic Springs Private Limited”, *International Journal Research and Analytical Reviews (IJRAR)*, Vol.5, Issue.4, 2018, pp.849-855.
47. Dr. Venkateswararao.Podile, “Profitability Analysis of a Small Enterprise - A Case Study of Power Oxides Private Limited”,*Asian Journal of Multidimensional Research*, Vol.7, Issue.10, 2018, pp.178-188.
48. Dr. Venkateswararao.Podile, “Profitability Analysis of A Micro Enterprise - A Case Study of Laxmi Vinay Poly Print Packs Private Limited”,*ZENITH International Journal of Multidisciplinary Research*, Vol.8, Issue.11, 2018, pp.252-263.



HERMENEUTIC INTERPRETATION OF THE CATEGORY OF "AVESTO" AND UPANISHADS TASHKENT STATE INSTITUTE OF ORIENTAL STUDIES

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ABSTRACT

The article was systematically examined of Upanishads and the methodological and socio-historical foundations of ethno-axiological research of "Avesto". Moreover, defined mythological prototypes with historical, socially religious and moral evolution of the tasks assigned to them. Good and evil history of cross-resistance were analyzed according to the Upanishads and the "Avesta" materials and a variety of motives, the essence of evil is the way it should be shown that the barrier. At the same time, overall peace is one of the decisive factors in the implementation of humanistic and good ideas. Our goal is to study the genesis of the categories of Upanishads and the philosophical-hermeneutic comparative study of the conceptual principles of Avesto. Finally, research concludes ethical and axiological sequences of nature cultures, as well as educational and ethical studies based on written and material sources.

KEYWORDS: Avesto, Rigveda, Mazda, Ayunya Varna, Om, Yima, Ashah, goodness and evil.

INTRODUCTION

In the development of today's spirituality and culture, the ancient historical and philosophical sources of each country have a special meaning. Especially the first socio-philosophical views are based on its first historical-philosophical sources. Almost the same with the development of such a historical monument Samples of the "invaluable" and we get acquainted with the Vedas, the status of those universal values and philosophy of life is still surprising us more confidence.

"As we all know, has hit the world of competition, confrontation and conflict becomes increasingly critical. Religious extremism, terrorism, drugs, human trafficking, illegal migration, "mass culture" of such risks, and the men followed over the centuries from the beliefs, family values and situation. In this and many other threats to human life and serious ones - the same problems and no one can deny the truth"[1].

"Rigveda "and" Avesta "in the interpretation of moral values in the next period is based on the development of philosophical ideas of teaching and schools as well as" invaluable "and" Rigveda "gothic texts in Sanskrit and Zend language similar to aspects of its ancient India Midian, Azerbaijan, Iran and Turan, the existence of the peoples of the region so'zlashganliklarini scientific justification of this language.

However, this issue is not only the country, but also abroad, one of the subjects has not been studied enough for the research of relevance to today.

LITERATURE REVIEW

Avesto and Vedas have been analyzed and studied comparative-typologically by specialists in the field. However, ethical and axiological analysis and research are not available in this regard. Western scholars have an important role in Avesta. In 1771, the French scientist Antelope Duperron published Avesta in French with the name "Zend Avesta" [2]. The text and translation of the Avesto textbook was written in Gujarati in 1880. Avesta scientist Layt Ervard Kavasci Edulji Kanga translated "Chorde Avesto" into gujarati language [3]As a result of the works of Avesta in the field of avant-garde studies by Ibrahim Purdovud, Hoshim Rizai, and Jalil Dakhrakh, one of the Iranian scholars during the last century, the Aesthetic Persian translation [4], two volumes of avant-gear research [5] appeared.

During this period, Avesta's M.Ishakov published translations by Askar Mahkam [6]. Specifically, the publication of the Avesta Yasht Naskin in the translation of M. Ishokov was the basis for a series of scientific researches [7]. Finally, in 2007, translation of Avesta's Videvdot also dwells on some of our ideas on our work [8].

Numerous foreign scientists have been researching the contribution of the Upanishads to the development of world science. Sarvapeli Radhakrishna, an Indian philosopher, writes in his book, "The Philosophy of the Indian Philosophy," exploring the history and philosophy of Vedas and Upanishads. Swami also translates and interprets translation from original Sanskrit, in Swansea [11], Swami Paramananda [11] in Nihilananda. Antekil Dyugeron [12] was the first foreign scholar to translate from Sanskrit in 1802. Later on, Max Myuller, Juan Mascaro [13], Sazanova, Serebrikov I.G, Avdiyev V. [14], and Hodjaeva T.A. from us did their own research. Basically, Brihadaryanka's "Chhandoghya" was used. This scientific publication was re-published in 1937. Scientific literature consists of 1017 pages. It was learned mainly by A.Sirkin [15], S.Radhakrishna [16], Sri Aurobindo [17], Shri Yoshapanishad [18], Veber A [19], Covell E. B [20].

Early researches on this topic began in the late 19th century. The main researchers are Darmesteter [21], Geldner [22], F.Karl, J. Ferdinand [23], L. Herman [24], Mainyo Khard [25], T. Behramgore, E.Tahmuras [26] and J .Tavadia [27] and the Rigveda texts published in Harvard University in 1951. At these events, mainly Avesta and Rigveda's Gothic texts were interpreted linguistically.

One of the serious studies in the avant-geste, created in the second half of the twentieth century, is the study of the Tajik historian Bobojon Gafurof's "Tajiks. The Early, Ancient and Medieval History, "in the

section titled "Common in the Indo-Iranian and the Persians in the Formation of Orthodox Orions," relates to ancient Iran and Hindu religion, traditions and imaginations. We see this in mutual Avesta and Vedas [28].

Modern Croatian linguist, Indian-Hebrew scholar and bastographer Ranko Matasovic interpreted Avesto and Vedas as a comparative hermeneutic interpretation of Hindu-European religion [29]. We have 8 Upanishads in Rigveda and part 2 of Bahrom Farrughashi's Yoddoshthoye gotho [30] published in Iran in 1958.

Dutta, also known as S.C.'s Skopus's "Asian Agri-History" magazine, also provides valuable information in the article "History of Soma and Other Drinks." [31] Arnavaz analyzed the similarity of the Veda and Avesto language and culture in the article by Firoozian Esfahani, entitled "Cultural Relations between Indian and Iranian Civilizations: Panchatantra and the Study of Calila and Dimna" [32]. Urazova R.T. "Rigveda and Avesto: A Comparative Analysis of Mythological and Social Relations," [33].

RESEARCH METHODOLOGY

Throughout the research, dialectical, systematization, composit and synergetic methods, as well as completeness, verification, history and validity were used.

Analyses and results

The Vedas are a philosophical-religious book dating back to the 1500-600 millennium BC in India. The origins of the vases are largely the same as ancient Hindu people who lived at that time. The sacred book of Zoroastrianism "Avesto" also began to appear in Central Asia in II-I millennium BC. Abu Rayhon Beruniy's Hindu script writes: "Veda is an unknown knowledge. They believe that Hindus are the words of the Most High God in Brahma.

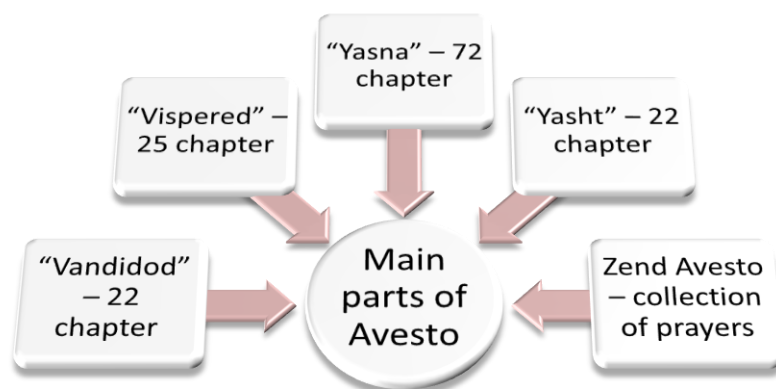
"Also, Beruniy's "Ancient Holocaust Monuments" says: "The Zoroastrian pagans came with a book called Abisto. This book was written in a language opposed to all languages of the people of the other languages, and the special language owners were more than in other languages." [34]

The word "Veda" is a Sanskrit word and means "Knowledge." In the case of "Avesto", IS Braginsky is referred to as the "sacred law", "instructions", "noun", "pand", "A. Sagdullayev believes that the word Avesto comes from the first century BC and comes from" the main source ". M. Iskhakov explains Avesto as a "studied", "approved", "predetermined", ie a set of laws governing [35].

Vedas include the social, political, economic life of the ancient Indians, their religious, ethic, aesthetic issues. In Avesto, humanistic views embody the social, moral and ethical reality that has been first developed not only by man, but also by the interactions of the entire universe, the earth, the air, the water, the universe, the stars, the animals, the insects, the moth and the mammalian world.

Avesta is the sacred book of Zoroastrianism, which operates in our country before Islam. Zoroastrianism is considered to have come through history in the first divine revelation. According to the Zoroastrianism's written sources, the god Ahura Mazda was a zealous Creator, Zaratusht, whom he chose to be a prophet and a prophet from among the people. Avesta's book is essentially a question-and-answer session between Zaratusht and Ahura Mazda.

This book consists of 21 chapters (nask). Four parts have come to this day: "Videvdot", "Yasna", "Visparat" and "Yasht". There is a collection of the most important duets for various Christian beliefs - "The Little Avesta". There are fragments of texts that are not preserved in the main part of Avesta.



The ups and downs of the Vedas have always been regarded as flames. The Upanishads continued and developed the ideas of Vedas without leaving the Vedas.

Upanishad is divided into two parts for learners:

- 1) Narrow Scale (Small Scale)
- 2) Large-scale (large)

The narrow range of Upanishads is small in size, which includes, in particular, Ishah, Katha, Mundaka, Shvetashvatara, Taitraiya Upanishads.

The wide range of Upanishads are large, including Chhandoghia, Brihadaryanka, and Maithryan Upanishads.

The Upanishads are philosophical commentaries written on the Vedas and help them to understand the Vedas. The Upanishads were born about 1000-800 years ago. The word "Upanishad" is a Sanskrit word for "near", "down", "sad" (ie sitting), "student sitting next to a teacher" and "useful advice and advice" meanings. Its essence is "mystical knowledge."

According to the Russian philosopher Sirkin [36], 11 of them and Rubenda 1 are added: 1) Aiteria; 2) in Kaushitaki; 3) Kena; 4) Taitria; 5) Katha; 6) Shvetashvatara; 7) Maitri; 8) Isha; 9) Prashna; 10) Mandukya; 11) Chhandogy; 12) Mundakya.

"The category of goodness in Avesto is related to the concept of Ahura Mazda. For example, Tajik historian Bobojon Gafurov's book, titled "Common Indian and Iranian In Formation of Orthodox Orthodoxy," relates to ancient Iran and Indian religion, traditions and imaginations. We see this in mutual Avesta and Vedas.

Their names are similar. "For example, when the war of the gods was mentioned, Avesto was called by the King of Avesta, King Yima - Viva, and in Vedas, the King of Veda, King Yama Vivasvont's son. Or, in the case of the ideology, it is called "Aurora" Bar of the Rigveda, and in Avesta it is called "Ahura mazda". The meaning of these is 'Ashura', 'ahura' means ruling. [37].

The same is true in the appearance of the universe. They have the same view of the universe as three important visions - sky, space, earth, and gods. "They say in Rigveda," Father, "" nan "- mother - earth, as well as in Avesto and Vedas," gav "- cow," ushtra "- camel," aspa "in Avesta," harp "in Rigveda which means In Iran, "foot", in the Indian "ayse" - copper. In Iran, the word "zaraniya", in the Indian "hiranya" - called "tillo"[38].

Ahura Mazda is seen as the ruler of the whole world for good.

In the book of Yoddoshthoye gotho, the book of Got's Practices, the Iranian avant-garde Bahrom Farhushiy says:

، در پهلوی مس (مسمغان = مسمغان یعنی بزرگ مغان، در لهجه دری: لهجه maz مه=مز - ۶ زرتشتیان ایران مامس و بامس یعنی مادر بزرگ و پدر بزرگ)، در فارسی مه یعنی و واژه های مهتر و مهتری و مهست و مهی و مهین یعنی بزرگتر و بزرگتری و بزرگی و بزرگ در برابر کیه (کوچک) و کهتر و کهتری و کهی [39].-بزرگ) بر می خوریم (=maz کهین است. در بند ۲ از هات ۳۰ در بند ۳۱ از هات ۴۶ نیز بواژه مز

“Meh = maz dar pahlavi mas (masmag'on-masmag'on), that means bo'zorg mag'on, dar lahje-yi dari: lahjaye zardo'shtoyoni eron manas and bomas, hencei modar bo'zorg va pedar bo'zo'rg) dar forsi meh, ya'ni bo'zo'rg va vojehoye mehtar va mehtari va mehest va mehi va mehon, ya'ni bo'zo'rgtar va bo'zo'rgtari va bo'zorgtarinva bo'zo'rgi va bo'zo'rg dar barobar kiye va kehtar va kehtari va kehi va kehiyon ast, dar band 2 az hot 30 va dar band 14 az hot 46 niz bevoje maz(=bo'zo'rg) bar xo'rim”.

Maz “Avesto” maz, pahlaviy tilida mas(mas-mag'on=masmag'on), ya'ni katta mag'on, dariy lahjasida, ya'ni eron zardushtiyari momos va bomos, ya'ni katta ona va katta ota) fors tilida meh – katta deganidir. Meh so'zi mehtar, mehtari va mehest hamda mehi va mehiyon shakllarida darajalanadi. Ya'ni katta, kattaroq va eng kattasi shaklidir. Agar buni kichik so'ziga nisbatan qo'llasak, kehtar, kehtari, va kehi va kehiyondir. (46th gotning 14 points and 30th gotning 2 points)

Ahura Mazda is the oldest adult who has created all the noble deities that serve the well-being of all the good and its prosperity.

For Upanishadsॐ, that is, the category of goodness. Firstॐ, that is Om to a category of goodness“Chxandogya” (छान्दोग्योपनिषद्)vaand Isha (ईशापनिषद्) Upanishaswe encounter. ॐ(AUM) this is the main feature of life and is expressed by the concept of higher education.

ॐपूर्णमदः पूर्णमदंपूर्णमिदंपूर्णात्पूर्णमुदच्यते।

पूर्णस्यपूर्णमादायपूर्णमेवावशिष्यते॥

ॐशांतिःशांतिःशांतिः॥[40]

Translation:God! It is a perfect perfection with uncertain perfection. No unbreakable process of rebuilding. God is peace, peace, and peace!

As it is seen from the translation of the above-mentioned sanction text,ॐ(AUM) as the idea of peace is one of God's attributes.

From the foregoing evidence it has always been in the forefront of God's creativity, the unity, the will and the propagation of His work. In the framework of their religion, peoples and nations have contributed to the progress of science.

For example, the Arab-Spanish philosopher Soid Andalusian, who lived in the eleventh century, analyzed each of the eight nations who had contributed to the development of world science in the above-mentioned Tabaqat ul-umam, and describes the geographical environment, discusses the basic principles of their languages and religions, and summarizes the origins of these nations.

For example, the author dwells on the history of the Persian people and writes: وذكر بعض علماء الاخبار أن الفرس في أول أمرها كانت موحدة على دين نوح عليه السلام ثم هم الصابئيون فاعتقدوه نحو الف سنة وثمانمائة سنة إلى أن تمجسوا جميعاً.

و كان سبب تمجسهم ان زرادشت الفارسي ظهر في زمان يستاسب ملك الفرس و دعا الى دين المجوسية من تعظيم النار و القول بتركيب العالم من النور و الظلام و اعتقاد القدماء الخمسة التي هي عندهم: الباري و ابليس و الهولوى و الزمان و المكان...”

Translation: ... Some scholars mention that the Persians were originally part of the religion of Noah. Then they came to believe in the religion of paganism (ie, worshipers of fire and sun worship), that is, about 1,300 years, and they believed in the Sabae'ity (the religion of the worshipers of the heavenly Heights in the Lower Mesopotamia).

The cause of their paganism is the Persian Zoroastrian. He lived in the time of Jastistite king of Persia and called on the Gentile religion to encourage the Persians to glorify the flame. He states that the world consists of darkness and light, and that it is necessary to believe in the following five things: 1) The Creator (Bari, Hâraliq); 2) The devil; 3) To Hayuloo; 4) to the space; 5) The time [41].

From the views of Soed Andalusia, the belief in the Creator is in the first place.

As it has been said in the Upanishads, ॐ (AUM) defines अहिंसा (ahimsa) is explained in connection with its concept. That is, अहिंसा (ahimsa) – This means that the peaceful state of the nation will endure it with patience.

इतिहासतत्तयुद्धोंकाएकलेखाहै, परहमनयाइतिहासबनानेकीकोशिशकर रहेहैं।मैंऐसाइसलिएकर रहाहूँ, क्योंकिजहांतकअहिंसाकासवालहै – मैंराष्ट्रीयमानतकाप्रतिनिधित्वकरताहूँ।तलवारकेसिद्धांतकोमैंनेखूबसोच-विचारकरनेकेबादछोड़ाहै।उसकीसम्भावनाओंकामैंनेहिसाबलगायाहै, औरमैंइसनिष्कर्षपरपहंचाहूँकिजंगलकेकानूनकीजगह, प्रबुद्धप्रेमकेकानूनकीस्थापनाहीमनुष्यकीनियतिहै।[42]

Translation: History is a witness of the continuing wars, but we are trying to create a new history. That's why I'm telling you that when I get a question about Ahimsa, I represent the nation. Thinking of the swordfish, I chose it after making that decision. Having calculated his potential, I came to the conclusion that it is the duty of a person to love instead of evil. Love of one another is a love for one another.

It is clear that such a idea of peace is regarded as a struggle for war and civilization, from ancient to modern times.

Xulosa va takliflar

Avesta and Upanishads serve as an important source of human civilization in the historical development of the world nations. They embody the idea of philosophy, the world in which it is moving, the substance, the living and the inanimate world, to perfect human relationships through intelligent, infinite thought. It empowers human beings in the form of synthesis of the world of emotional states, and expresses noble qualities such as purity, noble intentions, pure emotion, sacred knowledge of the soil, and the Homeland in the person of high moral principles and thinking .

The results of this research can be used to create monographs, textbooks, methodological developments, and related parts of textbooks. Also, special courses for higher and secondary special educational institutions are planned to be introduced. In addition, research materials can be used to promote good news through media, radio, and television.

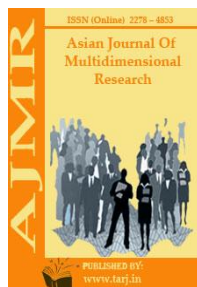
The Vedas and Upanishads are written in Sanskrit, and the study of the history of ancient civilization, which they call kindness, and the use of universalistic ideas in the reproduction of today's reforms is an urgent issue.

LIST OF PUBLICATIONS USED

[1 Mirziyoev Sh.M. continuing our national path of perseverance, to a new level. - Tashkent: NMIU, Uzbekistan, 2017. - B.504-505.

- [2] Lelekov L. A. Avesta and sovremennoy nauke. - M., 1992. - 363 h. In this book Over 250 research papers on "Avesta" for 250 years philosophical-historical analysis.
- [3] Ervard Kavasji Edulji Kanga. Hordeh Avesta. -Bombey: Jenaz Printers, 2013. P 365.
- [4] ۱۹۹۳ حاشیم رزی اوستا دردو جلد تهران
- [5] ۲-۱۱۹۹۱ اذتشارات مرورید تهران -اوستا . کهذترین سرودهای ایرانیان
- [6] Avesta allegations / M. Iskhakov tarj. // Uzbek language and literature. -1999. -№ 1. -Б.7079; № 2. - Б.63-74; -№ 3. -Б.63-72; № 4. -Б.67-72; -№ 5. - Б.72- 74; 2000. - № 1. -Б.63-74; -№ 2. -Б.72-80; -№ 3. - Б.70-76; -№ 4. -Б.52-62; -№ 6. -Б.62-69.
- [7] Avesto: Manuscripts / M. Iskhov's translation. - T: East, 2016. - 303 6.
- [8] Avesta: The book "Videvdot" / M.Ishakov's translation - T.: TSIOS publishing house printing department, 2007. - 96 6.
- [9] रथक्रिषणान.भारतका दर्शन. दिल्ली 1926. – 605 p.
- [10] Swami Nikhilananda. The Upanishads -A New Translation in four volumes. London, 1921. – 320 p.
- [11] Prabhavananda, Svami and Manchester, Frederik. The Upanishads: Breath of the Eternal” Vedeanta Press, 1976. – 304 p.
- [12] Anquetil Duperron, Oupnek'hat, 1801, 1802. See page 54.
- [13] Juan Mascaro. The Upanishads. London.: Penguin books, 1966. – 130 p.
- [14] Avdiev V.I. The history of the ancient east. M.: State. publishing house watered. lit. 1948. - 652 s.
- [15] And I. Syrkina. Upanishads translation and re-introduction. - M.: Science, 1967. - 109 p.
- [16] Radhakrishnan. Indian Philosophy Delhi 1994. I Tom. - 624 page.
- [17] Shri Aurobindo. Upanishads. Jayanagar Bangalore: Block East 1942. – 111 p.
- [18] Shri Yoshapanishad. Bhaktivedanta. Bombay.: Book Trast, 1990. – 654 p.
- [19] Weber. A. Analyse der in Anquetil du Perron's Übersetzung enthalten Upanishad; Indische Studien, vol. i, p. – 247 et seq.
- [20] Cowell. E. B. The Maitri Upanishad. Edited with an English translation; Bibliotheca Indica. Calcutta, 1870. – 344 p.
- [21] Darmesteter, James. Etudes Iraniennes. Paris, 1883.
- [22] Geldner, Karl F. Drei Yasht. Aus Dem Zendavesta. Stuttgart 1884.
- [23] Justi Ferdinand, Iranisches Namenbuch. Marburg 1895.
- [24] Lommel Herman Die Yasts Des Avesta. Gottingen 1927.
- [25] Mainyo Khard. The pazand and Sanskrit texts. Stuttgart 1871.
- [26] Behramgore T. Anklesaria. Bombay 1935.
- [27] Bundahism. Edited by Ervard Tahmuras D anklessria. Bombay 1908.
- [28] Gafurov. B.G. Tojikon: The heritage of ancient, ancient, myri dance and heritage - Dushanbe: Donish, 2008. 870 p.
- [29] Ranko Matasovic. A reader in comparative indo-european religion. – Zagreb. 2016. 98 p.
- [30] Sayast – ne – sayast by J. Tavadia. Hamburg 1930.
- [31] Dutta. S.C. History of soma and other spirituous liquors of India (Article). Asian Agri-History/Volume 4, Issue. 2000, Pages 203-220.

- [32] Arnavaz Firoozian Esfahani. Religious and Cultural Relationship between Indian and Iranian Civilization: A Reading of Panchatantra and Kelileh va Demneh. IOSR Journal Of Humanities And Social Science (IOSR-JHSS). Volume 17, Issue 4 (Nov. - Dec. 2013), PP 106-111. E-ISSN: 2279-0837, p-ISSN: 2279-0845. www.iosrjournals.org
- [33] Urazova R.T. Rigveda and Avesta: comparative analysis in the level of mythology and social relations The advanced SCIENCE open access journal. United States: Columbia Street, 2013. – R.68-72.
- [34] Beruniy A.R. Selected Works. Volume 1. - Tashkent: "Fan", 1968. – B 237.
- [35] Maxmudova G. Avestoning falsafiy moxiyati. – Toshkent: "Noshir" nashriyoti. 2015. – B 18.
- [36] Syrkina A.Ya. Upanishady. Perevod i peredislovie. - M.: Nauka, 1967. - S. 3.
- [37] GafurovB.G. Тоҷикон: Takhrichi ancient, radyad, asrian myona and the navy - Dushanbe: Donish, 2008.- Cah.35.
- [38] GafurovB.G. Тоҷикон: The most beautiful, ridiculous, antiquated moon and décor - Dushanbe: Donish, 2008.- Cah.36.
- [39] بهرامفرهوشی. یادداشت‌هنگامها. از انتشارات انجمن ایرانشناسی. مهرماه ۱۳۳۶. Barhom Farhushiy. Got Applications. - Iran: "The Iranians Conference". 1957 (Hijri 1336's Month of Love) - B 56.
- [40] ईशापनिषद(II:I) दिल्ली. 1914. – P.7.
- [41] صاعد بن صاعد اندلسی. طبقات الأمم. – بيروت، ۱۹۱۲. Soed ibn Soed Andalusiy. Tabaqot ul-umam. – Bayrut, 1912. –P. 17.
- [42] गांधीनेकहाथा 45, (सम्पूर्णगांधीवाङ्मय (खण्ड 65), पृव् 388)



MAHARAJA HARI SINGH'S REFORMS AND THEIR IMPACT

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ABSTRACT

The modern Jammu and Kashmir State is founded by Maharaja Gulab Singh after the Treaty of Amritsar, signed on 16th March 1846 between British Indian Government and Maharaja of Jammu. By the treaty, Gulab Singh took the possession of "all the hilly or mountainous country with its dependencies situated to the eastward of the River Indus and the westward of the River Ravi including Chamba and excluding Lahul, being part of the territories ceded to the British Government by the Lahore State according to the provisions of Article IV of the Treaty of Lahore, dated 9th March, 1846." Maharaja consolidated the state and was succeeded by Ranbir Singh (1856-1885), Pratap Singh (1885–1925) and Hari Singh (1925-1952). Maharaja Hari Singh continued till 1961 as only title. He brought a number of reforms in various fields for the development of the people of the Princely State of Jammu and Kashmir i.e. Social Reforms, Educational reforms, Economic Reforms, and Agrarian Reforms etc. These reforms put far reaching impact on the administration and common man in the development of the society.

KEYWORDS: Agrarian, Education, Impact, Reforms, Treaty

OBJECTIVES

- To understand the Reforms which were brought by Maharaja.
- To study and analyse the works which changed the life of society and development of the State.

INTRODUCTION

The modern State of Jammu and Kashmir is the creation of the Treaty of Amritsar which was concluded on 16 March 1846 between the British Indian Government and Gulab Singh, the ruler of Jammu, the largest princely state of India.

The region was an isolated territory having no constitution and also the absence of laws. The ruler was the supreme authority in executive, legislative and judicial system of his territory and considered to be the representative of the God. The common man was exploited and deprived of their belongings. During the Dogra rule Maharaja Gulab Singh framed a number of laws for the development and upliftment of the state and the society. At the time of state formation British tried to appoint the Resident to look after the state affairs but Maharaja Gulab Singh strongly opposed. But when Maharaja Ranbir Singh ascended the throne on 25th September 1885, the British Indian Government appointed Sir Oliver St. John the first Resident of the State (Hussnain 1974 p.79). He was replaced in the very next year by T.C. Plowdon with a secret mission for greed of more power. Consequently, he conspired Amar Singh and Ram Singh, the brothers of Maharaja to dethrone him (File No. 11 of 896, H.H.P.R.Files, SARJ). The British formed the full functioning of the Resident in the state in 1885. They established their own administration also replaced the state officials with the adjoining states. The court languages of Dogra Rulers, Persian and Dogri were to replace by Urdu and English for the functioning of their administration (Digbe. pp 164-65). The huge burden of taxes was imposed on the shoulders of the peasants and other people of the state.

During the rule of Maharaja Partap Singh various steps were taken for the spread of modern education, schools were set up on the patron of western education. In 1886 two such high school were opened each at Jammu and Srinagar (Annual Administrative Report p.105). Maharaja was now satisfied after establishment of new education system. Besides, various other reforms were also brought by him during his reign.

Maharaja Hari Singh ascended the throne in 1925 after the death of Maharaja Partap Singh. He was the son of Amar Singh, the younger brother of Maharaja Partap Singh. Amar Singh was died on 1909, so Hari Singh was only surviving direct male descendant of Gulab Singh, left in the row to ascent the throne of the Dogra rule over State of Jammu and Kashmir. He brought a series of reforms for the betterment of the administration and upliftment of the common people. He is also known as the benevolent ruler of the state.

REFORMS OF MAHARAJA HARI SINGH

Economic Reforms

When Mahariaja Hari Singh ascended the throne the total area of the state, according to the Census Report of 1921, was 84,258 square miles. The State of Jammu and Kashmir was the largest Indian states. It was larger than Hyderabad and as large as the four Indian states of Gwalior, Mysore, Bikaner and Baroda put all together.(The Census of India, 1921. P.4). Almost the whole area is mountainous and having small area is under cultivation 5.18 percent in 1911 Census and 6.8 percent in 1921(Lawrence, W.R., p.336.) Agriculture was the dominant portion of state's economy. In 1921, 80.2 percent population was engaged with agricultural activities (M.L.Kapur.p.217).

Maharaja Hari Singh after ascending the throne promised some special benefits to the people are; (Saxena, 1975.pp.86-87)

- i. The khalsa land was transferred to Shamlat deh
- ii. Dead and fallen wood in future be removed by the village throughout the year.
- iii. Stress on the development of education in the state, 50 additional schools in Jammu, 50 in Kashmir, 10 in Gilgit and 10 in Ladakh were approved on the spot.
- iv. Three mobile dispensaries for Jammu and three for Kashmir were approved.

- v. A sophisticated hospital with every facility for Srinagar was sanctioned.
- vi. The technical education benefits were also given to Baramullah, Anantnag, Leh, Kishtwar, Samba, Mirpur and Bhadarwah.
- vii. For the proper arrangement of supply of drinking water on the kandi area, a special allotment was to be included in the budget every year for this purpose.
- viii. He paid special attention on the drinking water for kandi area, included a portion of budget every year.

Trade and industry. Maharaja was eager to see the Jammu and Kashmir as an industrialised state. For the development of the sector paid proper intention and various taxes were abolished. The local traders and ventures were encouraged to purchase local products from the local business man. Various manufacturing units were set up like, tents, woodworks, carpets, silk yarn, food crafts, matchboxes and tannery goods, etc.

Establishment of Jammu and Kashmir Bank. It was the far reaching step of Maharaja to establish a bank in the state in 1938, to maintain and control the state treasury. Many branches were opened in the other cities and towns of the state. This boost the local business, trade and industry, besides it inspire employment and industrial production.

Set up of Silk Industry. To enhance the employment and economic growth the government set up a small silk factory in Jammu which expanded many folds within a few years. A production unit was also established in Srinagar. It provided two types of employment to the local people one the factory workers and other the villager engaged in the production of cocoons for the silk factories. The industrial centres were opened in Srinagar, in 1941, and later in Jammu propagated the trade of the Kashmiri handicraft products.

Tourism. Kashmir has always been the source of attraction for the internal and foreign tourist. It was Maharaja Hari Singh also paid more attention to tourism industry. The number of tourists who visited Kashmir during 1931-32 was 8,604 to 24,659 during 1936-37.

Price Control Department. The prices of commodities were not fixed and traders used to sell them with their own will put huge burden on the pockets of consumers. He sanctioned a Price Control Department to fix the prices and regulate the distribution of the commodities.

AGRARIAN REFORMS

Maharaja paid immense attention towards the modernization of the agriculture sector.

Agriculturist's Relief Act. This Act provided freedom for the peasants and rural workers from the self-flagellating of money lenders.

The Land Alienation Act. This Act "has forbidden the transfer of agricultural land to the non agriculturists." The agriculturists also were granted with proprietary ownership rights and immunity from the taxes or levies of Nazrana and Malikana. Maharaja inspired the agriculturist by providing loans for the up gradation of agricultural lands and for establishment of local economy. The rural population and peasantry let to live in the Khalsa land with ownership rights.

The Kahcharai Act. It permit to exempt the owners of their cattle and sheep in respect of particular animals of a given number and age.

Bulls of High quality. For better livestock the bulls of Sindhi and Dhani breeds were provided to the peasants in some areas.

Land Settlement. The period of the land settlement was extended to forty years. Begar or forced labour was abolished from the state. The agricultural development was extended to every parts of the state like, Kashmir, Jammu and Northern provinces.

Educational reforms

Maharaja Hari Singh was keen to spread education to all the sections of the society and every part of the state.

The compulsory Education Regulation. It was passed and it was implemented immediately to Srinagar, Jammu, Sopore, Udhampur and Mirpur. Consequently, every town or village with a population of over 500 had its own school (Saxena, 1975.pp.90-91) The primary and secondary education was already free for all in the state. Primary education was made compulsory for municipal area in 1930.

He also created The Scholarship Selection Board to grant scholarships to the deserving students for higher and technical education in Indian instructions and those went to get education in abroad. A large number of new schools, colleges and other educational institutes were created for increasing number of students. It was during the Dogra ruler the Urdu language was made the medium of instruction in schools.

Social reforms

The Maharaja was eager to put an end to the social evils and inequalities like torturing and trafficking of women, untouchables, child marriage etc. prevailing in the state. His social reforms were;

Infant Marriages prevention Regulation of June (1928). This Regulation raised the marriage age for girls to 14 years and for boys to 18 years. He also established the Dhandevi Memorial Fund for the marriage of girls.

Jammu and Kashmir Vaccination Regulation (1928). The vaccination to eradicate small pox was mandatory for children in every region of the state of Jammu and Kashmir.

Juvenile smoking Regulation. It prohibited the smoking by younger generation.

In 1926 and 1929 two separate committees were constituted to prevent the infanticide which recommended educating the people and the rigorous punishment will be awarded to the person who would commit the crime. The recommendations of both the committees were approved by the Maharaja.

Hindu widow's remarriage and property regulation. This Regulation was passed to remove the prohibition of the re-marriage of the Hindu Widows.

Suppression of Immoral traffic in women regulation. It was passed to suppress the women trafficking and forcibly pushed them into prostitution. Maharaja declared that for every daughter born in a Rajput family, the family would be granted by additional acre of state land and financial assistance would be provided at the time of the marriage of the Rajput girl. Dhandevi Memorial fund, in memory of his maharani was raised for this purpose.

Untouchability. The Maharaja was eager to remove the curse of the untouchability from the society. He ordered to end this discriminatory treatment of the depressed classes in all Government institutions and in 1931 he threw open all Government wells, tanks and temples to all Hindus, irrespective of their caste or creed. In 1940 he proclaimed untouchability a crime.

Creation of High court. Since the time of Maharaja Ranbir Singh, Adalat -Ul-Alia was functioning in the State was replaced by a High Court, in 1928, which headed by a Chief Justice and two Judges which were appointed by Maharaja Hari Singh (M.L. Kapur,pp 65-70)

Road and Communication system.

Maharaja Hari Singh introduced the modern communication system like telegraph, telephone, and wireless to all the cities and towns of the state. He was eager to construct road, bridges, tunnel to make the better communication and road connectivity for the people of the state.

Rural development

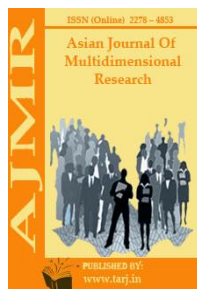
Maharaja Hari Singh created Rural Development Department in 1937, to empower the panchayats to resolve the village dispute and to took part in the implementation of plans and activities.

CONCLUSION

The modern state of Jammu and Kashmir governed by the Dogra Rulers from Maharaj Gulab Singh to Maharaja Hari Singh, the farmer who established and consolidated the state. He shaped and constituted the every component of the administration. The successors continued his system of work with necessary reforms without disturbing the basic structure. However, Maharaja Hari Singh brought a series of Reforms and Regulation for the betterment of the common people of the state, like educational Reform, social Reform, Rural Development, road and communication and Agrarian Reforms. It is absorbed that they put far reach impact on the development of the people of modern State of Jammu and Kashmir.

REFERENCES:

1. Hussnain, F.M., *British Policy Towards Kashmir (1846-1921)*, Sterling Publishers, New Delhi 1974, p 79
2. File No. 11 of 896, H.H.P.R. Files, SARJ.
3. Digbe, William. *Condemned Unheard*, Kashmir Papers. Pp. 164-65 (English was introduced in 1886 A.D. and Urdu in 1889 A.D. as the new Official languages)
4. Annual Administrative Report, J&K Govt., Civil Military Gazette Press Lahore, p.105
5. *The Census of India*, 1921, Vol. XXII, Kashmir, Part-I, Report, Lahore, 1923, p.4.
6. Lawrence, W.R. *The Valley of Kashmir*, p.336.
7. Kapur, M.L., *Social and Economic History of Jammu and Kashmir State*
8. Saxena, H.L., 1975 *The Tragedy of Kashmir*, New Delhi : Nationalist Publishers, pp.86-87.
9. M.L. Kapur, EDT. 1995 *Maharaja Hari Singh, 1895-1961*, Har-Anand Publications New Delhi



IMPACT OF PSYCHOLOGICAL CAPITAL ON ORGANIZATIONAL CITIZENSHIP BEHAVIOR: A STUDY OF CLERICAL EMPLOYEES

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ABSTRACT

In this competitive environment, employees are the most important part of an organization for its bright future. In the past years, researchers have focused their attention towards the factors that may increase employees' performance. In this regard Organ (1988) introduced the concept of Organizational Citizenship Behavior. Organizational citizenship behavior may be defined as an extra work related activities of employees, which may contribute towards the success of an organization. The aim of the present research is to measure the impact of Psychological capital on Organizational citizenship behavior. For this purpose, a scale for measuring Organizational citizenship behavior is developed by Podsakoff et.al (1990), and Psychological capital was measured by using the scale developed by Luthans et. al (2007). Clerical employees have been taken as a sample of the study and Stepwise Multiple Regressions is used for the data analysis. Obtained results demonstrate the impact of Psychological capital and its dimensions on Organizational citizenship behavior.

KEYWORDS: Clerical employees, Organizational Citizenship behavior, Organizational behavior, Psychological Capital.

INTRODUCTION

In this challenging scenario and high pressure working environment, employees' efficiency and performance is the challenging task in front of the organization. In order to compete others, organization pay more attention that how to make employees competitive? And it becomes a major research area particularly for industrial and organizational psychologist. In 1988 Organ defined Organizational citizenship behavior as "individual behavior that is discretionary, not

directly and explicitly recognized by the formal reward system, and in aggregate promotes the effective functioning of the organization”’. (p.4) .Podsakoff & et.al (2000), designed a theoretical model for the explanation of Organizational citizenship behavior with five factors, via altruism, conscientiousness, courtesy, sportsmanship and civic virtue. A large number of previous researches had been done regarding Organizational citizenship behavior in relation to other variables, which may have their impact on Organizational citizenship behavior, such as Psychological capital, Luthans et.al (2007b,p.3) defined Psychological Capital as :” an individual’s positive psychological state of development that is characterized by characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success”’.

REVIEW OF LITERATURE

Plessis and Barkhaizen (2011), emphasizing the importance of Psychological capital for the better productivity and efficiency of the employees.

Van Dyne & Kostova (1995), suggest that psychological ownership was positively related to Organizational citizenship behavior.

Luthans, Kyle, Jensen & Susan (2005), conducted a study on nurses and found that there is positive relationship between psychological capital, extra role performance, job commitment and intention to stay.

Luthans and Youssef (2004) argued that psychological capital help to realize desirable attitudinal outcomes, which includes job satisfaction, commitment, Organizational citizenship behavior and perceived organizational effectiveness.

Alberto Ortega (2017) demonstrated psychological capital and performance among under graduate students. A sample of 682 students was used for analysis of the data, the result shows direct impact of Psychological capital on performance.

Nafei (2015) conducted Meta analysis of the impact of Psychological capital on quality of work life and Organizational citizenship behavior. The result of the study obtained that there is positive correlation between psychological capital and quality of work life and also with Organizational citizenship behavior. Individual who have high level of psychological capital are more engage in Organizational citizenship behavior.

SIGNIFICANCE OF THE STUDY

No organization can be deemed as an organization without employees. In every sense, employees have been and always will be the most crucial part. No matter, how much the company is dependent upon automated machinery and soft wares, the organization’s main resource will always be human. So in this study we are not concerned only about the working behavior of the employees rather the researcher is concerned more on the working habits of the employees and their self-realization while performing extra for the benefits of the organization.

The study is significant as there is a debate going on how much an employee should be held responsible for a company's ups and down, and these responsibilities influences by many factors, therefore the present research highlighted the influence of psychological capital on organizational citizenship behavior of the employees which may lead towards the success of an organization while performing duties which do not comes into their purview but still they find it necessary for the company's growth and sustenance.

OBJECTIVE

To study the impact of Psychological capital and its dimensions on Organizational Citizenship Behavior among clerical employees

RESEARCH METHODOLOGY

SAMPLE

Sample of the study consisted 60 clerical employees working in different departments of Aligarh Muslim University, Aligarh. Random sampling technique was used to collect the data.

INSTRUMENTS

Organizational citizenship behavior scale developed by Podsakoff, Mackenzie, Moorman and Fetter (1990) was used in the present study, the scale consisted 24 items based on 5 dimensions i.e. Altruism, Conscientiousness, Sportsmanship, Courtesy and civic virtue proposed by Organ in 1988. This scale is based on seven point likert rating. The responses ranges from 1 to 7, i.e from strongly disagree to strongly agree. 24 items of the scale is based on 5 dimensions, out of which all four dimensions have 5 items expect civic virtue which has 4 items. All items of the scale are positively coded expect Sportsmanship which is based on negatively coded. The scores range from 24 to 168.

Psychological capital was measured by a scale developed by Luthans, Youssef & Avolio (2007). The scale consisted 24 items based on 4 dimensions i.e hope, self-efficacy, resiliency and optimism. This is 6 point rating scale with the responses ranging from 1(strongly disagree) to 6 (strongly agree).Three items of the scale are reversely coded one from resiliency and two from optimism.

RESULT AND DISCUSSION

Table 1: Showing Multiple Linear Regression Analysis (stepwise) among (N=60) Clerks.

Predictor: Psychological capital and its dimensions

Criterion: Organizational Citizenship Behavior

Predictor Variables	Un. Stand. β	Multiple R	R^2	R^2 Change	Cohen's f^2	F	p
PsyCap and its dimensions				(Model	$Y_1 = a + \beta_5 X_5 + \beta_3 X_3 + \beta_1 X_1$)		
X_5	1.162	.574	.329	-	.49	28.439	0.01

Predictor Variables	Un. Stand. β	Multiple R	R^2	R^2 Change	Cohen's f^2	F	p
X ₃	4.717	.616	.379	.050	.61	17.412	0.01
X ₁	7.978	.670	.449	.069	.81	15.189	0.01
Constant	94.502						

X₁= Self- efficacy, X₃= Optimism, X₅= Psychological capital.

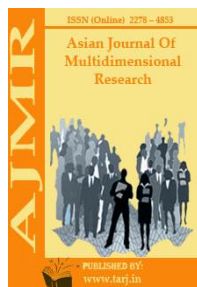
From the table 1, it has been shown that, the dimension self-efficacy (Psychological capital) accounted $R^2 = .449$, it can be inferred that self-efficacy explains 44.9% variance in Organizational citizenship behavior among the clerical employees. $F = 15.18$ is significant at 0.01 level of confidence. It can be also shown that self-efficacy is significantly and positively predict Organizational citizenship behavior as $\beta = 7.978$. Further Cohen's effect size value ($f^2 = .81$) suggested large strength of contribution. The reason may be that self-efficacy play a key role in performing the work task of the employees, if employees have high efficacy, they are more concerned towards their work that may lead to perform better. Optimism is another dimension of Psychological capital, emerged as significant predictor of Organizational citizenship behavior. From the above mentioned table it can be shown that dimension Optimism jointly accounted $R^2 = .379$, it can be inferred that optimism explains 37.9% variance in Organizational citizenship behavior. $F = 17.41$ significant at 0.01 level of confidence, $\beta = 4.717$ are found to be statistically positive to Organizational citizenship behavior. While Cohen's effect size value ($f^2 = 17.41$) explained high strength of contribution. The explanation of this may be that optimism employees give credit themselves for the favorable events of their lives (Luthans & Youssef, 2004), so they are less engage to think about worst events of their life. The analysis of the study also found that overall Psychological capital is significantly predict Organizational citizenship behavior, Psychological capital together accounted $R^2 = .329$ it means that there is 32.9% variance in Organizational citizenship behavior. $F = 28.43$ found to be significant at 0.01 level of confidence and the β value is 1.162 are statistically found positive. Further Cohen's effect size value ($f^2 = .49$) suggested high strength of contribution. A number of studies shows the positive impact of Psychological capital on Organizational citizenship behavior, it is characterized by hope, optimism, self-efficacy and resilience, if employee possess high level of these four construct may significantly contribute to citizenship behavior, in this regard Avey, Luthans & Youssef (2009), argued that employees who have high level of Psychological capital are more likely to engage in citizenship behavior, in addition a study conducted by Avey, Luthans and Youssef emphasizing that positive employees are more related to this behavior of work than negative employees.

CONCLCLUSION

Based on the findings of the study it is concluded that self-efficacy and optimism predict organizational citizenship behavior and psychological capital as a whole also significantly and positively influence organizational citizenship behavior, so there is no doubt that Organizational citizenship behavior is likely to be a function of psychological capital.

REFERENCES

- Avey, J.B., Luthans, F. and Youssef, C.M., 2010. The additive value of positive psychological capital in predicting work attitudes and behaviors. *Journal of management*, 36(2), pp.430-452.
- Bies, R.J., 1989. Organizational citizenship behavior: The good soldier syndrome.
- Du Plessis, Y. and Barkhuizen, N., 2012. Psychological capital, a requisite for organisational performance in South Africa. *South African Journal of Economic and Management Sciences*, 15(1), pp.16-30.
- Luthans, F., Youssef, C.M. and Avolio, B.J., 2007. *Psychological capital: Developing the human competitive edge*(Vol. 198). Oxford: Oxford University Press.
- Luthans, F. and Youssef, C.M., 2004. Human, social, and now positive psychological capital management: Investing in people for competitive advantage
- Luthans, F., Avolio, B.J., Avey, J.B. and Norman, S.M., 2007. Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel psychology*, 60(3), pp.541-572.
- Luthans, K.W. and Jensen, S.M., 2005. The linkage between psychological capital and commitment to organizational mission: A study of nurses. *Journal of Nursing Administration*, 35(6), pp.304-310.
- Nafei, W., 2015. Meta-analysis of the impact of psychological capital on quality of work life and organizational citizenship behavior: A study on Sadat City University. *International Journal of Business Administration*, 6(2), p.42.
- Ortega-Maldonado, A. and Salanova, M., 2018. Psychological capital and performance among undergraduate students: the role of meaning-focused coping and satisfaction. *Teaching in Higher Education*, 23(3), pp.390-402.
- Podsakoff, P.M., MacKenzie, S.B., Moorman, R.H. and Fetter, R., 1990. Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The leadership quarterly*, 1(2), pp.107-142.
- Podsakoff, P.M., MacKenzie, S.B., Paine, J.B. and Bachrach, D.G., 2000. Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of management*, 26(3), pp.513-563.
- Vandewalle, D., Van Dyne, L. and Kostova, T., 1995. Psychological ownership: An empirical examination of its consequences. *Group & Organization Management*, 20(2), pp.210-226.



THE ROLE AND PLACE OF AGRO CLUSTERS IN IMPROVING THE ECONOMIC EFFICIENCY OF WATER USE IN THE REGION

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ABSTRACT

The article discusses the urgency of creating agroclusters in agriculture of the Jizzakh region in order to introduce innovative and resource-saving technologies, as well as the use of agroclusters to save water resources in the region. The main activity of the clusters will be the production, processing and sale of fruits and vegetables. Processing of fruits and vegetables in these areas with their potential is a major direction in the formation of integration systems. In 2018, in each region of the republic, up to two clusters of fruit and vegetable products were created and in 2019 it is planned to transfer the form of a cluster of all districts specializing in the production of fruit and vegetable products. The main activities of the cluster are the creation of enterprises for the processing of cotton, the construction of modern foster cotton points and points for the processing of cotton fiber, a workshop for the production of oil and fat products. The effective form of the implementation of the task, recognized in economically developed countries, is the creation and development of agro clusters. Thus, new innovative technologies will come to cotton production. Cotton agro clusters are developing rapidly. Currently, there are 18 cotton agroclusters in the republic.

KEYWORDS: Agro Cluster, Water Resources, Agro Complex, Clustering Of The Region, Fruits And Vegetables, Cotton-Growing Complex, Competitiveness Improvement, Introduction Of Innovative Technologies.

1. INTRODUCTION

In the modern world, the structure of the economy is changing rapidly. Each sector of the economy is equipped with high technology. Among them, agro-clusters are currently being successfully used in the agro-industrial complex. They contribute to the overall development and competitiveness of each company taken. In various literatures, they are interpreted differently. We agree with the interpretation: “Agro cluster is an informal association of leading companies with medium and small enterprises, technology developers, necessary market institutions, consumers and suppliers that interact with each other within a single chain of additional value creation. It is important that all of them are concentrated in a limited area for the implementation of joint activities in the process of production and supply of a certain type of products and services.”

In recent years, Uzbekistan has paid great attention to modern agro-clusters. Large joint projects are being created in the regions of the republic in this area. In 2018, in each region of the republic, up to two clusters of fruit and vegetable products were created and in 2019 it is planned to transfer the form of a cluster of all districts specializing in the production of fruit and vegetable products.

2. METHODS

One of the modern projects is the creation of a modern agro cluster in the Jizzakh region. The first phase will be implemented in 2019 in the Arnasaysky and Mirzachulsky districts, the second phase - in the Dustliksky and Pakhtakorsky districts by 2020. The project provides for the creation of a joint venture. The main activities of the cluster are the creation of enterprises for the processing of cotton, the construction of modern foster cotton points and points for the processing of cotton fiber, a workshop for the production of oil and fat products.

Textile complexes will also be created, the production of milk, meat and eggs, a modern greenhouse complex will be organized.

In general, the system of the agro cluster of the region includes the entire process from the cultivation of cotton to the production of the finished product from it. Thus, new innovative technologies will come to cotton production. Cotton agro clusters are developing rapidly. Currently, there are 18 cotton agroclusters in the republic.

Analysis of agro clusters of Jizzakh region show that the number of agro clusters in this region is still not sufficiently developed in the field of fruit and vegetable farming. At this time, the Savot-Agro Export agro-cluster with an area of 275 hectares is successfully operating in the region. Projects of clusters “Hayekbek-textil”, “Zizzakh-industrial tukim”, which occupy 8500 hectares of area, have been developed. At present, more than 1000 labor resources are employed in these clusters. [2]Основная цель создания агрокластеров в регионе является:

- expanding the share of products on the market;
- The development of new markets;
- increasing the investment attractiveness of enterprises and companies in the region.

To create agro-clusters, all regions should follow the instructions of the “European Memorandum”. Considering the above, we propose a diagram of the institutional form of the agro cluster of the region (Fig. 1)



Fig.1. Institutional form of agrocluster of the region

In conditions of limited land and water resources and taking into account the constant growth of the population of the region, thanks to consistent agricultural policies and rational use of the potential that the agricultural sector has, they have achieved a sustainable supply of food and export needs of the population of the region.

It is for saving water resources that the strategic focus is agro-clusters.

The average annual water use in the Republic of Uzbekistan is more than 60 billion m³. Almost 50 billion m³ is used in agriculture. From the above statistics it is clear that the use of agro clusters in the republic gives a powerful impetus to the effective use of water resources in the regions

An average of 1 hectare of irrigated area consumes about 12 thousand m³ of water. At the same time, the total water volume of Uzbekistan itself is more than 10 billion m³, and the rest of the

water comes from the territory of neighboring states. The reason for this is that a large part of the territory of Uzbekistan makes up the steppe zone.

3.РЕЗУЛЬТАТЫ

The current situation in the world, the level of agricultural development and the problems of food security in Uzbekistan require the development of new approaches and mechanisms, changes in the structure of agricultural production, the introduction of innovative and resource-saving technologies, as well as organizational measures.

The effective form of the implementation of the task, recognized in economically developed countries, is the creation and development of agro clusters.

To identify sectoral competitive advantages in the region, it is necessary to calculate the clustering potential, which reflects the competitive advantages of industries, enterprises and infrastructure organizations located in the region, the possibility of combining these advantages and using them to increase its competitiveness. [3]

Assessment of the clustering potential of the region

$$ПК_K = K_{произв} * K_{спец} * K_{перераб} * K_{душ.произв.}$$

$ПК_K$ - clusterization coefficient

$K_{произв} = \frac{ОПП_{региона}}{ОПП_{республики}}$ - the production coefficient is calculated as the ratio of the volume of production in the region to the volume of production in the republic in average;

$K_{спец} = \frac{ОПП_{продукции.региона}}{ОПП_{вал.продук.респуб.}}$ - coefficient of regional specialization is calculated as the ratio of the region's share in the total production of this type of product to the share of the same region in the total volume of gross agricultural output in the republic;

$K_{перераб} = \frac{МПП_{региона}}{МПП_{сред.порегионам}}$ - the coefficient of development of the processing industry is calculated as the ratio of the available capacities for processing products in the region to the available processing capacities on average by region;

$K_{душ.произв.} = \frac{УВ_{отрас.региона}}{УВ_{насел.рег.в.насел.страны}}$ - the coefficient of per capita production is calculated by the ratio of the share of the regional industry in the corresponding structure of the country's industry to the specific gravity of the region's population in the country's population.

The coefficient of potential clustering regions of Uzbekistan for the production of certain types of agricultural products (2018)

TABLE 1

	Vegetables	Fruits and berries	Meat	Milk
Republic of Karakalpakstan	0,010	0,004	0,145	0,041
Areas:				
Andijan	1,794	4,114	0,101	3,368

Bukhara	0,303	0,722	0,851	0,220
Jizzak	0,110	0,086	1,020	0,424
Kashkadarya	0,179	0,122	8,094	1,587
Navoi	0,080	0,180	1,877	0,320
Namangan	1,945	2,124	0,305	2,179
Samarkand	29,629	19,081	1,781	1,854
Surkhandarya	0,129	0,061	0,542	0,215
Sirdaryo	0,030	0,005	0,108	0,079
Tashkent	2,710	0,416	1,914	0,459
Fergana	0,298	1,224	0,153	1,429
Khorezm	0,375	0,485	0,578	0,889

4. DISCUSSION AND CONCLUSION

From this point of view, the modern strategy and tactics of forming the economic potential of the agricultural sector requires rethinking the essence of the integration process and systematizing the directions of its development using the cluster approach. However, in our country, the features of clustering in food production and its use to ensure the improvement of the competitiveness of agricultural products are little studied.

According to the results of calculations, the Samarkand, Tashkent regions and all areas of the Fergana Valley (Andijan, Namangan, Fergana) have the largest clustering potential in the fruit and vegetable complex. The main activity of the clusters will be the production, processing and sale of fruits and vegetables. Processing of fruits and vegetables in these areas with their potential is a major direction in the formation of integration systems. Under the existing conditions in the regions, it is possible to produce many types of fruits and vegetables: fruit puree, tomato paste, jam, canned fruits and vegetables, juices and other types of fruits and vegetables. [3] Livestock agrocluster is most advisable to create in the Kashkadarya, Navoi, Jizzakh and Tashkent regions, with the potential to create agroclusters of beef cattle. In the Fergana Valley there are all possibilities for the successful functioning of the agrocluster of dairy cattle breeding and the production of dairy products. We have developed a clustering plan for agriculture in the Jizzakh region (table 2).

Strategy clusterization of agriculture and processing industry of the Jizzakh region

TABLE 2

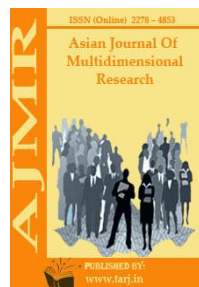
Steps	Strategy	Expected results
1-step 2017-2019	Infrastructure development:	Reduced yield loss after harvest
2-этап 2019-2021	· Formation of a system for the purchase of raw materials;	Agrocomplex diversification: · Increase in production at the request of consumers (semi-finished products, frozen, etc.); · An increase in product processing; · Creation of new jobs in the region.;
3-step 2021-2030	· An increase in the number of warehouses equipped with	Optimization of the agricultural sector: · An increase in the value added of

	modern technology	members of the agro cluster
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The coefficient of clustering potential of the Jizzakh region shows that an increase in the number of clusters in the region ensures the lowest amount of water consumption.

REFERENCES:

1. Presidential Decree number PF-5388 "On additional measures for the accelerated development of horticulture in the Republic of Uzbekistan" dated 03.29.2018.
2. Electronic source: <https://www.hokimiyat-dzhizakskoj-oblasti>
3. Ch.Murodov. "Prospects for the development of agro clusters in Uzbekistan" International Conference "On the most important reserves for the implementation of the food program in Uzbekistan", Tashkent-2014
4. What is agro clusters. Information portal Agro Perspective.
<http://www.agroperspectiva.com/ru/>



OPTIMIZATION OF THE TOP ORDER OF THE INDIAN TEST CRICKET TEAM

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ABSTRACT

By means of this paper we have tried to establish the importance of batting order with the help of Operations Research Methodology to help decide which player should play on which place to maximise efficiency by trying out all possible combinations. The quantitative analysis is done using Assignment Theory and Simplex Method for top six batting positions. This paper explores in detail about the effect of batting line-ups and its effects on the game as well as its performance on bowlers. It also understands the Indian cricket team requirements in detail.

KEYWORDS: Batting order, averages, Assignment Problems, Indian Cricket, Test Matches

INTRODUCTION

In India, cricket is nothing short of a religion. With the Rupert Murdoch's \$2.55 billion purchase of media rights, Indian Premier League (IPL) is now being compared to NBA in US and Premier League in UK (Bhatia, 2017). Despite the reports of a decline in overall viewership, sponsors are pouring in and cricketers are getting richer. Uniting people across the country, irrespective of their caste, class or creed, Cricket is that thread that brings the nation together. Of course, as we all know, 'Rome was not built in a day' and neither did cricket reach where it is in a blink of an eye. It was a rollercoaster of ups and downs, going something like this.

Cricket progressed from a Children's game to an adults' game somewhere during the 16th and 17th century in England. After which, they started colonizing over the world (BBCWorld Service, 2018). After they colonized India, they brought with them their culture, their habits, and along with all the other obvious things, their games as well.

Within no time cricket has become the most successful game in India. Reportedly, the first match in India was played in 1721 when a group of sailors gathered to play in Western India (BBCWorld Service, 2018). Cricket has been followed like a religion globally. It has over one billion fans globally, out of which 90% belongs to Indian sub-continent (PTI, 2018).

The popularity of IPL is clearly hampering the quality of other forms of cricket. Coming to where we are now, in 2014, when Dhoni decided to retire from Test Cricket, Kohli proved to be the ideal candidate to lead the team forward (Bhaduri, 2015). After leading the team to victory over Sri Lanka and South Africa, Kohli was hungry for more. The team has now been focusing on getting back to their top spot. (India Today, 2016)

The recent five-match test series between India and England, in the first match in Edgbaston, the Indian pacers started off well, and bowled out the English team for 287 runs. Notwithstanding, the Indian batsmen failed to cope with the conditions in England. Except Virat Kohli, all of them were out cheaply, and if it wasn't for his exceptional century, the team would have never reached even close to the English total. The Indian bowlers did put up an extraordinary performance by bowling the team out for just 180 runs in their second innings. However, with just 194 runs required, India seemed to be able to win the match, and take a 1-0 lead in the series. This however didn't happen and we faltered badly. The first test match showed the susceptibility of the Indian batsmen against swing bowling. (Sengupta, 2018)

The similar trend continued throughout the series and we lost it 4-1. We believe that operations research can help Kohli's team to avoid the same in the future.

OVERVIEW

After association football, international cricket is the world's most viewed sport. Popular mainly in commonwealth nations. (Britain, Australia, India and Pakistan), the industry has over the years evolved into a billion-dollar sporting industry regularly selling out stadiums. One of the biggest crowd attractions

have been the sports batsmen. Throughout this part of the paper we are going to have a look at indicators used to evaluate them and investigate the reasons behind the performances we actually see.

CALCULATION OF THE BATTING AVERAGE

The statistics accumulated for a test batsman is calculated in the basis of the number of matches a batsman plays, the number of innings he takes to the crease and the number of innings a batsman goes unbeaten (without giving his or her wicket away), this includes the innings they do not bat. The number of runs scored is divided by the number of innings in which the batsman was declared out. Some other parameters are highest score in a single innings, the total number of delivery faced in an innings, the number of centuries scored and the number of half-centuries scored (Runs between 50 and 99).

Batting averages are usually expressed to the second decimal place and are the most common indicator to gauge performance. A remarkably low average indicates that the player might be a tail ender and bat lower down the order. Mid-level averages usually indicate either the player being a bowling all-rounder primarily picked for his bowling ability or a batting all-rounder picked for his batting ability. Higher averages are attributed to higher order batsmen who specialize in batting only. Strike rates are indicative of the number of runs a batsman makes every 100 deliveries faced. The strike rate is usually higher for ODIs than Test matches because of how the formats work.

Records against styles are derived from the simple batting average. Calculated specific to a batsman's performance against a specific style of bowling or in different conditions. Provides further flexibility to captains to decide a batting line up tailor made for opposition. Every cricketing nation uses these basic parameters to decide an optimal batting line up for specific opposition based on the calibre of player faced, and batting conditions. Another determinant that is often overlooked is weather conditions. Overcast conditions and windy weather can influence a captain's decision to send a particular player out who can handle such conditions.

SIGNIFICANCE/OBJECTIVES

The objective of this research is to explore how Operation Research can help in forming the optimal batting line up order in a cricket team. This research will try to show a proper Operation Research methodology can help teams in deciding which player should play in which place efficiently without trying out all possible combination which would be impossible practically. A proper research can help any team to increase their probability of winning the game by using an optimal batting order. The need is particularly there today as even when we have the best fast bowling lineup in the history of Indian cricket, and we boast of some of the best batsmen in the world in the form of Virat, Rahane who have probably the best batting techniques in the world, we are being unable to win abroad. This shows mismanagement on the part of the coaching staff, particularly considering the importance of the batting order.

IMPORTANCE OF BATTING ORDER

It is important to have a good batting order as different players have different batting technique and they perform differently on stress. The opening batsmen or "openers" are the batsmen who bat first in the innings (no. 1 and 2). This position is important as the openers need to get the innings off to a good start. During the beginning of the innings the ball is new which leads to more swing and more bounce in the ball hence the batsmen are needed to require more experience and skill in such situation.

Then comes the top order which are usually the positions 3, 4 and 5. These usually include the best and most proficient players in team. They are required to score the most runs in game as they are likely to face the old ball hence making it easier to score runs. The players are usually more versatile as they may have to change their batting techniques (Attacking or Defensive) based upon how the match is progressing.

Positions 6 and 7 are the middle order bats they are usually the all-rounder or the wicket keeper of the team. They can be better batsmen than the top order but they come lower as they may get tired from bowling or wicket keeping so to provide rest they usually come down in order. They may be required to play like openers and as the match continues there may be a chance of a new ball coming in due to different factors. They are usually required to play more aggressively to score runs fast and declare the innings fast. But they also have to keep in mind about protecting their wickets as if they get out the lower positions start to come in which includes the bowlers of the team who don't usually score much run for the team.

METHODOLOGY

The technique employed in this paper to arrive at the optimal batting order for the Indian Test cricket team is Assignment Problem (AP). "The best person for the job" is an apt description of the assignment model. In general, the situation can be illustrated by the assignment of workers with varying degrees of skill to jobs. A job that happens to match a worker's skill costs less than one in which the worker is not as skilful. The objective of a general AP model is to determine the minimum-cost assignment of workers to jobs. Analogous to this, in our case, the workers happen to be batsmen in the Indian Test Cricket Team; the jobs are the positions in the batting order from 1 to 6. The batsmen's batting averages in matches played at home and away (and their aggregate) are equivalent to the cost of completing a job, except that our objective is to maximise the batting average (as opposed to minimising the costs involved in the general AP model).

The assignment model is actually a unique case of the transportation model in which the workers represent the sources, and the jobs represent the destinations. The supply amount at each source exactly equals 1 and the demand at each destination is also exactly 1. Effectively, the assignment model can be solved directly as a regular transportation model. Nonetheless, the fact that all the supply and demand amounts equal 1 has led to the development of a simple solution algorithm called the Hungarian Method. Although the new solution method appears totally unconnected with the transportation model, the algorithm is actually rooted in the Simplex method.

An AP can either be solved manually using the Hungarian Method or by using the built-in 'Solver' feature in MS Excel. We have employed the second method to arrive at the optimal assignment of batting positions. A brief summary of the procedure followed is as follows:

- Collected the historical data on batting averages (home, away and their aggregate) of the players in question. This data is arranged in a tabular format as depicted below.

Home								Away							
	Vijay	Dhawan	Kohli	Rahane	Pujara	Rahul	Saha		Vijay	Dhawan	Kohli	Rahane	Pujara	Rahul	Saha
1	40	14	0	0	0	58	0	1	46	58	0	0	0	42	0
2	60	47	0	0	81	19	0	2	34	41	0	0	145	54	0
3	0	0	25	10	60	0	0	3	0	0	4	36	38	1	0
4	0	0	71	84	39	0	0	4	0	0	55	113	0	0	0
5	0	0	68	29	0	0	0	5	0	0	21	53	0	0	0
6	29	0	0	83	0	0	63	6	0	0	0	48	21	0	27
7	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0

- Upon execution of the Solver command, the optimised solution to the AP is readily available. The cells where the binary decision variables equal 1 are indicative of the optimal batting positions of the batsmen if maximisation of their batting averages is the only consideration.

	Vijay	Dhawan	Kohli	Rahane	Pujara	Rahul	Saha	Task
1	0	0	0	0	0	1	0	1
2	1	0	0	0	0	0	0	1
3	0	0	0	0	1	0	0	1
4	0	0	0	1	0	0	0	1
5	0	0	1	0	0	0	0	1
6	0	0	0	0	0	0	1	1
None	0	1	0	0	0	0	0	1
Player	1	1	1	1	1	1	1	

ANALYSIS

As talked about earlier the aim of this research paper is to maximize the average runs scored in a match, as ultimately the team that scores the most number of runs wins. Using the average for seven batsmen namely, Murali Vijay, Shikhar Dhawan, Virat Kohli, Lokesh Rahul, Cheteshwar Pujara, Ajinkya Rahane and Wriddhiman Saha to allocate the top six spots in the Indian Test cricket side to all but one of these talented players, we have used the Assignment Problem method to come up with a line-up that maximizes the average and hence the probability to win.

HOME

To analyse batting line ups based on home conditions, we must be familiar with cricketing conditions prevalent in the Indian sub-continent. Starting with the weather, the Indian subcontinent has ideal weather conditions for the perfect batting innings. The sun is usually out and it's not really windy so there is no additional movement of the ball. These are ideal batting conditions because the batsmen can sight the ball well and adjust themselves to line and length hence the batting averages are generally higher. This is crucial because the bowler adds inswing and outswing to bother a batsman and make his life uncomfortable. In England for example bowlers need not hold a perfect seam position as the ball swings in the air lowering strike rates considerably.

The second facet to analyzing your batting line up is to look at pitch conditions. This is actually a reactionary decision taken on the basis of the opposition bowling attack subject to pitch conditions. For instance, an Indian batting line up in home conditions will be decided on the basis of the availability of quality spinners. Indian pitches are dusty and full of cracks and irregularities for spinners to exploit and take quick wickets. Traditionally visiting batsmen haven't been great players of spin, due to traditionally different conditions so the batting average for a visiting team would be below par.

Based on the averages of each of these batsmen in home conditions, the following line-up is the most suitable for the current Indian Test side while playing in India:

1. Lokesh Rahul (58)
2. Murali Vijay (60)
3. Cheteshwar Pujara (60)
4. Ajinkya Rahane (84)
5. Virat Kohli (68)
6. Wriddhiman Saha (63)

Shikhar Dhawan will not be playing the match.

Using this line-up, our average can be 393.34 which is very high when we consider that the average test score in the Indian Subcontinent range between 250 and 330.

The line-up here clearly shows that the management should seriously consider sending KL Rahul to play the first ball along with Murali Vijay. This is probably because in Indian conditions, even the new ball does not seam a lot. Also spinners are introduced, to take advantage of the skidding new ball requiring batsmen who can control the innings and hold their wicket to be present.

Cheteshwar Pujara represents the calm figure that the Indian team needs at number three. He is the perfect choice as he is a versatile player who can adjust his game in accordance with the needs of the team, playing both an aggressive and defensive innings when needed.

We also find that Ajinkya Rahane should bat ahead of Virat Kohli, as he is a player who is more confident batting with the top order batsmen, because of his game style of rotating the strike and relying lesser on boundaries leading to improved averages and better performances. Virat however does not face such issues as he can bat with a top order and a lower order batsman alike with the same class. It also make sense to send Virat a bit lower down the order because even though he might face lesser balls than a top order batsman he can control the innings really well and adapt his game according to the needs of the team. Virat at number 5 also acts as a confident booster to the other batsmen on the top.

Wriddhiman Saha is the preferred choice at number 6. His wicket-keeping distinguishes him from his peers and he has been performing consistently as a batsman too.

AWAY

Since away games are played in too many places like the Caribbean, Australia, Africa and even parts of Asia, it is not possible to provide a general analysis for the away games conditions; however some analysis can be made. The weather conditions in New Zealand are mostly overcast and windy. This aids the fast bowlers in generating swing, due to the help from the weather condition; as a result we see lower averages and lower strike rates in these conditions. England mostly has weather on the cooler side, with the looming possibilities of rain. These conditions also help the seamers in generating pace and swing. We can generalise the weather conditions in Australia, the Caribbean and Africa as something very close to our weather conditions back, thus leading to scenarios discussed earlier.

Coming to the pitch conditions which are to some extent a function of the weather conditions, soil conditions, opposition's style of play, home team's preferred style of play and the curator's expertise. Generally overseas we see that conditions favour fast bowlers, by generating swing and bounce, even with the recent trend of moving towards batting friendly pitches, to enable the batsmen to score more runs and hence make it more entertaining for the audiences. Traditionally, Indian batsmen cope well with conditions in the Caribbean because of the lack of calibre bowlers in recent times and proximity to home conditions. Pitch and weather conditions in England are uncomfortable for Indian batsmen to deal with hence the lower batting average. Though the weather conditions in the likes of South Africa and Australia may be similar to home conditions, the extra bounce and pace off the pitch make batting slightly uncomfortable. This combined with the quality of the oppositions bowling attack makes picking the right line up that much harder.

Based on averages of each of the batsmen having been affected by aforementioned conditions we have arrived at the following optimal batting line up for away games

- 1) Dhawan (58)
- 2) Pujara (145)
- 3) KL Rahul (1)
- 4) Ajinkya Rahane (113)
- 5) Virat Kohli (21)
- 6) Wriddhiman Saha (27)

Murali Vijay will not be considered for away series as these maximise the runs in a single innings. This is especially crucial because the first batting innings sets the tone for the whole match.

The openers here should be Pujara and Shikhar Dhawan because their contrasting styles of play also happen to perfectly complement each other. Pujara has a solid defense and will keep the score ticking without giving away his wicket cheaply. This allows more expressive players like Dhawan to be more aggressive and score boundaries piling up the crucial score before the first wicket falls.

In at three we have KL Rahul. The numbers are slightly deceptive because he hasn't played many innings in at 3. However the model clearly indicates that the innings total will receive a massive boost should KL Rahul play there.

At 4 we have Ajinkya Rahane. The model shows that he is as very solid player with a remarkably high average in at 4 in foreign conditions. He is arguably India's best test batsman abroad based on his skill set and can handle adverse pitch and weather conditions the best out of the top order batsmen.

In at 5 the model sends in Virat Kohli. Although he would average higher in at 4 Ajinkya Rahane's average drops drastically and again the order is set to ensure the batting innings total is maximised. Virat Kohli's talent ensures he manages to perform well enough anywhere in the batting line up and further boost the maximised total.

In at 6 the model sends in the most reliable keeper-batsman available since MS Dhoni's retirement. Wriddhiman Saha is a solid batsman capable of anchoring an innings in trying condition. Of the keeper batsman options available he's the best batsman.

CONCLUSIONS

Thus we see that by making changes in the batting line-up and making players play in the positions they prefer, will help in maximizing their performances and increase the chances of winning. In the last test match between India and England, held from 7th September, 2018 to 11th September 2018, India lost by 118 runs. The players in top six were from our sample set (Saha was injured), and if we add the averages in our optimal lineup and compare with the lineup that played we find that we can increase the runs scored by 151 in each innings, clearly indicating that we could have won the match easily.

LIMITATIONS

Since there is only one indicator that is relevant to our project it is a major limitation. Some of the problems with using average as a metric:

- The computation of average itself poses some problems as we see lower order batsmen like MS Dhoni having higher averages due to the fact that they have been dismissed a fewer number of times. This problem is however, to some extent is mitigated in Test cricket.
- Due to the concept of night watchman, being particularly popular in Test cricket, the batting orders are affected, thus the data used for the computation of the batting line-up, might be skewed due to the changes that take place when a night watchman bats.
- Non quantitative factors like left hand- right hand batting partners, synergy between players and the problem of a player getting out early or late, affect the performance of a player, and hence the average of a player.
- A player might have scored a lot of runs at a particular batting position he has not played very often on. This might just be an outlier or the position might really suit the batsman. Thus this data cannot be ignored, and has been considered.

BIBLIOGRAPHY

BBCWorld Service. (2018). *Story of Cricket*. Retrieved from BBC: http://www.bbc.co.uk/worldservice/specials/1157_cricket_history/page6.shtml

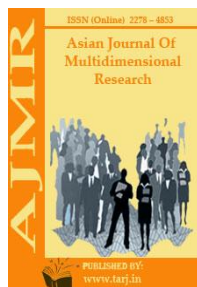
Bhaduri, P. (2015). *Indian cricket in 2015: From Dhoni to Kohli, passing of the ..* . Retrieved from The Times of India: Indian cricket in 2015: From Dhoni to Kohli, passing of the ..

Bhatia, G. (2017, September). *The richest sport in India just keeps getting richer*. Retrieved from CNBC: <https://www.cnbc.com/2017/09/27/indian-premier-league-cricket-a-rich-sport-is-getting-a-lot-richer.html>

India Today. (2016). *Virat Kohli's message after taking over from MS Dhoni was clear: Gun for wins, says Rohit Sharma*. Retrieved from India Today: <https://www.indiatoday.in/sports/cricket/story/rohit-sharma-west-indies-vs-india-virat-kohli-captaincy-335495-2016-08-16>

PTI. (2018, June 27). *India constitutes 90 percent of one billion cricket fans: ICC research* . Retrieved from Economic Times: <https://economictimes.indiatimes.com/news/sports/india-constitutes-90-percent-of-one-billion-cricket-fans-icc-research/articleshow/64760726.cms>

Sengupta, S. (2018). *India vs England Test series: Analysis of India's performance*. Retrieved from Sportskeeda: <https://www.sportskeeda.com/cricket/india-vs-england-4th-test-match-can-india-win-the-4th-test-match-and-level-the-series-2-2>



THE IMPORTANCE OF THE REGION'S SOCIO-ECONOMIC POTENTIAL OF THE TOURISM MARKET

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ABSTRACT

The article outlines the importance of the tourism market and its theoretical foundations in raising the socio-economic potential of the regions. On this case, tourism has seen as one of the developing sector of the economics while organizing better life style and cool atmosphere as whole. Therefore, country has been accentuating on hospitality sector to be one of the forthcoming destination at all. One of these sectors should be regional tourism. There are all opportunities to sharply develop the tourism industry, which is rich in natural resources in the region. One of the most important tasks of tourism in the region is to increase foreign exchange earnings. Currency earnings are provided through the provision of tourist services and currency circulation. The quality and types of services provided by tourists, hotels, holiday homes, tourist centers and other facilities determine the extent to which the tourism market has developed in the region. Therefore, the most important process is the use of information technology in order to book a tourist ticket, book a hotel reservation, purchase tickets to airplanes and trains. Along with identifying the impact of tourism on the region's economy on the basis of general concepts, it is important for theory and practice to develop its methods and methods of quantitative identification.

KEYWORDS: Local Content, Tourism Development In The Region, Insurance Policies, National Values, Infrastructure, Information Services.

INTRODUCTION

The strategy of action in the other priority direction of development of the Republic of Uzbekistan for 2017-2021 is focused on further modernization and liberalization of the economy. The solution of two most important and urgent issues in this priority area is the main factor and motivation for the country's sustainable high-profile development.

First, the complex and balanced socio-economic development of regions, districts and cities. Secondly, the rapid development of the tourism industry is seen as the main growth point of the regions (Campos, Jiménez, & Suárez-Alemán, 2013).

President of the Republic of Uzbekistan Sh. The following should be noted in the decree of Mirziyoev: "The provision of tourism to the strategic sector of the economy should become a leading force for the comprehensive development of all areas and interconnections in this sector"

In the 21st century, as an important factor of economic growth, it requires the effective use of existing capacities and capacities in the regions of the country. A good example of this is the results of a series of scientific researches carried out by foreign and domestic scientists and priorities outlined in official documents.

Uzbekistan is a country with potential for an expanded tourism industry. Many of its Central Asian cities were main points of trade on the Silk Road, linking Eastern and Western civilizations. Today the museums of Uzbekistan store over two million artifacts, evidence of the unique historical, cultural and spiritual life of the Central Asian peoples that have lived in the region. Uzbekistan attracts tourists with its historical, archeological, architectural and natural treasures.

Cultural Tourism is the only major product Uzbekistan is providing to visitors since its independence. Samarkand, Bukhara and Khiva are hot spots of tourism.

Tourist activities in Uzbekistan range from outdoor activities, such as rock-climbing, to exploration of its rich archeological and religious history. Travel & Tourism generated 98,500 jobs directly in 2017 (0.8% of total employment) and this is forecast to remain the same in 2018 at 98,500 (0.8% of total employment). This includes employment by hotels, travel agents, airlines and other passenger transportation services (excluding commuter services). It also includes, for example, the activities of the restaurant and leisure industries directly supported by tourists. The total contribution of Travel & Tourism to employment (including wider effects from investment, the supply chain and induced income impacts, see page 2) was 305,000 jobs in 2017 (2.4% of total employment). This is forecast to fall by 1.4% in 2018 to 300,500 jobs (2. of total employment).

By 2028, Travel & Tourism is forecast to support 337,000 jobs (2.4% of total employment), an increase of 1.1% pa over the period (Aldebert, Dang, & Longhi, 2011; Baum & Thompson, 2007; tourism & 2006, n.d.).

Visitor exports are a key component of the direct contribution of Travel & Tourism. In 2017, Uzbekistan generated UZS753.2bn in visitor exports. In 2018, this is expected to grow by 4.5%, and the country is expected to attract 2,066,000 international tourist arrivals.

By 2028, international tourist arrivals are forecast to total 4,238,000, generating expenditure of UZ\$1, 532.8bn, an increase of 6.9% pa.

Travel & Tourism is expected to have attracted capital investment of UZ\$1,168.8bn in 2017. This is expected to rise by 0.9% in 2018 and rise by 4.6% pa over the next ten years to UZ\$1, 843.8bn in 2028.

Travel & Tourism's share of total national investment will fall from 2.0% in 2018 to 1.8% in 2028.

RESEARCH METHODOLOGY:

In the last ten years in Uzbekistan a great attention is paid to the comprehensive development of regions, further intensification of investment projects on the basis of local natural and economic resources. Particularly, in 2016, measures will be taken to ensure a comprehensive and balanced development of the territories, to ensure that the natural resources of the regions, production and employment potential, optimal placement of production capacities and consistent improvement of living standards and quality of life of the population. Another official document is about improving the structure of territorial public administration bodies, whose primary goal is to ensure sustainable socio-economic development of the regions (Niyazbayeva & Yessengeldina, 2016; Put-van den Beemt & Smith, 2016; Turtureanu et al., 2012).

In general, in terms of both theory and practice, and enhance the role of ensuring economic development in the region will be provided.

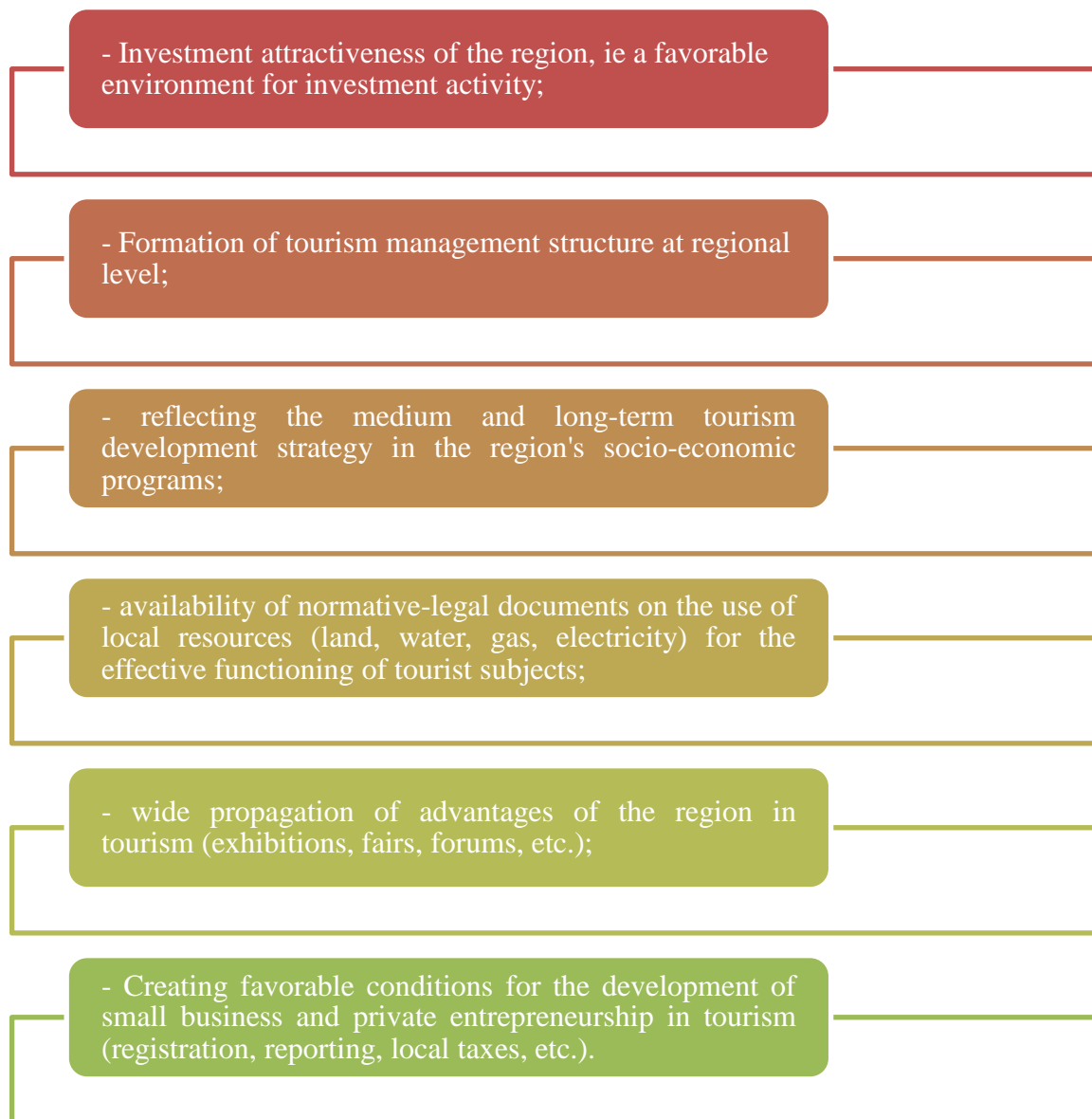
RESULTS AND OUTPUTS:

To achieve high rates of economic growth in the regions, competitive industries and enterprises have to take a leading position in locomotive. One of these sectors should be regional tourism. There are all opportunities to sharply develop the tourism industry, which is rich in natural resources in the region. Tourism serves as the basis for growth for a specific region.

Relationships between the region and the tourism are closely interconnected with the combination of the main objectives and priorities. The main trends in the development of the region and tourism are very similar to each other, but they also have direct interests. The main directions are primarily the development of rational use of regional resources (natural, economic, moral values, labor, water and land, local content), raising competitiveness, creating new jobs and training qualified personnel, improving the quality of life of the population possible. It should be noted that the interconnectivity is double. First, the impact of the socio-economic situation in the region on tourism; and second, the impact of tourism on the sustainable development of the region.

According to the author, the influence of socio-economic potential of the region on tourism development will be as follows (Graph 1.)

Graph 1. INFLUENCE OF SOCIO-ECONOMIC POTENTIAL OF THE REGION ON TOURISM DEVELOPMENT



From the point of view of scientific theory and methodology, the influence of tourism on the socio-economic development of the regions has almost not been studied. In fact, the development of tourism brings virtually all economic entities. Tourists, on the other hand, get the goods and services that they want, and tourist companies and entrepreneurs have high salaries and benefits, while the regions fill their budgets through tax revenues(Kim, Yeji & Cho, Yoon C., 2011; Paramonov, 2006; Tao & Wall, 2009a).

Demand for products and services as a result of tourist activity requires organization of production and increase of capacity of existing ones. That is why tourism is likely to affect the real sector development in the region. The main factor for the rapid development of consumer goods production is the region's supply of the consumer goods market, as well as the formation of external demand (Graph 2).

GRAPH 2. STATISTIC DATABASE OF WORLD TRADE AND TOURISM COUNCIL

SUMMARY TABLES: ESTIMATES & FORECASTS

UZBEKISTAN	2017 USDmn ¹	2017 % of total	2018 Growth ²	USDmn ¹	2028 % of total	Growth ³
Direct contribution to GDP	275.1	0.9	4.5	514.9	0.9	6.0
Total contribution to GDP	830.7	2.8	3.1	1,537.5	2.7	6.0
Direct contribution to employment ⁴	99	0.8	-0.1	111	0.8	1.2
Total contribution to employment ⁴	305	2.4	-1.4	337	2.4	1.1
Visitor exports	93.3	1.5	4.5	189.9	1.7	6.9
Domestic spending	415.5	1.4	4.4	774.5	1.4	6.0
Leisure spending	426.8	0.8	5.5	817.1	0.8	6.1
Business spending	82.1	0.1	-1.0	147.3	0.1	6.1
Capital investment	144.8	2.1	0.9	228.5	1.8	4.6

¹2017 constant prices & exchange rates; ²2018 real growth adjusted for inflation (%); ³2018-2028 annualised real growth adjusted for inflation (%); ⁴000 jobs

The development of tourism in the regions will increase the demand for transport and communication services. This creates the basis for the national budget, the further development of communication and production facilities.

One of the most important tasks of tourism in the region is to increase foreign exchange earnings. Currency earnings are provided through the provision of tourist services and currency circulation. The tourists' contributions to hotel, restaurant and transportation services have the greatest impact on the development of the region's economy.

It is desirable to analyze the effectiveness of tourism on the economy of the regions by separate sectors (directions). The economic impact of direct tourism is determined by the types and types of income earned from them. In particular, the incomes of economic entities, the population, local authorities directly from tourists. The benefits of tourist companies can be demonstrated by the implementation of investment projects. In addition, the direct impact of tourism on the state and local budgets is determined by various payments.

Companies and firms in the tourism industry are pushing for a number of industries in the region and create conditions for their development. These include transportation and communication,

public catering and trade, banking and financial institutions, culture, sports and recreational facilities, and so on (Graph 3).

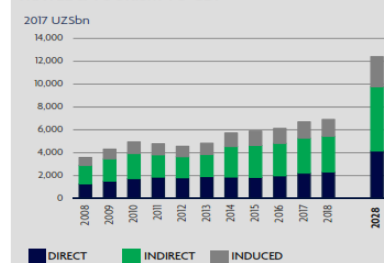
GRAPH 3. WORLD RANKING RATE OF THE REPUBLIC OF UZBEKISTAN

WORLD RANKING (OUT OF 185 COUNTRIES):

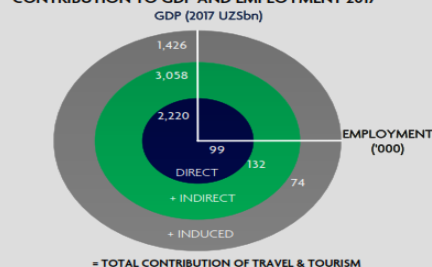
Relative importance of Travel & Tourism's total contribution to GDP

146 ABSOLUTE Size in 2017	182 RELATIVE SIZE Contribution to GDP in 2017	118 GROWTH 2018 forecast	13 LONG-TERM GROWTH Forecast 2018-2028
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TOTAL CONTRIBUTION OF TRAVEL & TOURISM TO GDP



BREAKDOWN OF TRAVEL & TOURISM'S TOTAL CONTRIBUTION TO GDP AND EMPLOYMENT 2017



Transportation services rendered by tourists at their destination, organization of different excursions, departure to their homes will be the impetus for the development, reconstruction and reconstruction of transport infrastructure in the region. In turn, the expenses of tourists for transport services constitute the main part of tourist travel.

Promoting the quality of air services, railways and roads in international and regional standards will help to ensure the quality of tourism services. In addition, it is important that the infrastructure of transport infrastructure (airport, bus station and railroad stations, transport centers) is essential, and will eventually lead to the formation of a single transport system in the region (Law, 2007; Tao & Wall, 2009b).

The quality and types of services provided by tourists, hotels, holiday homes, tourist centers and other facilities determine the extent to which the tourism market has developed in the region. Especially it is desirable to use historically preserved traditions such as national values, traditions and hospitality to be used for the reception and service of tourists. The tourism potential of the region is largely based on the condition of living places, their capacity (number of places), use rates. Based on the experience of the world and our country, it can be said that nowadays the infrastructure of the tourist placement has become the most important development point of the tourism system. This system is the basis of tourism revenues. It should be noted that the importance of private companies, organizations and households in the placement of tourists is increasing.

Expenses of tourists for food and water carriers, folk crafts and other products are among the direct incomes for the region.

The quality of tourism services in the regions is largely related to the activities of banks, financial and insurance companies. Nowadays it is known from the world experience that tourists use more than twenty insurance services. The level of insurance services development indicates the level of security of tourists. In the organization of international tourism almost all tourists buy insurance policies to protect their health.

Tourists spend their time to use additional services and purchase necessary products. Therefore, the development of tourism in the regions directly affects the expansion of banking activity and the increase of the services provided. At present, the image of the region (reputation, prestige), along with the presence of tourist facilities, is determined by the convenience and quality of banking and financial services. Therefore, the development of tourism will provide opportunities for the immediate establishment of market infrastructure facilities in the region and the quality of their satisfaction, based on the optimal location within the regions.

One of the most important tourism-related services is the use of the broad range of information and communication technologies. These services are associated with the creation of favorable conditions for tourists and their safety. It is possible to get a full range of tourist sites, population and traditions, hospitality level, development of production, social and market infrastructure and other specific information within the context of information services. Therefore, the most important process is the use of information technology in order to book a tourist ticket, book a hotel reservation, purchase tickets to airplanes and trains.

Further expansion of the range of information technologies will lead to the growth of their incomes, the development of this sector in the region, and the contribution to sustainable economic growth(Turtureanu et al., 2012; Willson, 2011).

The impact of tourism on the development of the region can largely be attributed to the growth of local budgets, the expansion of export potential, the coordination of the ecology, the employment problem, and the contribution to the development of social spheres. The regional budget is complemented by a variety of travel agencies and tour companies and firms serving tourists. In particular, tax and customs payments, some fees.

Tourists from foreign countries are directly involved in the region, which means that foreign exchange earnings, as a result of economic relations between producers and consumers, can lead to exports. International tourism contributes to export potential of the region and opens opportunities for further expansion of export services in the future.

In the conditions of Uzbekistan, the tourism market plays an important role in addressing socio-economic issues in the regions, including employment. Tourism is one of the most demanding industries. As foreign countries experience, about 10 percent of the working population is engaged in tourism. Almost half of them work at the hotel. In the sphere of international tourism, one tourist is served on average every 7 tourists.

With regard to other sectors of the economy (industry, agriculture), the use of new technologies and information programs in tourism is dramatically reduced. However, the quality of tourism services depends largely on the number of service providers. Therefore, tourism is characterized

by high labor productivity over other industries. Investing activities in the area of tourism development in the region create great opportunities for creation of new jobs.

Along with identifying the impact of tourism on the region's economy on the basis of general concepts, it is important for theory and practice to develop its methods and methods of quantitative identification. The main issue is the scientific substantiation of concrete indicators and indicators of economic efficiency of tourism. Economic efficiency (indirectly and indirectly) can be determined primarily by means of gross tourism income, its share in gross regional product and other macroeconomic indicators (export, services, employment, etc.).

CONCLUSIONS:

There are a number of methodological problems in identifying these indicators, the need to improve the official statistics, the need for new computation methods, and the conduct of special social surveys.

In conclusion, it should be noted that the study of the impact of tourism on the economy of the region and the implementation of concrete scientific conclusions, complex and balanced development of the territories, effective use of the long-term and medium-term tourism potential, and most importantly, theoretical basis for improving the living standards and quality of the population. In the case of Uzbekistan, it is advisable to use the following:

- Necessity of a clear strategy of complex socio-economic development of regions of the country;
- gradual adaptation of regional policies to general trends such as decentralization, interregional integration and environmental protection, taking into account the national model of economic reform;
- In the development of regions (tourism), it is also desirable to focus on the implementation of the investment policy, taking into account inter-budgetary relations, taking into account the level of territorial socio-economic development;
- Development of infrastructure as a driving force for sustainable tourism development and sustainable development, including tourism

REFERENCES:

- Aldebert, B., Dang, R. J., & Longhi, C. (2011). Innovation in the tourism industry: The case of Tourism@. *Tourism Management*, 32(5), 1204–1213. <https://doi.org/10.1016/j.tourman.2010.08.010>
- Baum, T., & Thompson, K. (2007). Skills and labour markets in transition: A tourism skills inventory of Kyrgyzstan, Mongolia and Uzbekistan. *Asia Pacific Journal of Human Resources*, 45(2), 235–255. <https://doi.org/10.1177/1038411107073601>
- Campos, J., Jiménez, J. L., & Suárez-Alemán, A. (2013). Prices and brand diversity in touristic areas supermarkets. *Tourism Management*, 36, 435–440. <https://doi.org/10.1016/j.tourman.2012.09.016>

Kim, Yeji, K. S. of P. P. and M., & Cho, Yoon C., K. S. of P. P. and M. (2011). *Journal of business & economics research. Journal of Business & Economics Research (JBER)* (Vol. 5). Retrieved from <https://www.cluteinstitute.com/ojs/index.php/JBER/article/view/2552/2598>

Belorusov V.I. Regional strategy for socio-economical development: sovereign practice and sovereignty. M. regionalnaya economy: theory and practice. 2011, №2, p. 185

On Additional Measures to Improve the Activities of Local Governments in Ensuring Comprehensive Development of Territories. Resolution by the President of the Republic of Uzbekistan, February 18, 2016

On Strategies for Further Development of the Republic of Uzbekistan. Decree of the President of the Republic of Uzbekistan. Tashkent city, 7th of February, 2017.

Measures to ensure the rapid development of the tourism sector of the Republic of Uzbekistan. Decree of the President of the Republic of Uzbekistan. City of Tashkent. December 7, 2016

Gavrilov A. Razvitie metodologii resursnogo potentsiala na regionalnom urovne. M. 2012, p. 18.

Law, R. (2007). Internet and tourism in the Asia Pacific region. *Asia Pacific Journal of Tourism Research*. <https://doi.org/10.1080/10941660701243380>

Niyazbayeva, A., & Yessengeldina, A. (2016). Analysis of tourism cluster development: Kazakhstan experience. *Journal of Environmental Management and Tourism*, 7(3), 519–525. [https://doi.org/10.14505/jemt.v7.3\(15\).18](https://doi.org/10.14505/jemt.v7.3(15).18)

Jabbarov, n., & Ollanazarov, b. (2018). Investment attractiveness in tourism. *International Journal of Medicine, Nature and Life sciences*, 1(1), 52-55.

Siddikov, A. A. (2018). Agro tourism potential of Uzbekistan. *American Journal of Economics and Business Management*, 1(2), 36-42.

On improving the structure of territorial public administration bodies. Resolution of the President of the Republic of Uzbekistan, February 24, 2016

Paramonov, V. (2006). Regional Cooperation in Central Asia: A View from Uzbekistan (I). *Problems of Economic Transition*, 49(4), 6–86. <https://doi.org/10.2753/PET1061-1991490500>

Put-van den Beemt, W., & Smith, R. (2016). Smart tourism tools: linking technology to the touristic resources of a city. *Smart Tourism Congress Barcelona*, 1–12. Retrieved from https://www.cett.es/fitxers/campushtml/MiniWebs/122/papers/PUT_SMITH.pdf

Tao, T. C. H., & Wall, G. (2009a). Tourism as a sustainable livelihood strategy. *Tourism Management*, 30(1), 90–98. <https://doi.org/10.1016/j.tourman.2008.03.009>

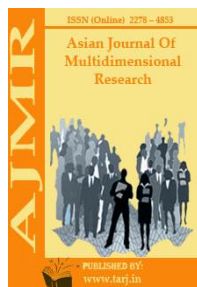
Tao, T. C. H., & Wall, G. (2009b). Tourism as a sustainable livelihood strategy. *Tourism Management*, 30(1), 90–98. <https://doi.org/10.1016/j.tourman.2008.03.009>

tourism, P. K.-I. and growth in, & 2006, undefined. (n.d.). Innovation and tourism policy. *Oecd-*

Ilibrary.Org. Retrieved from https://www.oecd-ilibrary.org/industry-and-services/innovation-and-growth-in-tourism/innovation-and-tourism-policy_9789264025028-3-en

Turtureanu, A. G., Tureac, C. E., Gheorghe, S., Pripoaie, R., Cretu, C. M., & Dragomir, G. (2012). The importance of the touristic brand in the sustainable tourism evolution. In *12th International Multidisciplinary Scientific GeoConference and EXPO - Modern Management of Mine Producing, Geology and Environmental Protection, SGEM 2012* (Vol. 4, pp. 1161–1168). <https://doi.org/10.5593/SGEM2012/S22.V4044>

Willson, G. (2011). Research themes for tourism. *E-Review of Tourism Research*. <https://doi.org/10.1080/1743873X.2011.601882>



GARO HILLS AUTONOMOUS DISTRICT COUNCIL: ISSUES AND PROBLEMS

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ABSTRACT

Meghalaya is one of the states in India where three tribes i.e the Garo, Jaintia and Khasi people inhabit. It became a state on January 21st 1972 and was also given its own District Councils to protect and preserve their culture, traditions and customs. The Garo Hills Autonomous District was inaugurated for the Garos so that they can preserve and protect their culture. As years passed by the District Council has gone through many changes and has ceased to become corrupt and inefficient machinery. The GHADC has many problems and issues which makes it very vulnerable to collapse any moment. The purpose for which it was created is in dilemma as it can't make strong decisions for the welfare of the Garo people. It has many flaws and therefore many changes has to be made in order to make it more efficient and people centric so that it can withstand the hurdles which it is facing. The only option for it is to totally revamp itself and restart to restore its old glory and set an example to the other District Councils that it has strong powers and functions as mentioned in the Sixth Schedule of the Indian Constitution.

KEYWORDS:*Garo, Tribe, District, Council, Hills, Constitution.*

INTRODUCTION

Meghalaya is one of the states in the North-Eastern part of India. The word 'Meghalaya' was coined by Shiba P Chatterjee in his book *Meghalaya: Garo Khasi and Jaintia* and has been derived from a Sanskrit word 'megham' meaning clouds and 'alayam' meaning abode. The state of Meghalaya became a fully fledged state in the midnight of January 20-21 in accordance with the provisions contained in the North-Eastern Areas (Reorganisation) Act, 1971.¹ It was inaugurated by the then Prime Minister of India Smt. Indira Gandhi, who came personally to inaugurate the new state in Shillong.² The state comprises of three major tribes which are the Garo, Jaintia and Khasi. All these tribes have their own Autonomous District Councils. The Constituent Assembly appointed the Bordoloi Sub-Committee in the year 1947 under the Chairmanship of Shri Gopinath Bordoloi to look after the grievances of the tribal's. The Sub-Committee recommended autonomy in the administration of the hill districts. This recommendation was subsequently enshrined in the Constitution of India in its Sixth Schedule. The Autonomous Council for the Garo Hills was introduced in the year 1952 along with the United Khasi Jaintia Autonomous District Council in accordance with the provisions laid down in the Sixth Schedule in the Constitution of India.

THE GAROS

The Garo tribe belong to the Tibeto- Burman family and according to the historical records documented by the British they have mentioned that the Garos immigrated from Tibet around 400 BC which was referred to as (Torua) in Garo dialect under the leadership of 'Jappa Jallimpa' by crossing the Brahmaputra river and settled tentatively in the river valley. From there they spread to other parts of the region by making small groups and went ahead in search of their Aman A'song (Motherland) and finally settled in the erstwhile un-inhabited Garo Hills. But according to the Garo Songsareks the Garos never came from Tibet, they have been settling in the present Garo Hills from times immemorial but because of famine they had gone to Tibet and from there they were chased away and they returned back to their original homeland. The Garos have no written records as all the events have been passed down orally. The Garos are also head hunters and collected heads as their trophies. There are no written records of the Garo history, the records are very scanty and this makes it hard to briefly explain the history. The Garo tribe is divided into twelve sub- tribes based on language which are A'we, A'beng, A'tong, Chisak, Chibok, Dual, Gara, Ganching, Matchi, Matabeng, Megam and Ruga. The dialects which these tribes speak are not heard of as there, are only few who are preserving their dialects. The common language is A'we, which has become the standard dialect. It is the dialect of the Garo's settling in the plain areas. This dialect is used for communicating with each other. These twelve sub-tribes comprises of the Garo family.³

DEMOGRAPHIC PROFILE OF THE GAROS:

The Garo tribes are scattered all over the North Eastern part of India. In the year 2011 it was estimated that the overall population of the Garos had risen to approximately 20 lakhs which includes all the Garos residing in India and as well as those residing in Bangladesh. The Garos residing in India especially in the state of Meghalaya is estimated to be approximately 10 lakhs. The majority of the Garo population inhabit the five districts of Garo Hills which includes the

North Garo Hills District, South Garo Hills District, East Garo Hills District, West Garo Hills District and South-West Garo Hills District which is a part of the Indian state Meghalaya. Other Garo settlements are found in the state of Assam, Nagaland, Tripura and West Bengal. There is also a large number of Garos who live in Bangladesh and their population is estimated to be 2,00,000 lakhs approximately.⁴

THE GARO HILLS DISTRICT

The district of Garo Hills occupies the South Western part of the state of Assam having an area of about 3152 square miles of which 2971.9 square miles are hilly area and the rest being the plain areas. An international border of about 150 miles separates the Garo Hills from the Mymensingh district of Bangladesh. The total population of the Garos residing in the Garo Hills is estimated to be approximately 10 lakhs. The Garo Hills altogether has five districts which are, North Garo Hills District, South Garo Hills District, East Garo Hills District, West Garo Hills District and South-West Garo Hills District.⁵

Prior to the British annexation of Garo hills, the Garos lived in various parts of the district and followed their own customs and traditions under their respective Chiefs called the Nokmas. They were independent of external control till the area was occupied by the British through a series of expeditions and made into a separate administrative unit in 1866 when Lieutenant W.J. Williamson (later Captain) was appointed as Assistant Commissioner to be in charge of it. He established his headquarters in Tura in 1867 and started the survey work of Garo Hills in the later part of 1870. By 1873 the turbulent Garo Chiefs were subjugated, and the defiant villages were brought under control and the entire district was annexed to the British Empire.⁶ Since then it was being administered as de-regularised area or excluded area till the enforcement of the Government of India Act, 1935 when the district was made a partially excluded area. The people were governed by a simple system of administration of Civil and Criminal justice based on the customary laws and traditions of the land till the achievement of independence of India.

FORMATION OF THE GARO HILLS DISTRICT COUNCIL

In the exercise of the powers conferred by Sub-paragraph (6) of paragraph 2 of the Sixth Schedule to the Constitution of India, the Governor of Assam published the Rules called the Assam Autonomous Districts (Constitution of District Councils) Rules, 1951, on 15th October, 1951 for the Constitution of the District Council for the Autonomous Districts of Assam and the Council was held in February, 1952. The Garo Hills Autonomous District Council was formally inaugurated on the 14th of April 1952 at Tura, which is the headquarters of the West Garo Hills, District by the then Chief Minister of Assam, Shri Bishnuram Medhi.⁷

POLITICS AT THE VILLAGE LEVEL

The Nokmaship and the Nokma is one of the earliest systems of political system which prevailed in Garo Hills. It is an important authority which functions at the village level and had existed even before the prior advent of the British. The term 'Nokma' denotes a 'wealthy' or a 'rich man' and etymologically it means the 'big house' or 'the owner of a big house' Therefore, though the Nokma which is the man is the owner theoretically, the actual owners are his wife and children and their clans. Being the head of the clan, the Nokma is only the acting custodian of the lands and property of his wife and her clan. All the decisions are taken by the Nokma who is the

leader in the village level. The Nokma or the headman is considered as the ultimate leader in the whole village. All the hill areas of Garo Hills are the A'king lands which belongs to the A' khing Nokma of a particular clan. The entire A' khing lands are managed by the Nokma who is the guardian and custodian of a particular clan or motherhood. The District Council does not have direct control over the A' khing lands. A' king lands belongs to a particular motherhood whose head is a female. The ultimate ownership lies with the motherhood which exercises its control through her husband. He being a mere custodian and guardian of the A' king lands cannot take any arbitrary decisions in matters of sale, mortgage, gift or transfer of lands. The decisions taken by the Nokma in the village is supreme and no other authority has the power to overturn it. The Nokma can be divided into six different kinds which include respected intellectuals, wealthy individuals, religious priests (kamal), head of clans and lastly the A'king Nokma.

The A'king Nokma is the most important of all the Nokmas because he is considered as the custodian of all the clan lands. He is the person who holds the title to the A'khing land of the village as the head of a clan. He becomes the A'khing Nokma by virtue of his marriage with the woman of the village. As the A'khing Nokma he has certain powers and functions and he is the supreme authority regarding decisions on all the lands which fall under his jurisdiction. He also has the responsibilities to entertain visitors, to preside at village functions and adjudicating disputes. During the colonial era the Nokma was given the sole responsibility to collect taxes and report crimes to the British administration. After independence, the District Council took over some of the judicial, custodial and fiscal powers of the Nokma. But even after all his powers have been stripped, he is still held in high esteem by villagers for his continuous social and religious roles.

THE LEGISLATIVE

The Garo Hills Autonomous District Council has 30 members both elected and nominated and this therefore forms the Legislative body. The Legislative body is responsible for enacting Rules and Regulations in accordance with the subjects which has been specified in the Sixth Schedule and is published in the Official Gazette of the State Government under Paragraph 11 of the Sixth Schedule of the Constitution of India for running the day to day administration. The Acts, Rules and Regulations which have been passed by the Garo Hills Autonomous District Council over the last six decades, the following are important to mention as it deals with the trends of Legislations which meets the needs and aspirations of the Garo people in the respective Districts.⁸ They are as follows:

1. The Garo Hills (Abolition of the Garo Hills District Fund Committee) Act, 1952.
2. The Garo Hills Cotton Trade Regulation, 1952.
3. The Garo Hills District (Revenue Assessment) Regulation, 1953.
4. Garo Hills District Fund Rules, 1952.
5. The Garo Hills Autonomous District (Administration of Justice) Rules, 1953.
6. Garo Hills Local Rate Regulation, 1953
7. Garo Hills Fisheries Act, 1953.
8. The Garo Hills Cart, Cycle and Boat (Taxation) Act, 1953.
9. The Garo Hills Autonomous District (Land and Revenue) Regulation, 1954.
10. The Garo Hills (Christian Marriage) Act, 1954.

11. The Garo Hills Autonomous (Social Customs and Practices) Act, 1954.
12. The Garo Hills District (Transfer of Land) Act, 1955.
13. The Garo Hills District Professions, Trades, Callings and Employments Taxation) Regulation, 1957.
14. The Garo Hills District (Trading by Non-Tribals) Regulation, 1957.
15. The Garo Hills District (Constitution of Village Councils) Act, 1958.
16. The Garo Hills District (Forest) Act, 1958.
17. The Garo Hills Autonomous District (Members Salaries and Allowances) Act, 1958
18. Garo Hills District (Awil Fees) Act, 1960.
19. The Contributory Provident (Council Services) Fund Rules, 1963.
20. The Garo Hills (Money Lending by Non-Tribals) Regulation, 1970.
21. The Garo Hills Autonomous District (Revenue Demand) Recovery Act, 1975.
22. The Garo Hills Cotton, Jute and Ginger Trade Regulation, 1982.

These Acts, Rules and Regulations have been amended from time to time and new amendments are introduced in the Council. The Bills are passed by the majority of the votes present and voting. These Bills are passed under the supervision of a Chairman and Deputy Chairman who conduct the proceedings of the House.

THE EXECUTIVE

The overall administration of the District Council is vested in the Executive Committee headed by the Chief Executive Member. The Executive Committee consists of the Chief Executive Member, who is elected by the members of the District Council from among themselves, two Executive Members and two Deputy Executive Members who are appointed by the Governor on the advice of the Chief Executive Member. There is a Secretary to the Executive Committee who is appointed by the Executive Committee and responsible for the supervision of the administrative works of the District Council. The Garo Hills Autonomous District Council comprises of 30 members in all where 26 seats are reserved for the Garo's and 4 for other minor tribes and generals. It has all the three organs which are the Executive, Legislative and Judiciary. The first Chief Executive Member of the Garo Hills Autonomous District Council was Captain Williamson A Sangma who accelerated the movement for a separate state comprising the Garo, Khasi and Jaintias who later on became the first Chief Minister of Meghalaya. Before the establishment of the Autonomous Councils two Garos had represented the Assam Legislative Assembly, Shillong in the first General Election in 1937. The first ever elections for the Garo Hills Autonomous District Council was held on the 18th January 1952 for 18 constituencies on the basis of adult franchise and 6 others were nominated by the Assam government.

THE JUDICIARY

The Garo Hills Autonomous District Council also has a judiciary branch comprising of all the village courts at the village levels, the Subordinate District Council Court which has both Original and Appellate jurisdiction and the District Council Court having Appellate jurisdiction to try cases involving between tribal and tribal in accordance with the Garo Customs and Traditions. This Act was passed by the Garo Hills District Council in the year 1953.

THE SUBORDINATE DISTRICT COUNCIL COURT

With its headquarters in Tura it has both the Original and Appellate jurisdiction. It is competent to try all cases and suits in which both the parties belong to Scheduled Tribes and are residents within the jurisdiction and is presided over by a Judicial Officer.

THE DISTRICT COUNCIL COURT

This is a Court of appeal in respect of all suits and cases from the Subordinate District Council Court and the Village court. It is presided over by a judicial Officer who also exercises original jurisdiction to try cases involving members of the Scheduled Tribe only. Many of the civil cases such as the succession to Nokmaship, Divorce, Inheritance, Inter-Nokma boundary dispute have been settled by this Court.⁹

OBSERVATIONS

The present Garo Hills Autonomous District Council is in dilemma as there are many loop holes in the Council. There have been a lot of complaints about the working of the Council and the people whom the researcher has met are dissatisfied with the Council. The following findings are as follows:

Firstly, the burning issue in the Council is the participation of the non-tribals and other minor tribes who are elected to the Council. There has been a series of agitation and protest by the civil societies time and again against the participation of non-tribals who have the right to contest and vote in the GHADC.¹⁰ at present there are two Muslims, one Koch and one Hajong in the Council which has been represented since the formation of the Council. The Civil societies have been demanding that an act or a law be passed in the House so that only the Garos can have the right to vote and contest the District Council elections to protect and preserve the culture and traditions of the Garo community.¹¹ Recently the Union Minister for Tribal Affairs Jual Oram on his visit to Shillong on the 13th of October, 2015 had stated that the Government of Meghalaya has to formulate a law which bars the non-tribals from taking part in the District Council elections and added that the State government has to take a serious note on this matter.¹² The Khasi Hills Autonomous District Council has been praised for protecting the indigenous tribals in its Council and the civil societies are demanding that similar act or law be passed in the GHADC as well.

Secondly, there are many illegal appointments in the Council as the number of appointments exceeds the number of posts created. It was observed that for one particular post the number of appointments held were about five to six which was against the norms or rules. Because of these illegal appointments the salary has to be cut into many portions.¹³ the problem which the staffs of the Council are currently facing is that the salary is not given on time. It takes about five to six months to get their salary and pending dues and because of this many of the staff is not satisfied, as they have to lend money to survive and run their family.¹⁴ There have been many protests because of this issue and the demand of the employees is that their pays should be paid regularly every month and all their allowances should be paid and not pending. The Council does not have enough funds to pay and this therefore has created hardship for the staff of the District Council.¹⁵ The researcher observed that for the post of one driver there were about five to six appointments and similarly in some posts it was the same. The room was over crowded and some of the staff had to sit outside the room.¹⁶

Thirdly, most of the people felt that all the non-tribals who are residing illegally without any valid documents should be dealt with strictly and all those who have illegal land documents should be cancelled and the Council should maintain transparency and strengthen the Nokma and Village administration. The public feels that the Council should investigate all those who are settling illegally in Garo Hills and deport them back from where they have come and strongly demand back all those lands which fall under the District Council from some parts of Goalpara District, Assam and from other places as well.¹⁷

Fourthly, the persons who are doing small business feel that the professional tax should be taken by the Council just once for all purposes instead of paying monthly. It should be yearly or annually as the process becomes very complicated.¹⁸

Fifthly, the Council has not been able to maintain a proper library as it was noticed that most of the important documents are either lost or missing from the Council.

Lastly, the Nokmas have no authority over their own A'khing lands as they have to approach the GHADC for obtaining permissions to sell their land or for any other purpose. Many people are dissatisfied with this rule as it has made the Nokma very weak and some Nokmas claim that the very purpose of having Nokmaship has become irrelevant. The Council has now become the custodian of all the lands belonging to the Garo Nokmas and this will have an impact on the Nokmaship as they are left as a traditional institution with no powers and functions. The India-Bangladesh border fencing has affected the land belonging to the Garos as most of the cultivable lands are now outside the border and falls under the Zero line. Some villagers are unhappy as they have to go to Bangladesh or the Zero line to cultivate their lands and there has been no demand from any NGO's to reconsider the proper demarcation as many Garos have lost their lands because of the border fencing and till date there are no objections raised by the Garo organisations. The villagers blame the GHADC for not conducting a proper survey before the borders were fenced and are facing difficulties for living their livelihood.

CONCLUSION

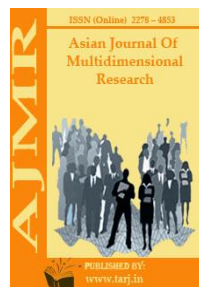
It can be concluded that the Garo Hills Autonomous District Council (GHADC) is in total chaos as it has failed in all the spheres. This institution which was created for the upliftment of the Garo community to preserve and protect their culture and tradition has not live up to the expectations and therefore it needs to be totally revamped with new laws and regulations. The prevalent corruption has disrupted the machinery of the Council and brought down the very purpose for which it was created. The funds which are allotted for various developmental schemes have been siphoned off and it does not reach the area for which it was sanctioned. The self-interest on part of the Members have made the Council a poor institution as it faces a huge financial crisis and are not able to pay even the salaries of the staff for months. The tribal lands are given away to non-tribals and there is no proper documentation of land pattas available in the Council Library. The taxes are not collected properly hence there is no revenue generated and therefore the Council is financially weak and has to depend solely on the State government. The people of Garo Hills still lack awareness of the powers and functions of the District Council and the importance of Sixth Schedule as laid down in the constitution of India which was to protect and preserve the culture and traditions of the tribals. There is also a lack of political will among the politicians in order to fulfil the aims which has been set in the Sixth Schedule. Therefore it

has become a Council where the members have become power hungry and frequent horse trading has made the Council weak and is not able to take decisions which would benefit the community as a whole.

In spite of all these problems mentioned above, the District Council is not without strength and weaknesses it has lot to achieve in the coming years so that it will be a strong institution which will protect and preserve the culture, traditions and customs of the Garo people. It has become a part and parcel of the political life of the people of Garo Hills and its existence is firmly rooted. It has become a training ground for all those politicians to raise their voice and try their luck in the Assembly elections and fulfil their political ambitions and aspirations. Therefore the Council in order to be a strong institution needs to revamp and revive itself so that it can be better and effective machinery in the near future.

REFERENCES

1. megassembly.gov.in
2. See, *Meghalaya Times*, "Lest We Forget", October, 9th 2017.
3. Milton S Sangma, *The Garo Language: Its Origin and Dialects*, p.59.
4. Garo in: Lewis, M. Paul, Gary F. Simons and Charles D. Fennig (ed.), *Ethnologue: Languages of the World*, 17th Edition, Dallas, Texas, SIL International, 2013.
5. meghalaya.gov.in
6. *The Garo Hills Autonomous District Council, Acts, Rules and Regulations*, July, 2007, p.1.
7. *Ibid*, p.2.
8. *Ibid*, pp.7-20.
9. *The Garo Hills Autonomous District Council, Acts, Rules and Regulations*, 1968, p.17.
10. See, *The Telegraph*, "Cry against non-tribals in Garo Council polls", September, 10th 2015.
11. See, *The North-East Today*, "ADC elections: Garo Hills NGO's continue fight against non-tribals".
12. See, *the Shillong Times*, "Centre Against Participation of Non-Tribals in Council Polls", October, 13th 2015.
13. Interview with GHADC employee.
14. See, *The Meghalaya Times*, "AYC slams GHADC in the midst of 9 months pending salaries", May, 25th 2016.
15. See, *The Shillong Times*, "GHADC passes 126 Crore Budget, Sadhiarani becomes First Woman Chairperson", August, 30th 2017.
16. Interview with GHADC employee.
17. Field Survey, 2015.
18. Field Survey, 2015.



A COMPARATIVE STUDY ON SELF-ESTEEM AND ASSERTIVENESS AMONG ADOLESCENT GIRLS STUDYING IN SINGLE SEX AND CO-EDUCATIONAL SCHOOL OF MOHALI AND ROPAR DISTRICT (PUNJAB)

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ABSTRACT

Education is the only field where a child spends his important years of his life, the formative years, and a maximum portion of his life. The field of education is not only offers knowledge but also gives opportunity to do interaction with teachers, friends of same-sex and opposite-sex. A cross-sectional comparative survey study was conducted to assess and compare the self-esteem and assertiveness among adolescent girls studying in single sex and co-educational schools. Total 280 adolescent girls of single-sex and coeducational schools residing in Mohali and Ropar District were selected by stratified random sampling. Rosenberg self-esteem scale (Standardized) and Rathus Assertiveness schedule (Standardized) was used to collect the data from study participants. Findings of the study revealed that significant difference in self-esteem among adolescent girls studying in single sex and coeducational schools with mean percentage (67%) & (69.42%) whereas non significant difference in assertiveness among adolescent girls studying in single-sex and coeducational schools with mean percentage (15.71%) & (11.55). The study concluded that the adolescent girls studying in co-educational schools have high self-

esteem as compare to the adolescent girls studying in single-sex school whereas no difference were observed in assertiveness among the girls studying in single sex & co-educational school.

KEYWORDS:Self-Esteem, Assertiveness, Single-Sex School, Co-Educational School

INTRODUCTION

Single Sex Schools and Co-Ed schools are a topic which has been a concern for many parents. There are schools which start Single Sex classes after children have reached a certain age while some schools are strictly Single Sex right from the Kindergarten. Co-Ed Schools have no such restrictions. Both boys and girls study together. It has become a big issue for parents to reach a conclusion as to which one is better; after all it is a question of their children future. Parents and students seem to be unaware of the merits and demerits of both the single-sex and co-educational institutions. The choice of an institution today is based on popularity factors, distance from home etc, ignoring the deliberate choice of single-sex or co-education system.¹

Adolescence is a transitional stage of physical and psychological development that generally occurs during the period from puberty to adulthood. Adolescents are usually faced with the onset of pubertal changes and the transition to an unfamiliar and stressful school environment. These changes are characterized by the desire to establish an identity that calls for independence from parents and caregiver.²

Researcher has shown key differences between individuals with high self-esteem, focus on growth and improvement whereas people with low self-esteem focus on not making mistakes in life. Low self-esteem has been shown to be correlated with a number of negative outcomes, such as depression. People with low self-esteem are more troubled by failure and tend to exaggerate events as being negative.³

In everyday life situation and interaction, individuals develop patterns of responding to others. Some of these patterns include watching other people, being positively reinforced or punished for a better way to respond, not developing the proper skills for a better response and consciously choosing a response style. The four types of response pattern are: Non-assertive, Assertive, Aggressive and Passive-aggressive to control and deal with our life in this present world of stress we have to act in our best interests, stand up for ourselves without undue anxiety, express honest feelings comfortably, and exercise personal rights without denying the rights of others. This behavior is called Assertive behavior. Assertiveness is a core human behavior and is key to interpersonal relationships.⁴

OBJECTIVES

1. To assess self-esteem and assertiveness among adolescent girls of single sex & co-educational school using Rosenberg self-esteem scale & Rathus assertiveness schedule
2. To compare self-esteem and assertiveness among adolescent girls of single sex and co-educational school.
3. To determine the association between self esteem and assertiveness with selected socio-demographical variable of study participants.

HYPOTHESIS

H₁: There is significant difference between self-esteem & assertiveness among adolescent girls studying in single sex & co-educational school at 0.05 level of significance.

H₂: There is significant association between the self-esteem and assertiveness and personal characteristics of adolescent girls studying in single sex & co-educational school at 0.05 level of significance.

MATERIAL AND METHODS

A cross-sectional descriptive, comparative survey design was adopted to compare self-esteem and assertiveness among adolescent girls studying in single-sex and co-educational schools. The conceptual framework used to guide the study was “Bandera Social Learning Theory” Adolescent girls from single sex and co-educational schools were selected by stratified random sampling. Power analysis was used to estimate in advance how big a sample needed for the survey. A total 280 adolescent girls from which 140 from single sex school and 140 from co-educational school situated in Mohali and Ropar District (Punjab).

Description of study tool: The tool consists of three parts-

TOOL 1: Socio-demographic profile sheet: - developed for present study to collect sample's socio-demographic characteristics, which consists of 15 items that includes age, class, type of family, religion, father education, father occupation, mother education, mother occupation, income, birth order, staying with, state, medical illness, primary education and mode of going school.

TOOL 2: Rosenberg self-esteem scale:-was used to measure the self esteem of adolescent girls studying in single sex and co-ed schools. This scale developed by sociologist Dr. Morris Rosenberg, and widely used in social-science research. The scale is a ten item Likert Scale with items answered on a four point scale - from strongly agrees to strongly disagree. Permission was taken from the concerned authority for using this scale.

TOOL 3: Rathus Assertiveness Schedule:-was used to measure the assertive behavior. It consists of 30 items to assess the assertive behavior. The items were measured on a 6 point rating scale ranging from “Always” to “Never”.

RESULTS

TABLE-1 FREQUENCY AND PERCENTAGE DISTRIBUTION OF SUBJECTS ACCORDING TO SOCIO-DEMOGRAPHIC VARIABLES N=280

Sample characteristics		School		Chi-square	p-value
		Co-educational f (%)	Single-sex f (%)		
Age (in years)	12-16	93(66.4)	100(71.4)	0.43	0.25
	17-20	47(33.6)	40(28.6)		
Class	6-8	44(31.4)	51(36.4)	1.77	0.42
	9-12	96(68.6)	89(63.6)		
Type of family	Nuclear	72(51.4)	54(38.6)	5.1	0.07
	Joint	62(44.3)	81(57.9)		
	Extended	6(4.3)	5(3.6)		
Religion	Hindu	46(32.9)	38(27.1)	6.1	0.19
	Sikh	92(65.7)	93(66.4)		
	Muslim	1(0.7)	3(2.1)		
	Christian	0(0.0)	4(2.9)		
	Other	1(0.7)	2(1.4)		

Father's employment status	Unemployed	13(9.3)	32(22.9)	25.13	0.00*
	Self-employed	63(45.0)	28(20.0)		
	Private job	54(38.6)	60(42.9)		
	Govt. job	10(7.1)	20(14.3)		

Sample characteristics		School		Chi-square	p-value
		Co-educational f(%)	Single-sex f(%)		
Mother's employment status	House wife	123(87.9)	107(76.4)	16.82	0.001*
	Private job	8(5.7)	27(19.3)		
	Self employed	8(5.7)	2(1.4)		
	Govt. job	1(0.7)	4(2.9)		
Family monthly income	5000-10,000	95(67.9)	110(78.6)	8.22	0.42*
	10001-20,000	17(12.1)	9(6.4)		
	20001-30,000	22(15.7)	11(7.9)		
	>30,000	6(4.3)	10(7.1)		
Medical illness	Yes	7(5.0)	4(2.9)	0.35	0.27
	No	133(95.0)	136(97.1)		
Primary education	Same school	57(40.7)	78(55.7)	6.30	0.008
	Other school	83(59.3)	62(44.3)		
Mode of going school	School Bus	36(25.7)	39(27.9)	6.17	0.10
	Own vehicle	55(39.3)	41(29.3)		
	Public transport	12(8.6)	24(17.1)		
	Other	37(26.4)	36(25.7)		

Table 1 depicts the frequency and percentage distribution of study participant's socio-demographic characteristics. Further chi-square test was used to determine samples homogeneity among participants from different schools. The result revealed that group was found homogenous for variable such as age, class, type of family, religion, primary education, and medical illness, mode of going school ($p \geq 0.05$) whereas significant was observed for participant variable such as state, father's employment status, mother employment status and family monthly income.

TABLE-2 COMPARISON OF SELF-ESTEEM AND ASSERTIVENESS AMONG ADOLESCENT GIRLS STUDYING IN SINGLE-SEX AND CO-EDUCATIONAL SCHOOLS N=280

	Single-Sex School	Co-Educational School	t-value	p-value
	Mean \pm SD (%)	Mean \pm SD (%)		
Self-Esteem	26.80 \pm 2.65 (67)	27.77 \pm 3.02 (69.42)	2.87	0.004***

Assertiveness	14.14±21.58 (15.71)	10.40±23.19 (11.55)	-1.395	.164
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Table 2, depicts the self esteem mean± SD and mean percentage scores of participants in single sex and co-educational schools that is 26.80±2.65 & 27.77±3.02 respectively, Significant difference was observed

	Score	
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between self esteem among adolescent girls studying in co-ed and single sex schools ($p=0.004$) whereas the assertiveness Mean ± SD and mean percentage of participants in single sex and co-ed school that is 10.40±23.19 & 14.14±21.49 respectively. No significant difference of assertiveness observed between subjects from different schools ($p=0.16$). Therefore, it is concluded that adolescent girls studying in co-educational schools have high self-esteem as compare to girls studying in single-sex schools whereas the nature of school does not affect assertiveness of adolescent girls.

TABLE-3 ASSOCIATION BETWEEN SELF-ESTEEM AND PERSONAL CHARACTERISTICS OF STUDY SUBJECTS

N=280

Personal characteristics		Score			Chi-square	p-value
		Low	Average	High		
Age	12-16 (%)	1(0.5)	160(82.9)	32(16.6)	6.38	0.041*
	17-20 (%)	1(1.1)	81(93.1)	5(5.7)		
Academic standard	6-8 (%)	1(1.1)	71(74.7)	23(24.2)	15.53	.0001**
	9-12 (%)	1(0.5)	170(91.9)	14(7.6)		
Type of family	Nuclear (%)	0(0.0)	103(81.7)	23(18.3)	10.17	0.038*
	Joint (%)	2(4.1)	130 (90.9)	11 (7.7)		
	Extended (%)	0(0.0)	8 (72.7)	3 (27.3)		
Family income	5000-10,000	1 (0.5)	179 (87.3)	25 (12.2)	5.43	0.48
	10001-20,000	0 (0.0)	21 (80.8)	5 (19.2)		
	20001-30,000	1 (3.0)	26 (78.8)	6 (18.2)		
	>30000	0 (0.0)	15 (93.8)	1 (6.3)		
Type of school	Co-educational	1(.7)	114 (81.4)	25 (17.9)	5.26	0.07
	Single-sex	1 (.7)	127 (90.7)	12 (8.6)		

Table reveals significant association between level of self-esteem and age, academic standard and type of family ($p \leq 0.05$) whereas no significant association observed with and family income and type of school of subjects ($p \geq 0.05$)

Personal characteristics		Probably aggressive	Assertive	Somewhat assertive	Situational non assertive	Very non assertive	
Age	12-16 (%)	17 (8.8)	42 (21.8)	77 (39.9)	43 (22.3)	14 (7.3)	5.10 (P=0.2)
	17-20 (%)	12 (13.8)	22 (25.3)	36 (41.4)	15 (17.2)	2 (2.3)	
Academic standard	6-8 (%)	6 (6.3)	22 (23.2)	32 (33.7)	23 (24.2)	12 (12.6)	16.74 (P=.002)**
	9-12(%)	23 (12.4)	42 (22.7)	81 (43.8)	35 (18.9)	4 (2.2)	
Type of family	Nuclear (%)	14 (11.1)	29 (23.0)	47 (37.3)	29 (23.0)	7 (5.6)	13.77 (P=0.08)
	Joint (%)	11(7.7)	31 (21.7)	63 (44.1)	29 (20.3)	9 (6.3)	
	Extended (%)	4 (36.4)	4 (36.4)	3 (27.3)	0 (0.0)	0 (0.0)	
Family income	5000-10,000 (%)	18 (8.8)	49 (23.9)	81 (39.5)	42 (20.5)	15 (7.3)	11.77 (P=0.46)
	10001-20,000 (%)	5 (19.2)	6 (23.1)	7 (26.9)	7 (26.9)	1 (3.8)	
	20001-30,000 (%)	4 (12.1)	7 (21.2)	15 (45.5)	7 (21.2)	0 (0.0)	
	>30,000	2 (12.5)	2 (12.5)	10 (62.5)	2 (12.5)	0 (0.0)	
Type of school	Co-educational	12 (8.6)	33 (23.6)	50 (35.7)	35 (25.0)	10 (7.1)	5.90 (P=0.20)
	Single-sex	17 (12.1)	31 (22.1)	63 (45.0)	23 (16.4)	6 (4.3)	

TABLE-4 ASSOCIATION BETWEEN ASSERTIVENESS AND PERSONAL CHARACTERISTICS AMONG STUDY SUBJECTS

Table reveals significant association between academic standard and level of assertiveness ($P \leq 0.05$) whereas no significant association observed with age, type of family, family income and type of school ($P \geq 0.05$).

DISCUSSION

The current study focused on self-esteem and assertiveness among adolescent girls studying in single-sex and co-educational schools situated in Mohali and Ropar District (Punjab). A cross-sectional survey approach was used. Data was collected from the 280 adolescent girls 140 from co-educational school and 140 from single-sex school by using Random sampling. Throughout the study, due care was taken to minimize bias and enhance the validity of the study findings. Present study has strong methodology that has improved on those used in previous research in this area.

Present study revealed significant difference of self esteem among of two groups. An increase level of self-esteem was found among adolescent girls from co-educational school i.e. (27.77 ± 3.02) as compared

to single-sex school i.e. (26.80 ± 2.65) which was statistically significant ($p \leq 0.05$). These findings are consistent with the study conducted by **Guglielmi Alexa (2011)**⁵ revealed that co-ed high school girls have high level of self-esteem as compare to single sex school girls ($p \leq 0.05$ **Kaur Jasbir & Kaur Mandeep (2016)**⁶ revealed that better adjustment among adolescent girls studying in the co-educational schools.

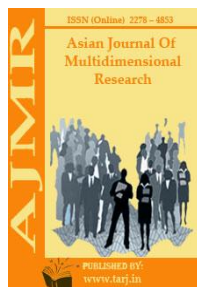
Present study revealed a negative co-relation between self-esteem and assertiveness. These findings are inconsistent with study done by **Shrivastava U & Mishra V (2015)**⁷ where a positive extent of self-esteem on assertiveness was observed among adolescent.

CONCLUSION

Education is the action or process of teaching someone especially in school, college or university. It is a field of study that deals with method of knowledge and teaching. Study conclude that adolescent girls studying in the co-educational schools have high self-esteem as compare to the girls studying in the single-sex school whereas nature of the school does not affect assertiveness of adolescent girls.

REFERENCES

1. Pathan S. A comparative study of student's attitude towards co-education and single-sex. Journal of arts, science & commerce 2011 Jan; 11(2): 103-109
2. Chinawa M.J., Herbert A. Obu, Pius C. Manyike, Ikechukwu E, Obi, Odetunde O, Isreal and Awoere T. British Journal Of Medicine & Medical Research 2015; 5(1): 98-106
3. Silverstone, P.H & Salsali M. Low self-esteem and psychiatric patients. Annals of general psychiatry 2003; 2(1): 2
4. Oswalt A. Building self-esteem by fostering individuality [online] 2010 June; Available from: URL: <https://www.mentalhelp.net/articles/factors-influencing-the-development-of-self-esteem/>
5. Guglielmi Alexa Girls self-esteem rates in single-sex and co-ed high schools. Trinity College Digital Repository, January 2011. Available from URL: <http://digitalrepository.trincoll.edu/theses>.
6. Kaur J & Kaur M. A comparative study on adjustment among adolescent girls studying in co-educational and non-co-educational schools. Journal of International peer reviewed referred 2016 May; (3)2: 2350-1294
7. Shrivastava U and Mishra V. A comparative study on the effect of self esteem enhancement on assertiveness of school students. The International Journal Of Indian Psychology 2015 Dec; 3(1): 2349-3429



CURRENCY AND DIAGNOSTIC CRITERIA OF RHEUMATOID ARTHRITIS IN PATIENTS OF SENIOR AGE GROUPS

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ABSTRACT

This article presents the results of the study of the peculiarities of the course and diagnosis of rheumatoid arthritis (RA) in elderly people. In our work we studied 56 RA patients. Of these, 25 (44.6%) of the patients first fell ill in old age, 16 (28.5%) of patients became ill for more than 15 years and 15 (26.7%) of patients younger than 45 years made up a control group. In the elderly, according to some authors, the onset of RA is often characterized by a low degree of activity of the inflammatory process, which, in retrospective evaluation, is classified as a "chronic" course of the disease. A major achievement was the creation and implementation in the clinical practice of RA treatment of so-called biological agents of medical preparations obtained by genetic engineering, the targets for which are key pro-inflammatory cytokines, their receptors and immunocompetent cells. In the elderly at the beginning of the disease, an important diagnostic sign "morning stiffness" manifests itself after 3-4 months and even a year from the onset of the disease.

KEYWORDS:*Rheumatoid Arthritis, Elderly Age.*

INTRODUCTION:

RELEVANCE

According to various research groups rheumatoid arthritis (RA) suffer from 0.5-2.5% of the adult population. RA may occur in childhood (juvenile RA), but most often the onset of the disease is 52 ± 15 years. Among those under the age of 35, the prevalence of RA is 0.38%, and over the age of 55 years, 1.4%. Women are sick more often than men 2-3: 1[2]. The high frequency of development of RA is noted in relatives of the first degree of kinship (3.5%), especially in female patients (5.1%). The last two decades have been marked by significant advances in the study of pathophysiology and the treatment of rheumatoid arthritis (RA). Widely distributed in the 60-80s of the last century aphorism: "We do not treat RA, but only we provide assistance to a patient with RA» («We don't treat RA, we manage the patient with the disease») — today can be regarded as an anachronism [4]. Timely appointment (i.e. at the early stages of the disease, ideally - in the first three months) disease-modifying ant rheumatic drugs (DMAD) in adequate dosages alone, and if necessary - in various combinations, allows in many cases to successfully control the activity of the disease, prevent or slow down the development of erosive processes [5]. A major achievement was the creation and implementation in the clinical practice of RA treatment of so-called biological agents of medical preparations obtained by genetic engineering, the targets for which are key pro-inflammatory cytokines, their receptors and immunocompetent cells. The results of a number of studies allow us to look optimistically at the possibility of low dosages of glucocorticoids (GK) both in controlling the activity of the disease and in slowing the progression of articular lesions. In the elderly, according to some authors, the onset of RA is often characterized by a low degree of activity of the inflammatory process, which, in retrospective evaluation, is classified as a "chronic" course of the disease. " In such cases, the signs of the joint syndrome develop gradually over a period of several months [8]. Extra-articular manifestations of the disease are noted no more often than in 20% of cases. Approximately in 2/3 elderly patients, RA begins with symmetrical oligoarthritis it is, in 1/3 of symmetric polyarthritis. The defeat of large joints in the debut of the disease is noted in 30% of cases. According to other authors, the onset of rheumatoid arthritis in the elderly has a more acute onset, almost without prodroma, onset of the disease. There is a primary lesion of large joints, and not small joints of hands and feet. There is a leveling in the sex ratio: the ratio of men and women is 1: 1, while at a younger age females predominate. The identification of new markers of inflammation, the use of ultrasound (US) and magnetic resonance imaging (MRI) significantly improved the diagnosis of RA and dynamic control of the effectiveness of the therapy [1,4]

Rheumatoid arthritis is especially important for medical and social importance. At the same time, the economic losses from rheumatoid arthritis for society are comparable to coronary heart disease. The significant prevalence of RA predominantly among the able-bodied age group of the population leads to chronic disease and a progressive course, a high incidence of loss of professional capacity for work of patients. The increase in the number of elderly and elderly people in Uzbekistan, as in many other countries, is accompanied by an increase in the number

of diseases associated with the aging process - osteoarthritis, rheumatoid arthritis, osteoporosis, diabetes, obesity, Alzheimer's disease. The process of human aging is accompanied by changes in the genetic apparatus of the cell, the development of a number of diseases. The problem of studying rheumatoid arthritis (RA), in old age, remains one of the topical in rheumatology. The increase in the number of elderly and elderly people observed in Uzbekistan, as in many other countries, is accompanied by an increase in the number of diseases associated with the aging process - osteoarthritis, rheumatoid arthritis, osteoporosis [5]. Rheumatoid arthritis is the most common form of articular pathology, one of the main causes of chronic pain syndrome, premature disability and disability. In the prevention of rheuma to logical diseases, including rheumatoid arthritis, the elderly can normalize the processes of bone remodeling, improve its strength characteristics, reduce the risk of fractures, improve the quality of life. The social significance of the RA is determined not only by its wide spread, but, first of all, it quickly leads to disability of patients, with the ensuing consequences: a change in the quality of life and great material damage to both the patient himself and society [7].

PURPOSE OF RESEARCH

The main goal of the work was to study the peculiarities of the course and diagnosis of RA in elderly people.

25 (44.6%) patients first fell ill in the elderly, 16 (28.5%) patients fell ill with experience more than 15 years and 15 (26.7%) patients younger than 45 years made up a control group.

MATERIALS AND METHODS OF RESEARCH

In this study 56 RA patients were studied. Of these, 25 (44.6%) of the patients first fell ill in old age, 16 (28.5%) of patients became ill for more than 15 years and 15 (26.7%) of patients younger than 45 years made up a control group. The diagnosis of RA was carried out according to the criteria of the experts of the American College of Rheumatology and the European Antirheumatic League (ACR / EULAR RA) 2010 and taking into account the additions made by the staff of the Institute of Rheumatology of the Academy of Medical Sciences of the Russian Federation. Of the total number of RA patients newly diagnosed in the elderly, 14 (21.2%), 52 (78.8%), the ratio of males and females was 1: 4.

At the age of over 60 years there were 38 (57.5%) patients. Among the RA patients we examined, 68.5% had a disease duration of up to 6 years, which allowed us to carefully analyze the dynamics of clinical manifestations and the cause of their progression from the very beginning of the disease. Based on the studies carried out,

1. Seropositivity for rheumatoid factor (RF).
2. The nature of the current of the RA according to G.P. Matveikova and V.E. Yagur.
3. The degree of RA activity according to the criteria of V. Otto and M.G. Astapenko.
4. Degree of functional insufficiency of the joints.
5. Radiographic stage of RA according to the criteria of O. Steinbroke.
6. The presence of extra-articular manifestations of the disease.

RESULTS AND DISCUSSION

As a result of the conducted studies, it was established that the clinical features of the course of RA, which began in the elderly, is a frequent defeat at the beginning of the disease of large and medium joints (63.6%), in contrast to the classical variant of RA. In 52.2% of cases, RA in the elderly began acutely or subacute with an increase in the sign of inflammation of the joints. Depending on the presence of rheumatoid factor in the blood serum, they are divided into two groups: at a titer of 1:32 and above, RA was assessed as seropositive, and at titers below 1:32 as seronegative. 67% of the patients we examined had a seropositive RA. A study of the clinical picture of the disease showed that in 89% of RA patients that began in old age, there were II and III activity of the inflammatory process. X-ray manifestations of the I stage were detected in 2.5% of patients, stage II was detected in 55.5%, stage III was detected in 31.4%, stage IV was detected in 10.6% of patients. With rheumatoid arthritis, the loss of professional capacity for work and disability contributes to the development of severe joint failure (FNS), the cause is the progression of bone destruction. FNS I degree was observed in 20.4% of patients, grade II in 53%, grade III in 28.9% of patients.

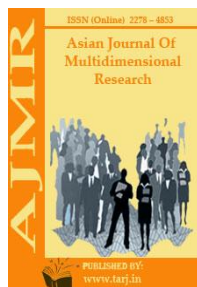
The study of the joint syndrome showed that in RA patients there were significantly high indices of the Richie index of 19.1 ± 1.1 points, the number of inflamed joints was 5.1 ± 3.1 , the pain at rest was VAS 42.1 ± 18.3 , pain at motion- YOUR 65.7 ± 18.5 , pain at palpation-VASH 39.4 ± 19.7 . The duration of morning stiffness in elderly RA patients was significantly less than $p < 0.005$ than in the control group. In the elderly at the beginning of the disease, an important diagnostic sign "morning stiffness" manifests itself after 3-4 months and even a year from the onset of the disease. In elderly people with RA other than articular manifestations occurs, also with the defeat of internal organs. In 35 (53%) patients visceral lesions were diagnosed, manifested as vasculitis 15 (22.7%), Raynaud's syndrome in 5 (7.5%), rheumatoid nodules - 7 (10.6%) and in 4 (6%) patients other manifestations of the disease. The peculiarities of the clinical course of the RA, in old age, are frequent lesions of large and medium joints, acute and subacute onset of the disease, high activity of the inflammatory process, pronounced articular syndrome, rapid formation of bone-grasping destruction, severe limitation of motor activity, leading to early disability and invalidity, involvement in the pathological process of internal organs.

CONCLUSIONS

Rheumatoid arthritis in the elderly is particularly affected by large and medium joints that perform basic musculoskeletal function, which leads to limiting physical activity of patients and contributes to the development of disability and the rapid development of trophic disorders in many patients. The pronounced activity of the inflammatory process, the rapid development of bone-cartilage destruction, the low efficacy of NSAIDs make it necessary to prescribe elderly patients with RA at early stages of glucocorticosteroid disease, not only intraarticular, but also in small doses.

LITERATURES:

1. Aleksandrov A.V., Gontar I.P., Nenasheva N.V., and etc. /. Problems in the diagnosis of chronic immuno-inflammatory diseases: the use of immunological studies for the isolation of subtypes of rheumatoid arthritis // Allergology and Immunology. – 2008. – T.9, №3. –P. 333–334.
2. Balabanova R.M., Kataeva A.K. / Features of the clinical picture and treatment of rheumatoid arthritis in old age // Consilium Medicum. – 2006. – P. 12-8.
3. Bochkova A.G. Rheumatoid arthritis with debut in the elderly: flow and therapy // Clinical gerontology: a quarterly scientific and practical journal. – 2002. – T. 8, №3. – P. 45–50.
4. Kas Y.A. Connective tissue dysplasia is a pre-illness of some rheumatic diseases // Human and drugs: XIV Российский национальный конгресс. – 2007. – P. 365.
5. Kas Y.A. «Connection continuum continuum» and organosclerosis in certain connective tissue diseases // Forum of «Cardiology– 2009».
6. Satibaldiev A.M. Rheumatoid arthritis in the elderly // Consilium medicum: journal of Evidence-Based Medicine for Practitioners. – 2007. – T.9, №12. – P. 85–92.
7. Satibaldiev A.M., Akimova T.F., Ivanova M.M. Early differential diagnosis of rheumatoid arthritis and osteoarthritis in the elderly // Clin. geriatrics. – 2004. – №6. – P. 39–45.
8. American College of Rheumatology Subcommittee on Rheumatoid Arthritis Guidelines // Guidelines for the Management of Rheumatoid Arthritis. 2002 Update. Arthritis Rheumatism. – 2002. – №46. – P. 328–346.



FACTORS AFFECTING CUSTOMER TO SHOP ONLINE: A STUDY IN INDIAN CONTEXT

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ABSTRACT

The purpose of this paper is to measure the developed online shopping construct in the Indian context and to examine the impact of demographics (Age, Gender, Income, Occupation, Education, etc.) of customers to online shopping and their product preference in online shopping. The study also, examines the mediating role of consumer attitude relationship between quality of the product, price, product delivery, website information attribute, online services and consumer buying behavior towards online shopping in the Indian context. An offline survey was conducted by administering a structured questionnaire to the online shopper in selected metro cities in India. The data was collected through a structured questionnaire by applying a purposive sampling technique. Responses are recorded on a Five-point Likert scale where: one stands for strongly disagree, three stands for neither disagree nor agree, and five stands for strongly agree. Descriptive statistics were used to analyze the demographic and Internet uses related to online shopping. Structure Equation Modelling (SEM) Chi-square test was used to test the theoretical model developed by the researcher through SPSS and AMOS. The study

reveals that developed constructs by the researcher are valid for measuring online shopping construct in the Indian context. The study proves that there is a significant impact of customer attitude towards price, quality of the product, product delivery, online services, website information attributes and consumer buying behavior in online shopping.

This data was collected a single time due to cost and time constraints. Longitudinal studies are more suitable to understand the customers purchasing preference. Thus, future study may adopt the longitudinal approach. The sample of the survey was from Indian metro cities, i.e., Hyderabad, Chennai, Mumbai, Delhi, and Kolkata. Therefore, the future studies can focus on semi-urban and rural areas of the country. The study developed and validated the scale of online shopping predominantly in an Indian context, which may not be applicable in other cultural and market settings. The study helps online service providers or E-retail industry to understand customer attitudes and buying behavior in India. It also contributes to formulating the best marketing/e-marketing strategies to tap potential customer in India. Hence, the study also helps the e-retailers to provide better convenient policies to tier-1 tier-2 cities and rural customer in India.

KEYWORDS: *Customer Attitude, Customer Buying Behaviour, E-Retailers, Online Shopping and E-Commerce in India.*

1. INTRODUCTION:

The retailing sector is growing at a fast pace and gaining popularity. Developments in Information Technology have enabled online shopping; that gave scope for customers to order goods, the transactions to happen without the need for physical interaction with the retailers. In recent past years, the online shopping industry has gained popularity to the point where particular categories of customers would consider buying new products online rather than visiting the stores. Conventionally the physical location of a warehouse is seen as a source of competitive advantage. The new version of web-based retailing might alter the rules of the game. Online shopping sites provide virtual shopping space to the customers. It is easy to understand the main advantages of online shopping while at the time there are also consumers who are sticking to offline shopping, and they have their reasons as well. A major challenge for an e-tailer is retaining customer who frequently switch to other e-tailer due to the negligible switching cost and minimal effort. E-fulfilment is one major area of e-tailer operations, which significantly influence customer shopping experience (Koufteros et al., 2014; Lee and Lin, 2005; Thirumalai and Sinha, 2005) and repurchase intention (Koufteros et al., 2014). In this digital age, it is clear that the Internet has a significant influence on customers' shopping process and behavior (Thaichon, 2017).

Online shopping is increasing in India, with Internet penetration improving in the country and smartphones becoming affordable along with changing lifestyles and preferences of customers. The way Indian consumers used to shop is also changing with the changing demographic profile

of Indian consumers, as a result of a mostly young and working population. Although online shoppers prefer the convenience and choice available in online shopping, specific issues like lack of trust, privacy, payment security and transaction safety, are concerns that need to be addressed by online retailers. The proposed study attempts to examine the product and process preferences of Indian shoppers towards online shopping.

“India’s Business to Business (B2B) e-commerce market is expected to reach US\$ 700 billion by 2020 whereas the Business to Consumer (B2C) e-commerce market is projected to reach US\$ 102 billion by 2020. Online retail is expected to be on par with the physical stores in the next five years. Indian e-commerce sales are projected to reach US\$ 120 billion! By 2020 from US\$ 30 billion in FY2016. Further, India’s e-commerce market is expected to reach US\$ 220 billion regarding Gross Merchandise value (GMV) and 530 million shoppers by 2025, led by faster speeds on secure telecom networks, more rapid adoption of online services and better variety as well as convenience. Amazon India expanded its logistics footprint three times to more than 2,100 cities and towns in 2015, as Amazon.com invested more than US\$ 700 million in its India operations since July 2014.

2. LITERATURE REVIEW

The purpose of this research is to develop and validate the construct in online shopping and test the structural model which represent the causal relationship between the customer attitude buying behavior, price, quality of the product, website information attributes, timely product delivery and online service offered by the e-retailers. Following is a brief overview and discussion of main concepts and interrelationships between them.

2.1. Website Information Attributes:

There is very limited empirical research about Indian online shopping. A study showed that accurate information about product features, product quality, product warranties, avenues for customer feedback complaints, and certification of the website are factors that affect online shopping confidence among Indian consumer (Kiran *et al.* 2008). Indian customers are found to be more willing to disclose personal information on the Internet compared to US consumer (Gupta *et al.*, 2010). Website information that adapts to Indian culture was shown to be more favorable perceived in a study conducted by (Singh *et al.* 2006). A website that was more culturally congruent were rated more favorably on navigation, presentation, purchase intention, and customer attitude towards the website. In an empirical study, they identified the dimension of website design (usability, information availability, product selection, and appropriate personalization), fulfillment/reliability, customer service and privacy/security (Wolfenbarger and Gilly, 2003). The website information plays a vital role in search about the product reviews, customer purchase intentions, ease of use and convenience and comfort to the customer.

2.2. Product delivery delay: Delivery delay defined as a purchase arrives later than promised (Cho *et al.*, 2002). Ahmad (2002) has indicated in his study that poor customer experience, such as delivery delay, may cause customer dissatisfaction in no appropriate recovery strategy exists. Diaz and Ruiz (2002) stated in his study that waiting time positively influences anger and negatively influences the repurchase intention of customers. Kim (2005) proposed in his study that timely delivery is the primary factor of online customer’s repurchase behavior.

2.3. Customer Attitude: Attitudes may be defined as a person's relatively enduring evaluation that develops positive or negative feelings and tendencies toward an object, be it a person, product or idea. The customer has a cognitive, affective and conative component, and consumer behavior is a sum of these. Identification of factors that lead to the development of attitudes and a proper understanding of consumer attitudes towards online shopping can help retailers formulate strategies for future growth and success. This study is an attempt to identify such factors that lead to the development of positive attitudes towards online shopping. Consumers' attitude towards online shopping depends on the consumers' perceptions of functional and utilitarian dimensions ("Ruyter *et al.*, 2001; and Monsuwé *et al.*, 2004) or their perceptions of emotional and hedonic aspects ("Hirschman, 1983; Menon and Kahn, 2002; and Childers *et al.* 2001").

2.4. Price: Price has a direct impact on the monetary aspect of transaction utility in mental accounting theory. Price may affect customer's purchase behavior through the total utility. In recent years, a significant amount of research has been directed towards understanding how consumer's process and act upon price information in purchase situations. One applicable generalization from this literature is that consumers are highly sensitive to contextual cues in information supplied in price offers, which may lead them to make decisions which do not appear to be rational, from a purely economic interpretation. For instance, Inman *et al.* (1997) find that deals with restrictions such as "Limit to per customer" or "Offer good till specified date" elicit higher evaluations from consumers than the same deals without such restrictions. Similarly, Gourville (1998) reports that consumers evaluate price offers more favorably when the prices were stated as "pennies-a-day" than when these are given in aggregate terms. Jacoby and Olson (1997) distinguished between the actual price of a product (which may include shipping costs in the context of Internet shopping) and the price encoded by customers. Zeithaml (1982) had found in a study that the customer usually does not remember the actual price of a product. Instead customers encode prices in ways that are meaningful to them. For example, they compare objective prices (e.g., Price offered by the current shopkeeper) with reference prices (e.g., The prices provided by the other vendors)

2.5. Online Shopping Convenience: Shopping convenience has been one of the principal motivations underlying customer inclinations to adopt online purchasing (Beauchamp and Ponder, 2010). A crucial point of departure for online retailers who wish to take steps designed to maximize the speed and ease of shopping is to develop an understanding of the salient feature of online shopping convenience and the specific domain within each dimension. Although online shopping convenience is one of the significant factors that prompt consumers to access online retailers' websites (Ahmad, 2002; Jayewardene *et al.*, 2007),

2.6. Online services are important in business to consumer (B2C) e-commerce because they represent ways to provide on-demand solutions to customers strengthening customer-service provider relations, creating transactional efficiencies and improving customer satisfaction (Ruyter *et al.*, 2001)

2.7. Customer buying behaviour: "Kotler and Keller (2011) state that consumer buying behaviour is the study of the ways of buying and disposing of goods, services, ideas or

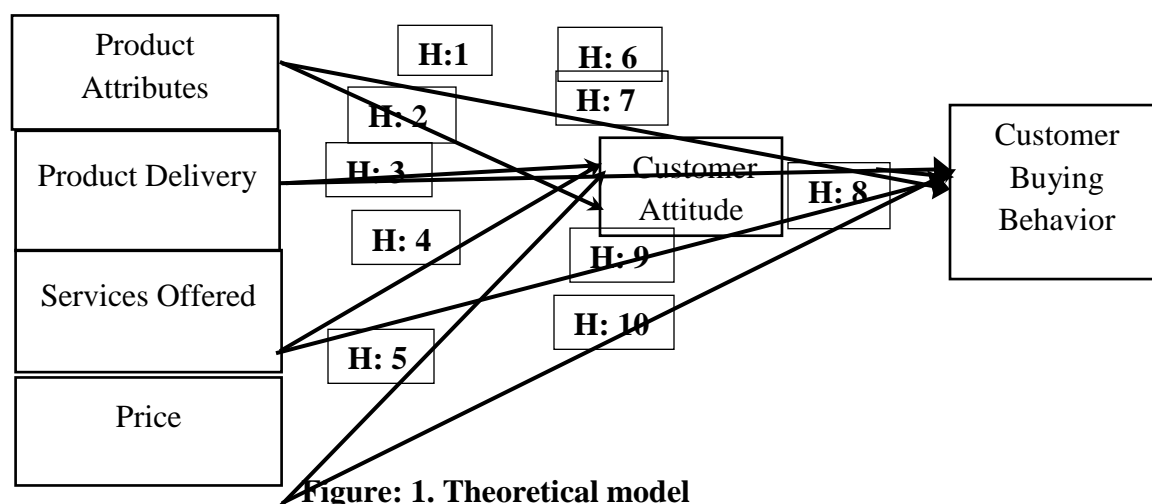
experiences by the individuals, groups and organizations in order to satisfy their needs and wants in their daily life.

TABLE 1: THE OPERATIONAL DEFINITION OF THE VARIABLES

Variable	Operational Definition
Website Information	Website Information defined as the dimension of website design (usability, information availability, product selection, and appropriate personalization), fulfillment/reliability, customer service and privacy/security (Wolfenbarger and Gilly, 2003).
Product Delivery Delay	Delivery delay defined as a purchase arrives later than promised (Cho et al., 2002).
Convenience	Online shopping convenience is one of the significant factors that prompt consumers to access online retailers' websites (Ahmad, 2002; Jayewardene et al., 2007),
Online Services	Online services are essential in business to consumer (B2C) e-commerce because they represent ways to provide on-demand solutions to customers strengthening customer-service provider relations, creating transactional efficiencies and improving customer satisfaction (Ruyter et al., 2001)
Quality of Product	Product quality means the actual functionality of the product, consistency between the quality specification of Internet shopping mall and real quality of the physical product. Variety is the assortment or a range of goods available from a shop.
Customer Attitude	"Consumers' attitude towards online shopping depends on the consumers' perceptions of functional and utilitarian dimensions (Ruyter et al., 2001; and Monsuwé et al., 2004")
Customer Buying Behaviour:	"Kotler and Keller (2011) state that consumer buying behaviour is the study of the ways of buying and disposing of goods, services, ideas or experiences by the individuals, groups and organizations in order to satisfy their needs and wants in their daily life.

Therefore, there is a consensus among the researcher with regards to casual order between these seven constructs. With the theoretical model/background, the present study proposed a theoretical model to test the complete mediation of website information attribute, product attribute. Product delivery, service offered and price towards customer buying behavior mediated by the customer attitude of the customer in the Indian context. Based on this theoretical model the hypotheses were intended to test the model.





The following hypotheses were framed for the theoretical model given in Figure 1.

H1:Significant difference between website information & customer attitude.

H2:Significant difference between Product Attribute & Customer Attitude

H3:Significant difference between Product Delivery & Customer Attitude

H4:Significant difference between Price & Customer Attitude

H5:Significant difference between Online Offered & Customer Attitude

H6:Significant difference between Website Information & Customer Buying Behavior towards Online Shopping.

H7:Significant difference between Product Attribute & Customer Buying Behavior towards Online Shopping

H8:Significant difference between Product Delivery & Customer Buying Behavior towards Online Shopping

H9:Significant difference between Price & Customer Buying Behavior towards Online Shopping

H10:Significant difference between Services Offered & Customer Buying Behavior towards Online Shopping

3. THE RESEARCH

The primary concept in this study are customer who use website information attribute, price, product attribute, online service offered by e-tailer, product delivery on time, customer attitude towards online shopping and customer buying behavior and to measure the relationship between these variables in the e-retailing sector in India and to add empirical evidence to the existing filed of shopping preference knowledge of the customer.

The total analysis was done in two stages. In stage one refers to the various steps in the process of development and validation of the instrument in online shopping in the Indian context. Exploratory and confirmatory factors analyses are used to extract the factors and assess the validity and reliability of the instrument. In stage two, structural equation modeling was used to measure the causal relationship between the latent variable. The study presents a structural model begins with theoretical justification to define the nature of the focal constructs and then uses a series of empirical test to support the casual direction between the constructs and their measures (Coltman *et al.*, 2008)

The first-order and second-order measurement models were developed using confirmatory factor analysis specifying that scale items are reflective indicators of their corresponding latent constructs and allowing the latent constructs to inter-correlated (Parasuraman *et al.*, 2005). Specifying scale items are reflective or formative indicators to latent construct is a challenging and important issue (Coltman *et al.*, 2008; Jarvis *et al.*, 2003). The model is based on the review of literature which provides a set of decision rules for deciding whether the measurement model should be a normative or reflective one (Jarvis *et al.*, 2003).

The results substantiate the decision on a thoughtful approach to developing measurement model. All the items of concern construct have high positive inter-correlation, and all the items of each construct have similar signs and significance of the relationship with the antecedents of the construct in below table no 4 and five were included in the study. The items of each construct were measured for internal consistency via Cronbach's alpha, construction reliability, the average variance extracted and factor loadings; content validity is established based on theoretical consideration and assessed empirically via convergent and discriminant validity.

3.1. Survey instrument

The questionnaire (data collection survey instrument) is comprised of 60 items which in turn were segregated into three sections: A and B. The first section (A) comprised 14 items which covered demographic profile of the respondents (a. Gender, b. Age, c. Education, d. Occupation, e. Income) and internet usage related and online shopping related descriptive variables (average time spent in internet usage during a day, type of internet connection, past history of internet usage, various devices used for internet usage and payment method used for online shopping,). Section B covered 46 items related to online shopping price, product delivery, website attribute information, customer attitude, online shopping services, quality of the product, and customer buying behavior towards online shopping. All the items were measured on Likert five-point format scale. The range of the scale varied from 1 representing 'strongly disagree' to 5 representing 'strongly agree' for 60 items of online shopping. For the questionnaire, the scale was developed by the researcher based on the literature review, discussions with customer focus groups, and considering the inputs from subject experts. The researcher tested the developed scale at the stage of the pilot study.

3.2. Sample Size

The current study aims to collect data from across India. Purposive sampling is used in identifying the respondents of the study. The data collection is carried out across five metropolitan cities in India – Hyderabad, Mumbai, Chennai, New Delhi and Kolkata. The targeted sample size in each city is 200 totaling 1000 respondents for the study. After the data

tabulation and purification, the valid samples are Hyderabad (184), Mumbai (175), Chennai (175), New Delhi (156) and Kolkata (170) totaling to 860 respondents.

3.3. Methods and Procedures of Data Collection

The study adopted offline survey methods for data collection. The offline survey method was done across the main cities in India like (Hyderabad, Mumbai, Chennai, New Delhi and Kolkata). Purposive sampling technique was adopted for the collection of data. The study carried out structured interviews with customers engaged in online shopping from metropolitan cities like (Hyderabad, Mumbai, Chennai, New Delhi and Kolkata) in India. To the purify the scale items and to check the feasibility, a pilot study was initially carried out. The pilot study was conducted in Hyderabad with a sample size of 210. Moreover, the final study was done with a sample size of 1000, from the metropolitan cities (Hyderabad, Mumbai, Chennai, New Delhi and Kolkata) of India. The researcher personally interviewed the respondents in the selected metro cities and collected data.

3.4. Sample size justification

Sample size should be representative of the target population and large in number to minimize the sampling error" (Grossnickle & Raskin, 2000). Since the study has used structural equation modelling for the data analysis, the size of the sample should be large enough to estimate the model fit indices (Hair, Black, Babin, & Anderson, 2010). There should be at least 200 subjects for performing structural equation Modeling (Kelloway, 1998).

According to Hair, Black, Babin, & Anderson, (2010), the size of the sample should be determined based on the number of attributes of the study and suggested that there should be five subjects for each attribute". The study comprised of seven observed variables for online shopping. Based on the criteria given by Black et al., the study required a minimum of 60 subjects. In online shopping categories, the final sample sizes were chosen to meet the criteria mentioned above, thereby justifying the sample size. The total valid sample size of the study was 860.

3.5. Data Analysis:

The sample consists of 634 males (73.7%) and 226 females (26.3%). The majority of the respondents were in the age group of 18 to 25 years (48.6%), followed by the age group 26-30 years (43.1%) and the age group 31-40 year (7.4%). Most of the interviewees were postgraduates (61.0%) followed by Graduates (30.6%), and the highest level of qualification of the respondents was MPhil / Ph.D. (7.0%). The lowest level of qualification of the respondents was SSC (0.3%). As far as the occupation of the respondents was concerned, Private employees constituted a majority of respondents (72.9%) followed by respondents who owned their own business (18.0%) and self-employed constituted 6.9% of the respondents. Government employees constituted only 2.2% of the sample respondents.

A majority of respondents were unmarried (68.7%); the remaining 31.3% were married. As far as monthly income (in rupees) is considered 417 respondents (48.5%) reported monthly income between Rs.15001 and Rs.25000. 282 respondents (32.8%) reported monthly income between Rs. 25001, and Rs.35000, 56 (6.5%), respondents reported monthly income between 35000-45000 while 51 (5.9%) respondents had monthly income below Rs.15,000. Most of the

respondents were using the internet for the past 1-5 years (54.0%), followed by users in the 5-10 years category (36.4%) and users with less than one year were internet usage(9.0%). The respondents who constituted internet usage over ten years accounted for only 0.7%.

Most of the respondents were using Desktop computers for online shopping(52.2%) followed by Laptops (37.1%), and only 10.7% of respondents were using Mobile/Smartphone for online shopping. Most of the respondents (33%) were using the internet for more than 4 hours a day followed by 31.5% using the internet between 30 minutes and 1 hour. Others included 19.8% of respondents using the internet above 4 hours a day, and 13 respondents (1.5%) reported using the internet for less than 30 minutes on a typical day. The analysis also revealed that most of the respondents (58.5%) were using LAN based internet connection followed by 23.4 % using mobile data and 17.8% respondents reported using a Wi-Fi connection to use the internet.

3.6. Exploratory Factor Analysis for Online Shopping

The first step in carrying out Exploratory Factor Analysis (EFA) is to verify the KMO value to check whether factor analysis will be appropriate or not using KMO and Bartlett's test of Sphericity. KMO value varies between 0 and 1. The value .000 indicates that the sum of partial correlations is significant relative to the sum of relationships, indicating factor analysis was likely to be inappropriate. Kaiser (1974) recommends a value above .5 as acceptable. The results show a KMO value as .855, which can be considered as a good value and therefore factor analysis is appropriate. Bartlett's measure tests the null hypothesis that the original correlation matrix is an identity matrix. Thus, there are as many factors as the items, and for doing factor analysis, this test should be significant (Hair, Anderson, Tatham, & Black, 1998). For this data, Bartlett's test is highly significant ($p = .000$), and therefore factor analysis is appropriate. The results for KMO and Bartlett's test are presented in Table 4.3.1.

TABLE: 1. KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.855
	Approx. Chi-Square	12295.945
Bartlett's Test of Sphericity	Df	435
	Sig.	.000

TABLE: 2. TOTAL VARIANCE EXPLAINED

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.483	21.609	21.609	6.483	21.609	21.609	3.139	10.465	10.465
2	2.825	9.415	31.024	2.825	9.415	31.024	3.055	10.183	20.648
3	2.570	8.567	39.591	2.570	8.567	39.591	2.983	9.945	30.593
4	2.268	7.560	47.151	2.268	7.560	47.151	2.814	9.378	39.972

5	1.885	6.283	53.434	1.885	6.283	53.434	2.791	9.302	49.274
6	1.631	5.436	58.870	1.631	5.436	58.870	2.297	7.655	56.929
7	1.205	4.017	62.887	1.205	4.017	62.887	1.788	5.959	62.887

TABLE: 3.ROTATED COMPONENT MATRIX

	Component						
	1	2	3	4	5	6	7
PA1	.747						
PA2	.804						
PA3	.841						
PA4	.736						
PA5	.734						
CBB1		.893					
CBB2		.885					
CBB3		.899					
CBB4		.500					
CA 1			.690				
CA 2			.686				
CA 3			.668				
CA 4			.792				
CA5			.636				
WI1				.851			
WI2				.846			
WI3				.810			
WI4				.750			
PD1					.749		
PD2					.809		
PD3					.867		
PD4					.752		
P1						.763	
P2						.756	
P3						.780	
P4						.694	
SO1							.689
SO2							.731

SO3	.662
SO4	.532

“Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations”.

WI= Website Information, CA= Customer Attitude, P= Price, PA= Product Attributes, CBB= Customer buying behavior towards online shopping, and finally, SO= Services Offered for the online product.

TABLE: 4.COMPOSITE RELIABILITY, AVERAGE VARIANCE EXTRACTED (AVE)

Variable / Construct	Composite Reliability	Average Variance Extracted (AVE)	Construct Validity Cronbach Alpha
Customer Attitude	0.83	0.497	0.798
Website information	0.88	0.650	0.845
Product Attribute	0.84	0.522	0.842
Price	0.80	0.509	0.744
Services Offered	0.85	0.600	0.710
Product Delivery	0.84	0.575	0.838
Customer Buying Behavior	0.81	0.522	0.919

TABLE: 5. MAXIMUM SHARED VARIANCE, AVERAGE SHARED VARIANCE & CORRELATION MATRIX

Construct	MSV	ASV	1	2	3	4	5	6	7
Customer Attitude ¹	0.013	0.05	0.71						
Website Information ²	0.12	0.03	0.184	0.81					
Product Attribute ³	0.34	0.08	0.257	0.068	0.72				
Price ⁴	0.01	0.00	0.056	0.038	.024	0.71			
Services Offered ⁵	0.12	0.04	0.028	0.153	.014	.073	0.77		
Product Delivery ⁶	0.13	0.05	0.380	0.039	.170	.081	.028	0.76	
Customer Buying Behavior ⁷	0.34	0.09	0.612	0.253	.291	.118	.020	.378	0.72

The Table 5. Shows of maximum shared variance and correlation matrix of online shopping the correlation matrix related to the Convergent and Discriminant validity of the construct has been considered of online shopping. The Maxim Shared Variance and Average Shared Variance

should be less than average variance extracted of the construct and square of average variance extracted should be greater than correlation loadings of other constructs.

- From the above table, the key point to be observed, i.e., MSV & ASV should be less than AVE. Square of AVE should be greater than correlation Loadings of other constructs

Figure: 2 Assumption model of online shopping

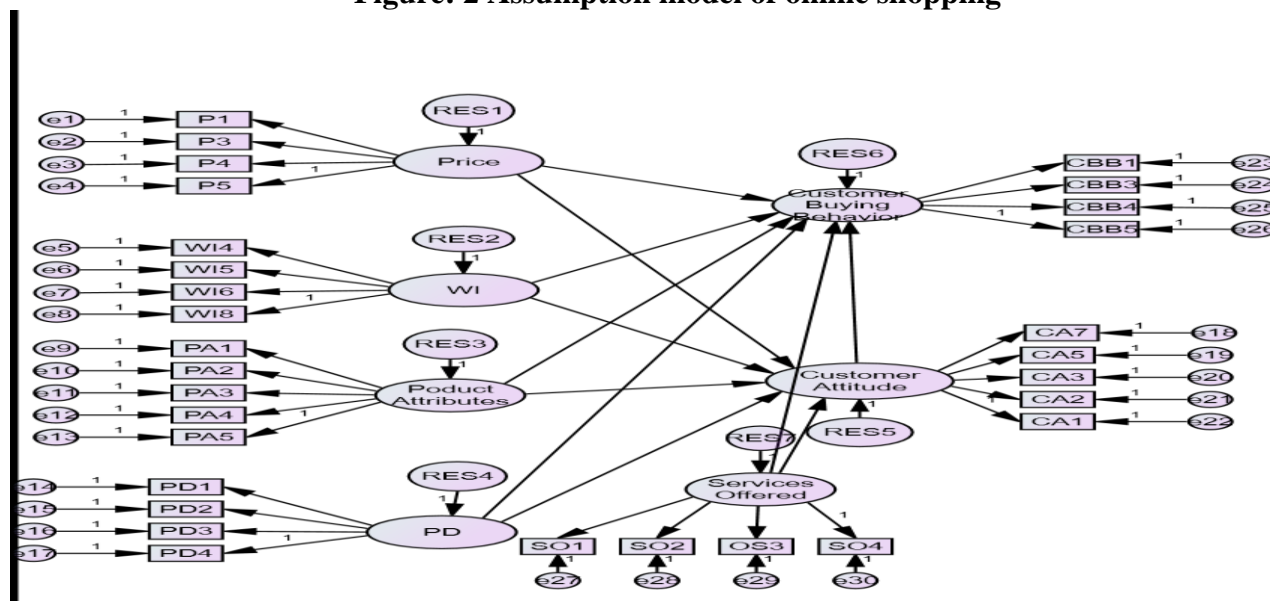


TABLE: 6. ASSUMPTION MODEL OF ONLINE SHOPPING

Relation	Estimate	P-Value	R ²
WI → CA	0.209	0.000	0.275
PA → CA	0.257	0.000	
PD → CA	0.404	0.000	
Price → CA	0.049	0.201	
SO → CA	0.008	0.849	
CA → CBB	0.691	0.000	0.477
WI → CA → CBB	0.144	0.000	
PA → CA → CBB	0.178	0.000	
PD → CA → CBB	0.279	0.000	
Price → CA → CBB	0.034	0.194	
SO → CA → CBB	0.006	0.859	

Model fit indices: $\chi^2 = 1002.983$; $df = 399$; $p\text{-value} = 0.000$; $GFI = 0.928$; $CFI = 0.950$; $NFI = 0.919$; $RFI = 0.912$; $IFI = 0.950$; $TLI = 0.945$; $RMSEA = 0.042$.

The above Table: 6. Indicates that direct paths from website information (WI), Product Attributes (PA), Product Delivery (PD) and customer attitude to customer buying behavior are

significant with p -value < 0.001 and their loadings are 0.209, 0.257, 0.404 and 0.691 respectively. Other two independent variables labeled price and SO were found to be insignificant with p -value 0.201 and 0.849. Indirect path estimates were tested from independent variables. Customer Attitude mediates customer shopping behaviour. Results indicate that three circuitous paths from website information (WI), Product Attribute (PA), and Product Delivery (PD) leading to Customer buying behavior (CBB) were significant. The other two indirect paths were insignificant. Independent variables cumulatively showed 0.275 percent of variation in customer attitude. Customer buying behavior variables have observed with 0.477 percent of variation from the model. Model fit indices were showing the good fit of the model with $\chi^2 = 1002.983$; $DF = 399$; p -value = 0.000; $GFI = 0.928$; $CFI = 0.950$; $NFI = 0.919$; $RFI = 0.912$; $IFI = 0.950$; $TLI = 0.945$; $RMSEA = 0.042$.

Figure: 4.3 Final Model: Online Shopping



TABLE: 7.FINAL MODEL: ONLINE SHOPPING

Relation	Estimate	P-Value	R ²
WI → CA	0.181	0.000	0.244
PA → CA	0.243	0.000	
PD → CA	0.389	0.000	
Price → CA	0.032	0.425	
SO → CA	0.014	0.753	
WI → CBB	0.117	0.000	0.474
PA → CBB	0.077	0.014	
PD → CBB	0.091	0.007	
Price → CBB	0.071	0.026	

SO → CA	-0.021	0.548
CA → CBB	0.590	0.000
WI → CA → CBB	0.107	0.000
PA → CA → CBB	0.143	0.000
PD → CA → CBB	0.230	0.000
Price → CA → CBB	0.019	0.406
SO → CA → CBB	0.008	0.759

Model fit indices: $\chi^2 = 972.809$; $df = 394$; $p\text{-value} = 0.000$; $GFI = 0.930$; $CFI = 0.952$; $RFI = 0.914$; $IFI = 0.952$; $NFI = 0.922$; $TLI = 0.947$; $RMSEA = 0.041$.

The Table 7. Indicates that direct paths from website information (WI), Product Attributes (PA), Product Delivery (PD) and Customer Attitude resulting in Customer buying behavior are significant with $p\text{-value} < 0.001$ and their loadings are 0.181, 0.243, 0.389 and 0.117 respectively. Other two independent variables labeled Price and Services offered (SO) were found to have insignificant results on preference towards online shopping with $p\text{-value}$ 0.425 and 0.753. Indirect path estimates were tested from independent variables namely Website Information (WI), Product Attributes (PA), Product Delivery (PD), Price and Services Offered by online retailer (SO) resulting in customer buying behaviour mediated by customer attitude. Results indicate that three circuitous paths from website information, Product Attribute and Product Delivery to Customer buying behavior were significant. The other two indirect paths were insignificant. Independent variables cumulatively showed 0.244 percent of the coefficient of determination variation on shopping preference. Model fit indices were showing the good fit of the model with $\chi^2 = 972.809$; $DF = 394$; $p\text{-value} = 0.000$; $GFI = 0.930$; $CFI = 0.952$; $NFI = 0.922$; $RFI = 0.914$; $IFI = 0.950$; $TLI = 0.947$; $RMSEA = 0.041$.

3.7. Hypotheses Testing Results

TABLE: 8. ONLINE SHOPPING MEDIATION HYPOTHESIS RESULTS

S. No	Hypotheses	Decision
H ₁	There is a significant relationship between website information and customer attitude.	Supported
H ₂	There is a significant relationship between product attributes and customer attitude	Supported
H ₃	There is a significant relationship between product delivery and customer attitude	Supported
H ₄	There is a significant relationship between price of online products and customer attitude	Not Supported
H ₅	There is a significant relationship between Services offered by online retailers and customer attitude	Not Supported

H ₆	There is a significant relationship between website information and customer buying behavior.	Supported
H ₇	There is a significant relationship between Product attribute and customer buying behavior towards online shopping	Not Supported
H ₈	There is a significant relationship between Product Delivery and customer buying behavior towards online shopping	Not Supported
H ₉	There is a significant relationship between Price and customer buying behavior towards online shopping	Supported
H ₁₀	There is a significant relationship between Services offered and customer buying behavior towards online shopping	Not Supported

4. FINDINGS AND DISCUSSION

4.1 Theoretical implications

The originality of this research is based on the development of a comprehensive model that examines the factors affecting customer online shopping. Although studies have been conducted in online shopping in retail sector in Indian context. The present studies of online shopping in retail sector is significant because the Indian retail sector is untapped market and there is a huge scope to conduct retail business on internet (E-Commerce) in India.

The study test the direct and indirect relationship between the website attribute information (WIA), product attributes (PA), product delivery (PD), price, Services offered (SO), website attribute information (WAI) and customer buying behavior (CBB), Product attribute (PA) and customer buying behavior (CBB), Product Delivery (PD) and customer buying behavior (CBB), Price and customer buying behavior (CBB), Service offered (SO) and customer buying behaviour (CBB) towards online shopping.

The finding of the study shows the direct effect of website information on customer attitude is significant followed by the direct effect of price on customer attitude is significant, The direct effect of product attributes on customer attitude is significant The direct effect of product delivery on customer attitude is significant, The direct effect of services offered on customer attitude is not significant, The direct effect of customer attitude on customer buying behavior is significant, The effect of price on customer buying behavior is significant, and product attribute on customer buying behavior is insignificant, The direct effect of services offered on customer buying behavior is insignificant, The effect of website information mediated by customer attitude is significant, The effect of product delivery mediated by customer attitude is significant, The effect of price on customer buying behavior mediated by customer attitude is significant, The effect of services offered on customer buying behavior mediated by customer attitude is insignificant, The effect of product attribute on customer buying behavior mediated by customer attitude is significant.

4.2 Theoretical Contribution of the Study

The research contributes to E-retailing sector to develop online shopping model which identifies variables and dimension of retailing customer attitude, price, product attribute, and product

delivery on time, service offered, and customer buying behaviour towards online shopping in the Indian context.

Exploring the important factors of online shopping which motivate the customer to purchase online rather than shop offline. The present study developed scales for measuring online retail preferences in Indian context the study has identified and validated the Factors Affecting customer to shop online.

4.3 Practical Implications

The study has practical implications for online retailers for better understanding the shopper behavior in the context of changing consumer's demographic and psychographic characteristics in an emerging Indian retail market. The findings may help the retailers to segment and target by altering retail formats to capture the customer's and its preference, to choose more regular online retail stores for their shopping needs. The study has highlighted areas to address for the online retailing. The study also provides the marketing manager's issues to address the determination of consumer attitude for online shopping compare with offline shopping channel. The study has identified the demographic profile of the shoppers who prefer online shopping. The study has identified the product categories which have a higher preference among consumers for online shopping.

5. Limitations of the Study and Directions for the Future Research

The research has its own limitations. As the sample of the survey was from Indian metro cities, i.e., Hyderabad, Chennai, Mumbai, Delhi, and Kolkata. Therefore, the future studies can focus semi-urban and rural areas of the country. The study adopted purposive sampling methods which are non-random, and there may be a chance of sampling bias. Therefore, the primary study can utilize random sampling methods for further validating the study results. This study was done in a single time due to cost and time constraints. Longitudinal studies are more important to understand the customers purchasing preferences. Thus, future study can adopt the longitudinal approach. Future studies can test the scale for further validation in other parts of the country. Future studies may add other related factors like risk, satisfaction, trust, personal data privacy, etc. in online shopping model. The study did not address the role of factors like hedonics (pleasure derived etc.), the presence of friends and family members during the purchase process, etc. Customer to Customers (C2C) shopping models like Olx and Quikr are not considered for the study. The study developed and validated of online shopping model which is predominantly in an Indian context, which may not be applicable at a universal level.

CONCLUSION:

The advent of information technology coupled with the adaptation of Internet (which is yet to reach its full potential) by customers has paved the way for online retailing. Online retailing offers opportunities and challenges for the customers as well retailers. The traditional retailing formats are bound to undergo a radical change in the wake of online retailing. While online retailing promises to deliver greater value to the costumes (it does not require a huge investment in physical retail space in prime locations), it also poses challenges to the retailers, regarding ensuring secure transaction procedures, managing seamless supply chain and efficient logistics systems.

The customers of online retailing expect the convenience of shopping with the click of a button (without the need to move from the home, facing heavy traffic, dealing with parking space, etc.) making price comparisons online and search across a wide variety of product assortments in the virtual space. However, the customers also face the challenges of dealing with unknown retailers making online payments and ordering products which they can only feel and touch after the physical delivery of the product. Given the vast potential of electronic retailing especially in the context of Indian environment which constitutes a higher percentage of the younger population, the role of demographics in online purchasing should be carefully analyzed for the success of online retailing. This would enable the retailers to understand the needs and concerns of various target groups and accordingly offer the services.

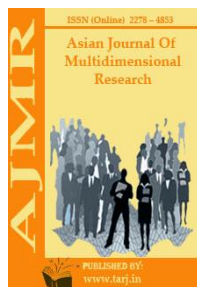
REFERENCES:

- Andersone, I., & Gaile-Sarkane, E. (2009). Behavioural differences in consumer purchasing behavior between online and traditional shopping: Case of Latvia. *Economics and management*, (14), 345-352.
- Atul, K., & Sanjoy, R. (2013). Store attribute and retail format choice. *Advances in Management*, 6(11), 27.
- Bhandari, N., & Kaushal, P. (2013). Online Consumer Behavior: An Exploratory Study. *Global Journal of Commerce and Management Perspective*, 2(4), 98-107.
- Bhatnagar, A. (2012). Supply Chain Challenges for Organised Retailing in India. *International Journal of Management Research and Reviews*, 2(9), 1590.
- Bhatnagar, A., Misra, S., & Rao, H. R. (2000). On risk, convenience, and Internet shopping behavior. *Communications of the ACM*, 43(11), 98-105.
- Boedeker, M. (1995). New-type and traditional shoppers: a comparison of two major consumer groups. *International Journal of Retail & Distribution Management*, 23(3), 17-26.
- Chen, S., & Granitz, N. (2012). Adoption, rejection, or convergence: Consumer attitudes toward book digitization. *Journal of Business Research*, 65(8), 1219-1225.
- Chiang, K. P., & Dholakia, R. R. (2003). Factors driving consumer intention to shop online: an empirical investigation. *Journal of Consumer psychology*, 13(1-2), 177-183.
- Chiu, C. M., Chang, C. C., Cheng, H. L., & Fang, Y. H. (2009). Determinants of customer repurchase intention in online shopping. *Online information review*, 33(4), 761-784.
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Das, G. (2014). Factors affecting Indian shoppers' attitude and purchase intention: An empirical check. *Journal of Retailing and Consumer Services*, 21(4), 561-569.
- Dennis, C., Merrilees, B., Jayawardhena, C., & Tiu Wright, L. (2009). E-consumer behaviour. *European Journal of Marketing*, 43(9/10), 1121-1139.

- Dennis, C., Morgan, A., Wright, L. T., & Jayawardhena, C. (2010). The influences of social e-shopping in enhancing young women's online shopping behaviour. *Journal of Customer Behaviour*, 9(2), 151-174.
- Dutta, S. (2012). E-tailing—a digital make-over of traditional retailing of India—issues and challenges. *SIT Journal of Management*, 1(1), 207-217.
- Evanschitzky, H., Kenning, P., & Vogel, V. (2004). Consumer price knowledge in the German retail market. *Journal of Product & Brand Management*, 13(6), 390–405.
- Gehrt, K. C., & Yan, R. N. (2004). Situational, consumer, and retailer factors affecting Internet, catalogue, and store shopping. *International Journal of Retail & Distribution Management*, 32(1), 5-18.
- Gehrt, K. C., Rajan, M. N., Shainesh, G., Czerwinski, D., & O'Brien, M. (2012). Emergence of online shopping in India: shopping orientation segments. *International Journal of Retail & Distribution Management*, 40(10), 742-758.
- Ghosh, P., Tripathi, V., & Kumar, A. (2010). Customer expectations of store attributes: A study of organized retail outlets in India. *Journal of Retail and Leisure Property*, 9(1), 75-87.
- Goel, B., & Dewan, B. (2011). Factors affecting consumer preferences of shopping at organised retail stores in Punjab. *Journal of Engineering, Sciences and Marketing Education*, 4, 44-49.
- Gopal, V. V., & Suryanarayana, A. (2011). Growth drivers and challenges for organised retailing in India. In *2010 International Conference on Business and Economics Research* (Vol. 1).
- Goswami, P., & Mishra, M. S. (2009). Would Indian consumers move from Karana stores to organized retailers when shopping for groceries? *Asia Pacific Journal of Marketing and Logistics*, 21(1), 127-143.
- Grewal, D., Janaki Raman, R., Kalyanam, K., Kannan, P. K., Ratchford, B., Song, R., & Tolerico, S. (2010). Strategic online and offline retail pricing: A review and research agenda. *Journal of Interactive Marketing*, 24(2), 138–154.
- Handa, V., & Grover, N. (2012). Retail sector in India: Issues & challenges. *International Journal of Multidisciplinary Research*, 2(5), 244-264.
- Hart, C., Doherty, N., & Ellis-Chadwick, F. (2000). Retailer adoption of the Internet—Implications for retail marketing. *European Journal of Marketing*, 34(8), 954-974.
- Hsin Chang, H., & Wang, H. W. (2011). The moderating effect of customer perceived value on online shopping behaviour. *Online Information Review*, 35(3), 333-359.
- Jackson, V., Stoel, L., & Brantley, A. (2011). Mall attributes and shopping value: Differences by gender and generational cohort. *Journal of retailing and consumer services*, 18(1), 1-9.
- Jain, N. K., Gajjar, H., Shah, B. J. & Sadh, A. (2017). E-fulfilment dimensions and its influence on customers in e-tailing: a critical review. *Asia Pacific Journal of Marketing and Logistics*, 29(2), 347-369.
- Jain, R., & Bagdare, S. (2009). Determinants of Customer Experience in New Format Retail Stores. *Journal of Marketing & Communication*, 5(2).

- Jarvenpaa, S. L., & Todd, P. A. (1996). Consumer reactions to electronic shopping on the World Wide Web. *International Journal of Electronic Commerce*, 1(2), 59–88.
- Jayasankara Prasad, C., & Ramachandra Aryasri, A. (2011). Effect of shopper attributes on retail format choice behaviour for food and grocery retailing in India. *International Journal of Retail & Distribution Management*, 39(1), 68-86.
- Joshi, D. J. (2013). An analysis of the existing literature on B2C E-commerce. *Indian Journal of Marketing*, 43(12), 34-46.
- Kar, S. S., & Sahoo, S. K. (2009). Organised Retailing in India: Issues and Challenges. *Indian Journal of Marketing*, 39(11), 10-14.
- Kennedy, A., & Coughlan, J. (2006). Online shopping portals: an option for traditional retailers? *International Journal of Retail & Distribution Management*, 34(7), 516-528.
- Khare, A., & Rakesh, S. (2011). Antecedents of online shopping behavior in India: An examination. *Journal of Internet Commerce*, 10(4), 227-244.
- Kim, J., & Forsythe, S. (2010). Factors affecting adoption of product virtualization technology for online consumer electronics shopping. *International Journal of Retail & Distribution Management*, 38(3), 190-204.
- Kim, J., & Park, J. (2005). A consumer shopping channel extension model: attitude shift toward the online store. *Journal of Fashion Marketing and Management: An International Journal*, 9(1), 106-121.
- Liang, C. J., & Chen, H. J. (2009). A study of the impacts of website quality on customer relationship performance. *Total Quality Management*, 20(9), 971-988.
- Liang, C. J., Chen, H. J., & Wang, W. H. (2008). Does online relationship marketing enhance customer retention and cross-buying? *The service industries journal*, 28(6), 769-787.
- Liu, C., & Forsythe, S. (2011). Examining drivers of online purchase intensity: Moderating role of adoption duration in sustaining post-adoption online shopping. *Journal of retailing and consumer services*, 18(1), 101-109.
- Lu, H. P., & Yu-Jen Su, P. (2009). Factors affecting purchase intention on mobile shopping web sites. *Internet Research*, 19(4), 442-458.
- Mujumdar, A. (2005). A Model for Customer Loyalty for Retail Stores inside Shopping Malls- An Indian Perspective. *Journal of services research*.
- Mummalaneni, V. (2005). An empirical investigation of Web site characteristics, consumer emotional states and on-line shopping behaviours. *Journal of Business Research*, 58(4), 526-532.
- Raijas, A., & Tuunainen, V. K. (2001). Critical factors in electronic grocery shopping. *The International Review of Retail, Distribution and Consumer Research*, 11(3), 255-265.
- Reibstein, D. J. (2002). What attracts customers to online stores, and what keeps them coming back? *Journal of the academy of Marketing Science*, 30(4), 465-473.
- Schoenbachler, D. D., & Gordon, G. L. (2002). Multi-channel shopping: understanding what drives channel choice. *Journal of Consumer Marketing*, 19(1), 42-53.

- Sengupta, A. (2008). Emergence of modern Indian retail: an historical perspective. *International Journal of Retail & Distribution Management*, 36(9), 689-700.
- Shergill, G. S., & Chen, Z. (2005). Web-Based Shopping: Consumers 'attitudes Towards Online Shopping in New Zealand. *Journal of electronic commerce research*, 6(2), 78.
- Shobeiri, S., Laroche, M., & Mazaheri, E. (2013). Shaping e-retailer's website personality: The importance of experiential marketing. *Journal of retailing and consumer services*, 20(1), 102-110.
- Sim, L. L., & Koi, S. M. (2002). Singapore's Internet shoppers and their impact on traditional shopping patterns. *Journal of Retailing and Consumer Services*, 9(2), 115-124.
- Singh, D., Bansal, M., & Kaur, N. (2012). Internet retailing-new era of marketing. *International Journal of Marketing and Technology*, 2(3), 154.
- Singh, H., & Kaur, N. (2008). Retailing in India: recent trends & challenges. *Indian journal of Marketing*, 38(4).
- Thaichon, P. (2017). Consumer socialization process: The role of age in children's online shopping behavior. *Journal of Retailing and Consumer Services*, 34, 38-47. *Transportation*, 39(5), 957-974.
- Tse, A. C., & Yim, F. (2002). Factors affecting the choice of channels: online vs. conventional. *Journal of International Consumer Marketing*, 14(2-3), 137-152.
- Wakefield, K. L., & Baker, J. (1998). Excitement at the mall: determinants and effects on shopping response. *Journal of retailing*, 74(4), 515-539.
- Wu, H., & Zhang, J. T. (2006). Nonparametric regression methods for longitudinal data analysis: mixed-effects Modeling approaches (Vol. 515). John Wiley & Sons.
- Yang, Z., & Jun, M. (2002). Consumer perception of e-service quality: from internet purchaser and non-purchaser perspectives. *Journal of Business Strategies*, 19(1), 19.
- Zhou, L., Dai, L., & Zhang, D. (2007). Online shopping acceptance model-A critical survey of consumer factors in online shopping. *Journal of Electronic commerce research*, 8(1), 41.



A REVIEW ON SLUMS IDENTIFICATION AND POLICIES IN URBAN PUNJAB, INDIA

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ABSTRACT

Growing populations, expanding urban areas, declining resources and lack of management are responsible for the growth of settlements with dark narrow streets, which are collectively called 'Slums'. The definition of term 'Slum' is given by various organizations at international, national and state level; describe the slum condition very clearly in that particular area. In India, many states have their own definition for slum and slum types. In Punjab state, while following its state definition, municipalities have identified slums type poorly built structures which need up gradation. But, at national level, to improve the housing structures, avail facilities and development of such areas, many policies are made and implemented by following national definition (Census of India or National Sample Survey Organization) of slums. The main focus of the study is to understand the subject of identification of different type of slums while preparing the policies at national and state level. This review study is a theoretical perspective on the concern of state versus national identification of slums and scenario of policy implementation in Class I cities of Punjab.

KEYWORDS: *Slums, Cities, Definitions, Identification, Policies.*

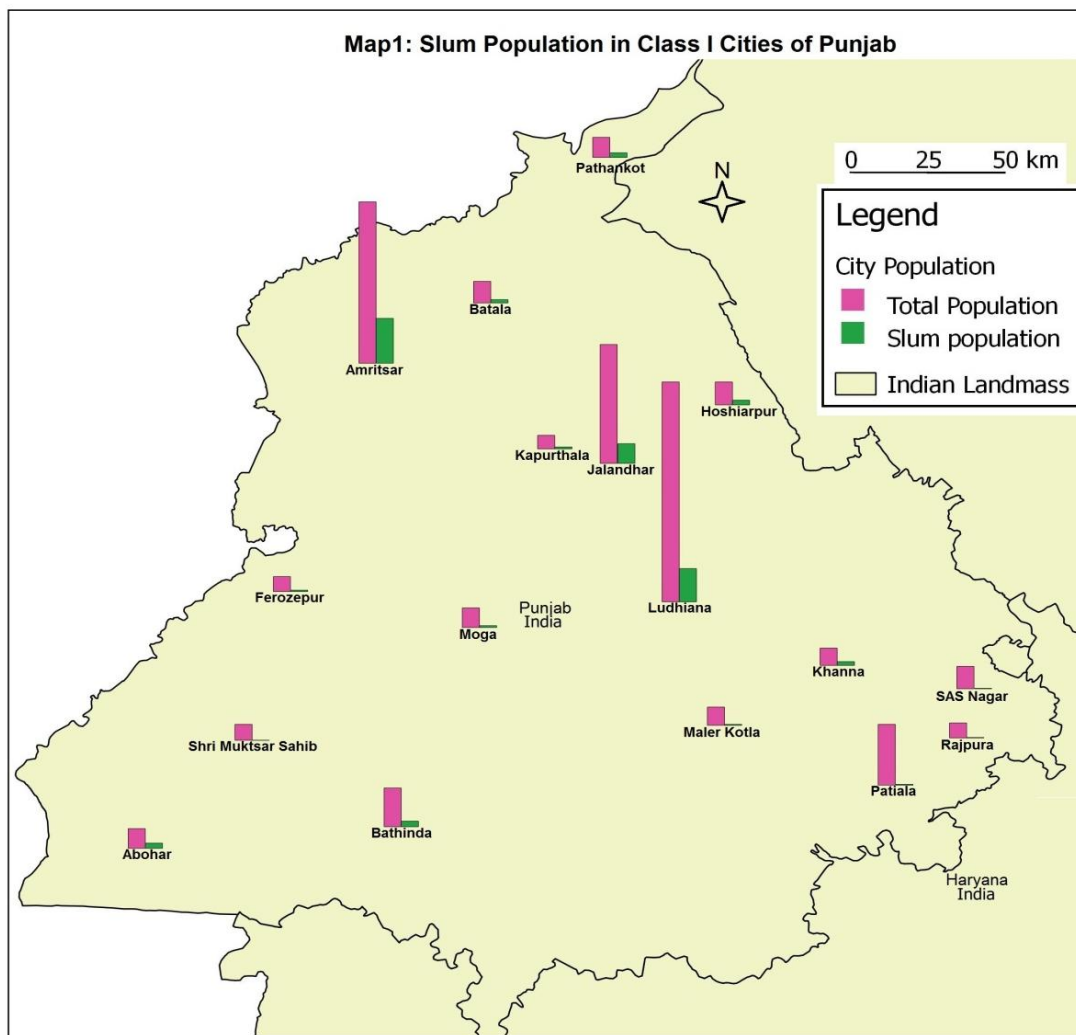
INTRODUCTION:

The uncontrolled wave of urbanization across the political boundaries (McKee & Smith, 1972), leads to increase in land prices in one urban area push the economic activities to other urban areas also (Insunju, et al., 2011; Mahadevia & Sarkar, 2012). The major impacts of growth of settlements in urban areas, and poverty induced rural-urban migration are; proliferation of slums and informal settlements, housing stock characterized by congestion and obsolescence, social deprivation, deteriorating nutrition and health status for urban poor (PMIDC, 2016). Vast slum population is facing the scarcity of adequate water, sanitation, healthcare and infrastructure services (Shome, 2009). Mike Davies called urban slums as Planet of slums in his various writings due to increasing urban slum population and urban slums are considered as most life threatening areas of living. Most of slum people are employed in informal sector or self-employment like tea shopkeeper, auto rickshaw drivers, rag pickers, labourers etc. and population is predominated by male population due to migration factor (Kumar & Aggarwal, 2003). Abandoned migration and messy growth of slums are responsible for several demographic, physical, and environmental imbalances which lead to increase crimes, diseases, traffic congestions, encroachment of public lands in urban areas (Teotia, 2007). Broad term urban area is being used for town and its categories, city and its categories, and outgrowths. Urban areas can be categorized on the basis of number of people residing, people engaged in non-agriculture activities or being managed by municipalities. As per 2011 census, there are 217 towns (statutory towns) in Punjab State and the services to the households are managed by various municipal corporations, municipal committees and municipalities. In terms of cities, there are 18 Class I cities in Punjab, which has more than 1 lakh population residing within the city (Census of India, 2011). Class I cities of Punjab state have excellent employment opportunities for poor people but the increasing number of population and informal settlements make this issue a matter of concern (Kumar & Sidhu, 2005).

DEFINING SLUMS:

Different nations use different words for slum-like settlements in their native languages like ghettos, bidonville, barrio, favela, katchi abadi, kampong, masseques, shanty towns, skid row, squatter cities, sowetto, shanties, jhuggi-jhopri, Jhopar-patti, basties and chawls. The core idea of the definitions of slum like settlements revolves around poor housing and lacking basic amenities and facilities. UN-Habitat points out that lack of improved water or lack of improved sanitation or lack of sufficient living area and housing conditions are core areas of slum definition (UN-Habitat, 2006). Encyclopaedia Britannica adds more details like lack of family privacy and space for recreational use into the definition and describes the slum settlements as physically as socially deteriorated areas (Ministry of Housing and Urban Poverty Alleviation, 2010). Register General of India adds a new condition to the definition, which is adopted by Census of India and National Sample Survey Organization, i.e. at least 300 populations or about 60-70 households poorly built congested tenements are collectively called slums (Ministry of Housing and Urban Poverty Alleviation, 2010). Ministry of Housing and Urban Poverty Alleviation, National Buildings Organization, report collected all definitions of slums given by different ministries, by NSSO different rounds and by different states to denote their slum conditions in different parts of India. The report mentioned that NSSO defined slums on the basis of the objectives of their survey whether they are taking declared or non-declared slums, notified or non-notified slums but in their definitions they took the conditions as per the census of India definition of slums. Definitions adopted by different states in India are highly influenced by the legal acts of government. The document entitled 'The Punjab Slum Areas (Improvement and Clearance) Act, 1961' known as Punjab Act No. 24 of 1961 is the first legal document consisting slum definition. Chapter II of 'The Punjab Slum Areas (Improvement and Clearance) Act, 1961' explains about declaration of slum areas by notification in Official Gazette i.e. the buildings in particular area- are in any respect unfit for human habitation; are by reason of dilapidation, overcrowding, narrow streets, lack of ventilation, light or sanitation facilities or any combination of these factors,

detrimental to safety, health or morals. Slum definition in Punjab has not shown any further modifications in it. By following this definition, 17 out of 18 Municipal Corporation/Municipalities of Class I cities of Punjab reported existence of slums (Map 1) and associated problems in their cities. Barnala city Municipal Corporation did not report any slum till 2017.



Source: Map is created using QGIS, Population data is extracted from Census of India, 2011

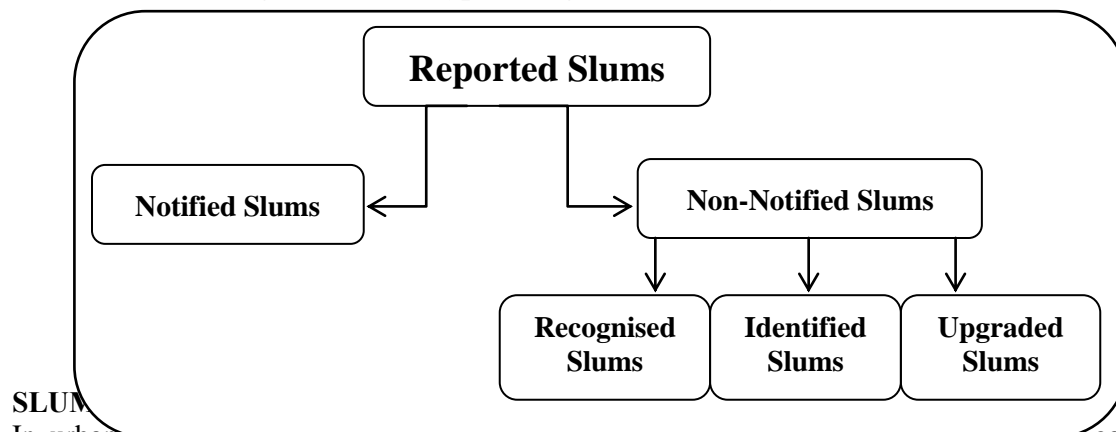
SLUMS WITHIN THE SLUM:

Slum or informal settlements are considered as living place of urban poor who are living in the most deprived conditions in urban areas with lack of facilities as well as violated human rights mainly right to live with dignity. Whether the slums were more prevalent in metros, but now they are increasing in cities and towns (Sawhney, 2013). Slums found everywhere in any urban areas but sometimes location of slums may be at centre in advanced or developed cities but may be in periphery or outgrowths in emerging city (McKee & Leahy, 1970). Despite having locations in different areas of the city, slums have different types. At national level, (Census of India, 2011) classified the slums into three major types; Notified Slums, Recognized Slums and Identified Slums. Notified slums are those areas of any town or city which are notified as 'Slum' by State, Union territories Administration or Local Government under

any Act including a 'Slum Act' (Slum Area Improvement and Clearance Act, 1956). Recognized slums are those slums which are recognised as 'Slum' by State, Union Territories Administration or Local Government, Housing and Slum Boards, but not notified under any slum Act. Identified slums have concrete definition i.e. 'A compact area of at least 300 populations or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities' (Census of India, 2011). Identified slum areas are personally identified by the Charge Officer which must be duly recorded in charge register and also inspected by an officer nominated by Directorate of Census Operations. The definitions only vary in the form by whom the data is being recorded and these are collectively called Reported slums (NSSO, 2013).

In National Sample Survey Organization (NSSO) 69th round, slums are divided into two broad categories; Notified and Non-Notified Slums. NSSO consider the Notified slums as same as Census of India, but define Non-notified slums as those areas of at least 20 households poses poorly built compact, crowded, temporary kind of settlements with inadequate sanitary and drinking water facilities in unhygienic conditions (NSSO, 2012). If such a slum is not a notified slum, then it can be called a Non-Notified slum. Centre for Urban and Regional Excellence (CURE) survey report of Ludhiana city for Slum Free City Plan of Action (SFCPoA) added one more type called Upgraded Slums. These upgraded Slums are those areas which were Notified Slums but after policy implementation these areas are upgraded. These are to be de-notifying from the notified slums list (CURE, 2015) but not exist even in notified slum list of Ludhiana City. In Punjab Municipal Infrastructure Development Company (PMIDC) survey report of Bathinda city for Slum Free City Plan of Action (SFCPoA) categorised the slums into three broad types; Notified, Non-Notified and Identified Slums (not notified yet but fulfilling all conditions of non-notified slums) (PMIDC, 2016). In Punjab state of India, three type of Non-Notified slums could be categorized; Recognised (Unrecognised or to be recognise) Slums, Identified Slums and Upgraded Slums (Figure 1).

Figure 1: Slum Types being used for Surveys in Punjab, India



SLUM

In urban areas of India, poor infrastructure and high density population widened the gaps between effective housing policies and their implementation (PRIA, 2013). For the provision of basic amenities and facilities, education, health, roads, water supply, sanitation and electricity in slum areas, Municipal Corporations, State Governments and Central Governments conduct surveys and prepare policy frameworks. Implementation and effectiveness of the policies for the upliftment of slums is the major objective of policy approach. On the basis of objectives, slum policies can be categorized into two types; economically driven policies and infrastructure driven policies. Economically driven policies concentrate on the economic upliftment and poverty alleviation of slum dwellers by providing employment opportunities, land for houses and land ownership. Ministry of Housing and Poverty Alleviation, Government of India policies; Subsidized Industrial Housing Scheme (1952), Swarna Jyanti Shahari

Rozgar Yogna (1997), Integrated Low Cost Sanitation Scheme (1981), Interest Subsidy Scheme for Housing the Urban Poor (sub-mission of JNNURM), Affordable Housing in Partnership (2013) are for the economic upliftment of slum dwellers (Ministry of Housing and Urban Poverty Alleviation, 2010). Infrastructure driven policies are those whose objectives mainly revolve around development of infrastructure and provision of basic amenities in slum areas. Government of India's policies for slum up gradation are; Lower Income Group Housing Scheme (1954), Site and Services Scheme (1960), Environmental Improvement of Urban Slum (1972-1973), Integrated Low-cost Sanitation Scheme (1979-80), EWS Housing Scheme (1980), Urban Basic Services Scheme (1986), Urban Basic Services for Poor Programme (1990-91), National Slum Development Programme (1996), Two Million Housing Programme (1998-99), Valmiki Ambedkar Awas Yojana (2001), Jawaharlal Nehru National Urban Renewal Mission (2005), Basic Services for Urban Poor & Integrated Housing and Development Programme (sub-mission of JNNURM), National Housing and Habitat Policy (1998, 2007), and Mission Rajiv Awas Yojna (RAY) (2011) (Charumitra, et al., 2014). Government of India and associated ministries or institutions follow NSSO and Census of India definitions for identification of each type of slums during preparation of policy framework.

Punjab Slum Areas (Improvement and Clearance) Act, 1961, defines the slum areas identifications, slum clearance and improvement legal actions. As per Punjab stats data estimations, there were no slums reported in Urban Punjab before 1975, but from 1976-1980 in all urban areas of Punjab 95 slums has been reported. In Punjab, 293928 slums households are reported in 2011 census which occupies 1460518 populations of urban areas (Census of India, 2011). After, 1976, for the up gradation of urban Punjab slums, Government of India policies work by following the NSSO and Census of India definitions of slums. The policies show good success rate in urban Punjab which is calculated by various ministries reports Like Ministry of Urban Development, Ministry of Housing and Urban Poverty Alleviation, Ministry of Housing and Urban Affairs. In December 2014, 55 slum families were successfully rehabilitated under JNNURM scheme in Ludhiana city of Punjab (Goyal, 2014). On the other hand, the number of slums and slum population growth scenario is same as national level. At present, Rajiv Awas Yojna (RAY), a Government of India Programme, is working in all Class I cities of Punjab. Every Municipal Corporation is working for the identification of slums. Among all Class I cities of Punjab; Amritsar, Ludhiana, Jalandhar and Bathinda are top four cities on the basis of slum populations (Census of India, 2011). These top four cities have different type of slums as per different definitions and different survey conducting institutions are working for slum identification in each city (Table 1).

Under Rajiv Awas Yojna Surveys, NSSO and Census of India's definitions about Notified slums are used but each city of Punjab has different type of Non-Notified slums (Table 1). In this way, Non-Notified slums do not have a standardized definition at state level in Punjab. Upgraded slums (a type of non-notified slum) of Ludhiana city are previously of notified type. Ludhiana city is selected for first round of by beating two big cities of Punjab i.e. Jalandhar & Amritsar as well as Chandigarh to be Smart City. Ludhiana city is in the list of first 20 Smart cities proposal from North-West Region of India which cover three states; Punjab, Haryana & Himachal Pradesh (Goyal, 2016). In smart city project, Ludhiana city slum have to be upgraded by following national definition of slums.

TABLE 1: SLUM IDENTIFICATION UNDER RAJIV AWAS YOJNA IN TOP FOUR CLASS I CITIES OF PUNJAB

Name of the City	Targeted Slum Population	Targeted Slum Households	Types of Slums under RAY		Survey Conducting Institution
			Notified	Non-Notified	
Amritsar	3,29,797	66,444	Yes	Yes	**

Ludhiana	3,63,122	63, 831	Yes	Unrecognized, Vehda-type, Upgraded.	Centre for Urban and Regional Excellence, New Delhi
Jalandhar	17005	3225	Yes	Identified	Municipal Corporation, Jalandhar
Bathinda	46169	11867	Yes	Non-notified, Newly Identified	Punjab Municipal Infrastructure Development Company, Chandigarh

**Data of Amritsar City has been taken from Census (2011), not for RAY

Source: (Census of India, 2011)(CURE, 2015), (Municipal Corporation Jalandhar, 2013)(PMIDC, 2016),

CONCLUSION:

While, Punjab has excellent employment opportunities for slum dwellers but the increasing number of population and slum settlements make the slum conditions more vulnerable and a matter of concern. Several organizations have worked on slum areas of urban Punjab but the data consists of the fact that notified slums get benefitted more by policies. Except them, these are several other areas (non-notified slums) also which look like slum conditions according to the definition but not under slum Act yet, at some places they are temporary in nature. The expenditures and the objectives of the policies are hoped to sought out the issues in successful manner but slum people are still living in crowded, bad air and water, solid waste sites and the number of slum households are keep on growing. Such types of results are somehow despair in context of eliminating the poor conditions of living of slum people. Policies prepare at national level give preference to the slums which are notified or fall under the definitions at national level, get benefit more rather than other types of slums. Such areas and their associated problems are to be addressed at city level.

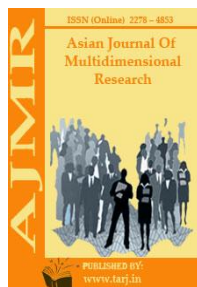
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REFERENCES:

1. Census of India, 2011. *Slum Population 2011*. [Online] Available at: <http://www.indiastat.com/urbanareas/31/slums/257/stats.aspx> [Accessed 20 January 2015].
2. Charumitra, B., Dhote, K. K. & Sharma, A., 2014. Slum Redevelopment Strategy: A Way forward to Urban Environment Management through Inclusive Approach. *Research Journal of Engineering Sciences*, 3(7), pp. 28-37.
3. CURE, 2015. *Slum Free City Plan of Action, Ludhiana*, New Delhi: Centre for Urban and Regional Excellence.
4. Goyal, D., 2014. *In a first in Punjab, slum dwellers shifted to BSUP flats at Giaspura*. [Online] Available at: <http://indianexpress.com/article/cities/ludhiana/in-a-first-in-punjab-slum-dwellers-shifted-to-bsup-flatsatgiaspura/#sthash> [Accessed 28 December 2017].

5. Goyal, D., 2016. *Ludhiana Smart City projects review meeting: Just one project takes off in 2 years.* [Online]
Available at: <https://indianexpress.com/article/cities/ludhiana/ludhiana-smart-city-projects-review-meeting-just-one-project-takes-off-in-2-years-5145122/>
[Accessed 19 April 2018].
6. Insunju, J. B. et al., 2011. Socio Economic Aspects of Improved Sanitation in Slums: A Review Study. *Public Health*, Volume 25, pp. 368-376.
7. Kumar, N. & Aggarwal, S. C., 2003. Patterns of Consumption and Poverty in Delhi Slums. *Economic and Political Weekly*, 38(50), pp. 5294-5300.
8. Kumar, N. & Sidhu, A., 2005. Pull and Push Factors in Labour Migration: A Study of Brick-Kiln Workers in Punjab. *Indian Journal of Industrial Relations*, 41(2), pp. 221-232.
9. Mahadevia, D. & Sarkar, S., 2012. *Handbook of Urban Inequalities*. New Delhi: Oxford University Press.
10. McKee, D. L. & Leahy, W. H., 1970. Intra-Urban Dualism in Developing Economics. *Land Economics*, 46(4), pp. 486-489.
11. McKee, D. L. & Smith, G. H., 1972. Environmental Diseconomies in Suburban Expansion. *American Journal of Economics and Sociology*, 31(2), pp. 181-188.
12. Ministry of Housing and Urban Poverty Alleviation, 2010. *Report of the Committee on Slum Statistics/Census*, New Delhi: Government of India.
13. Municipal Corporation Jalandhar, 2013. *Rajiv Awas Yojna- Pilot Detailed Project of Jalanshar City*, Jalandhar: Municipal Corporation Jalandhar.
14. NSSO, 2012. *NSSO's 69th round of survey for Drinking water and Sanitation*, New Delhi: National Sample Survey Organization, Ministry of Statistics & Programme Implementation.
15. NSSO, 2013. *Key Indicators of Urban Slums in India*, New Delhi: National Sample Survey Organization, Ministry of Statistics & Programme Implementation.
16. PMIDC, 2016. *Skum Free City Plan of Action - Bathinda City*, Chandigarh: Punjab Municipal Infrastructure Development Company.
17. PRIA, 2013. *Contribution of Urban Informal Settlement Dwellers to Urban Economy in India.*, New Delhi: Participatory Research in Asia.
18. Sawhmey, U, 2013. Slum Population in India: Extent and Policy Response. *International Journal of Research in Business and Social Science*, 2(1), pp. 2147-4478.
19. Shome, S., 2009. *Accommodating Poor in Elite's Urban Space: Status of Selected Slums in Ahmedabad*, Ahmedabad: Mahila Housing SEWA Trust.
20. Teotia, M. K., 2007. Strengthening and Sustaining Vitality of Urban Areas: The Case of North-West India. *Sociological Bulletin*, 56(1), pp. 65-87.
21. Un-Habitat, 2006. *State of the World's Cities.*, Nairobi: United Nations Human Settlements Programme.



A STUDY ON CATEGORY-WISE PRODUCTION, DOMESTIC SALES AND EXPORT OF AUTOMOBILE INDUSTRY IN INDIA

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ABSTRACT

This research paper is a study on the automobile industry in India. The importance of the study is very high since India has been on a stupendous growth trajectory in the last decade in terms of production, domestic sales and export. For the study of that the researcher has taken production, domestic sales and export data for five years from 2013-14 to 2017-18 with secondary data. The study has been analysed in terms of Compound Annual Growth Rate and Trend Analysis. The growth rates for future have been estimated based on the analysis for next two years from 2018-19 to 2019-20 by using least square method. The study shows that the overall growth is positive even though there are some fluctuations from linearity.

KEYWORDS: *Compound Annual Growth Rate (CAGR), Domestic Sales, Export, Production, Trend Value*

1. INTRODUCTION

The automobile industry has been the theme of significant research over the years. Automobile industry occupies a very important place in the Indian industrial scenario. As an outcome of its onward and backward connections with several key segments of the economy, it has a strong multiplier effect and is capable of being the driver of economic growth. The automobile industry which has always been an evaluating aspect for the economic strength of a nation in industrial sector. India has achieved a tremendous growth in automobile industry in the last few years. Its growth is remarkable in almost all the sectors within automobile industry namely, two wheelers, three wheelers and four wheelers. The four wheelers category can be further classified into passenger vehicles and commercial vehicles. India is emerging as one of the world's fastest growing passenger car markets and the second largest two wheeler manufacturer. It is also the home for the largest motor cycle manufacturer and fifth largest commercial vehicle manufacturer. Not only the production growth is remarkable but also the quality of the vehicles produced. This is corroborated by the fact that the export of vehicles from India has also been growing in numbers. After liberalisation the automobile industry was delicensed and announced the New Industrial Policy. At present the automobile industry is contributing to India's manufacturing GDP (22%) and to India's overall GDP (7%). India is also a prominent auto exporter and has strong export growth expectations for the near future. Automobile exports grew 26.56 per cent during April-July 2018. It is expected to grow at a CAGR of 3.05 per cent during 2016-2026. In addition, several initiatives by the Government of India and the major automobile players in the Indian market are expected to make India a leader in the two-wheeler and four-wheeler market in the world by 2020.

2. REVIEW OF LITERATURE

Viswanatha Krishnan (1995) analysed that the Indian Automobile industry has experiencing an unprecedented boom in demand for all types of vehicles. This boom has been triggered primarily by two factors like increase in disposable income and the Indian governments liberalisation measures. The trend has encouraged many multinational automakers from Japan, USA and Europe to enter the Indian market mainly through joint ventures with Indian firms.

Avinandan Mukherjee (1996) revealed that the market is growing at about 25% from 1991 to 1995. In the highly price sensitive market, reduction of prices because of lower duties and taxes and progressive indigenization and rising middle class incomes are likely to further increase industry growth rate.

Hemal Pnadya and Heal Pandya (2013) concluded that fundamental analysis is a method of evaluating a security that entails attempting to measure its intrinsic value by examining related economic, financial and other qualitative and quantitative factors and company factors specific factors. Top-down approach EIC approach: Economy-Industry-Company is used for carrying out fundamental analysis.

Jatinder Singh (2014) reveals that the study at hand finds that the changing policy environment during the last three decades in the country has eventually contributed to the growth and export intensity of automobile industry. The influence of changing economic environment is also visible across sub-sector of the industry. Passenger vehicles segment seems to be the only segment which has experienced considerably high growth and improvement in export intensity as well. The share of this segment in total exports of automobile industry is reported to have doubled over the years.

Dr. C. Gopalkrishnan (2014) investigates the production, domestic sales and export trends of the Indian Automobile sector using the two financial years data from 2012-13 and 2013-14 and employ the findings to estimate the percentage changes in the sector. This study has shown that the Indian Automobile Industry has been able to achieve high scores on the various components and this has positive impact, Automobiles led to strong demand due to signs of revival in the economy and increasing trend in hiring especially

organisations decisions will describe how the companies are placed within the industry and how they track new opportunities and innovations; ups and downs in growing markets in universal economic trends and varying customers demand will confront companies to react in novel ways.

3. IMPORTANCE OF THE STUDY

The development of the Indian automobile sector is further witnessed after the liberalisation of economy. Since that period, an exponential growth has been observed in production, domestic sales and export. In the light of the above it is worthwhile to evaluate and understand the automobile industry of India. Automobile industry in India not only contributing to GDP of the country but also providing employment opportunities to the people. Around 19 million jobs are getting through direct and indirect employment. The study is important to understand the present scenario of automobile industry in India in terms of production capacity, burgeoning domestic sales and increasing demand of Indian products of Indian automobiles in the world market. In this paper an attempt to study the production of vehicles, domestic sales and export of vehicles in India.

4. OBJECTIVES OF THE STUDY

The main objectives of the study are:

1. To evaluate the production of vehicles in India
2. To evaluate the domestic sales of vehicles in India
3. To evaluate the export of vehicles from India

5. METHODOLOGY

The research methodology adopted is analytical in nature. All the data are secondary data collected from Society of Indian Automobile Manufacturers. The authenticity of data has been verified by cross checking from different reports. The data is presented in tabular form from 2013-14 to 2017-18. The data has been used for calculating of Trend values, CAGR and finally for forecasting data for the future two years i.e., 2018-19 to 2019-20.

6. PRODUCTION AND PROJECTED VALUE OF TWO WHEELERS

The following Table No. 1 highlight the production of Two wheelers in India for the period from 2013 – 14 to 2017-18.

TABLE NO.1 PRODUCTION OF TWO WHEELERS (in Units)

YEAR	PRODUCTION	INCREASE/DECREASE	GROWTH RATE	TREND VALUE	CAGR
2013-14	1,68,83,049	--	--	16662198	6.51%
2014-15	1,84,89,311	16,06,262	9.51	18059443	
2015-16	1,88,29,786	3,40,966	1.84	19456687	
2016-17	1,99,33,739	11,03,462	5.86	20853931	
2017-18	2,31,47,057	32,13,318	16.12	22251175	

Source: SIAM and Computed

From the Table No.1, it could be seen that the production of Two-wheelers in India was fluctuating between 16883049 units of two-wheelers and 23147057 vehicles during the study period. The highest increase in production is 16.12 % in 2017-18 comparing to previous years. The compound growth rate of are under two-wheeler vehicle production in India was 6.51% during the study period.

TABLE NO.2 PROJECTED VALUE FOR PRODUCTION OF TWO WHEELERS

(In Units)

YEAR	PROJECTED VALUE
2018-19	23648322
2019-20	25045566

Source: Computed

From the Table No.2, it shows the trend movement of production of two wheelers in India for the year 2018-19 and 2019-20 will be 23648322 units and 25045566 units.

7. PRODUCTION AND PROJECTED VALUE OF THREE WHEELERS

The following Table No.3 highlight the production of Three wheelers in India for the period from 2013 – 14 to 2017-18.

TABLE NO.3 PRODUCTION OF THREE WHEELERS (in Units)

YEAR	PRODUCTION	INCREASE/DECREASE	PERCENTAGE	TREND VALUE	CAGR
2013-14	8,30,108	--	--	860111.0	4.25%
2014-15	9,49,019	1,18,911	14.32	881941.8	
2015-16	9,33,950	-14,915	-1.57	903772.6	
2016-17	7,83,721	-1,50,383	-16.10	925603.4	
2017-18	10,21,911	2,38,190	30.39	947434.2	

Source: SIAM and Computed

From the Table No.3, it could be seen that the production of Three-wheelers in India was fluctuating between 830108 units of three wheelers and 1021911 vehicles during the study period. The highest increase in production is 30.39 per cent in 2017-18 comparing to previous year. It can notice from the table that in the year 2015-16 and 2016-17 there was a sharp decrease up to 1.57 and 16.09 per cent in production. The compound growth rate of are under three-wheeler vehicle production in India was 4.25 per cent during the study period.

TABLE NO.4 PROJECTED VALUE FOR PRODUCTION OF THREE WHEELERS

(In Units)

YEAR	PROJECTED VALUE
2018-19	969234
2019-20	991065

Source: Computed

From the Table No.4, it shows the trend movement of production of three wheelers in India for the year 2018-19 and 2019-20 will be 969234 units and 991065 units.

8. PRODUCTION AND PROJECTED VALUE OF PASSENGER VEHICLES

The following Table No.5 highlight the production of Passenger vehicles in India for the period from 2013 – 14 to 2017-18.

TABLE NO.5 PRODUCTION OF PASSENGER VEHICLES (in Units)

YEAR	PRODUCTION	INCREASE/DECREASE	PERCENTAGE	TREND VALUE	CAGR
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2013-14	30,87,973			3032286	5.37%
2014-15	32,21,419	1,33,446	4.32	3274791	
2015-16	34,13,859	2,43,626	7.56	3517296	
2016-17	38,01,670	3,36,625	9.71	3759801	
2017-18	40,10,373	2,08,703	5.49	4002306	

Source: SIAM and Computed

From the Table No.5, it could be seen that the production of passenger Vehicles in India was fluctuating between 3087973 units of passenger vehicles and 40,10,373 vehicles during the study period. The highest increase in production of passenger car is 9.71% in 2016-17 comparing to previous year. In 2013-14, 2016-17 and 2017-18 actual production is more than trend value of production. The compound annual growth rate for production of passenger vehicles in India was 5.37% during the study period.

TABLE NO.6

PROJECTED VALUE FOR PRODUCTION OF PASSENGER VEHICLES (in Units)

YEAR	PROJECTED VALUE
2018-19	4234574
2019-20	4477079

Source: Computed

From the Table No.6, it shows the trend movement of production of passenger vehicles in India for the year 2018-19 and 2019-20 will be 4234574 units and 4477079 units.

9. PRODUCTION AND PROJECTED VALUE OF COMMERCIAL VEHICLES

The following Table No.7 highlight the production of Commercial vehicles in India for the period from 2013 – 14 to 2017-18.

TABLE NO.7

PRODUCTION OF COMMERCIAL VEHICLES (in Units)

YEAR	PRODUCTION	INCREASE/DECREASE	PERCENTAGE	TREND VALUE	CAGR
2013-14	6,99,035			677168.4	5.06%
2014-15	6,98,298	-737	-0.11	727467.1	
2015-16	7,82,814	88,394	12.66	777765.8	
2016-17	8,10,253	23,561	2.99	828064.5	
2017-18	8,94,551	84,298	10.40	878363.2	

Source: SIAM and Computed

From the Table No.7, it could be seen that the production of commercial Vehicles in India was fluctuating between 699035 units of commercial vehicles and 894551 vehicles during the study period. The highest increase in production is 12.65% in 2015-16 comparing to all selected period. It can notice from the table that in the year 2014-15 there was a negative sign i.e., -0.1054% in production and after that there was zig zag trend for another three years. The compound annual growth rate of are under commercial vehicle production in India was 5.06% during the study period.

TABLE NO.8

PROJECTED VALUE FOR PRODUCTION OF COMMERCIAL VEHICLES

(In Units)

YEAR	PROJECTED VALUE
2018-19	927886
2019-20	978185

Source: Computed

From the Table No.8, it shows the trend movement of production of commercial vehicles in India for the year 2018-19 and 2019-20 will be 927886 units and 978185 units.

10. DOMESTIC SALES AND PROJECTED VALUE OF TWO WHEELERS

The following Table No.9 highlight the production of Domestic Sales of Two Wheelers in India for the Period From 2013 – 14 to 2017-18.

TABLE NO.9
DOMESTIC SALES OF TWO WHEELERS (in Units)

YEAR	DOMESTIC SALES	INCREASE/D ECREASE	PERCENTAGE	TREND VALUE	CAGR
2013-14	14806778	-	-	14526927	9.35%
2014-15	15975561	1168783	7.89	15765523	
2015-16	16455851	480290	3.00	17004120	
2016-17	17589738	1133887	6.89	18242717	
2017-18	20192672	2602934	14.80	19481314	

Source: SIAM and Computed

From the Table No.9, it could be seen that the domestic sales of Two-wheelers in India were fluctuating between 14806778 units of two-wheelers and 20192672 vehicles during the study period. The highest increase in production is 14.80 % in 2017-18 comparing to previous year. The compound growth rate of are under two-wheeler vehicle domestic sales in India was 9.35 % during the study period.

TABLE NO.10
PROJECTED VALUE FOR DOMESTIC SALES OF TWO WHEELERS (in Units)

YEAR	PROJECTED VALUE
2018-19	20719910
2019-20	21958506

Source: Computed

From the Table No.10 it shows the trend movement of domestic sales of two wheelers in India for the year 2018-19 and 2019-20 will be 20719910 units and 21958506 units.

11. DOMESTIC SALES AND PROJECTED VALUE OF THREE WHEELERS

The following Table No. 11 highlight the production of Domestic Sales of Two Wheelers in India for the Period From 2013 – 14 To 2017-18.

TABLE NO.11
DOMESTIC SALES OF THREE WHEELERS (in Units)

YEAR	DOMESTIC SALES	INCREASE/D ECREASE	PERCENTAGE	TREND VALUE	CAGR
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2013-14	480085			481603.4	5.78%
2014-15	532626	52541	10.94	510651.3	
2015-16	538208	5582	1.05	539699.2	
2016-17	511879	-26329	-4.89	568747.1	
2017-18	635698	123819	24.19	597795	

Source: SIAM and Computed

From the Table No.11, it could be seen that the domestic sales of Three-wheelers in India were fluctuating between 480085 units of three wheelers and 635698 vehicles during the study period. The highest increase in domestic sales was 24.18 per cent in 2017-18 comparing to previous year. It can be noticed from the table that in the year 2016-17 there was a sharp decrease up to 4.89 per cent in domestic sales. The compound growth rate of three-wheeler vehicle domestic sales in India was 5.78 per cent during the study period.

TABLE NO.12

PROJECTED VALUE FOR DOMESTIC SALES OF THREE WHEELERS (in Units)

YEAR	PROJECTED VALUE
2018-19	626843
2019-20	655891

Source: Computed

From the Table No.12 it shows the trend movement of domestic sales of three wheelers in India for the year 2018-19 and 2019-20 will be 626843 units and 655891 units.

12. DOMESTIC SALES AND PROJECTED VALUE OF PASSENGER VEHICLES

The following Table No. 13 highlights the production of Domestic Sales of Two Wheelers in India for the Period From 2013 – 14 to 2017-18.

TABLE NO.13

DOMESTIC SALES OF PASSENGER VEHICLES (in Units)

YEAR	DOMESTIC SALES	INCREASE/DECREASE	PERCENTAGE	TREND VALUE	CAGR
2013-14	2503509			2442848	5.6%
2014-15	2601236	97727	3.90	2644374	
2015-16	2789208	187972	7.23	2845900	
2016-17	3047582	258374	9.26	3047426	
2017-18	3287965	240383	7.89	3248952	

Source: SIAM and Computed

From the Table No.13, it could be seen that the domestic sales of passenger Vehicles in India was fluctuating between 2503509 units of passenger vehicles and 3287965 vehicles during the study period. The highest increase in domestic sales of passenger vehicles is 9.26% in 2016-17 comparing to previous year. The compound annual growth rate for production of passenger vehicles in India was 5.6 % during the study period.

TABLE NO.14

PROJECTED VALUE FOR DOMESTIC SALES OF PASSENGER VEHICLES

(In Units)

YEAR	PROJECTED VALUE
2018-19	3450477
2019-20	3652003

Source: Computed

From the Table No.14, it shows the trend movement of domestic sales of passenger vehicles in India for the year 2018-19 and 2019-20 will be 3450477 units and 3652003 units.

13. DOMESTIC SALES AND PROJECTED VALUE OF COMMERCIAL VEHICLES

The following Table No. 15 highlights the production of commercial vehicles in India for the period from 2013 – 14 To 2017-18.

TABLE NO.15
DOMESTIC SALES OF COMMERCIAL VEHICLES (in Units)

YEAR	DOMESTIC SALES	INCREASE/D ECREASE	PERCENTAGE	TREND VALUE	CAGR
2013-14	632851			591540	6.24%
2014-15	614948	-17903	-2.83	646188.8	
2015-16	685704	70756	11.51	700837.6	
2016-17	714082	28378	4.14	755486.4	
2017-18	856453	142371	19.94	810135.2	

Source: SIAM and Computed

From the Table No.15, it could be seen that the domestic sales of commercial vehicles in India were fluctuating between 632851 units of commercial vehicles and 856453 vehicles during the study period. The highest increase in domestic sales was 19.93% in 2017-18 comparing to all selected period. It can be noticed from the table that in the year 2014-15 there was a negative sign i.e., -2.83% in domestic sales and after that there was a zig zag trend for another three years. The annual compound growth rate of commercial vehicle production in India was 6.24% during the study period.

TABLE NO.16
PROJECTED VALUE FOR DOMESTIC SALES OF COMMERCIAL VEHICLES
(In Units)

YEAR	PROJECTED VALUE
2018-19	864709
2019-20	919343

Source: Computed

From the Table No.16, it shows the trend movement of domestic sales of commercial vehicles in India for the year 2018-19 and 2019-20 will be 864709 units and 919343 units.

14. EXPORT AND PROJECTED VALUE OF TWO WHEELERS

The following Table No. 17 highlights the Export of Two Wheelers in India for the period from 2013 – 14 To 2017-18.

TABLE NO.17

EXPORT OF TWO WHEELERS (in Units)

YEAR	EXPORT	INCREASE/D ECREASE	PERCENTAGE	TREND VALUE	CAGR
2013-14	2084000			2166958	6.2%
2014-15	2457466	373466	17.92	2301443	
2015-16	2482876	25410	1.03	2435927	
2016-17	2340277	-142599	-5.74	2570411	
2017-18	2815016	474739	20.29	2704896	

Source: SIAM and Computed

From the Table No.17, it could be seen that the export of Two-wheelers in India was fluctuating between 2084000 units of two-wheelers and 2815016 vehicles during the study period. The highest increase in export is 20.29 % in 2017-18 comparing to previous year. The compound growth rate of are under two-wheeler vehicle export in India was 6.2% during the study period.

TABLE NO.18**PROJECTED VALUE FOR EXPORT OF TWO WHEELERS (in Units)**

YEAR	PROJECTED VALUE
2018-19	2839380
2019-20	2973864

Source: Computed

From the Table No.18, it shows the trend movement of export of two wheelers in India for the year 2018-19 and 2019-20 will be 2839380 units and 2973864 units.

15. EXPORT OF AND PROJECTED VALUE THREE WHEELERS

The following Table No. 19 highlight the Export of Three Wheelers in India for the Period from 2013 – 14 to 2017-18.

TABLE NO.19EXPORT OF THREE WHEELERS (in Units)

YEAR	EXPORT	INCREASE/D ECREASE	PERCENTAGE	TREND VALUE	CAGR
2013-14	353392	-	-	379763	1.52%
2014-15	407600	54208	15.34	371714.4	
2015-16	404441	-3159	-0.78	363665.8	
2016-17	271894	-132547	-32.77	355617.2	
2017-18	381002	109108	40.13	347568.6	

Source: SIAM and Computed

From the Table No.19, it could be seen that the export of Three-wheelers in India was fluctuating between 353392 units of three wheelers and 381002 vehicles during the study period. The highest increase in export is 40.12 per cent in 2017-18 comparing to previous year. It can notice from the table that in the year 2015-16 and 2016-17 there was a sharp decrease up to 0.78 and 32.77 per cent in export. The compound growth rate of are under three-wheeler vehicle export in India was 1.52 per cent during the study period.

TABLE NO.20
PROJECTED VALUE FOR EXPORT OF THREE WHEELERS (in Units)

YEAR	PROJECTED VALUE
2018-19	339520
2019-20	331471

Source: Computed

From the Table No.20, it shows the trend movement of export of three wheelers in India for the year 2018-19 and 2019-20 will be 339520 units and 331471 units.

16. EXPORT AND PROJECTED VALUE OF PASSENGER VEHICLES

The following Table No. 21 highlight the Export of Three Wheelers in India for the Period from 2013 – 14 to 2017-18.

TABLE NO.21
EXPORT OF PASSENGER VEHICLES (in Units)

YEAR	PASSENGER VEHICLE EXPORT	INCREASE/DECREASE	PERCENTAGE	TREND VALUE	CAGR
2013-14	596142			587374.8	4.62%
2014-15	621341	25199	4.23	631342.4	
2015-16	653053	31712	5.10	675310	
2016-17	758727	105674	16.18	719277.6	
2017-18	747287	-11440	-1.51	763245.2	

Source: SIAM and Computed

From the Table No.21, it could be seen that the export of passenger Vehicles in India was fluctuating between 596142 units of passenger vehicles and 747287 vehicles during the study period. The highest increase in export of passenger car is 16.18% in 2016-17 comparing to previous year. It can notice from the table that in the year 2017-18 there was a sharp decrease up to 1.51 per cent in export. The compound annual growth rate for export of passenger vehicles in India was 4.62% during the study period.

TABLE NO.22
PROJECTED VALUE FOR EXPORT OF PASSENGER VEHICLES (in Units)

YEAR	PROJECTED VALUE
2018-19	807213
2019-20	851180

Source: Computed

From the Table No.22, it shows the trend movement of export of passenger vehicles in India for the year 2018-19 and 2019-20 will be 807213 units and 851180 units.

17. EXPORT AND PROJECTED VALUE OF COMMERCIAL VEHICLES

The following Table No. 23 highlight the Export of Three Wheelers in India for the Period from 2013 – 14 to 2017-18.

TABLE NO.23
EXPORT OF COMMERCIAL VEHICLES (in Units)

YEAR	COMMERCIAL VEHICLES EXPORT	INCREASE/DECREASE	PERCENTAGE	TREND VALUE	CAGR
2013-14	77050			82257	4.68%
2014-15	86939	9889	12.83	88353.6	
2015-16	103124	16185	18.62	94450.2	
2016-17	108271	5147	4.99	100546.8	
2017-18	96867	-11404	-10.53	106643.4	

Source: SIAM and Computed

From the Table No.23, it could be seen that the export of commercial Vehicles in India was fluctuating between 77050 units of commercial vehicles and 96867 vehicles during the study period. The highest increase in export was 18.62 % in 2015-16 comparing to all selected period. It can notice from the table that in the year 2017-18 there was a negative sign i.e., -10.53% in export. The annual compound growth rate of are under commercial vehicle production in India was 4.68% during the study period.

TABLE NO.24
PROJECTED VALUE FOR EXPORT OF COMMERCIAL VEHICLES (in Units)

YEAR	PROJECTED VALUE
2018-19	112740
2019-20	118837

Source: Computed

From the Table No.24, it shows the trend movement of export of commercial vehicles in India for the year 2018-19 and 2019-20 will be 112740 units and 118837 units.

CONCLUSION

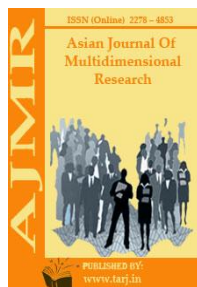
The growth rates for all the segments of automobile industry in India is on the positive trend. The slight decrease in between the study period can be explained in terms of exchange value of India rupees and the overall slump in the market during particular years. Forecasting is not attempted beyond two years since the technology is changing rapidly resulting in a lot of uncertainties in domestic and export markets.

The CAGR for production, domestic sales and export of two wheelers are 6.51%, 9.35%, 6.2% respectively. The CAGR of two wheelers are more when compare to three wheelers, passenger vehicles and commercial vehicles. The main reasons for this growth of two-wheeler segment is new innovation in two-wheeler category, zero percent interest rate for EMI, a large number of youngsters are using two wheelers are increasing, middle class people disposable income is also increasing and using two-wheeler has become necessity rather than fashion to the people for their day to day life.

REFERENCES

1. Avinandan Mukherjee, "The Indian Automobile Industry: Speeding into the Future?", Actes du GERPISA 28
2. Dr.C. Gopalkrishnan (2014), "Recent Trends in Automobile Sector, GRA- Global Research Analysis, Volume No.3, Issue No.4, April 2014, ISSN No.2277-8160

3. Hemal Pandya and Hetal Pandya, (2013) "Fundamental Analysis of Indian Automobile Industry", International Journal of Current Research, Volume.5, Issue No.5, PP-1273-1286, May 2013, ISSN: 0975-833X
4. Jatinder Singh (2014), "India's Automobile Industry: Growth and Export Potential", Journal of Applied Economics and Business Research (JAEBR), 4(4), 246-262 (2014), ISSN No.1927-033X
5. Viswanatha Krishnan (1995), "Indian Automotive Industry: Opportunities and Challenges posed by recent developments, The University of Texas at Austin.
6. www.siam.com



RANGING AND LIVING MASS OF KARAKUL LAMBS SUR OF TURTKUL FACTORY TYPE IN THE CONDITION OF THE NORTH- WESTERN KYZYL KUM

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ABSTRACT

The article presents an analysis of the products of karakul sheep raising. Ways and methods, which are used for further improvement of producing karakul sheep raising, are given. For the experiment, four months old lambs were chosen. The following are shown in the research: ranging and living mass of lambs, the productivity of lambs of I type behavior comparing with the living mass of the lamb II and especially, III type of behavior of karakul sheep in the condition of the north-western Kyzyl Kum. In karakul sheep breeding where year-round the pastoral maintenance of sheep is the basic condition their life-support, questions of ethology of sheep in the conditions of various regions of their deluting practically are not studied. From them three groups were formed, each of them consists of 10 lambs of every type with the account of behavior type.

KEYWORDS: Breed karakul sheep, lamb, ethology, type of behavior, the growth of lambs, productivity.

INTRODUCTION

Karakul sheep raising is one of the directions of animal husbandry in Uzbekistan, which gives to the government valuable lamb pelt, wool, meat, milk, sheepskin. Karakul is mainly produced in the regions of desert and semi-desertland. In connection with this, the good material basis is necessary for further development of karakul sheep raising.

It is known, that animal behavior is an important specific feature which is controlled by unconditional and conditional reflexes and defines the state of organism reaction. An enormous contribution to the development of ethology was brought by academic I.P. Pavlov, who noted that without the knowledge of animal behavior one could not organize proper care and content which provide their maximum productivity and safety.

Animal productivity is a reproductive function, growth and development is interconnected with the properties of nerve-reflector activities or animal behavior, which is subdivided into three known types of high nerve activities, characterized by different levels of excitative and brake-shoe processes, forming conditional reflexes (Belyaev, Martinova, 1973) (2).

In other words, the interaction of organism with paratypic factors happens under spontaneous control of nerve system, reproductive function depends on the peculiarities of nerve-reflector activities or animal behavior, which is admitted to subdivide into three main types of high nerve activities – strong balanced (motile, inert), strong unbalanced and weak.

LITERATURE REVIEW

For last 15-20 years, the great attention is given to studying of the behaviour of a horned cattle, pigs and some fine-fleeced breeds of sheep in various conditions of their feeding and the maintenance. In karakul sheep breeding where year-round the pastoral maintenance of sheep is the basic condition their life-support, questions of ethology of sheep in the conditions of various regions of their deluting practically are not studied.

Sheep karakul breeds are very hardy and well adapted for severe climatic and grazing-fodder conditions that promote economic development of huge terrains of natural grounds.

Now on the basis of I.P. Pavlova's concept about the highest excitatory activity the procedure of definition of phylums of behaviour of sheep which is based on digestive-food reactions of animals (Beljaev, Martynova, 1973) is applied. In dissertations of professor Bobokulova N.A. (N.A. Bobokulov, 2004) specified that parent flocks have been made (August-September) sample of sheep on behaviour phylums. Behaviour **phylum 3 times before pasture of sheep on a pasture when the background of edible excitability at animals has been accurately expressed** was made in the morning triple testing within 9 days.

During allocation of sheep the following characteristic for each phylum of **animal's** behaviour signs was observed. The sheep, falling into to the first phylum of behaviour awakes also have

quickly run about to the feeder and without being afraid of presence of people willingly ate a forage, a uterus of the second phylum of behaviour cautiously approached to the feeder after a while, they looked around and watched the people, being in kutan, animals 3 phylums were characterised by strongly pronounced fearfulness, hardly approached to the feeder, often on the way to it were intercepted, and if approached to the feeder quickly seized a forage and instantly ran off it.

METHODOLOGY

Testing of sheep was made in an industrial flock of a uterus by number of 676 goals at the age of 3-4 years.

On this procedure evolve three phyla of behavior and efficiency.

In the course of the group maintenance of animals (in the herd, a flock) besides the unconditional is excitatory-reflex status the complex of conditioned-reflex interaction between them, various norms and degree of the isthe reflex-biological answer to chronic influences is formed.

Main part

Asoftoday,agoodealofscientificmaterialsconcerningthestudyofthe behavior of different types and breed of animals were published.

In the field of karakul sheep raising it must be mentioned works of M.N.Andreev (1964); B.V.Panin (1971); A.V.Daniluk (1982); in fine-wool sheep breeding and ranchingD.K.Belyaev, V.N.Martinova(1979); V.S.Zaritovskiy, M.I.Lieva (1983), M.Ashirova (1981); A.Kaxarova (1994); A.M.Eroxina, E.Karasaeva (2001). (4)

To support stockbreeders, which deals with the development and cultivation of valuable kind of sheep in the karakul sheep raising industry, the following important normative documents were publishedin this field:

-DecreeofthePresidentoftheRepublicofUzbekistanon 23rdMarch 2006, PP №308 “About the measures of promotion of increasing the total number of livestock in individual peripheral and agrarian farms.”

-Decreeon 21stApril 2008, PP №842 “Abouttheadditionalmeasures of promotion of increasing the total number of livestock in individual peripheral and agrarian farms, and widening manufacture of cattle breeding products.”

-DecreeofthePresidentoftheRepublicofUzbekistanon16thMarch 2017,PP №2841 “Abouttheadditionalmeasures of deepening economical reforms in cattle breeding.”

-DecreeofthePresidentoftheRepublicofUzbekistanon 16thMarch 2018, “Aboutthemeasures of accelerated development of karakul sheep raising industry” {1}

The research aimstostudyexteriorrangingoflambs, **ethnology**, growth, their development in different types of behavior and studying the living mass of karakul lambssur of Turtkul breed type in the conditions of the north-western Kyzyl Kum.

OBJECT AND METHODS

Material for the research was karakul lambssurof Turtkul factory type. The research was carried out in the north-western Kyzyl Kum in agrarian karakul sheep raising pedigree farming “Karakul chorvanasl” in the fold “Uzin takir” in Turtkul region. Liberation of lambs of different ethology types was produced according to the special methodology of D.K.Belyaev, V.N.Martinova (1973).

There sults of the research

The research was carried out according to the typological structure of herds of Turtkul breed types in the north-western Kyzyl Kum in agrarian karakul sheep raising pedigree farming “Karakul chorvanasl” of Turtkul region. For the experiment, the lambs after birth at the time of judging practice and four months old lambs were chosen. From them three groups were formed, each of them consists of 10 lambs of every type with the account of behavior type.

Assessment of exterior on lambs was produced according to the development of separate figures of the body, which has a definite anatomic basis. The following linear ranging of karakul lambs of 4 months old was carried out: withers height, forward length of the trunk, chest depth, chest width, chest girth, metacarpus girth of lambs and their living mass.

Exterior ranging of 4 months old lambs of different types of behavior is represented on table 1.

TABLE 1
EXTERIOR RANGING OF 4 MONTHS OLD LAMBS OF DIFFERENT TYPES OF
BEHAVIOR 11.07.2018.(TURTKUL REGION, THE REPUBLIC OF
KARAKALPAKSTAN, THE FOLD “UZIN TAKIR”)

Number of lambs	Type of behavior	Indicators	M±m	δ	C%
30	I	Living mass, kg	16,6±0,44	1,33	8,28
		Withers height	66,5±0,77	2,33	3,55
		Chest depth, cm	43,6±0,66	2,0	4,68
		Forward length of trunk, cm	65,4±0,33	1,0	1,53
		Chest girth, cm	69,9±0,77	2,33	3,41
		Chest width, cm	66,1±0,66	2,66	4,08
		Metacarpus girth, cm	10,5±0,22	0,66	6,53
30	II	Living mass, kg	15,05±0,44	1,33	8,17
		Withers height	65,6±0,66	2,0	3,00
		Chest depth, cm	42,7±0,55	1,66	3,80
		Forward length of trunk, cm	63,0±0,33	1,0	1,52
		Chest girth, cm	67,8±0,66	2,0	2,86
		Chest width, cm	64,4±0,55	2,0	3,05
		Metacarpus girth, cm	9,1±0,14	0,44	4,4

30	III	Living mass, kg	14,2±0,33	1,0	6,01
		Withers height	64,2±0,55	1,66	2,50
		Chest depth, cm	40,7±0,55	1,66	3,73
		Forward length of trunk, cm	60,8±0,22	0,66	1,01
		Chest girth, cm	65,3±0,44	1,33	1,90
		Chest width, cm	62,1±0,33	0,93	1,40
		Metacarpus girth, cm	8.0±0,11	0,33	3,14

The results of the research on table 1 shows, that there is an advantage in the rate of the growth of different parts of the body of 4 months old lambs of I type of behavior compared with the rate of the growth of the same old lambs of II type and especially III type of behavior of karakul lambs of the same old sur of Turtkul factory type.

A living mass of lambs of different types of behavior from birth to 4 months old was shown in table 2.

TABLE 2.
COMPARISON OF LIVING MASS OF LAMBS OF DIFFERENT TYPES OF
BEHAVIOR FROM BIRTH TO 4 MONTHS OLD.(11.03.2018.-11.07.2018.TURTKUL
REGION, THE REPUBLIC OF KARAKALPAKSTAN, THE FOLD “UZIN TAKIR”)

Type of behavior	Number of lambs	Living mass, kg	Withers height, cm	Chest depth, cm	Forward length of trunk, cm	Chest girth, cm	Chest width, cm	Metacarpus girth, cm
At birth								
I	30	4,45±0,38	30,0±2,0	14,7±1,11	25,3±1,33	40,0±2,22	14,5±1,0	5,05±0,38
II	30	4,35±0,33	28,8±1,77	13,6±0,35	23,3±1,33	37,6±1,77	13,6±0,88	4,45±0,33
III	30	4,15±0,22	27,1±1,11	12,5±0,8	21,2±1,33	35,0±1,55	12,8±0,66	3,55±0,22
At 20 days old								
I	30	9,05±0,55	36,3±2,32	30,4±2,0	42,7±2,44	51,8±2,33	22,7±1,88	7,55±0,33
II	30	8,8±0,38	34,1±2,20	28,2±1,66	42,1±1,66	51±2,22	25,8±1,0	7,3±0,44
III	30	8,2±0,33	33,8±1,55	25,4±0,55	37,6±1,66	46±1,64	26,9±0,88	8,15±0,33
At four months old								
I	30	16,6±0,64	66,5±2,77	43,6±2,22	65,4±1,82	69,9±2,77	66,1±1,66	10,5±0,54
II	30	16,05±0,44	65,6±2,32	43,7±1,72	65,0±0,77	69,8±1,75	65,4±1,22	10,1±0,52
III	30	15,8±0,40	64,2±1,66	42,7±1,67	64,8±1,43	68,3±1,74	65,1±1,0	10,0±0,45

The results of the research on table 2 shows, that the lambs of I type are the best developed, comparing with II type and living mass at birth was 4,45 kg, at 20 days old 9,05 kg, and at 4 months old 16,6 kg, at that time living mass of lambs of III type was 4,15 kg, 8,6 kg and 15,8 kg.

Thus, ethology researches will allow studying features of vital exhibiting karakul sheep of coloring sur different ethology's phylums, to position communications between separate elements of behavior with growth, development, efficiency and interior indexes.

The process of formation of behavioral phylum at karakul sheep in the conditions of Northwest Kyzyl Kum descends towards augmentation of some animals of I type.

CONCLUSION:

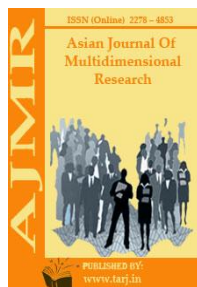
1. Analysis of the result shows an advantage in the rate of the growth of different parts of the body of 4 months old lambs of I type of behavior compared with the rate of the growth of 4 months old lambs of II type and especially III type of behavior of karakul lambs sur of Turtkul factory type.

2. In **dictators'** of karakul lambs ranging from birth to 4 months old increased from 1, 5 to 3, 5 times, in this case, the growth and development of lambs of I type were the highest.

3. **Like** this, using lambs of I type of behavior gives the opportunity to get the high qualified product in pasture conditions of the north-western Kyzyl Kum.

REFERENCES

1. Decree of the President of the Republic of Uzbekistan on 16th March 2018, №3603, on increasing amount of producing and widening the stock of karakul "About the measures of accelerated development of karakul sheep-raising industry."
2. D.K. Belyaev, V.N. Martinova. "Behavior and reproductive functions of domestic sheep" Novosibirsk, 1973, p-380-401
3. I.I. Pavlov. "Ethological basis and technological methods of increasing effectiveness of karakul sheep raising." Samarkand, 2014. p-5
4. V.S. Zaritovskiy, M.I. Liev, G.I. Emilyanov. "Sheep ethology." Moscow, 1990. p-137



APPLICATION OF INDICATORS FOR IDENTIFYING CLIMATE VULNERABLE AREAS IN SUB-TROPICAL REGIONS OF INDIA

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ABSTRACT

This paper aims to assess agro-climatic zone wise vulnerability in the state of Uttar Pradesh, India which has complex geographical conditions and highly susceptible to climate variability. By using indicator approach and decomposition method, the crop production losses due to climate variability of 20 crops were calculated for nine agro climate zones. Further, exposure to climatic factors namely rainfall and temperatures in Kharif and rabi seasons was captured. Furthermore, using socio-economic data, sensitivity and adaptive capacity indices were calculated. Moreover, vulnerability index was calculated using IPCC- vulnerability methodology. The calculated results show that climatic variability caused higher production losses in cereals, pulses and oilseeds in southwest semi-arid zone (13.2 thousand tonnes), Bundelkhand zone (2.26 thousand tonnes) and northeast plain zone (0.14 thousand tonnes), respectively. Further, the calculated results show that Midwest plain and bhabhartrai zones were placed under the extreme degree of exposure, whereas Midwest plain and Bundelkhand zones are most sensitive to climate variability. As per adaptive capacity index scores, west plain and east plain zones are ranked first and second in term of adaptive capacity in the state. Overall, vulnerability index scores indicate that Bundelkhand and vidhyan zones are extremely vulnerable agro climatic zones in the Uttar Pradesh. The present study suggest that the ranking based prioritization of the vulnerable areas calls for a holistic approach for each district or agro climatic zones to reduce their sensitivity, minimize exposure to rainfall and temperatures through implementation of area specific and leverage, adaptive capacity through better

health and education facilities, expansion of employment opportunities in the non-farm sector to reduce over dependence on agriculture.

KEYWORDS:*Crop Production Losses Index, Exposure, Sensitivity, Adaptive Capacity, Agro Climatic Zones and Vulnerability Index.*

1. INTRODUCTION

With heterogeneous agro climatic profile, lower adaptive capacity and high exposure to climate change, agriculture in India has most vulnerable sector in South Asia (IPCC, 2007b; Kato et al., 2010; Rao et al., 2011 and Kumar et al., 2016). Being one of the most drought-prone countries in the world (Mishra and Singh, 2010; Shetty et al., 2013), India constituted 55 percent rain fed area and supported 66 percent livestock and 40 percent of the human population of the country (Rao et al., 2011). Further, India receives around 80 percent of the annual rainfall through southwest monsoon (June to September). However, inter and intra annual variations due to increase in temperature and elevated levels of carbon dioxide have a profound impact on the farming (Bhate et al., 2012). The intensity of rainfall increased and rainy days have been declined at national level. Further, the frequency of heavy rainfall events in central India has been increased by nearly 50 percent in the monsoon period and more than 100 percent in the post-monsoon period respectively (Goswami et al., 2006). The monsoon has changed in two significant ways. First, it had weakened (less total rainfall during June- September). Second, the distribution of rainfall within the monsoon season has become more extreme. Furthermore, Dash et al., (2009) observed that for the country as a whole, the frequency of long rainy spells decreased and the frequency of the short rainy spells, dry spells and prolonged dry spell all increased. Sinha and Swaminathan (1991) estimated that 2⁰C in mean temperature could decrease rice yield by about 0.75 tons/hectare in high yield areas and 0.6ton/hectare in the low yield of coastal regions. Further, 0.5⁰C increase in winter temperature would reduce wheat crop duration of seven days and reduce yield by 0.45 ton/hectare, and 10 percent reduction in wheat production in the high yield states of Northern India. Subsequently, Aggarwal (2009) in the cross- crops season study estimated that a 1⁰C increase in temperature may reduce yield of wheat, soybean, mustard, potato and groundnut by 3.7 percent in India. More recently, Chattaraj (2014) and Abebe et al. (2016) predicted that an increase in temperature by 3.6⁰C resulted in 11 days shorter growing period and elevated temperature by 1.5⁰C to 3⁰C decreased food grain yield by 4.9 percent, respectively. These (mentioned) studies confirmed that Indian agriculture has potential risk of climate change, because more than half of the population directly or indirectly depended on agriculture for their livelihoods. Therefore, the present study by using large- scale agricultural, social and economic data sets and indicator approach and developed a vulnerability indices for agro climatic zones to identify vulnerable zones and factors responsible for their higher vulnerability. Vulnerability index can facilitate decision making and can be useful for setting targets and priorities as it provides a single- vale, easy to comprehend estimate, and facilitates easy and meaningful monitoring and evaluation of progress (Briguglio, 2003 and Kumar et al., 2016). Therefore, indicators are increasingly adopted and recognised as a useful tool for policy making (Fussel, M., 2007). By taking socioeconomic, environmental and agricultural factors, an attempt has been made to develop a composite vulnerability index for assessing the agro climate zone state of Uttar Pradesh, which is one of the most drought and flood prone state in India.

This paper is organised as follows. In the next section, the data set, information about the sources and technical aspects of the estimation model are discussed, which is followed by results and discussion in section III. Concluding remarks are made in the final section.

2. MATERIALS AND METHODS

2.1 STUDY AREA

Uttar Pradesh is between latitude 24° - 31° N and longitude 77° - 84° E. It is the India's fourth largest and the most populated state in India (GoI, 2011). It has a population of about 199,581,477 (Census, 2011). There is an average population density of 828 person per KM^2 . With an area of 243, 290 KM^2 , Uttar Pradesh covers a large part of the highly fertile and densely populated upper Gangetic Plain region. It also has more than 31 large and small rivers, major one being the Ganges, Yamuna, Sarayu and Ghaghara (GoI, 2017). The climate of Uttar Pradesh is predominantly sub-tropical; however, weather conditions change significantly with location and season (IMD, 2017). Depending on the elevation, the average temperatures vary from between 12.5 - 17.5°C in January to 27.5 - 32.5°C in May and June (IMD, 2017). Rainfall in the state ranges from between 1,000-2,000 millimetre in the east to 600-1,000 millimetre in the west (IMD, 2017). About 90 percent of the rainfall occurs during the southwest monsoon, lasting from approximately June to September (IMD, 2017).

2.2 DATA

The present study used district- wise time series data on area and yield (1997-98 to 2016-17) collected from the Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare, Government of India. Data pertaining to nine agro climatic zones of the state were collected under the three major crop group viz., cereals (wheat, rice, maize, jowar, bajra), pulses (chickpea, green gram, urad, arhar, moong, moth and some other minor pulses grown in the summer (Kharif) and winter (Rabi) season and oilseeds (groundnut, sunflower, rape seed & mustard, soybean, linseed and sea same). The data for other indicators were collected from Central Ground Water Board (CGWB); Ministry of Water Resources, Government of India and Indian Meteorological Department, Ministry of Earth Science, Government of India.

2.3 DE-TRENDING OF TIME-SERIES DATA

According to Larson et al. (2004), Antwi-Agyei et al. (2012) and Kumar et al. (2016) inter- annual fluctuations in sown area and yield of the crops is due to long-term trend, which shows the impact of technological advancements (changes in management practices and use of new technologies) and short term factors (spatial and temporal variations of climatic factors). Therefore, an important step for analysing climate-yield relationship is to first remove long-term or technological trends.

The trend effect in area and yield of a crop was captured by using linear regression model given in the Equation (1).

$$Z_t = \alpha + \beta_t + \varepsilon_t \quad (1)$$

Where, Z_t is the Dependent Variable (area or yield), α is intercept, β is parameter to be estimated, t is years and ε_t is residual with mean zero and variance σ^2 . To obtain the de-trended area or yield, the residuals were centered on mean area of yield (\bar{Zt}). De-trended data for the yield or area can be obtained by using Equation (2).

$$Z_{dt} = \varepsilon_t + \bar{Zt} \quad (2)$$

Z_{dt} is de-trended area or yield. The de-trended production was computed by multiplying the de-trended area by the de-trended yield, and which has all the variations than can be attributed to climatic variability.

2.4 INDEXING

After intense review on the selection an appropriate approach for vulnerability assessment (Hahn et al., 2009; Gbetibouo and Ringler, 2009; Antwi-Agyei et al., 2012; Piya et al., 2012; Liu et al., 2013; Acheampong et al., 2014; Geng et al., 2014 and Kumar et al., 2016) indicator based approach is selected. Further, appropriate indicators were chosen keeping in the view of their relevance of the study area and

availability of the data. Since indicators are measured in different units, they therefore, subjected to normalisation in different units (Suresh et al., 2016), they uses within the comparable range between 0 and 1 (Vincent, 2004; Kumar et al., 2014, Hahn et al., 2009 and Kumar et al., 2016).

Normalisation is done based on the functional relationship of indicator with targeted index- exposure, sensitivity and adaptive capacity. If there is a positive relationship (increase in the target index with increase in the value of indicator) indicators are normalised by using equation (3).

$$Y_{ij} = \frac{K_{ij} - \text{Min}(X_{ij})}{\text{Max}(X_{ij}) - \text{Min}(X_{ij})} \quad (3)$$

Where, Y_{ij} is the index for the i^{th} indicator related with to j^{th} agro climatic zone, K_{ij} is the actual/observed value of i^{th} indicator for the j^{th} agro climatic zone, $\text{Max}(X_{ij})$ and $\text{Min}(X_{ij})$ is the maximum and minimum value of i^{th} indicator among all the L ($L = 1, \dots, 9$) agro climatic zone, respectively. If the variable has negative functional relationship, then equation 4 was used.

$$Y_{ij} = \frac{\text{Max}(X_{ij}) - K_{ij}}{\text{Max}(X_{ij}) - \text{Min}(X_{ij})} \quad (4)$$

2.5 WEIGHT

The assignment of appropriate weights for different components is an important issue in construction of an index. A number of earlier studies based on the indexing approach have given equal weight age to all the components of the index; a rather restrictive approach considering that the relative importance of economic, ecological and social aspects varies across regions (Saleth and Swaminathan, 1993; Yadav and Rai, 2001; Calkeret al., 2004; Sen and Hatai, 2007; Singh and Hiremath, 2010). The weight is calculated by using equation 5& 6.

$$[W_i = \frac{K}{\sqrt{\text{Var}(\text{Cid})}}] \quad (5)$$

$$\text{Where, } [K = \frac{1}{\{\frac{1}{\sum_{i=1}^n \sqrt{\text{Var}(\text{Cid})}}\}}] \quad (6)$$

Where, ' W_i ' denotes the weight, $\text{Var}(\text{Cid})$ is variance of Y_{ij} . further, weight is multiply in the index value calculated in equation 3 or 4 as follows.

$$Z_j = \frac{\sum_i^k Y_{ij} * W_i}{\sum_i^k W_i} \quad (7)$$

Z_j is the index score for the j^{th} district; W_i is the weight corresponding to i^{th} indicator; k is the total number of indicators; and $\sum_i^k W_i$ is the summation of weights. Finally quartile analysis was carried out for categorizing the district into different groups based on their index scores.

2.6 COMPOUND ANNUAL GROWTH RATE

The compound annual growth rates (CAGR) of area, production and yield for the selected cereals, pulses and oilseeds were estimated during 1990-2017. The CAGR are usually estimated by fitting a semi-log trend equation of the form.

$$\ln Y = a + \beta t \quad (8)$$

Where, Y is the time series data (1990-2017) of area production and yield of the crop, t is the trend term and a is the constant coefficient. The slope coefficient β measures the relative change in Y for a given absolute change in the value of the explanatory variable t . if we multiply the relative change in Y by 100.

We get the percentage change or growth rate in Y for an absolute change in variable t . the slope coefficient β measures the instantaneous rate of growth. We can calculate the CAGR r as follow.

$$\text{CAGR } (r) = (\text{antilog } b-1) \times 100 \quad (9)$$

2.7 CROP PRODUCTION LOSS INDEX

Thus, study adopted a formula developed by Kumar et al. (2016) equation (10) to compute average production losses. This equation apart from measuring average production losses and, help in segregating production losses into three groups viz., area, yield and interaction deviation effects, distinguishing the impact of area and yield deviation and also simultaneous deviations in both yield and area (interaction effect) at a time. The segregation of potential loss for a crop-group for a agro climatic zone can be worked out as follows:

$$PL_i = \frac{1}{t_n} \left\{ \sum_{t=1}^n Y_t (A_m - A_t) + \sum_{t=1}^n A_t (Y_m - Y_t) + \sum_{t=1}^n (A_m - A_t) (Y_m - Y_t) \right\} \quad (10)$$

$$t = 1, 2, 3, \dots, 20$$

Where, PL_i is an average production loss for a crop in a particular district, Y_t and A_t are the actual area and yield during i^{th} year, respectively. A_m & Y_m are potential area and yield achieved during last 20 years and t is number of years, respectively. The losses incurred due to only reduction in sown area in a crop was termed as ‘area deviation effect (ADE)’ depicted by the first part $Y_t (A_m - A_t)$ in equation (8), and the part of loss attributed merely to reduction in yield was called a ‘yield deviation effect (YDE)’ and is represented by the second part $A_t (Y_m - Y_t)$ and the reduction due to both area and yield was termed as ‘interaction deviation effect (IDE)’ depicted by third part $(A_m - A_t) (Y_m - Y_t)$. The advantage of segregation is that it gives an insights about the factor responsible for the production losses which would help in crafting factor based strategies to minimize crop production losses or realisation the production potential of a crop in a particular district.

2.8 EXPOSURE INDEX AND RATIONALE FOR CHOOSING ITS INDICATORS

Exposure is defined as the degree to which a particular system is exposed to frequent drought/ flood and cyclones (IPCC, 2001a and Fraser, 2007). Climate change projections made for India an overall increase in temperature by 1-4 °C and precipitation by 9-16 percent towards 2050 (Kumar et al., 2011). Gosain et al (2011) projected the impact of climate change on the 17 most important river basins in India up to mid-century and towards the end of the century. They estimated a decline in rainfall in 14 out of the 17 river basins towards the 2030s (mid-century) and the 2080s (end century). Further, if a district or agro climatic zone is presently receiving relatively low rainfall with higher variability and if there is a further decrease in rainfall and with an increase in its spatial and temporal variability, the area will suffer an adverse impact on crop production (Kumar et al., 2016). Such a region is to be considered as highly exposed to climate variability. Apart from rainfall, temperature is an important factor influencing crop production especially for rabi season since an increase in temperature can reduce crop duration, increase respiration rates, affect the survival and distributions of pest populations, decrease fertiliser use efficiencies (Agarwal, 2007). In warmer regions, increasing temperatures will have a stronger negative impact (Schlenker and Lobell, 2010). In other words, if increased temperature and decreased rainfall are predicted, there would be highly negative impacts on farm production especially in hot and water-scarce regions, i.e., Bundelkhand region (Gletibouo and Ringler, 2009). To capture climatic variations (exposure), present study used long-term rainfall and temperatures data in terms of indicators namely, annual average kharif season rainfall; percentage change in mean kharif season rainfall; variability in kharif season rainfall; annual average rabi season rainfall; percentage change in annual average rabi

season rainfall; variability in rabi season rainfall; projected change in maximum and minimum temperatures, variability in maximum and minimum temperatures.

2.9 SENSITIVITY INDEX AND RATIONALE FOR CHOOSING ITS INDICATORS

Sensitivity is the extent to which a system is either negatively or positively, directly or indirectly affected by climate change and variability (IPCC, 2007a & b) or is a degree to which a system is modified or affected by an internal or external disturbance or set of disturbances. Sensitivity of rain fed agriculture can be realized by the fact that even a decrease of one standard deviation from the mean annual rainfall often leads to a complete crop failure (Rockstrom and Falkenmark, 2000). Further, dry spell which generally involve 2-4 weeks of no rainfall during critical crop growth stages, causing partial or complete crop failure, often occur during every cropping season (Sharma et al., 2010). Gbetibouo and Ringler (2009) found that district or region with higher degraded land resources will experience greater negative impacts of climate change. Furthermore, climate change may aggravate the risk of soil erosion and other degradation processes (Boardman, 2006). The sensitivity was captured with the help of selected indicators viz., population density, percentage of below poverty line population, ground water exploitation, population facing drinking water problem, degraded land and rainfed area in a particular agro-climatic zone.

2.10 ADAPTIVE CAPACITY INDEX AND RATIONALE FOR CHOOSING ITS INDICATORS

Adaptive capacity is the ability or potential of a system to respond successfully to climate variability and change, and includes adjustments in both behaviours and in resources and technologies (IPCC, 2007b). The presence of adaptive capacity has been shown is a necessary condition for the design and implementation of effective adaptation strategies so as to reduce the likelihood and the magnitude of harmful outcomes resulting from climate change (Brooks and Adger, 2005). Adaptive capacity also enables sectors and institutions to take advantage of opportunities or benefits from climate change, such as a longer growing season or increased potential for agriculture production. Further, it is a function of several factors, such as income, education, information access, skills, infrastructure and management capabilities (McCarthy, 2001 and Toland Yohe, 2007). It affects vulnerability by moderating exposure and sensitivity (Yohe and YOI, 2002) by influencing both biophysical and socio-economic elements of a system (Eaking and Luers, 2006). Education has a positive relation with high capacity of adaptation of new technology, access to weather and market information and enhances knowledge of improved and modern farm practices and inputs, and thereby helps in reducing vulnerability (Leichenko and O' Brien, 2002; Wood et al., 2014). Kumar et al. (2016) suggested that farm size is an indicator of physical assets of a farmer and also reflects high financial capabilities for investing in climate change resilient agricultural practices, which are the key to moderate the impact of climate change/variability. It has been observed that small and marginal farmers due to acute land constraints are forced to engage themselves in low-paid wage activities relating to agriculture, namely husbandry and other non-farm activities to sustain their livelihood (Defiesta and Rapera, 2014). This leaves them with little or no investment capacity at their own farm which is vital for protecting them from climatic variability (Das, 2013). The continuous dependence on agriculture, directly or indirectly, keeps them in a state of low assets and household wealth (Schneiderbauer et al., 2013). As a result, capital- intensive adaptation measures to moderate the impact of climate change will not be carried out by the poor. Therefore, an agro climatic zone with a large number of small scale farmers will be more climate-sensitive than that with fewer small farmers (Gbetibouo and Ringler, 2009). Similarly, less per capital income implies less capacity to cope with adverse impact to climate change. In other words, an agro climatic zone or society with low per capita income is high sensitive to climate change. Further, after adoption an ambitious agriculture development project, namely green revolution access of electricity, formal training in agriculture (Huq et al., 2015), farm-market approach road (Byrne, 2014; Egyir et al., 2015) had played potential role to moderate adverse

impact of climate change and enhanced the adaptive capacity to cope with climate change/variability. Because Indian agriculture system still has least mechanised, therefore, low wage agricultural labourers not only reduced the cost of cultivation but also enhanced adaptive capacity (Eakin et al., 2011b and Ibrahim, 2014). Further, the share of multi-cropping is still lower in India. Therefore, employment opportunities in the off cropping season not only ensured employment but also secured livelihoods. Therefore, farmers those have worked in MGNREGA have high capacity to cope with climate change compared with those do not worked (Armah et al., 2010 and Defiesta and Rapera, 2014). Considering the relationship of the above mentioned factors with vulnerability, study estimated adaptive capacity of an agro climatic zone by combining the following indicators; percentage of households having electricity access, percentage of households taken formal training in agriculture, percentage of agricultural labourers, percentage of cultivators, percentage of households participated in MGNREGA, pucca approach roads, literacy rate, per capita income, mean land size.

2.11 VULNERABILITY INDEX

Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity (IPCC, 2007). Vulnerability of a particular sector, i.e., agriculture can be assess by using three approach viz., biophysical (Levy et al., 2004), economic (Briguglio, 1995& 2003) and environmental (Kaly et al., 2003). The present study combined all the biophysical, economic and environmental dimensions to measured vulnerability with the help of indicators under the sub-indices viz., exposure, sensitivity and adaptive capacity. The composite index has the advantage of combining both “external” (sensitivity and adaptive capacity) and “external” factors (exposure) affecting the vulnerability to climate change. Following this approach, Potential impact (Eq. 11) and vulnerability (Eq. 12) indices for each agro climatic zone was computed by integrating a new crop production losses index, sensitivity index, exposure index and adaptive capacity index as mentioned in the equation (11& 12).

$$PI_j = EI_j + SI_j + CPLI_j \quad (11)$$

$$VI_j = (EI_j + SI_j + CPLI_j) - AC_j \quad (12)$$

Where, PI_j is potential impact index, VI_j is vulnerability index for j^{th} agro climatic zone, EI_j is exposure index for j^{th} agro climatic zone, SI_j is sensitivity exposure index for j^{th} agro climatic zone, $CPLI_j$ is crop production loss index for j^{th} agro climatic zone and AC_j is adaptive capacity index for j^{th} agro climatic zone. Thus, the value of vulnerability index depends on the relative robustness of indices given in equation (11). An agro climatic zone with higher score of vulnerability index would be considered as more vulnerable to climate change.

3. RESULTS AND DISCUSSION

3.1 CROP GROWTH RATE

The estimated growth rate shows that highest area has been declined by 2.64 percent (cereals) & 10.40 percent (pulses) in the Vidhyan zone (VZ) and 9.36 percent (oilseeds) in the south-western semi-arid zone (SWSZ) respectively (Table 1). Further, the highest production has been declined by 1.80 percent (cereals) & 10.40 percent in VZ and 8.17 percent (oilseeds) in the mid-western plain zone (MWPZ). The highest yield of cereals, pulses, and oilseeds has been declined by 0.31, 1.31 & 4.11 percent in western plain zone (WPZ), Bundelkhand zone (BZ) and MWPZ respectively (Table 1), whereas the highest yield has been increased by 1.37 percent (cereals) in central zone (CZ), 2.93 percent (pulses) and 1.94 percent (oilseeds) in the SWSZ.

TABLE 1: COMPOUND ANNUAL GROWTH RATE OF CEREALS, PULSES AND OILSEEDS

ACZs	Cereals	Pulses	Oilseeds
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	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
BTZ	0.01	0.29	0.28	-1.24	-0.78	0.46	-1.49	-2.99	-1.50
B Z	-0.60	0.64	1.24	-6.67	-7.97	-1.31	3.43	2.29	-1.14
CZ	-1.63	-0.26	1.37	-4.51	-4.00	0.51	-1.01	-0.38	0.62
EPZ	0.11	0.65	0.54	-6.73	-6.16	0.57	1.11	1.25	0.11
MWPZ	-1.08	-0.37	0.70	-8.89	-7.04	1.85	-4.05	-8.17	-4.11
NEPZ	-0.20	0.95	1.14	-6.07	-6.02	0.05	0.52	0.99	0.48
SWSZ	0.08	1.00	0.93	-4.12	-1.20	2.93	-9.36	-7.42	1.94
VZ	-2.64	-1.80	0.83	-10.08	-10.40	-0.32	-1.28	0.63	1.90
WPZ	0.02	-0.29	-0.31	-5.65	-4.42	1.23	-5.81	-6.67	-0.86

Source: Authors Estimation. Note: Figures in Percentage.

3.2 CROP PRODUCTION LOSSES

The estimated values of crop production losses in cereals, pulses and oilseeds have been given in Table 2. South western semi-arid zone (SWSZ) and north eastern plain zones (NEPZ) incurred the maximum losses in cereals production to an extent of 13.2 and 11.17 thousand tonnes per annum. Segregation of cereal production losses show that with 48.59 and 48.26 percent yield deviation effect (YDE) eastern plain zone (EPZ) and NEPZ are more prone to yield reduction, respectively whereas Bundelkhand zone (BZ) has been affected from losses due to higher year to year fluctuations in area under cereals crops as is evident by an area deviation (ADE) of 58.22 percent. The top two zones in terms of losses in pulses are BZ (2.26 thousand tonnes) and EPZ (1.90 thousand tonnes). Segregation of pulses production losses show that 46.48 percent and 41.18 percent YDE BZ zone is more prone to yield reduction. These zones, therefore, must be accorded priority for minimizing losses of pulses production. Similarly, NEPZ (0.14 thousand tonnes) and BZ (0.11 thousand tonnes) zones incurred the maximum losses in oilseeds production.

TABLE 2: AGRO CLIMATIC ZONE WISE POTENTIAL LOSSES OF CEREALS, PULSES AND OILSEEDS PRODUCTION AND ITS SEGREGATION INTO AREA, YIELD, AND INTERACTION DEVIATION EFFECT

Agro-Climatic Zone	Cereals				Pulses				Oilseeds			
	PL	ADE	YDE	IDE	PL	ADE	YDE	IDE	PL	ADE	YDE	IDE
BTZ	9.57	52.61	40.79	6.59	1.04	55.01	31.30	13.70	0.10	52.39	12.21	35.40
B Z	3.63	58.22	29.79	11.99	2.26	35.86	46.48	17.66	0.11	48.14	25.72	26.14
CZ	4.09	53.19	41.65	5.16	1.09	45.87	41.18	12.96	0.09	50.42	15.32	34.27
EPZ	5.14	45.79	48.59	5.62	1.90	43.05	43.03	13.92	0.04	63.49	5.88	30.63
MWPZ	7.34	49.08	43.77	7.15	1.22	58.84	30.17	10.98	0.03	53.03	16.97	30.00
NEPZ	11.17	41.35	48.26	10.38	1.52	47.81	37.19	15.00	0.14	50.42	16.75	32.84
SWSZ	13.02	47.54	41.90	10.56	1.73	50.02	38.62	11.35	0.05	54.74	18.34	26.91
VZ	3.71	42.68	47.37	9.95	0.66	54.03	29.00	16.96	0.02	76.89	-22.48	45.60
WPZ	5.16	55.16	35.41	9.43	0.47	53.79	31.92	14.29	0.05	47.26	26.49	26.25

Source: Authors Estimation. Notes: BTZ, BZ, CZ, EPZ, MWPZ, NEPZ, SWSZ, VZ, WPZ stand for Bhabhar and Trai Zone, Bundelkhand Zone, Central Zone, Eastern Plain Zone, Mid-Western Plain Zone, North Eastern Plain Zone, South Western Semi-Arid Zone, Vidhyan Zone and Western Plain Zone. PL, ADE, YDE and IDE stand for Potential Loss (Thousand Tonnes), Area Deviation Effect (Percentage Losses due to Deviation in Area only), Yield Deviation Effect (Percentage Losses due to Deviation in Yield only) and Interaction Deviation Effect (percentage Losses due to reduction in area and yield both).

3.3 CROP PRODUCTION LOSSES INDEX

The estimated production losses from cereals, pulses and oilseeds were normalised to develop cereal production loss index, pulses production loss index and oilseeds production loss index, respectively (Table 3). The average score of these three indices was treated as composite crop production loss index (CPLI). As per CPLI scores, agro climatic zones were also classified into four groups; extreme, high, medium and low degree of losses (Table 2). The calculated index scores show that central (CZ) and vidhyan (VZ) zones have been incurred extremely crop production losses due to climate change, whereas SWSZ, EPZ and WPZ zones have been incurred lowest crop production losses.

TABLE 3: AGRO CLIMATIC ZONE WISE CEREAL, OILSEED, PULSES PRODUCTION LOSSES INDEX AND CROP PRODUCTION LOSSES INDEX (CPLI)

Agro-Climatic Zone	CLI	Rank	OLI	Rank	PLI	Rank	CPLI	Degree of Crop Production Loss Index
BTZ	0.363	5	0.354	5	0.353	4	0.357	Medium
B Z	0.497	2	0.355	7	0.341	3	0.398	High
CZ	0.486	3	0.203	3	0.535	9	0.408	Extreme
EPZ	0.444	4	0.279	9	0.154	6	0.292	Low
MWPZ	0.317	6	0.400	6	0.341	1	0.352	Medium
NEPZ	0.237	7	0.230	1	0.691	7	0.386	High
SWSZ	0.185	9	0.222	4	0.370	8	0.259	Low
VZ	0.584	1	0.356	2	0.611	2	0.517	Extreme
WPZ	0.221	8	0.306	8	0.231	5	0.253	Low

Source: Authors Estimation. Notes: CLI, OLI, PLI and CPLI stand for cereals loss index, oilseeds loss index, pulses loss index and crop production loss index, respectively. Agro climatic zone having index score 0.00-0.25, 0.26-50, 0.51-0.75 & 0.76-1.00 were categorised as facing low, medium, high extreme level of production losses due to climate variability.

3.4 EXPOSURE INDEX

The calculated exposure index score was 0.187 and wide variations in exposure to climate variability are evident from the range of scores from 0.133 (minimum for Vidhyan zone) to 0.207 (highest for Bhabhar and Trai zone) as given in Table 4. Based on the exposure index scores, all agro climatic zones were grouped into four categories, i.e., extreme, high, medium and low degree of exposure to climate change and variability. Bhabhar and Trai (BTZ) and mid-western plain (MWPZ) were grouped under extreme degree of exposure. The factors responsible are: decline in Kharif and rabi season rainfall and increase in variability. Further, for these zones, projected temperatures are of 0.84 and 0.61°C, respectively. This is which are higher than the state level projections, respectively.

TABLE 4: AGRO CLIMATIC ZONE WISE EXPOSURE INDEX SCORES AND DEGREE OF EXPOSURE

ACZs \Rightarrow	BTZ	B Z	CZ	EPZ	MWPZ	NEPZ	SWSZ	VZ	WPZ
PCMinT	0.037	0.226	0.159	0.139	0.033	0.155	0.148	0.189	0.235
PCMaxT	0.245	0.526	0.438	0.423	0.226	0.611	0.385	0.248	0.179
VMinT	0.73	0.571	0.477	0.768	0.791	0.555	0.458	0.537	0.458
VMaxT	0.664	0.274	0.336	0.13	0.662	0.302	0.624	0.031	0.782
MKSR	0.056	0.082	0.058	0.067	0.043	0.087	0.036	0.086	0.016
PCMKR	0.084	0.021	0.026	0.024	0.058	0.038	0.018	0.061	0.082
VKSR	0.06	0.018	0.058	0.049	0.073	0.029	0.08	0.03	0.101
MRSR	0.06	0.054	0.056	0.077	0.041	0.075	0.013	0.112	0.039
PCMRSR	0.058	0.058	0.045	0.031	0.067	0.055	0.096	0.012	0.039
VRSR	0.076	0.063	0.081	0.059	0.095	0.062	0.123	0.024	0.097
Exposure Index	0.207	0.1893	0.1734	0.1767	0.2089	0.1969	0.1981	0.133	0.2028
Rank	2	6	8	7	1	5	4	9	3
Degree of Exposure	Extreme	Medium	Low	Low	Extreme	Medium	High	Low	High

Source: Authors Estimation. Notes: PCMinT, PCMaxT, VMinT, VMaxT, MKSR, PCMKR, VKSR, MRSR, PCMRSR, VRSR stand for projected change in minimum temperature, projected change in maximum temperature, variability in minimum temperature, variability minimum temperature, mean Kharif season rainfall, projected change in mean Kharif season rainfall, variability in Kharif season rainfall, mean rabi season rainfall, projected change in mean rabi season rainfall, variability in rabi season rainfall.

3.5 SENSITIVITY INDEX

The average index score of the sensitivity is 0.090 with standard deviation of 0.018 indicating noticeable inter-agro climatic zone disparities in the level of sensitivity to climatic variability (Table 5). Bundelkhand zone was found to be the most sensitive zone due to higher population density. On the other hand, north eastern plain zone (NEPZ) was found to be least sensitive with least degraded land (89 hectares) and population belongs to below poverty line (34 percent) respectively. Based on the sensitivity index scores, all agro climatic zones were grouped into four categories, i.e., extreme, high, medium and low degree of sensitivity to climate change and variability. It is found that Bundelkhand zone to be extremely sensitive to climate change, whereas eastern plain zone, north eastern plain zone and western plain zone to be least sensitive to climate change.

TABLE 5: AGRO CLIMATIC ZONE WISE SENSITIVITY INDEX SCORES AND DEGREE OF SENSITIVITY

ACZs	PD	PBP	GWE	PFDWP	DL	RA	Sensitivity Index	Rank	Degree of Sensitivity
BTZ	0.080	0.058	0.051	0.096	0.107	0.097	0.082	5	Medium
B Z	0.119	0.108	0.103	0.132	0.092	0.146	0.117	1	Extreme
CZ	0.053	0.091	0.113	0.104	0.058	0.058	0.079	6	Medium
EPZ	0.056	0.075	0.127	0.079	0.078	0.056	0.078	7	Low
MWPZ	0.084	0.124	0.133	0.124	0.103	0.120	0.115	2	Extreme

NEPZ	0.023	0.082	0.076	0.097	0.074	0.049	0.067	9	Low
SWSZ	0.071	0.089	0.136	0.126	0.119	0.097	0.106	3	High
VZ	0.052	0.103	0.136	0.051	0.098	0.093	0.089	4	High
WPZ	0.030	0.085	0.130	0.086	0.076	0.053	0.077	8	Low

Source: Authors Estimation. Notes: PD, PDP, GWE, PFDWP, DL & RA stand for population density, percentage of below poverty line population, ground water exploitation, population facing drinking water problem, degraded land and rainfed area.

3.4 ADAPTIVE CAPACITY INDEX

The calculated adaptive capacity index scores show that west plain zone (0.063), Vidhyan zone (0.063), mid-west plain zone (0.063) and eastern plain zone secured (0.060) have highest adaptive capacity index scores, whereas Bundelkhand zone (0.048) has lowest adaptive capacity to cope with climate change (Table 6) due to higher per capita income 39554₹ (west plain zone), 33404₹ (Vidhyan zone), 40938₹ (mid-west plain zone) and 33323₹ (eastern plain zone). Further, other factors namely, higher level of education, assess of electricity, mean land size helped these three four zones in achieving better adaptive capacity status. On the other hand, Bundelkhand zone has lower land size (3 hectare), only one percent households taken formal training in agriculture, least agricultural labourers (only 32 percent), respectively (Table 6).

TABLE 6: AGRO CLIMATIC ZONE WISE ADAPTIVE CAPACITY INDEX SCORES AND DEGREE OF ADAPTIVE CAPACITY (AC)

ACZs \Longrightarrow BTZ	B Z	CZ	EPZ	MWPZ	NEPZ	SWSZ	VZ	WPZ	
Electricity	0.075	0.048	0.059	0.078	0.069	0.052	0.083	0.06	0.07
AT	0	0.032	0.03	0.027	0.05	0.016	0.045	0.064	0.048
AT	0.081	0.058	0.059	0.092	0.042	0.069	0.059	0.058	0.047
Cultivators	0.073	0.034	0.066	0.06	0.054	0.055	0.045	0.1	0.061
MGNREGA	0.052	0.066	0.042	0.044	0.068	0.054	0.063	0.048	0.079
Road	0.031	0.089	0.07	0.078	0.081	0.093	0.073	0.063	0.069
LR	0.067	0.057	0.065	0.096	0.055	0.068	0.072	0.059	0.095
PCI	0.068	0.036	0.046	0.046	0.08	0.034	0.02	0.036	0.046
Land	0.064	0.012	0.035	0.046	0.068	0.028	0.042	0.054	0.056
AC Index	0.057	0.048	0.052	0.063	0.063	0.052	0.056	0.060	0.063
Rank	5	9	7	2	3	8	6	4	1
Degree of Adaptive Capacity	Medium	Low	Low	High	High	Low	Medium	High	High

Source: Authors Estimation. Notes: Electricity, AT, AL, cultivators, MGNREGA, Road, LR, PCI, Land stand for percentage of households having electricity access, percentage of households taken formal training in agriculture, percentage of agricultural labourers, percentage of cultivators, percentage of households participated in MGNREGA, Pucca approach roads, literacy rate, per capita income, mean land size.

3.5 VULNERABILITY INDEX

The relative strength and interaction of crop production losses, exposure, sensitivity and adaptive capacity index determined the vulnerability, and thereby the level of vulnerability of a particular agro climatic zone (Table 7). Vidhyan zone was rated as the most potentially impact and vulnerable agro climatic zone of the state (potential index score 0.739 & vulnerability index score 0.679). Further, on account of low adaptive capacity (4th rank) coupled with high exposure level (9th rank) and highest sensitivity (4th rank). In addition, Bundelkhand zone was on second position with potential impact and vulnerability index scores viz., 0.704 & 0.656, respectively. On the other hand, west plain zone, east plain zone and southwest plain zone were found to be exhibit low degree of vulnerability index scores (0.469, 0.484 & 0.508). Assessing the extent of population facing different level of vulnerability is considered a necessary step to assist in decision-making and to orient adaptation efforts. It is necessary that to show that: how much agricultural area, human population and livestock population are expected to suffer with adverse effects of vulnerability caused by climate change.

TABLE 7: AGRO CLIMATIC ZONE WISE POTENTIAL IMPACT & VULNERABILITY INDEX SCORES AND DEGREE OF VULNERABILITY

ACZs	Potential Index	Impact Rank	Vulnerability Index	Rank	Degree of Vulnerability
BTZ	0.646	6	0.589	6	Medium
B Z	0.704	2	0.656	2	Extreme
CZ	0.661	4	0.608	4	High
EPZ	0.547	8	0.484	8	Low
MWPZ	0.675	3	0.613	3	High
NEPZ	0.650	5	0.598	5	Medium
SWSZ	0.564	7	0.508	7	Low
VZ	0.739	1	0.679	1	Extreme
WPZ	0.533	9	0.469	9	Low

Source: Authors Estimation.

4. CONCLUSION AND POLICY PRESCRIPTION

The present study has identified climate change related vulnerable area in the various agro-climatic zones in Uttar Pradesh using vulnerability index, which is expected to enable policy makers and planners in articulating systematic, holistic and understandable information, and help in setting priorities (Kumar et al., 2016). The study revealed that mid-west plain zone is most prone to crop production losses and has the highest level of exposure to climate change. Further, Bundelkhand zone has highly sensitive, whereas west plain zone has highest adaptive capacity to cope with climate change. Overall, Vidhyan zone has potentially vulnerable to climate change.

From management and planning point of view, agro climatic zones incurring a sizeable losses of cereals, pulses and oilseeds production should be given attention and policies may be formulated reckoning with the area and yield deviation effects for minimizing losses.

Based on above-mentioned findings, the present study prescribed following policy prescription to enhance the livelihood security in Uttar Pradesh.

- For minimizing yield and area instability, adaptive measures need to be taken at crop production, farm and regional levels by formulating agricultural policies and investment plans.

- In rainfed area, such as Bundelkhand zone, interventions should focus on moderating the adverse impact of exposure by appropriate and judicious use of rainwater for enhancing in-situ soil moisture conservation (Kumar et al., 2016).
- By tapping rainfall with the help of appropriate farm-level soil and water conservation measures yield of different crops can be increased by 10-47 percent (Rao, 2011).
- Small-scale water harvesting structures has a large potential for increasing food production by enabling partial/supplemental irrigation when water is most needed by crops (Sharma et al., 2010).
- Crop level measures (shift in sowing dates and multiple-stress-drought varieties, crop rotation, early maturing varieties) farm level measures (farm pond, micro- irrigation systems, soil and water conservation structures), better land use management, crop and income diversification are also very vital for moderating the harmful impacts of climate change (Agarwal, 2003).
- Regional level measures for enhancing adaptive capacity and minimizing sensitivity should be taken, for instance introduction of crop insurance, access of state of art weather information system (Ranuzzi and Srivastva, 2012).
- Degradation of productive land has increased sensitivity in agriculture. Therefore, reclamation of degraded area with appropriate technologies, scientific land use planning must be promoted in degraded prone area by striking an appropriate balance between environmental sustainability and economic viability (Cao et al., 2009).
- Lastly, there is an urgent need to implement more focused and targeted programme and schemes, particularly in the area for sustaining livelihood to deal with challenges of climate change.

REFERENCES

- Abebe, H. Pathak, S.D. Singh, A. Bhatia, R.C. Heart and Vinod K., 2016. Growth, yield and quality of maize with elevated atmospheric carbon dioxide and temperature in north-west India. *Agri, Eco. and Envi.*, 218, 18.
- Acheampong, E.N., Ozor, N., Owusu, E.S., 2014. Vulnerability assessment of Northern Ghana to climate variability. *Clim. Change* 126 (1–2), 31–44.
- Adger, W. N., K. Brown, D. R. Nelson, F. Berkes, H. Eakin, C. Folke, K. Galvin, L. Gunderson, M. Goulden, K. O'Brien, J. Ruitenbeek, and E. L. Tompkins. 2011b. Resilience implications of policy responses to climate change. *Wiley Interdisciplinary Reviews, Climate Change* 2(5), 757-766.
- Agarwal, P.K., 2003. Impact of climate change on Indian agriculture. *J. Plant Biol.* 30, 189–198.
- Agarwal, P.K., 2007. Climate change: implications for Indian agriculture. *JalvigyanSameeksha* 22, 37–46.
- Agarwal P.K., 2009a. Global Climate Change and Indian Agriculture; Case Studies from ICAR Network Project Published by Indian Council of Agricultural Research, New Delhi, India, 21-25.
- Antwi-Agyei, P., Fraser, E.D., Dougill, A.J., Stringer, L.C., Simelton, E., 2012. Mapping the vulnerability of crop production to drought in Ghana using rainfall, yield and socioeconomic data. *Appl. Geogr.* 32 (2), 324–334.
- Armah, F.A., Yawson, D.O., Yengoh, G.T., Odoi, J.O., Afrifa, E.K., 2010. Impact of floods on livelihoods and vulnerability of natural resource dependent communities in Northern Ghana. *Water* 2 (2), 120–139.
- Bhate, J., Unnikrishnan, C.K., Rajeevan, M., 2012. Regional climate model simulations of the 2009 Indian summer monsoon. *Indian J. Radio Space* 41, 488–500.

- Boardman, J., 2006. Soil erosion science: reflections on the limitations of current approaches. *Catena* 68 (2), 73–86.
- Briguglio, L., 1995. Small island developing states and their economic vulnerabilities. *World Dev.* 23 (9), 1615–1632.
- Briguglio, L., 2003. The vulnerability index and small island developing states: a review of conceptual and methodological issues. In: AIMS Regional Preparatory Meeting on the Ten Year Review of the Barbados Programme of Action, Praia, Cape Verde, 45-50.
- Brooks, N., Neil Adger, W., Mick Kelly, P., 2005. The determinants of vulnerability and adaptive capacity at the national level and the implications for adaptation. *Glob. Environ. Change* 15 (2), 151–163.
- Byrne, S., Shrestha, G., 2014. A compromising consensus? Legitimising local government in post-conflict Nepal. *Int. Develop. Plan. Rev.* 36 (4), 435–453.
- Calder, V.K.J., P.B. Berensten, G.W. Glesen and R.B. Herivne. 2004. Identifying and ranking attributes that determine sustainability in Dutch dairy farming. *Agri. and Hu. Val.* 22(1), 53-63.
- Cao, S., Zhong, B., Yue, H., Zeng, H., Zeng, J., 2009. Development and testing of a sustainable environmental restoration policy on eradicating the poverty trap in China's Changting County. *Proc. Natl. Acad. Sci. U. S. A.* 106 (26), 10712–10716.
- Chattaraj, S., D. Chakraborty, V.K. Sehgal, R.K. Paul, S.D. Singh, A. Daripa and H. Pathak. 2014. Predicting the impact of Climate Change on water requirement of wheat in the semi-arid indo-gangetic plains of India. *Agri, Eco. and Envi.*, 197, 12.
- Das, A., 2013. Mapping the regional variation in potential vulnerability in Indian Agriculture to climate change- An exercise through constructing vulnerability index. *Afr. J. Environ. Sci. Technol.* 7 (4), 112–121.
- Defiesta, G.D., Rapera, C.L., 2014. Measuring adaptive capacity of farmers to climate change and variability: application of a composite index to an agricultural community in the Philippines. *J. Environ. Sci. Manage.* 17 (2), 1-15.
- Eakin, H., Luers, A.L., 2006. Assessing the vulnerability of social-environmental systems. *Annu. Rev. Environ. Resour.* 31 (1), 365.
- Egyir, I. S., Kwadwo, O., Godfred, A., Yaa, N.B. 2015. Adaptive Capacity and Coping Strategies in the Face of Climate Change: A Comparative Study of Communities around Two Protected Areas in the Coastal Savanna and Transitional Zones of Ghana. *J. of Sus. Dev.*, 8(1), 1-15.
- Fraser, E.D., 2007. Travelling in antique lands: using past famines to develop an adaptability/resilience framework to identify food systems vulnerable to climate change. *Clim. Change* 83 (4), 495–514.
- Fussel, M., 2007. Vulnerability: a generally applicable conceptual framework for climate change research. *Glob. Cli. Change*, 17(2), 155-167.
- Gay, D., Corazon L. Rapera, 2014. Measuring adaptive capacity of farmers to climate change and variability: application of a composite index to an agricultural community in the Philippines. *J. of Envi. Sci. and Manage.* 17(2), 48-62.
- Gbetibouo, G.A., Ringler, C., 2009. Mapping South African farming sector vulnerability to climate change and variability: a subnational assessment. International Food Policy Research Institute (IFPRI) and Center for Environmental Economics and Policy in Africa (CEEPA), 12-18.
- Geng, Q., Wu, P., Zhao, X., Wang, Y., 2014. A framework of indicator system for zoning of agricultural water and land resources utilization: a case study of Bayan Nur, Inner Mongolia. *Ecol. Indic.* 40, 43–50.

- Gosain, A.K., Rao, Sandhya., Arora, Anamika, 2011. Climate change impact assessment of water resources of India, *Curr. Sci.*, 101(3), 14-20.
- Goswami, B.N., V. Venugopal, D. Sengupta, M.S. Madhusoodan, K.K. Prince, 2006. Increasing trend of extreme rain events over India in a warming environment. *Science*, 314(5804), 245-250.
- Hahn, M.B., Riederer, A. M. and S.O. Foster. 2009. The livelihood vulnerability index: a pragmatic approach to assessing risks from climate variability and change- A case study in Mozambique. *Glob.Envi. Chan.*, 19(2), 123-125.
- Huq, N., Jean H., Emmanuel B., Animesh K. Gain. 2015. Climate change impacts in agricultural communities in rural areas of coastal Bangladesh: a tale of many stories. 7, 8437-8460.
- Inrahim, K., M.N. Shamsudin, R. Yacob, A. Radam. 2014. Economic impacts of climate change on maize production in northern Nigeria. *Trends in applied science research*, 9(9), 522-533.
- IPCC, 2001a. Climate change 2001: Impacts, adaptation and vulnerability. In: Working Group II Contribution to the Intergovernmental Panel on Climate Change Third Assessment Report. Cambridge University Press, Cambridge, 231-250.
- IPCC, 2007a. Climate change 2007: Impacts, adaptation and vulnerability. In: Working Group II Contribution to the Intergovernmental Panel on Climate Change Fourth Assessment Report. Cambridge University Press, Cambridge, 210-220.
- IPCC, 2007b. Climate Change 2007-the Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge, United Kingdom, 1-7.
- Kaly, U.L., Pratt, C.R., Mitchell, J., Howorth, R., 2003. The demonstration environmental vulnerability index (EVI). *SOPAC Techn. Rep.* 356.
- Kato, E., Ringler, C., Yesuf, M., Bryan, E., 2011. Soil and water conservation technologies: a buffer against production risk in the face of climate change? Insights from the Nile basin in Ethiopia. *Agric. Econ.* 42 (5), 593–604.
- Krishna Kumar, K. Patwardhan, S. K., Kulkarni, A., Kamala, K., Koteswara Rao, K. and Jones, R., 2011. Simulated projections for summer monsoon climate over India by a high-resolution regional climate model (PRECIS). *Curr. Sci.*, 2011, 101(3), 312–326.
- Kumar, S., A. Raizada, H., Biswas, S. Srinivas, Biswajit M., 2016. Application of indicators for identifying climate change vulnerable areas in semi-arid regions of India. *Ecol. Indi.* 70, 507-517.
- Kumar, S., Raizada, A., Biswas, H., 2014. Prioritising development planning in the Indian semi-arid Deccan using sustainable livelihood security index approach. *Int. J. Sustain. Dev. World* 21(4), 332–345.
- Larson, D.W., Jones, E., Pannu, R.S., Sheokand, R.S., 2004. Instability in Indian agriculture- a challenge to the Green Revolution technology. *Food Policy* 29 (3), 257–273.
- Leichenko, R.M., O'Brien, K.L., 2002. The dynamics of rural vulnerability to global change: the case of southern Africa. *Mitig. Adapt. Strat. Gl.* 7(1), 1–18.
- Levy, P.E., A.D. Friend, A. White, and M.G.R. Cannell, 2004. The influence of land use change on global-scale fluxes of carbon from terrestrial ecosystems. *Clim. Chan.*, 67, 185-209.
- Liu, X., Wang, Y., Peng, J., Braimoh, A.K., Yin, H., 2013. Assessing vulnerability to drought based on exposure, sensitivity and adaptive capacity: a case study in middle Inner Mongolia of China. *Chin. Geogr. Sci.* 23(1), 13–25.

McCarthy, J.J., 2001. Climate Change 2001: Impacts, Adaptation, and Vulnerability: Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, 2-10.

Mishra, A.K., Singh, V.P., 2010. A review of drought concepts. *J. Hydrol.* 391(1), 202–216.

Piya, L., Maharjan, K.L., Joshi, N.P., 2012. Vulnerability of rural households to climate change and extremes: analysis of Chepang households in the Mid-Hills of Nepal. In: 2012 Conference, August 18–24, 2012. Foz Do Iguaçu, Brazil (No. 126191), International Association of Agricultural Economists, 5-12.

Rao, V.U.M., Rao, A.V.M.S., Kumar, P.V., Desai, S., Saikia, U.S., Srivastava, N.N., Venkateswarlu, B., 2011. Agricultural Drought: climate change and Rainfed agriculture. In: Lecture Notes of the 5th SERC School, Central Research Institute for Dryland Agriculture, Hyderabad, India, 324.

Rockstrom, J., Falkenmark, M., 2000. Semi-arid crop production from a hydrological perspective-gap between potential and actual yields. *Crit. Rev. Plant Sci.* 19(4), 319–346.

Ranuzzi, A., Srivastava R., 2012. Impact of Climate Change on Agriculture and Food Security, ICRI ER, policy series, [/icrier.org/pdf/Policy Series No 16.pdf](http://icrier.org/pdf/Policy%20Series%20No%2016.pdf).

Saleth, R.M., Swaminathan, M.S., 1993. Sustainable livelihood security at the household level: concept and evaluation methodology. In: Proceedings of an Interdisciplinary Dialogue on Ecotechnology and Rural Employment, Madras, India, April 12–15.

Schlenker, W., Lobell, D.B., 2010. Robust negative impacts of climate change on African agriculture. *Environ. Res. Lett.* 5(1), 014010

Sharma, B.R., Rao, K.V., Vittal, K.P.R., Ramakrishna, Y.S., Amarasinghe, U., 2010. Estimating the potential of rainfed agriculture in India: prospects for water productivity improvements. *Agric. Water Manage.* 97(1), 23–30.

Schneiderbauer S, Pedoth L, Zhang D, Zebisch M., 2013. Assessing adaptive capacity within regional climate change vulnerability studies—An Alpine example. *Natural Hazards*, 67, 1059–1073.

Sen, C. and L.D. Hatai. 2007. An economic analysis of agricultural sustainability in Orissa, *Agri. Eco. Res. Rev.* 21(2), 273-282.

Sharma, B.R., Rao, K.V., Vittal, K.P.R., Ramakrishna, Y.S., Amarasinghe, U., 2010. Estimating the potential of rainfed agriculture in India: prospects for water productivity improvements. *Agric. Water Manage.* 97(1), 23–30.

Shetty P.K., Ayyappan S., Swaminathan M.S., 2013. Climate Change and Sustainable Food Security. Published by the National Institute of Advanced Studies, Bangalore and Indian Council of Agricultural Research, New Delhi, 1-10.

Singh, P.K. and B.N. Hiremath. 2010. Sustainable livelihood security index in a developing country: a tool for development planning”, *Eco. Indi.* 10(2), 442-451.

Sinha, A.K., M.S. Swaminathan. 1999. Long-term climate variability and changes. *J. of Indian Geo. Uni.*, 7(3), 234-240.

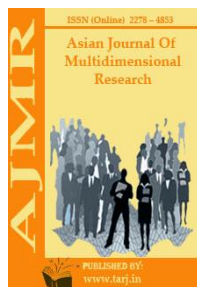
Tol, R.S., Yohe, G.W., 2007. The weakest link hypothesis for adaptive capacity: an empirical test. *Glob. Environ. Change* 17(2), 218–227.

Vincent, K., 2004. Creating an Index of Social Vulnerability to Climate Change for Africa, 56. Tyndall Center for Climate Change Research, Working Paper, 41.

Wood, S.A., Jina, A.S., Jain, M., Kristjanson, P., DeFries, R.S., 2014. Smallholder farmer cropping decisions related to climate variability across multiple regions. *Glob. Environ. Change* 25, 163–172.

Yadav, D.B. and K.N. Rai. 2001. Perspective and prospects of sustainable agriculture in Haryana”, In. J. of Agri. Eco. 56(1), 100-115.

Yohe, G., Tol, R.S., 2002. Indicators for social and economic coping capacity-moving toward a working definition of adaptive capacity. Glob. Environ. Change 12(1), 25–40.



URBANISATION IN MADYAMGRAM - A STUDY ON THE PATTERN OF EXPANSION OF THE URBAN BUILT UP AREA AND THE SUITABILITY OF THE URBAN SERVICES

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ABSTRACT

Urban expansion is the process where the urban built up area encroaches upon the existing rural landscape giving rise to a new landscape. In this paper the urban expansion has been measured on the basis of the land use characteristics. The temporal expansion of the urban built up area over a region has been considered as the means of studying the intensity of urban expansion. Moreover delineating a fringe area within the municipality has been done by the help of land use diversity index. Demarcation of the fringe area has been initiated with a reason of finding the differences in the perception of the people about the quality and access to the urban facilities. As the fringe and core area has been demarcated within the municipal boundary there shouldn't be any major difference between the opinion about the accessibility and the quality of the services. Differences in the perception in such cases occur under the situation of the unequal distribution of the facilities and its services. Therefore the broader objective of the study is to find out whether the urban growth in Madyamgram is planned or not depending on the differences in perceptions of the fringe population and the core population. Madyamgram has been considered as the study area within the North 24 parganas West Bengal because of its pattern of urban expansion.

KEYWORDS:*Demarcation, Encroaches, Fringe, Expansion, Initiated*

INTRODUCTION

Urbanization can be defined as the process of transformation of other land uses into urban built up area. On its way to transform the existing land use structure of a region it often leads to an emergence of a new land use character which is a mixture of urban as well as rural land use termed as fringe area. The gradual transformation of the land uses are the manifestation of the human behavior of a region. Therefore the driving factors of urbanization affecting the land use characteristics of a region is migration of people into an area in search of job opportunities, other benefits considered as pull factor or for avoiding a socio- political crisis in a region which is termed as forced migration acts as a push factor. Land use changes are the result of competition within different land uses which is taken over by the most dominant activity of that area. Urbanization when discussed in a global perspective has been a development focused for few centuries .Majority of the urbanization was realized in the 20th century when explained in land area. United states has shown the highest urbanization followed by the western Europe China and India. Urban area till 2010 in United states has been 157000sq. Km whereas India accounts about 24000 sq Km of urban area. As the higher income countries already had large populations in mid of 20th century therefore their rate of urban growth was lower in the next half of the 20th century whereas the low to medium, income countries have shown a higher increase in the rate of urban growth. Share of the urban population to the total population in India is highest in the year 2011 since 1951 which is 31.16%. Among the top 10 states in urbanization west Bengal is 9th in rank and it has been topped by the southernmost state Tamil Nadu followed by Kerala Urbanization with it brings some challenges to cope up and one of it is the increase in slum population in which Maharashtra tops the chart followed by Uttar Pradesh and West Bengal. Slum population in Maharashtra is 18.151million .Among the states facing the major challenge of increasing slum population is West Bengal,. West Bengal have witnessed to come up with large number of new towns. Urbanization in West Bengal was mainly concentrated around Kolkata and the nearby districts it was since 2011 that the urbanization process hit the interior districts like Jalpaiguri, Maldah, Murshidabad, Nadia, Birbhum. If we consider the Primary abstract data of 2001 and 2011 census we would see that the position of the districts of North 24 Parganas, Haora, Hugli and Bardhaman is unaltered and are experiencing the high degree of urbanisation. Increasing rate of urbanization is often followed by the distributional inequality of urban services to the population Urbanisation mainly takes place due to the migration .In-migration takes place due to the presence of the better services but when an area experiences drastic increase in population builds up pressure on the existing services. Therefore when it continues without a proper planning causes unequal distribution and availability of the urban services.

Study Area

This paper has considered 24 Parganas of West Bengal for the study where Madyamgram has been selected as the study area for micro level analysis of expansion and its associated consequences on the distribution and availability of services. The reason for the selection of 24

parganas is because of its highest concentration of the refugees from East Pakistan during two phases one after April 1950 and the other since 1st February 1951. Madyamgram falls under the jurisdiction of Barasat subdivision within the limits of Madyamgram police stations, and under the local jurisdiction of Madyamgram municipality. Urbanisation in North 24 pgs was greatly influenced by the net flow of migrants from and to East Pakistan till the end of January 1951. The migration of population took place in two phases since April 1950 till January 1951. First during the Delhi pact on April 1950. And second one since the disturbance of 1st February 1950. This led to the emergence of government sponsored colonies. On the other hand increase in population has been found in Municipalities like Barasat, Madyamgram, Bidhannagar due to the increasing job opportunities and the latent current of migration mainly from Bangladesh and from other states of India. Therefore the settling down of these refugees were planned to be done in colonies in permanent manner the expression was excessively natural and humanitarian.

REVIEW OF LITERATURE

(Rajashree Kotharkar, Pankaj Bahadure and Neha Sardathe, 2014) urban forms considered in the paper of "Measuring Compact Urban Form: A Case of Nagpur City, India". Are Neo-traditional Development, Urban Containment, Compact City and Eco-City. These four forms are considered to be the sustainable urban forms as introduced by Jabareen. These four urban forms have been identified on the basis of the following seven criteria (a) Compactness (b) Sustainable Transport (c) Density (d) Mixed Land uses (e) Diversity (f) Passive Solar Design and (g) Greening. This paper has measured the compactness of the Nagpur city in the view of analyzing the degree of sustainability of the city. As compact city has been considered as a suitable urban design supporting sustainability as it can facilitate for mass transport and reduced travel distances, emphasis on pedestrian traffic, efficient use of land through high population densities, social cohesion and cultural development, and the economy in per capita cost of infrastructure provision and minor businesses by making a supportive threshold population available, implanting more vibrancy in cities. The benefits of compact cities are perceived more through high density and public transit. The study has been carried out on the basis of the two criteria population distribution and its movement patterns. Thus the form identified of the city is a mono-polycentric model with one main centre with various subcentres.

The paper of Spatial Analysis on the provision of Urban amenities and their deficiencies – A case study of Srinagar City, Jammu and Kashmir, India (Jahangeer, A. Parry, Showkat A. Ganaie, Zahoor A. Nengoo and M. Sultan Bhat, 2012) has analysed the inter ward disparity in distribution of two social amenities namely educational institution and fire service stations by the help of Z-variate and later on with the application of Lorenz Curve and Gini coefficients. The results which have been derived show a positive level of disparities among the wards. In the following paper of (Yan Xu, Lijie Pu and Lifang Zhang, 2014) Spatial Pattern and Process of Settlement Expansion in Jiangsu Province from 1980 to 2010, Eastern China has explained the spatial pattern of expansion and its regional differences. The spatial pattern of the urban expansion has been studied by the application of the following indices using the dimension of the dynamic physical landscape a) settlement Expansion Intensity Index, Settlement Expansion Differentiation Index, Average Nearest Neighbor, Compactness of urban morphology.

Classification method used in the paper on Analysis of Urban Land and Land Cover changes : A Case Study in Bahir Dar, Ethiopia (Atalel Getu Sahalu, 2014) is Supervised classification method and the study of Land use change has been carried out by the application of the Land use change modeler to assess the spatial changes due to urbanisation .

Land use Land cover pattern in Indonesia has been analyzed by combining MSS LANDSAT and land use map (Dimiyati, 1986). using remote sensing techniques to calculate the index of changes. This was done by superimposing the land use/land cover images of 1972, 1984 and land use maps of 1990. Adeniyi and Omojola (1999) in their land use land cover change evaluation in Sokoto –Rima Basin of North–Western Nigeria used remote sensing and GIS techniques to study transformations in the two dams (Sokoto and Guronjo) between 1962 and 1986 Urbanization exerts tremendous effect on housing condition in India. Rapid urban expansion in national capital Delhi, India, has led to the deteriorating conditions of urban crowding, housing shortages and lack of infrastructure, as well as increasing urban expansion on fertile lands. Therefore highlights much attention for sustainable and effective management and planning of urban areas. However, recently, innovative approaches to urban land use planning and management such as sustainable development and smart growth has been proposed (Kaiser et al. 1995). Antony Vinoth Kumar, J., Pathan, S. K. and Bhandari, R. J. (2007) have studied the spatio-temporal analysis to monitor urban growth and divided the Indore city into four rectangular zones and measured the urban built-up area and its growth rate for different periods. The Shannon entropy turned out to be a good measurement of the spatial concentration or dispersion of built-up area.

SIGNIFICANCE OF THE STUDY

Urbanization often act as an indicator of development. When Urbanisation occurs in an unplanned manner few problem arises related to the proper and equal distribution of the urban services..Over pressure and unplanned development together leads to an chaotic and an unprecedented urban development of the area. This study however highlights the problem of the unplanned expansion of the urban area.

OBJECTIVES

The objectives of the study are

- Temporal study of the urban expansion of the study area
- Demarcation of the Fringe area and core area with respect to distribution pattern of urban services
- Differences in opinion of the population about the services available in Fringe and core area

HYPOTHESES

- There would be a difference in opinion between the fringe and the core area against the statements asked during the survey regarding the nature and extent of the urban facilities
- Higher concentration of the urban services are in urban core area compared to fringe area

METHODOLOGY

Selection of the study area

Figure 1: Showing the amount of Leapfrog Growth of urban area in The Municipalities of the 24 Parganas of Kolkata Metropolitan Development Authority Region

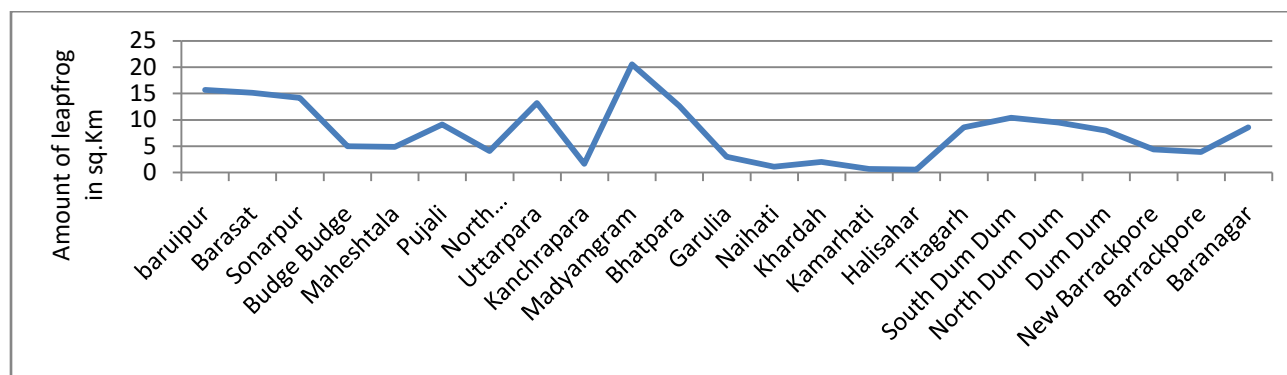
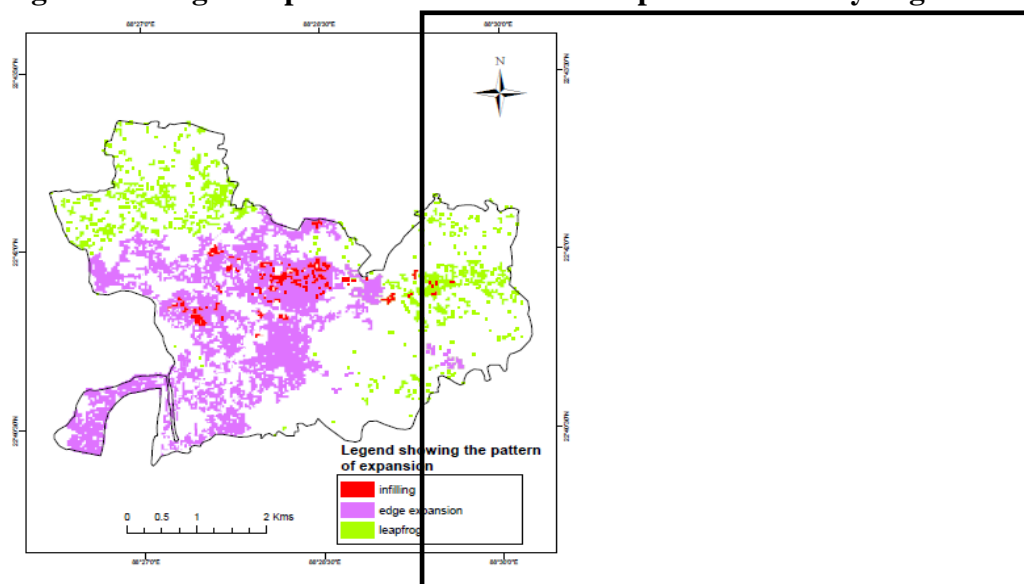


Fig2: Showing the Spatial Pattern of urban expansion in Madyamgram



The highest amount of leapfrog pattern has been recorded in Madyamgram municipality which lies in North 24 Parganas within Kolkata Metropolitan Development Authority region. Leapfrog pattern of urban growth is considered as the unplanned manner of urban expansion therefore there may occur sharp differences in perception among the population within the wards of the municipality about the quality and availability of the urban facilities

TABLE NO: 1 SHOWING THE PERCENTAGE OF THE LEAPFROG GROWTH IN THE MUNICIPALITIES OF 24 PARGANAS WITHIN KMDA

Municipalities	Percentage of Leapfrog Growth
Madyamgram	20.527
Baruipur	15.644
Barasat	15.123
Sonarpur	14.163
Budge Budge	4.973
Maheshtala	4.874

Pujali	9.071
North Barrackpore	4.031
Uttarpara	13.155
Kanchrapara	1.625
Bhatpara	12.654
Garulia	2.975
Naihati	1.05
Khardah	2
Kamarhati	0.65
Halisahar	0.53
Titagarh	8.56
South Dum Dum	10.36
North Dum Dum	9.44
Dum Dum	7.94
New Barrackpore	4.36
Barrackpore	3.89
Baranagar	8.564

Madyamgram municipality region has been segregated into two parts one is core area and the other one is the fringe area where from the wards has been selected on the basis of the maximum coverage of the wards under fringe area or core area Later on the perception collected from the sample population of the wards from the core area and fringe area has been compared by the application of the Mann Whiteny U Test to find out the degree differences in satisfaction level among the two regions .Moreover inter ward distribution of the distribution of the urban services has been studied by the application of the thiessen polygon. Here theissen polygon has been used to depict the concentration of the services which can be measured from the area of the thiessen polygon. Smaller the area of the thiessen polygon more is the concentration of different services. The service which has been considered for the study of distribution is educational service, health service, other public services, commercial service.

Sample selection of the population to be studied has been done from ward numbers 16, 17 as fringe areas and ward number 11 as urban core area sample size of the fringe area is 50 and that of urban core area is also 50.

Health services:

Health services include diagnostic center, pharmacy, hospitals and nursing homes

Educational services:

Educational services include primary school, madhyamik schools, higher secondary schools, Library, colleges

Other public services:

Public urinal, petrol pump, cemetery ground, busstop, Police stations

Commercial Services:

Atm, Bank, Post office

Entertainment Services:

Park, Playground, Cultural programme center

The aggregate scores which has been obtained by aggregating the code numbers allotted to each of the services for each polygon .has been later on multiplied by the areas of polygon for obtaining the weighted area values. The final distribution has been studied by superimposing the ward map of the Madyamgram over the thematic map of thiessen polygon thus showing the distribution of the services for each of the ward. The analysis has been done with respect to the fringe and core area of the municipality. Temporal study of urban expansion has been done for the years 1990, 1995, 2001, 2007, 2013, 2017 of Madyamgram by the application of supervised classification technique using maximum likelihood algorithm.is based on the probability of pixels to get membership to a specific class and it assumes that these probabilities are equal for all classes. Like other supervised classification algorithm MLC calculates the spectral distance between the measurement vector for the candidate pixel and the mean vector for each signature and the equation for classifying by spectral distance is based on the equation for Euclidean distance. Moreover the directional expansion has been estimated for above mentioned years by segregating the the Municipality map of Madyamgram in different directional segments in TNT Mips software .The rate of sprawl has been calculated of different directions to find out the dominance of the sprawl towards a particular direction The Satellite Images of the following sensors has been taken for the study.

TABLE 2: SHOWING THE DETAILS OF THE SATELLITE IMAGES TAKEN FOR THE STUDY

SATELLITE SENSORS	DATE	SPATIAL RESOLUTION
Landsat 4/TM & 5/TM	25.4.1990 & 28.4.1995	Visible and IR bands-30 mts, Thermal band- 120 mts
Landsat 7/ETM+	15.4.2001 & 15.4.2007	Visible and IR bands-30 mts, Two Thermal band- 60 mts each
Landsat 8/OLI-TIRS	24.4.2013 & 12.4.2017	Visible and IR bands-30 mts, Two Thermal bands- 100 mts each, Panchromatic band – 15 mts

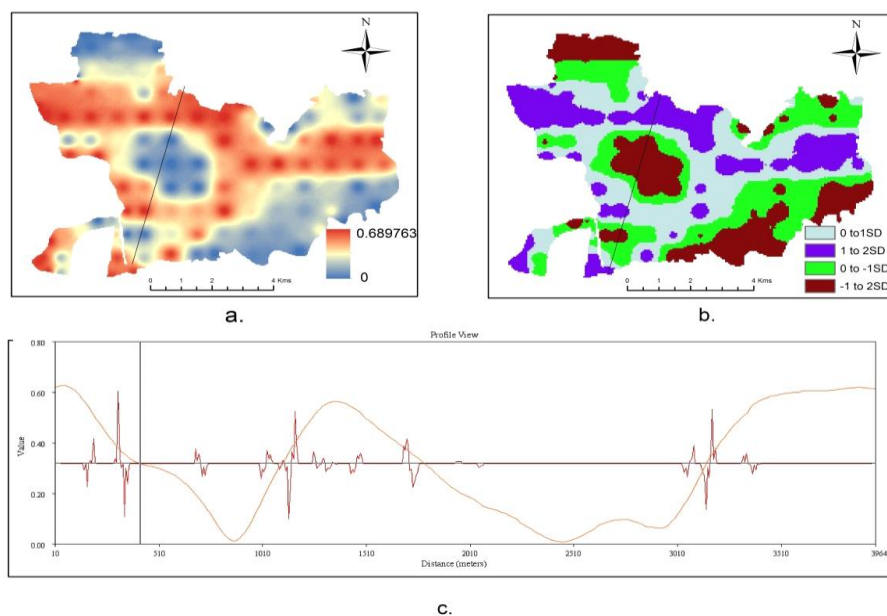
The fringe area of Madyamgram has been demarcated by the Shannon diversity index which calculates the degree of land use diversity of a region where more is the value of diversity higher is the probability of the region to be under the coverage of the fringe area. Here the demarcation is done on the basis of the fact that fringe area is supposed to bear both the characteristics of urban as well as rurallandscape.

$$H = -\sum_{i=1}^n P_i \ln P_i \dots \dots \dots (\text{Eq1.})$$

Where H is the diversity index (information entropy value). Pi is the proportion of area covered by land cover class i. It quantifies the diversity of land cover type based on two components: the number of different land cover types (richness) and the proportional area distribution among land cover types (evenness).

Finally the fringe area and the core area has been demarcated by estimating the inflection point on the cross sectional profile of the map . The cross section has been drawn on the map carrying the diversity values which were standardised by the application of Z score . .Inflection point on the curve may be defined as the point after which the second order derivative becomes negative .The map along with the cross sectional profile covering all the classes of diversity value has been produced by TNT Mips software. The inflection point has been identified from the curve by the application of second derivative option in the software. Where the line intersecting the curve shows the point of transition after which the second order condition becomes negative .



FIG3:SHOWING THE FRINGE AND URBAN CORE FOR THE YEAR 2017

- Showing the values of Shannon diversity index obtained by Surfacing
- Showing the fringe and Urban core area of 2017 classified by Z Scoring
- Profile showing the inflection point by the help of second derivative Line

Perception study

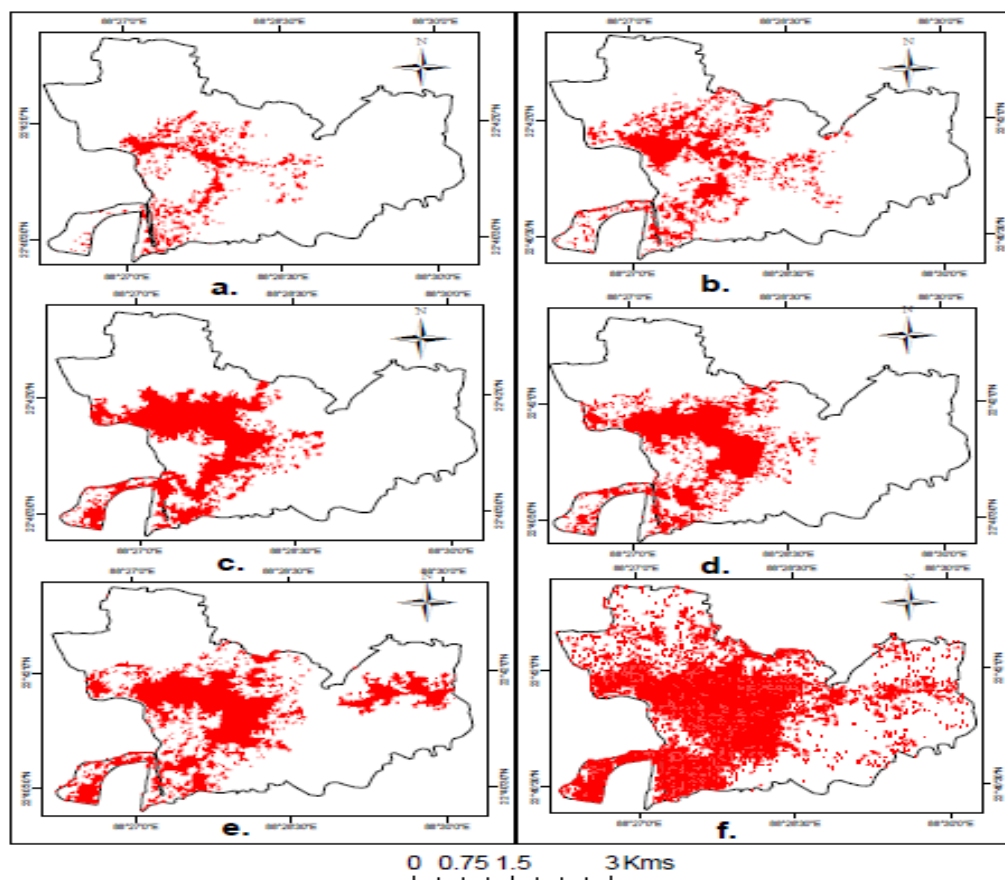
Selection of the households has been done after segregating the Madyamgram area into 2 halves by using Shannon Diversity index. Where one is the core area i.e. the low diversity land use zone and the other is the high diversity land use zone

Selection of the wards has been done on the basis of the highest coverage of the fringe area and the core area. Therefore the ward numbers 16 and 17 has been selected for having 100% fringe coverage whereas Ward number 11 has been selected for having the 100% of core coverage. The data has been collected on the basis of number of household. The household data has been collected by applying random sampling method, where the sample size has been considered as 50 for ward number 16 and 17 and 50 for ward number 11. The results which has been obtained by the application of Mann Whitney U Test where the comparison is done between the mean rank obtained by each group.

Mann –Whitney U test is a method which finds out the difference between the results of the two classes by estimating the mean ranks.

RESULT AND DISCUSSION

Fig4: Showing the urban expansion for the year 1990, 1995, 2001, 2007, 2013, 2017



Urban Area for the year a) 1990 b) 1995 c) 2001 e) 2007 f) 2013 g) 2017

TABLE3: SHOWING THE RATE OF EXPANSION FOR THE PERIOD OF 1990-95, 1995-2001, 2001-2007, 2007-2013, 2013-2017

Directions	1990_95	1995_2001	2001_2007	2007_2013	2013_17
N	1.664773	0.182516	0.033159	0.054454	1.936389
NE	1.550867	0.338545	0.248309	0.000508	0.824365
E	1.193399	0.203882	0.049587	0.00125	0.78517
SE	0.570238	0.601592	0.116396	0.007811	0.581024
S	0.70166	0.678127	0.151221	0.008428	0.21902
SW	0.695105	1.025578	0.223219	0.020367	0.613174
W	0.831512	0.095972	0.032319	3.91833	0.008303

NW	2.735714	0.251912	0.053076	0.222604	1.186758
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According to the data generated for the following years 1990,1995,2001,2007, 2013,2017 the maximum growth has been accounted during 1990 -95 i.e 9.9432 sq kms .The maximum expansion during this period was towards North west which is 2.736 sq km. Moreover the highest increase has been recorded towards the north western direction for the period of 1990-2017 i.e 11.5036. The expansion of the Madyamgram town towards the north western side indicates its pull towards the Barasat town . Significant Expansion has also been observed towards west and North i.e 8.96 sq km and 8.76 km respectively

Fig5: Star Diagram showing the rate of expansion in different directions during 1990-2017

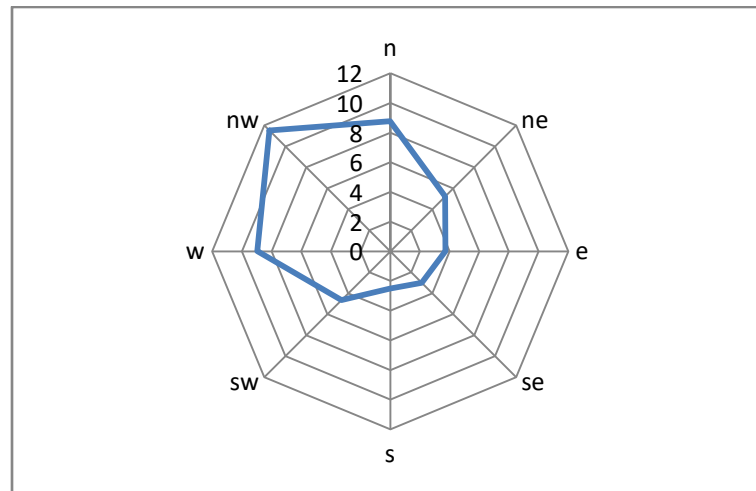
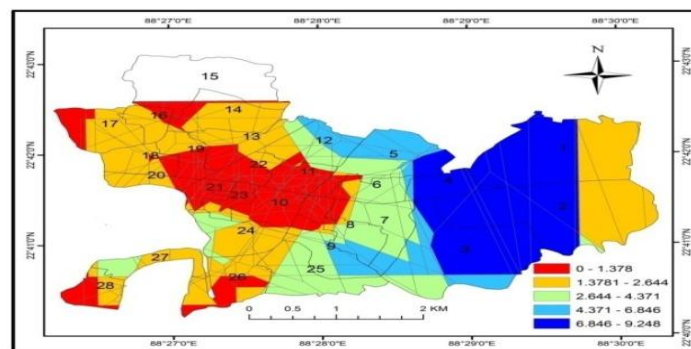


Fig 6: Showing the distribution of the urban services with the application of Thiessen polygon



Disparity in the Distribution of Services among the Ward:

The demarcated fringe and core area has been analyzed in this paper in respect to the distribution of the urban services. It has been found that the wards lying under the fringe area has received the highest aggregate score which means have less availability of all the urban services .whereas the areas having under the core area have more availability of all the services. The wards receiving the highest number of services are 19, 11, 22, 21, 23, 10. Those wards who are receiving lowest number of services are 3, 4, 2, 1, and 16.

TABLE NO 4: SHOWING THE SIGNIFICANCE TEST VALUE FOR THE WATER AVAILABILITY AND QUALITY PERCEPTION

Amount of	Mann Whitney U Wilcoxon	702
Water flow	W	1977
is sufficient	Z	-4.499
	Asymp Sig(2-tailed)	.000
Water is	Mann Whitney U Wilcoxon	1230
available	W	2505
When needed	Z	-.159
	Asymp Sig(2-tailed)	.874
Number of tube wells	Mann Whitney U Wilcoxon	574.500
And other sources	W	899.500
Of water	Z	-3.595
Is sufficient	Asymp Sig(2-tailed)	0.000

TABLE 5: SHOWING THE PERCEPTION AND THE MEAN RANK DIFFERENCE ABOUT THE CONDITION OF THE WATER SUPPLY

Statements	Categories	N	Mean Rank	Sum of Ranks
Amount of	Fringe	50	39.54	1977
Water flow	core	50	61.46	3073
is sufficient	Total	100		
Water is	Fringe	50	35.98	899.50
available	Core	50	55.34	4150.50
When needed	Total	100		
Number of tube wells	Fringe	50	50.10	2505
And other sources Of	Core	50	50.90	2545
water is sufficient	Total	100		

Perception on the standard of water availability reveals that the water availability is better in the core area than fringe area as the mean rank of the urban core area is more than that of fringe area. The mean rank is 61.46 for the core area and 39.54 in fringe area in the case of water flow. The difference between the opinions is negligible in the case about the number of wells and other sources of water in the wards. The significance test value i.e. the Z value for all the parameters of water facility shows an higher value than the tabulated value at 95% significance level therefore we can nullify the hypothesis that the differences in the opinion is equals to 0 and accept the alternative hypothesis stating that there is a difference in the opinions in two regions regarding the water quality, water flow, water availability .Except the statement regarding the presence of sufficient sources of water in the ward . Here the Z value is less than the tabulated value at 95% level thus fails to reject the null hypothesis

TABLE 6: SHOWING THE PERCEPTION AND THE MEAN RANK DIFFERENCE ABOUT THE WASTE MANAGEMENT

Statements	Categories	N	Mean Rank	Sum of Ranks
Door to door	Fringe	50	33.52	1676
collection	core	50	67.48	3374
Of waste	Total	100		
Wasted is collected in a	Fringe	50	50.50	2525
segregated	Core	50	50.50	2525
manner	Total	100		
Public conscious	Fringe	50	50.83	2541
About dumping	Core	50	50.17	2508
Garbage in proper manner	Total	100		

TABLE NO7: TEST STATISTICS FOR THE PERCEPTION ON WASTE MANAGEMENT

Door to door	Mann Whitney U Wilcoxon	401
collection	W	1676
Of waste	Z	-6.395
	Asymp Sig(2-tailed)	.000
Wasted is collected in a	Mann Whitney U Wilcoxon	1250
segregated	W	2525
manner	Z	0
	Asymp Sig(2-tailed)	1

Public conscious	Mann Whitney U Wilcoxon	1233.500
About dumping	W	2508.500
Garbage in proper manner	Z	-.127
	Asymp Sig(2-tailed)	0.899

The perceptions being collected about the management and the consciousness about the public about the disposal system has yielded the following results .Door to door collection of the garbage is more satisfying to the population of the core area than the Fringe area as the mean rank is more in the case of the core area i.e. 67.48 whereas in fringe area the mean rank is 33.52 Regarding the segregated collection of the garbage and about the consciousness of the public regarding the proper disposal of the garbage shows that the opinions has no or negligible mean rank difference between the two areas. Moreover if we see the Z value for each of the statement the value for the first statement is -6.395 which is much higher than the tabulated value that is - 1.96 to 1.96 at 95% level of significance in the case of two tailed test. But in the case of the other two the Z value is much lower than the Tabulated value .Thus we can reject the null hypotheses for the statement regarding the door to door collection of the garbage stating that there is a difference in the opinion regarding the collection method of the garbage

TABLE 8: SHOWING THE PERCEPTION AND THE MEAN RANK DIFFERENCE ABOUT THE MAINTENANCE AND THE AMOUNT RECREATIONAL SUBJECTS

Statements	Categories	N	Mean Rank	Sum of Ranks
Number of	Fringe	50	25	1280
Park and playgrounds are	core	50	75.40	3770
Sufficient	Total	100		
Maintainance	Fringe	50	26.10	1305
Of the playground and park is	Core	50	74.90	3745
good	Total	100		

TABLE 9: SHOWING THE TEST STATISTICS OF THE MANN- WHITNEY U TEST

Number of	Mann Whitney U Wilcoxon	5
Park and playgrounds are	W	1280
Sufficient	Z	-9.608
	Asymp Sig(2-tailed)	.000
Maintainance	Mann Whitney U Wilcoxon	30
Of the playground and park is	W	1305

good	Z	-9.067
	Asymp Sig(2-tailed)	.000

In the case of the maintenance and the sufficiency in the number of the recreational areas like park and playground yields a higher mean rank for the core area. This states that the core area is better as the maintenance is considered and is even more sufficient in the case of numbers of park and playgrounds when compared to the fringe area. The mean rank achieved by the urban core for the statement about the sufficiency of the amount of parks and playground is 75.40 whereas the mean rank obtained by the fringe area for the same is just 25.60. Similarly the statement regarding the maintenance also yields an higher rank for the core area i.e. 74.90 than fringe area which is 26.10. Moreover the z value is much higher than the tabulated value thus rejecting the null hypothesis for both the statements. The z values are -9.608 and -9.067 respectively.

TABLE 12: SHOWING THE PERCEPTION AND THE MEAN RANK VALUES FOR THE EXISTING DRAINAGE SYSTEM AND WATER LOGGED CONDITIONS

Statements	Categories	N	Mean Rank	Sum of Ranks
Drainage	Fringe	50	33.83	1400
System is	core	50	67.17	3650
Properly managed	Total	100		
Water when logged	Fringe	50	25.50	1285
gets down	Core	50	75.50	3764
faster	Total	100		
Water	Fringe	50	75.50	3775
Stays logged for	Core	50	25.50	1275
Long period	Total	100		

TABLE 13: SHOWING THE PERCEPTION AND THE MEAN RANK VALUES FOR THE EXISTING DRAINAGE SYSTEM AND WATER LOGGED CONDITIONS

Drainage	Mann Whitney U Wilcoxon	416.5
System is	W	1691.5
Properly managed	Z	-6.985
	Asymp Sig(2-tailed)	.000
Water when logged	Mann Whitney U Wilcoxon	0.000
gets down	W	1275.000
faster	Z	-9.363
	Asymp Sig(2-tailed)	0.000
Water	Mann Whitney U Wilcoxon	0.000

Stays logged for	W	1275.000
Long period	Z	-9.363
	Asymp Sig(2-tailed)	0.000

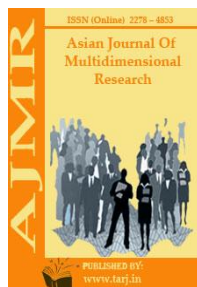
From the above table explaining the water logging status of both the areas shows a better condition for the core area as the water that gets logged for torrential rainfall moves out faster than the fringe area whereas the fringe area suffers from waterlogged conditions for longer periods as obtained from the mean rank differences. Moreover the Z value suggests a significant difference in the opinion of the two areas where the calculated value is more than the tabulated value at 95% of significance level.

CONCLUSION

Urbanization which has been initiated in Madyamgram region during the period of partition was triggered by the downfall of Jute industry and increasing job opportunities along with the incoming migrants mainly from Bangladesh and from other states of India. The expansion already been discussed is following a direction of north west and west in Madyamgram. Urban expansion in many cases has been considered as a scale of development where the urban area is assumed to expand along with the growth of enhanced and advanced facilities for the urban population which acts as the pull factor for migrants. Urban expansion when takes place in an unplanned manner leads to an unequal distribution of the facilities which results in largely varied satisfaction level among the population of a region about the availability and the quality of the facilities. Therefore we can say that the unequal distribution and management of the facilities leads to an unequal utility level within the region which leads to a failure in obtaining an optimum level of development for the region. The study reveals a sharp perceptual differences among the core and the fringe area about the maintenance and availability of the urban facilities where the core area is in much better position than the fringe area.

REFERENCE

- Adeniyi P.O and Omojola A. (1999) Land use land cover change evaluation Sokoto – Rima Basin of North Western Nigeria based on Archival of the Environment (AARSE) on Geoinformation Technology Applications for Resource and Environmental Management in Africa. Pp 143-172.
- Bauer M E, Yuan F, Sawaya K E and Loeffelholz B C (2005) Land cover classification and change analysis of the twin cities (Minnesota) Metropolitan Area by multi-temporal Landsat remote sensing. Remote Sensing of Environment, 98, 317-328.
- Dimiyati, et al. (1995). An Analysis of Land use Land cover change Using combination of MSS Landsat and Land use Map- A case study of Yogyakarta, Indonesia, International Journal of Remote Sensing 17(5):931-944



Donnay J P, Barnsley M J and Longley P A (2001) Remote Sensing and Urban Analysis. Taylor & Francis, London

Lambin .F. Eric, Meyfrod Patrick (2009) Land use transitions: Socio-ecological feedback versus socio-economic change, Land Use Policy, 27(2): 108-118

Paul Suman (2012) Analysis of Micro level Disparities in Urban Facility-Utility Services: a Study on Barasat city, West Bengal, India, Journal of Urban and Regional Analysis,

4(2): 173 -188

Sahana Mehboob, Hong Haoyuan, Sajjid Haroon (2018) Analyzing urban spatial patterns and trend of urban growth using urban sprawl matrix: A study on Kolkata urban agglomeration, India, Science of the Total Environment, 628-629:1557-1556

Xu Yan, Pu Lijie and Zhang Lifang (2014) Spatial Pattern and the Process of Settlement Expansion in Jiangsu Province from 1980 to 2010, Eastern China, Sustainable Land Use and Ecosystem Management, 6(11), 8180-8194



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PROBLEMS IN RESTORATION AND RECONSTRUCTION OF HISTORICAL LIVING HOUSES AND THEIR SOLUTION, CASE OF SAMARKAND INSTITUTE

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ABSTRACT

This article studies the problems of restoration historical parts of Samarkand and its living houses and their reconstruction. On this way, paper investigates sustainable development of the sightseeing places while taking into consideration their historical points. Investigations conclude that all historical building of the world heritage sights needs to be reconstructed according to national identity of the Republic of Uzbekistan. The salience and urgency of the problem of reconstruction of the historical part of the old city is that, in quantitative terms, it is a plan of traditional houses and complexes created during the last medieval and khans, the historically formed city center and historically wide areas. Moreover, the absence of normative documents on the determination of the cost-effectiveness of historical and retrofitting costs, as well as the lack of adequate support for the neighborhood system and the difficulties in rebuilding the historic cities. It may be necessary to conduct project research, summarize accumulated rich experiences, execute experimental design, and organize international urban contests, as well as develop a strategic plan.

KEYWORDS: Restoration, Reconstruction, Living Houses, Value, Volume, Spatial, Component, Solution, Program.

INTRODUCTION

Traditional rules of Uzbekistan are important for the development of Samarkand, Bukhara, Khiva and other historical cities. The spatial composition of the city, which has determined the character of the whole city in specific historical periods and has remained unchanged for us, has grown rapidly in the urbanization process of cities after gaining independence. The magnificent community and residential buildings are built on the basis of new standards of life, creating the

basis of our architecture. Rich national architectural tradition remains one of the modern requirements for the development of modern architecture and town-planning, preservation of architecture and urban planning.

There are a number of problems associated with reconstruction and reconstruction of new and reconstructed buildings and complexes: reconstruction of transport infrastructure and engineering systems without disturbing the territory-territorial structure of historical sites and territories; to provide cultural and communal services to the population of the old city, not only their artistic integrity, but also to meet the needs of the population, meeting the modern requirements, preserving the peculiarities of socio-demographic composition.

Identifying and implementing architectural monuments, their territorial integrity, visual, functional and composite dependence, and requirements for their harmonious convergence with traditional habitat and architectural heritage sites, which have a valuable historic and architectural heritage, are aimed at sustainable development of the old city is a major issue [1].

THEORETICAL BACKGROUND

The salience and urgency of the problem of reconstruction of the historical part of the old city is that, in quantitative terms, it is a plan of traditional houses and complexes created during the last medieval and khans, the historically formed city center and historically wide areas. From the point of view of the technical-engineering position (the restoration of the historic part of the city, which is made up of crude bricks, with a partially built or walled brick wall), is a powerful depreciation fund that is almost impossible to modernize.

Therefore, without any doubt, the internal design of the new residential buildings and complexes, the layout, the traditional types of accommodation, their architectural and planning and volume structure, the compositional and visual relations of traditional residential houses with simple and popular architectural monuments, methodical basis for project work serves as a

Some of the traditional principles of traditional low-rise housing that have been identified and preserved through a regional approach to interacting with the outside world, have been integrated into the historical context of the historic urban environment in the historical context of the historical monuments, , gradual passage of the composite parameters, recognition of logical thinking and relevance, accommodation and Demand for refurbishment creates the need for a differentiated approach.

MAIN PART

The historic part of the city's landscaping, landscaping, water supply, engineering equipment, and transport services are in the 50's of the 20th century. [2]. Moreover, the absence of normative documents on the determination of the cost-effectiveness of historical and retrofitting costs, as well as the lack of adequate support for the neighborhood system and the difficulties in rebuilding the historic cities.

(Gur Amir mausoleum of Samarkand city and its housing fund)

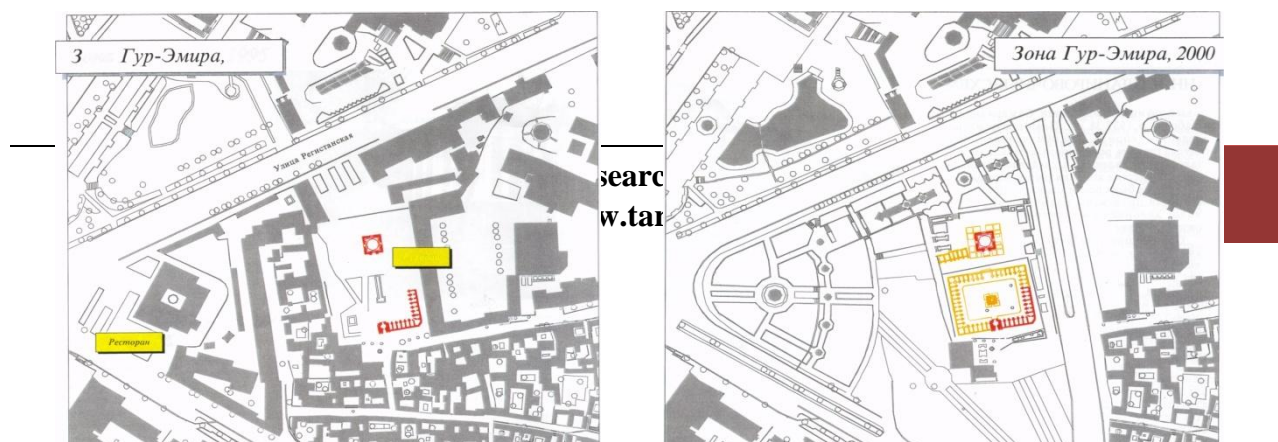


Fig.4. Gur-Emir Zone, 1995

Fig.5 Gur-Emir Zone, 2000

In order to preserve and preserve historic dwelling houses, it is important to identify the factors affecting its value

Factors affecting the value of historic city residential houses

- ❖ Economic deficiency in the family
- ❖ Sociology of reproductive growth (reproduction and increase of the building floor)
- ❖ The elderly people are left homeless (neglected)
- ❖ Do not understand the cultural value and value of the residential area
- ❖ European home imitation, blind eye approach
- ❖ History and ignorance of history
- ❖ From the point of view of urban development, due to the influence of neighbors buildings (insulation, sunlight and faults)
- ❖ Impact of reforms in the old city
- ❖ Construction of complex buildings in the historic city (road and public buildings)
- ❖ Construction of iodine complexes by buyers and builders of old houses
- ❖ Lack of communication system in most residential houses (condensation gas and water)
- ❖ The use of iodine materials and modern construction by well-equipped households.
- ❖ Impact of Natural Factors (Earthquake, Burgundy, Groundwater)
- ❖ The impact of the transport system
- ❖ Absence of a single priority system for construction in historic cities
- ❖ Lack of control over historic homes
- ❖ It is clear that these problems need to be addressed



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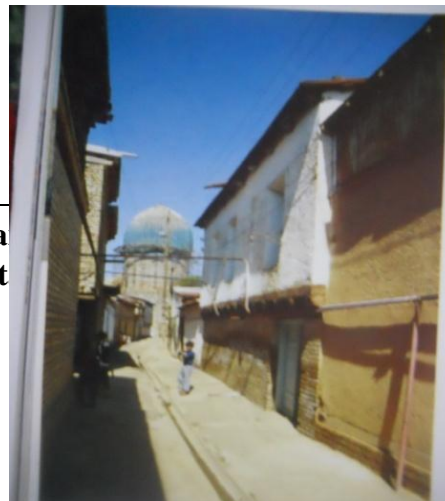


Fig.2 Gur-Emir Mausoleum and its background residential buildings. The facades of housing are made in a different style, complemented by a web of gas pipes and electrical wires. Therefore, in general, the architecture of this dwelling is not sufficiently combined with the architecture of the Gur-Emir mausoleum, it needs to be improved its architectural image, internal functional-planning organization of housing as well as architecture.

You will need software to troubleshoot and address similar urbanization errors.

Complex solutions and applications

- Government attention
- Development of each historical urban development program
- Establishment of historical city development management
- Creating a Historical City Development Plan
- Restoration of competent project organizations
- Establishment of repair and maintenance workshops
- Introduction to specialization subjects in colleges and literers
- Strengthening of material and non-material resources, cultural values, and teaching of textbooks to younger generation in schools.
- Conducting explanatory work with the population
- Providing material and moral support to the population
- allocation of long-term preferential microcircuits
- Organization of crafting in historic homes
- Transformation and development of historic dwelling houses into tourist routes
- Establish a control point in the historic area

Results

Replacement of historic houses leads to the creation and preservation of the entire historical city. For the implementation of the programs, it is required to identify the history and condition of the homes, identify the components.

Studying the process of formation and reconstruction of the historical city and its components

- Studying the general condition of residential houses
- Establishment of settlements in town-planning
- Establishment of surveys among the population
- Study of topsof and cadastral documents of the house
- Studying the historical location and history
- Determine development stages
- Examination of demand of the customer (house owner)

- Building a residential building based on management plan categories
- Study of natural climatic conditions
- Studying natural building materials and raw materials
- Proposal on the basis of developed normative documents
- Development

Considering the roles of studied residential houses, urban planning, the following can be summarized and the analysis of expected results.

Expected results on preservation and restoration of historical buildings

- Population has a comfortable, will be modern and modern home
- Household members are employed
- Improving the living standards of the population
- Household owners earn economic income
- The future generations have a rich cultural heritage
- National institute of mahallas, the management system is formed improves [2]
- Housing spaces are formed and formulated
- Building materials are cheap and natural
- Our rich ancient history is restored and enriched
- Tourism in the republic develops and brings economic effect
- Scientific research center for young researchers and students will arise
- The historical territory is formed by periodic mahallas over the centuries
- Town-planning structure improves
- Workplaces for the population of the city (Git, translator, small hotel staff, chefs, hammers, fresh shops drivers, etc.)
- National and traditional values and customs are restored
- Ecologically clean city for the population
- Historical city, ecotourism rich in material and non-material traditions become a city

In the interests of all parts ;



(Proposal for the reconstruction of Gur Amir Mausoleum in Samarkand and its Residential Buildings)

CONCLUSION

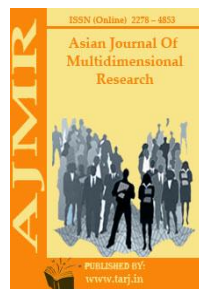
The only priority system for the preservation of historic city residential buildings in the case of Samarkand is the use of housing and economic efficiency. In the restoration and sustainable development of the system, they identify the principles of new housing and placement of premises, and include them in special research and design development with the aim of creating architectural-ethnographic, museum zones, tourist routes. It is also important to emphasize that reconstruction of the modern historical part of the cities and zones in accordance with the requirements is a continuous process that creates new directions, strategies. It may be necessary to conduct project research, summarize accumulated rich experiences, execute experimental design, and organize international urban contests, as well as develop a strategic plan.

Therefore, we must not forget that the restoration and moderatization of the historic part of the cities is a necessity.

REFERENCES

1. Salimov A.M. Preservation and use of architectural monuments. Tashkent, 2010..
2. Rakhimov K.D, Mohov A.I National (Local)ensembles (formation problems). - M., 1996.
3. Akhmedov M.K., SaidovaU.Kh. About the initialurban planning culture in Uzbekistan.Architectureand Construction of Uzbekistan, №6, 2009, 18-19p.

4. BaoMuping. The Special Structure of Mongolia Cities in XIX-XX Century. The 2nd Workshop for planning and Networking of Historical Cities in Eastern and Central Asia/ Samarkand: Sam GASI, 2005, p. 86-88
5. Gutnov A.E. The world of architecture. -Moscow: 1985.
6. Gutnov A.E. Evolution of town planning. -Moscow: 1984.
7. Ziyaev A.A. The complex Khazrati Imam in Tashkent. Historical-architectural outline. - Tashkent: 2008.
8. Ziyaev A.A. The complex Shaykhantakhur. In the last and today. Historical-architectural outline. -Tashkent: 2008.
9. Kadirova T.F. Ways architectural revival of Uzbekistan in XX-in the early of XXI cc. (Tradition and modernity). -Tashkent: 2007.
10. Kamenskaya M.M. Organizing rehabilitation of old buildings of residential areas -Leningrad: Stroyizdat. 1987.
11. Kantakyuzino Sh., Brandt S. Restoration of buildings. /Translated into english. Rappaporta A.G./ -Moscow: 1984.
12. Kudryavseva T.N., Kudryavsev M.P. The experience of providences predesigned researches of historical remarkable cities. -Moscow: 1974.
13. Mamatmusaev T.Sh. Architecture of the Ulugbek's period (the first half of XV century). The candidate dissertation. -Tashkent: 2011.



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**MEASURING CUSTOMERS PERCEPTION IN THE TELECOM
INDUSTRY: AN INDIAN PERSPECTIVE**

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ABSTRACT

India is rated as the world's second-largest telecommunications market with a subscriber base of 1.20 billion. The Indian mobile economy is growing rapidly and will contribute substantially to India's Gross Domestic Product (GDP). The present study is to find out customers perception towards marketing practices of telecom companies and ascertain the association of factors affecting customer's perception towards services offered by telecom companies with selected demographic variables.

KEYWORDS:Marketing, Telecom, Customers, Marketing Practices, TRAI

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1. INTRODUCTION

India's Telecommunication sector is the second largest market in the world based on the total number of telephone users. According to the Telecom Regulatory Authority of India (TRAI), total subscription in India is 1209.96 million in 2017. Out of this, 502.50 million connections are in rural areas and 707.46 million in the urban areas. Wireless telephony constitutes 98.04 percent (1186.21 million) of all subscriptions whereas share of the landline telephony now stands at only 1.96 percent (23.75 million) at the end of August, 2017. As there is huge competition in telecom market, domestic companies are providing the lowest call tariffs with strong network.

Indian telecom industry move upward after new Indian economy policy. This was a gateway to many foreign investors to get entry into the Indian Telecom market. After March 2000, the government became more liberal in making policies and issuing license for private operators. Many private operators such as Reliance Communications, TATA, Airtel, Idea, Hutch (Vodafone), Bharat Sanchar Nigam Limited, Mahanagar Telephone Nigam Limited successfully entered in high potential Indian telecom market. The government further reduced licence fees for service providers and increased the allowable stake to 74 percent for foreign companies. Because of all these factors, the service fee finally reduced and the call costs were cut greatly enabling every common middle-class family in India to afford a cell phone. It becomes the world's most competitive and one of the fastest growing telecom markets in last 25 years.

The Industry has grown over twenty five times in just twelve years, from under 37 million subscribers in the year 2001 to over 945 million subscribers in the year 2016. According to the Department of Telecommunication of India (DoT), as on March 2016, India has 366.35 million internet connections. Telephony, internet and television broadcast Industry are major sectors in the country which is in an ongoing process of transforming into next generation network, employs an extensive system of modern network elements such as digital telephone exchanges, mobile switching centres, media gateways and signalling at the core, interconnected by a wide variety of transmission systems using fiber-optics or microwave radio relay networks. The INSAT system is the support to telecommunication in India, one of the largest domestic satellite systems in the world. India possesses a diversified communications system, which links all parts of the country by telephone, Internet, radio, television and satellite.

2. REVIEW OF LITERATURE

Jain (1993) analyse that as there is business needs of faster, cheaper, and more varied modes of communication, the telecommunication sector in many countries has been undergoing rapid technological and structural changes over the past few years. As like India, many countries' has a sound policy to control properly on telecom sector. Moonie (2002) stated that India is a big market with huge potential so global companies is looking for their market share. It may be because of huge population and untouched market. Singh (2005) India's telecommunication growth is still far behind its contemporaries.

Kokil et al. (2006) emphasized that the Telecom sector of a country is always one of the integrated parts and symbol of growth towards establishing a world class infrastructure in country. Gupta (2008) stated that even there was slow down in the economy but it's not affected much to telecom sector due to acquisition and merger was happening. Mani (2008) addressed a number of issues arising from the growth of telecom services in India since the mid-1990s due to new economy policy. It also discussed a number of spillover effects for the rest of the economy and one of the more important effects is the potential to develop a major manufacturing hub in the country for telecom equipment and for downstream industries such as semiconductor devices. On the other hand, Grönroos (2006) claimed that this deterioration does not occur similarly to all firms in all countries. In the case of developing countries, product sale volume is depending extensively on the amount of marketing activities which consumers are exposed to. There is no doubt that few topics of the commercial theory have so intensively inspired and divided the marketing academia as the Marketing Mix-4Ps (Constantinides, 2006). Muller (1990) focuses that the success of the mobile business can be attributed to the personal nature of wireless devices.

National Telecom Policy (1999) projected a target 85 million telephone lines by the year 2007 and 175 million telephone lines by 2010 has been set. World Telecommunication Development Report (2002) explains that network expansion in India was accompanied by an increase in productivity of telecom staff measured in terms of ratio of number of main lines in operation to total number of staff. Adam Braff, Pass more and Simpson (2003) focus those telecom service providers even in United States face a sea of troubles.

Dutt and Sundram (2004) studied that in order to boost communication for business, new modes of communication are now being introduced in various cities of the country. In overview in Indian infrastructure Report (2005) explains India's rapidly expanding telecom sector is continuing to witness stiff competition. This has resulted in lower tariffs and better quality of services. Marine and Blanchard (2005) identifies the reasons for the unexpected boom in mobile networks. According to them, cell phones, based on Global System for Mobile Communication (GSM) standard require less investment as compared to fixed lines. Besides this, a wireless infrastructure has more mobility, sharing of usage, rapid profitability. Besides this, usage of prepaid cards is the extent of 90% simplifies management of customer base. Moreover, it is suitable to people's way of life-rural, urban, and sub-urban subscribers. Illustrating the lead achieved by Gujarat.

According to Business and Economy (2005) the catalyst for Indian mobile operators in the future will undoubtedly be increased marketing and advertisement expenditure, along with better deals for mobile phone users like the previously mentioned full talk time Rs. 10 recharge card, will go a long way in not only retaining customers but also acquiring the vast market of lowered customers who are extremely sticky about value for money and have extremely low loyalties and almost non-existent switching costs.

Oliver Stehmann (2005) explained that the telecommunications industry is characterized by rapid

innovation in the service and the transmission market. Marketing White book (2005) explains with support of detailed data that bigger players are close to 20% of the market each. In CDMA market, it is Reliance Infocomm and Tata Teleservices are dominating the scene whereas Airtel is lead in GSM operators. Between 2003 and 2004, the total subscriber base of the private GSM operators doubled.

3. OBJECTIVES OF THE STUDY

- To examine the customers perception towards marketing strategies adopted by telecom companies.
- To examine the influence of demographic factors on customers' perception towards marketing practices adopted by telecom companies

4. RESEARCH METHODOLOGY

The present study was conducted in the region of Delhi, Gurugram, Faridabad and Noida. The researchers selected five telecom service providers to analyse the customer's perception towards marketing strategies adopted by these companies. The sample for this research is 500 users (customer) selected from the five major telecom companies.

The research uses both primary and secondary sources of information. The primary data will be collected with the help of structured questionnaire which will be prepared after the review of literature. The secondary data will be collected from the published reports of World Telecommunications Development, Department of Telecommunications, Indian Telecom Policy, Journals, Books and various websites of the telecom service providers. Questionnaire also deals with demographic characteristics of respondents. It includes data related with following aspects of respondents: age, income, educational qualification, and occupation of respondents.

5. DATA ANALYSIS

The current study focuses on measuring customers' perception towards marketing practices followed by leading telecom companies in India. In order to fulfil the desired objectives data was collected from 500 respondents consisting respondents of various demographic profile.

TABLE 1: RESPONDENTS' PROFILE

Demographics		Frequency	Proportion of the sample (%)
Age	Up to 25 Years	91	18.2
	26-35 years	168	33.6
	36-45 years	147	29.4
	Above 45 years	94	18.8
	Total	500	100.0
Occupation	Businessman	66	13.2
	Private Job	73	14.6
	Student	92	18.4
	Govt. Employee	69	13.8

	Housewife	126	25.2
	Retired Person	74	14.8
	Total	500	100.0
Income	up to Rs. 20000	73	14.6
	Rs. 20000 – 30000	127	25.4
	Rs. 30000 – 40000	111	22.2
	Rs. 40000 – 50000	103	20.6
	Above Rs. 50000	86	17.2
	Total	500	100.0
Education	10+2	73	14.6
	Graduate	127	25.4
	Post Graduate	213	42.6
	Doctorate	87	17.4
	Total	500	100.0

5.1 ANALYSIS OF DEMOGRAPHIC FACTORS

Sample for the current study has been divided into six occupations where majority of respondents are housewife (25.2%) followed by student (18.4%), retired person (14.8%), private job (14.6%), government employee (13.8%) and businessman (13.2%). Sample has been divided into 4 age categories. Most of respondents belongs to 26-35 years (33.6 %), followed by 36-45 years (29.4 %), above 45 years (18.8 %) and up to 25 years (18.2 %). Further sample has been divided into four education categories. Most of the respondents are post graduates (42.6%) followed by graduates (25.4%), doctorate (17.4%) and 10+2 (14.6%). Sample has been divided into five income categories i.e. up to Rs. 20000, Rs. 20000 – 30000, Rs. 30000 – 40000, Rs. 40000 – 50000 and above Rs 50000. Most of the respondents belongs to Rs. 20000 – 30000 (25.4%) followed by Rs. 30000 – 40000 (22.2%), Rs. 40000 – 50000 (20.6%) and Above Rs 50000 (17.2%) and up to Rs. 20000 (14.6%).

5.2 FACTOR ANALYSIS

It is very difficult to analyze and interpret large number of statements, so in order to make some concrete conclusions out of statements measuring customers' perception regarding marketing practices followed by mobile companies' factor analysis has been applied. First of all appropriateness for application of factor analysis was judged using tool known as Kaiser-Meyer-Olkin (KMO) which is a measure of sampling adequacy and its values came out to be .858 indicating sample size is sufficient for application of factor analysis.

TABLE 2: EXTRACTION OF DIMENSIONS OF CUSTOMERS' PERCEPTION TOWARDS MOBILE SERVICES

Component	Initial Eigen Values	Rotation Sums of Squared Loadings	Rotation Sums of Squared Loadings percentage
		of variance	Cumulative

Factor 1: Quality of Services	16.427	11.245	11.245
Factor 2: Value Offers	3.829	9.184	20.429
Factor 3: Promotional Offer	3.307	8.461	28.890
Factor 4: Loyalty	3.170	6.545	35.435
Factor 5: Variety of Tariff Plan	2.926	5.904	41.340
Factor 6: Trust	2.574	5.875	47.215
Factor 7: Fair Price	2.336	5.693	52.908
Factor 8: Brand Value	2.031	5.074	57.982
Factor 9: Services Accessibility	1.971	4.965	62.947
Factor 10: Satisfaction and Intention	1.831	4.700	67.648
Factor 11: Advertisement	1.526	4.643	72.291

Extraction Method: Principal Component Analysis

With the application of factor analysis, 11 factors are extracted. The eleven solutions accounted for 72.291 percent of the variance. Total variance explained (72.29 percent) by these eleven components exceeds the 60 percent which is more than the acceptable table. Table 3 shows the names given to these 11 factors along their reliability.

TABLE 3: NAMING OF FACTORS AND RELIABILITY

Factors	Cronbach alpha	Remark
1. Quality of Services	.941	Excellent
2. Value Offers	.942	Excellent
3. Promotional Offer	.918	Excellent
4. Loyalty	.920	Excellent
5. Variety of Tariff Plan	.937	Excellent
6. Trust	.865	Good
7. Fair Price	.896	Good
8. Brand Value	.877	Good
9. Services Accessibility	.862	Good
10. Satisfaction and Intention	.840	Good
11. Advertisement	.809	Good

The first factor was named quality of services with Cronbach alpha .941 followed by Value offers, Promotional offers, Loyalty, Variety of tariff plan, Trust, Fair price, Brand value, Service accessibility, Satisfaction & intention, and Advertisement.

5.3 EXAMINATION OF INFLUENCE OF DEMOGRAPHIC FACTORS ON PERCEPTION OF CUSTOMERS' TOWARDS MOBILE SERVICES

Mean values for customers' perception regarding services offered by mobile companies. Overall respondents have indicated moderate satisfaction level with services provided by mobile companies (Average mean value \bar{x} =3.55), for all the dimensions of customers' perception towards mobile services) indicating significant acceptance of mobile services by respondents. When it comes to services offered by mobile companies, respondents are moderately satisfied with services offered (Average mean value \bar{x} =3.53) by mobile companies. Network offered by mobile companies are widely and easily available (Average mean value \bar{x} =3.55) to the respondents wherever they visit. Respondents consider promotional offers like specialized pricing and exclusive offers offered by mobile companies moderately attractive (Average mean value \bar{x} =3.55) and inspire them to select a particular mobile operator. Respondents have indicated that mobile companies' charge moderately fair pricing (Average mean value \bar{x} =3.55) for the services and respondents can easily avail customer care services through various channels.

Respondents have indicated that their mobile operator has built a significant brand image (Average mean value \bar{x} =3.55) among its users and exhibited moderate level of trust (Average mean value \bar{x} =3.55) with current operator, and may be due this users feel highly associated (Average mean value \bar{x} =3.55) with current operator and have a high tendency to recommend particular companies. Respondents have indicated greater level of satisfaction (Average mean value \bar{x} =3.55) with services offered by mobile companies in terms of and have indicated to continue current mobile companies in the near future. Respondents moderately believe that advertisements depicted by mobile companies are highly informative (Average mean value \bar{x} =3.55) and are able to create liking and preference for a particular mobile operator. In addition to this advertisement shown by mobile companies convince subscribers that decision made by them to choose a particular service provider is right decision.

TABLE 4: AGE AND MEAN VALUES FOR PERCEPTION OF CUSTOMERS' TOWARDS MOBILE SERVICES

Age of the Respondent	Quality of service	Network Accessibility	Promotional Offers	Satisfaction and Intention	Variety of Tariff Plans
Up to 25 Years	2.5824	3.0895	2.9199	2.9319	2.8434
26-30 years	3.2718	3.4286	3.3707	3.3167	3.3452
36-45 years	3.9297	3.9893	3.7940	3.9782	3.6497
Above 45 years	4.2872	4.4468	4.3283	4.3362	3.8777
Total	3.5307	3.7231	3.5931	3.6328	3.4435

Age of the Respondent	Trust	Fair Price	Brand Value	Value Offers	Loyalty	Advertisement
Up to 25 Years	2.8242	2.9890	3.1236	3.0522	3.1209	3.1264
26-30 years	3.3798	3.3214	3.4598	3.3616	3.5298	3.4568
36-45 years	3.6408	3.8014	3.7993	3.6820	3.7874	3.7262
Above 45 years	3.7553	4.3149	4.1676	3.8963	4.1277	3.9282
Total	3.4260	3.5888	3.6315	3.5000	3.6435	3.5645

Table 4 defined comparison of customers' perception towards services provided by mobile companies across various age groups. In general, it can be observed that as the age of the respondent increases their satisfaction level with services offered by mobile companies keeps on increasing. As per study of all services factors (Quality of services, Value, Promotional offers, Price, Tariff plan, Trust, Loyalty, Satisfaction towards companies, and Advertisement) younger respondents are lesser satisfied with overall service experience from their current service providers and have clearly indicated not to continue with current service provider. Elder age respondents are highly satisfied with overall service experience from their current service provider and have strong intention to be connected with current service provider.

Post hoc test statistics which inspects the significance of differences in opinions of respondents across different age groups already checked by ANOVA and Welch test statistics. Mean difference values indicated by asterisk exhibits significant difference in opinion of respondents between two age groups.

Therefore it can be concluded that age produces significance variance in respondent's opinion for marketing practices offered by mobile companies.

TABLE 5: INCOME AND MEAN VALUES FOR PERCEPTION OF CUSTOMERS' TOWARDS MOBILE SERVICES

Income of the Respondent	Quality of service	Service accessibility	Promotional Offers	Satisfaction and Intention	Variety of Tariff plans
up to Rs. 20000	4.3135	4.5068	4.3268	4.3699	3.9658
Rs. 20000 – 30000	4.0140	4.0889	3.9708	4.0898	3.7303
Rs. 30000 – 40000	3.6156	3.7323	3.5277	3.5820	3.4369
Rs. 40000 – 50000	3.0992	3.2760	3.2538	3.1786	3.2597
Above Rs 50000	2.5594	3.0415	2.9037	2.9419	2.8052

Total	3.5307	3.7231	3.5931	3.6328	3.4435
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Income of the Respondent	Trust	Fair Price	Brand Value	Values Offers	Loyalty	Advertisement
up to Rs. 20000	3.8274	4.3370	4.2089	3.9281	4.1952	3.8938
Rs. 20000 – 30000	3.6205	3.9433	3.8819	3.7087	3.8071	3.8071
Rs. 30000 – 40000	3.5568	3.5243	3.6757	3.5991	3.7072	3.5878
Rs. 40000 – 50000	3.2233	3.2252	3.2791	3.2112	3.4078	3.3811
Above Rs 50000	2.8721	2.9488	3.1366	3.0465	3.1337	3.1163
Total	3.4260	3.5888	3.6315	3.5000	3.6435	3.5645

Table 5 exhibits customers' perception towards services provided by mobile companies across various income groups. In general, it can be observed that as the income of the respondent increases their satisfaction level with services offered by mobile companies keeps on decreasing.

In addition to this higher income respondents are lesser satisfied with overall service experience (Quality of services, value and promotional offers, price provided by telecom companies, tariff plan trust and loyalty, satisfaction towards companies, advertisement as information) from their current service providers and have clearly indicated not to continue with current service provider. Lower income respondents are highly satisfied with overall service experience from their current service provider and have strong intention to be connected with current service provider.

Post hoc test statistics which inspects the significance of differences in opinions of respondents across different income groups already checked by ANOVA and Welch test statistics. Mean difference values indicated by asterisk exhibits significant difference in opinion of respondents between two income groups. Therefore it can be concluded that Income level of respondent's produces significance variances in respondent's opinion for marketing practices offered by mobile companies.

TABLE 6: EDUCATION AND MEAN VALUES FOR PERCEPTION OF CUSTOMERS' TOWARDS MOBILE SERVICES

Occupation of the Respondent	Quality of service	Service accessibility	Promotional Offers	Satisfaction and Intention	Variety of Tariff plans
Upto 10+2	4.3135	4.5068	4.3268	4.3699	3.9658
Graduate	4.0140	4.0889	3.9708	4.0898	3.7303
Post Graduate	3.1283	3.4118	3.2381	3.2939	3.1596

Doctorate	3.1533	3.2939	3.2956	3.1770	3.2816
Total	3.5307	3.7231	3.5931	3.6328	3.4435

Occupation of the Respondent	Trust	Fair Price	Brand Value	Values Offers	Loyalty	Advertisement
Upto 10+2	3.8274	4.3370	4.2089	3.9281	4.1952	3.8938
Graduate	3.6205	3.9433	3.8819	3.7087	3.8071	3.8071
Post Graduate	3.2310	3.2704	3.4190	3.3345	3.4343	3.3768
Doctorate	3.2828	3.2230	3.3017	3.2414	3.4540	3.3937
Total	3.4260	3.5888	3.6315	3.5000	3.6435	3.5645

Table 6 defined comparison of customers' towards services provided by mobile companies across various education groups. In general, it can be observed that as the education level of the respondent increases their satisfaction level with services offered by mobile companies keeps on decreasing.

In addition to this highly educated respondents are lesser satisfied with overall service experience from their current service providers (Quality of services, value and promotional offers, price provided by telecom companies, tariff plan trust and loyalty, satisfaction towards companies, advertisement as information) and have clearly indicated not to continue with current service provider. Lesser educated respondents are highly satisfied with overall service experience from their current service provider and have strong intention to be connected with current service provider.

Post hoc test statistics which inspects the significance of differences in opinions of respondents across different education groups already checked by ANOVA and Welch test statistics. Therefore it can be concluded that educational level of respondents produces significance variances in respondent's opinion for marketing practices offered by mobile companies.

TABLE 7: OCCUPATION AND MEAN VALUES FOR PERCEPTION OF CUSTOMERS' TOWARDS MOBILE SERVICES

Occupation of the Respondent	Quality of service	Network accessibility	Promotional Offers	Satisfaction and Intention	Variety of Tariff plans
Housewife	4.3300	4.5411	4.3247	4.3970	3.9318
Retired Person	4.1279	4.1859	4.1292	4.1096	3.6986
Student	3.8671	3.9084	3.7081	3.9522	3.6957

Govt. Employee	3.6441	3.7805	3.5694	3.5826	3.4167
Private Job	3.0176	3.2630	3.2698	3.1667	3.2361
Businessman	2.5781	3.0367	2.8417	2.9243	2.8209
Total	3.5307	3.7231	3.5931	3.6328	3.4435

Occupation of the Respondent	Trust	Fair Price	Brand Value	Values Offers	Loyalty	Advertisement
Housewife	3.8061	4.3424	4.2348	3.9659	4.2348	4.0038
Retired Person	3.7315	4.0301	3.9692	3.7740	3.8562	3.7637
Student	3.5826	3.7609	3.7772	3.6495	3.7663	3.6902
Govt. Employee	3.5014	3.5594	3.6341	3.5616	3.7210	3.6159
Private Job	3.2190	3.2206	3.3056	3.2361	3.4067	3.3671
Businessman	2.8730	2.9216	3.1318	3.0203	3.0845	3.1081
Total	3.4260	3.5888	3.6315	3.5000	3.6435	3.5645

Table 7 shows comparisons of customers' towards services provided by mobile companies across various occupation groups. In general, it can be observed that as the occupation of the respondent changes their satisfaction level with services offered by mobile companies keeps on changing. It further indicates that government employees, private employees and businessmen (group-I) perceive that cellular companies provide below average network coverage, do not consider current promotional offers as much exciting, variety in tariff plans and fairness in pricing is much lower than their expectation level, does not put greater amount of trust with their current service provider. On the other hand housewife, retired person and students (group-II) believe that mobile companies offer great network coverage in their areas, excited with promotional offers, variety in tariff plans and fairness in pricing on level of their expectation, trust on their existing service providers.

Group-I also believe that customer care representative are not that easy to reach and it takes them much more time to resolve their issues, advertisement offered by mobile service providers are not considered highly informative, does not help to create preference and loyalty for that particular service provider whereas group-II consider in different way to all above mentioned factors. Therefore it can be concluded that Occupational Pattern of respondents produces significance variances in respondent's opinion for marketing practices offered by mobile companies.

6. FINDINGS AND SUGGESTIONS

The present study is an attempt to know the customer perception towards marketing strategies adopted by Indian telecom companies. The study was conducted in NCR during December 2017-May 18. Data was collected from 500 active telecom users from the five major telecom companies.

With the application of factor analysis, 11 service quality factors were extracted. The eleven solutions accounted for 72.291 percent of the variance. The factors were named as Quality of Services, Value Offers, Promotional Offers, Loyalty, Variety of Tariff Plan, Trust, Fair Price, Brand Value, Service Accessibility, Satisfaction & Intention and Advertisement. 'Quality of Services' explained the 11.245 percent of the variance whereas the least variance was explained by Advertisement i.e. 4.643 percent.

With the help of ANOVA, an association between service quality factors and demographic variables was also checked. Interesting findings came out which are as follows:

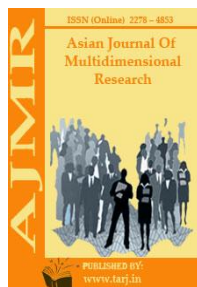
- Younger respondents are lesser satisfied with overall service experience from their current telecom service providers and have clearly indicated not to continue with current service provider.
- Higher income respondents are lesser satisfied with overall service experience from their current service providers and have clearly indicated not to continue with current service provider.
- Highly educated respondents are lesser satisfied with overall service experience from their current service providers.
- Government employees, private employees and businessmen are not satisfied with overall service experience from their current service providers. On the other hand housewife, retired person and students are satisfied with all services provided by telecom companies.

On the basis of above findings it is recommended that telecom service providers who are targeting youth, high income strata, and highly educated customers' needs to revise their service plan as customers were highly dissatisfied with their services. Similarly government employees, private employees and businessmen were dissatisfied with the service offering of Indian telecom companies. Therefore telecom companies can formulate tailor-made plans which are suitable to customers with different occupation class. Requirements of business class is quite different from service class, thus same service quality plan will not work for all. If Indian telecom companies increase their service quality levels then they will be able to retain their present customers.

REFERENCES

- De Ballion, Lori, and Rokwell, Patricia (2005), Gender and student status differences in cellular telephone use, *International Journal of Mobile Communication*, Vol.3, No. 1, pp 82-98.
- Dunnewijk, T, and Hulton Staffon (2006), A brief history of Mobile Telecommunication in India, Working paper series, Retrieved from www.merit.unu.edu.2006
- Jean-Jacques Lambin, Ruben Chumpitaz and Isabelle Schuiling (2007), *Market-Driven Management: Strategic and Operational Marketing*, (2nd edition). Palgrave Macmillan, New York, pp. 231-232.

- Mishra, Vijay Kumar (2007), FDI in Indian Telecom sector: A Bonaza for growth, *ICFAI Reader*, Vol. X, No. 9, pp 35-41.
- Orville C. Walker Jr. and John W. Mullins (2008), *Marketing Strategy: A Decision – Focused Approach*, (7th edition), McGraw-Hill International Irwin, New York, pp. 177-202.
- Park, Myeong-Cheol, Kim, Dan, and Sang Woo Lee (2007), Growth of telecom sector in Asia, *Journal of Global Information Management*, Vol. 15, No. 1, pp 43-67.
- Philip Kotler, Kevin Lane Keller, Abraham Koshy and Mithileshwar Jha. (2009), *Marketing Management-A South Asian Perspective* (13th ed.). Pearson Education, New Delhi, pp. 462-463.
- Telecom Regulatory Authority of India (2004), Press Release No. 49/1/ 2004, New Delhi, Retrieved from www.trai.gov.in
- Telecom Regulatory Authority of India (2012), *Report on Telecom Sector in India: A Decadal Profile*, pp. 11.
- Telecom Regulatory Authority of India (2005), *Study Paper on Indicators for Telecom Growth*, No. 2/2005, Retrieved from www.trai.gov.in
- Telecom Regulatory Authority of India (2007) *The Indian Telecom Services Performance Indicators*, Retrieved from www.trai.gov.in
- Xavier M. J. (2007). *Strategic Marketing: A guide for developing sustainable competitive advantage*. Response Books, New Delhi, pp. 12.



THE WAY AHEAD WITH CASHLESS MEDICAL TREATMENT- A STUDY ON AWARENESS OF CASHLESS MEDICAL TREATMENT AMONG CORPORATE EMPLOYEES

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ABSTRACT

Cashless Medical treatment is the way forward for those requiring medical treatment in the future. It implies that the patient or employee has been covered by medical insurance. Medical insurance offers the solution for the high cost of treatment associated with medical treatment. If a patient wants to get quality treatment they either choose research centers from the government or corporate hospitals. More often than not the costs associated with such treatments are exorbitantly high and the only way to mitigate the cost for most of the population is Medical insurance. Further medical insurance is the employee hygiene factor and benefit offered by most public sector organizations and corporate institutions. An effort has been made in this paper to understand the satisfaction levels of a corporate user or employee of cashless medical treatment.

KEYWORDS: *Cashless medical treatment, Health Insurance, Medical Insurance, Patient satisfaction*

INTRODUCTION

Cashless health insurance has gained popularity. Holding a cashless health insurance means the hospitalisation and other charges are taken care by the service provider. Cashless service calls for a hassle-free process in which you do not have to bother about the cash in case of any emergency. There are few challenges the people are facing while dealing with cashless health insurance claims.

NEED FOR THE STUDY

The idea behind buying health insurance is that an individual or a family member needs medical treatment; at least the need for immediate finances is met. Cashless settlement policies are aimed further. Insurance companies advertise cashless settlement policies as customer-friendly and convenient. Unfortunately, for many who have bought these cashless policies, the experience has not lived up to the promise.

According to the report the industry is booming and there is an increased access to health care with rising income levels and an increased access to health care. Insurance that is medical insurance happens to be the key contributor to this immense growth of the health care industry. This has become possible with private and public sector companies opting for health insurance of their employees. A growing population with an increased awareness and adoption of Medical insurance has become eligible for cashless medical treatment. Many major corporate hospitals and multispecialty hospitals have able to survive the immense costs due to the fact that patients covered by insurance happen to be their major target.

Many relevant studies have been conducted over the years by various stake holders, government bodies, research organizations and world organizations that bring out the importance the scope and the status of cashless treatment that is medical insurance in India. Some of the studies taken for review are summed up below

OBJECTIVES OF THE STUDY

1. To understand the knowledge and awareness of Health insurance
2. To understand the features of the health insurance policy
3. To analyze the purchasing decision (affordability) on the knowledge –(AWARENESS)

RESEARCH METHODOLOGY

Data is collected on a primary basis. Samples are drawn from companies, hospitals and also the individuals about their claim experience and simple random basis. Secondary source of data collection has been used by referring journals, magazines and yearly reports from IRDA.

Variables considered for the study:

The study has been made in to two parts-

1. Knowledge
2. Purchasing decision (affordability)

To give the Knowledge on cover for the employees and their affordability – the Manager concerned should have the knowledge of - Purchasing Decision, Income, gender, reason for buying, Knowledge and affordability.

Under knowledge variable following criteria were considered

- a) Possessing Health Insurance
- b) Type of Health Insurance Policy
- c) Coverage type (amount & period)
- d) Features of Health Insurance Policy
- e) Features of Health Insurance Policy
 - Comparison on products with other companies- regarding premium
 - Type of products
 - Features of the plan
 - Pre-existing diseases clause
 - Cash less benefit (at the time of hospitalization)
 - Exclusion of diseases
 - Cumulative bonus
 - On line payment
 - claims processing (in case of hospitalisation)
 - Benefits in case of continuous renewal
 - Reminders for the renewal of the policy
 - TPA Role and its services
 - Policy lapsation and renewal
 - Current updation- like portability
 - Co-payment and package treatment

Under Purchase Decision (Affordability) variable following criteria were considered which are demographic in nature

- I. Income level
- II. Gender
- III. Age
- IV. Reason for buying
- V. Reason for hospitalization

All these variables are tested for non parametric test by using SPSS, Ver16.

The Descriptive Statistics were checked through SPSS, Ver. 16 and same s tabulated below.

NULL HYPOTHESES

- 1. A.1 Knowledge of the insurance product in terms of education of the respondent does not influence purchase decision.
- 1. A.2 Knowledge of the insurance product in terms of occupation of the respondent does not influence purchase decision.

1. A.3 Knowledge of the insurance product in terms of features of the product does not influence purchase decision.

1. A.3.1 Features of the product in terms of comparable premium of other products do not influence purchase decision.

1. A.3.2 Features of the product in terms of type of products do not influence purchase decision.

1. A.3.3 Features of the product in terms of features of the plan do not influence purchase decision.

1. A.3.4 Features of the product in terms of pre-existing disease clause does not influence purchase decision.

1. A.3.5 Features of the product in terms of cashless benefit (at the time of hospitalization) does not influence purchase decision.

1. A.3.6 Features of the product in terms of exclusion of diseases does not influence purchase decision.

1. A.3.7 Features of the product in terms of cumulative bonus does not influence purchase decision.

1. A.3.8 Features of the product in terms of claims processing (in case of hospitalization) does not influence purchase decision.

1. A.3.9 Features of the product in terms of benefits in case of continuous renewal does not influence purchase decision.

1. A.3.10 Features of the product in terms of reminder for the renewal of the policy does not influence purchase decision.

1. A.3.11 Features of the product in terms of TPA (Third Party Administration) Role and its services does not influence purchase decision.

1. A.3.12 Features of the product in terms of policy lapse due to non-renewal does not influence purchase decision.

1. A.3.13 Features of the product in terms of current updates - like portability does not influence purchase decision.

1. A.3.14 Features of the product in terms of co-payment does not influence purchase decision.

1. A.3.15 Features of the product in terms of online payment does not influence purchase decision.

1. B.1 Affordability of the product in terms age of the respondents does not influence purchase decision.

1. B.2 Affordability of the product in terms marital status of the respondents does not influence purchase decision.

1. B.3 Affordability of the product in terms annual income of the respondents does not influence purchase decision.

1. B.4 Affordability of the product in terms type of health insurance policy does not influence purchase decision.

1. B.5 Affordability of the product in terms coverage of the product does not influence purchase decision.

1. B.6 Affordability of the product in terms of reason for buying does not influence purchase decision.

1.A

Case Processing Summary

Unweighted Cases ^a	N	Percent
Selected Cases Included in Analysis	4	.4
Missing Cases	1000	95.9
Total	1005	96.3
Unselected Cases	39	3.7
Total	1044	100.0

a. If weight is in effect, see classification table for the total number of cases.

Block 0: Beginning Block

Classification Table^{a,b}

Observed			Predicted		
			Purchase Decision		Percentage Correct
			0	1	
Step 0 Purchase	0		37	0	100.0
Decision	1		806	201	19.96
Overall Percentage					19.25

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

	B	S.E.	Wald	Df	Sig.	Exp(B)
Step 0 Constant	-.381	.156	5.951	1	.015	.683

Variables not in the Equation

	Score	df.	Sig.
Step 0 Variables			
Education	17.905	1	.000
Occupation	2.199	1	.008
Pre_existing_disease_clause	9.487	1	.072
Cashless_benefit	19.139	1	.100
Exclusion of diseases	14.561	1	.172
Cumulative bonus	.000	1	.987
Claims_processing	2.393	1	.122
Continous_renewal	7.735	1	.225
Reminder_for_the_renewal	11.190	1	.010
TPA_role	2.199	1	.008
Policy_lapse	9.487	1	.172
Current_updates	9.109	1	.125
Co-payment	4.501	1	.197
Continuous_renewal	1.090	1	.901

Block 1: Method = Enter**Omnibus Tests of Model Coefficients**

		Chi-square	Df	Sig.
Step 1	Step	143.429	13	.000
	Block	143.429	13	.000
	Model	143.429	13	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	86.181 ^a	.570	.769

a. Estimation terminated at iteration number 9 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	14.308	12	.004

Classification Table^a

Observed			Predicted		
			Purchase Decision		Percentage Correct
			0	1	
Step 1	Purchase	0	30	7	81.08
	Decision	1	32	975	96.82
Overall Percentage					96.26

a. The cut value is .500

Variables in the Equation

Step 1a	B	S.E.	Wald	Df	Sig.	Exp(B)
Education	.011	.003	15.163	1	.000	1.012
Occupation	-.006	.016	.115	1	.002	.994
Premium	-.018	.022	.694	1	.405	.982
Type_of_products	.090	.326	.077	1	.782	1.095
Features_of_plan	.164	.622	.069	1	.792	1.178
Pre_existing_disease_clause	.195	.721	.079	1	.792	1.608
Cashless_benefit	.648	.506	1.641	1	.200	1.911
Exclusion_of_Diseases	.060	.077	.604	1	.437	1.061
Cummulative_bonus	.193	.129	2.246	1	.134	1.213
Claims_processing	1.613	.501	10.363	1	.231	5.020
Cntinuous_renewal	.056	.067	.414	1	.235	1.023
Reminder_for_the_renewal	.103	.119	2.253	1	.224	1.213
TPA_role	2.146	.421	8.326	1	.128	6.121
Policy_lapse	.164	.172	.714	1	.132	1.061
Current_updates	.283	.219	2.153	1	.123	1.173
Co-payment	1.413	.237	8.373	1	.141	6.120
Cntinuous_re	.126	.117	.312	1	.136	1.104

newal						
Constant	-8.384	2.025	17.142	1	.000	.000

The model is statistically significant, which signifies that knowledge and features of the product have statistically significant influence on purchase decision. Nagelkerke R Square value is 0.769, which is quite high, and signifies that the model is robust enough. From the classification table, it can be concluded that, the predictability of the outcome (i.e. purchase decision), improves from 19.25%(random prediction, without using the logistic regression model) to 96.26%(with usage of the model). Among the independent variables, educational level, as well as occupation of the respondents, whether reminder was given for renewal of policy or not to the respondents, as well as the role played by the TPAs has statistically significant effect on the purchase decision at 5% level of significance. Thus null hypotheses no. 1. A.1, 1. A.2, and 1. A.3.11 are rejected. We fail to reject the rest of the null hypotheses.1.B

Case Processing Summary

Unweighted Cases ^a	N	Percent
Selected Cases Included in Analysis	4	.4
Missing Cases	1000	95.9
Total	1005	96.3
Unselected Cases	39	3.7
Total	1044	100.0

a. If weight is in effect, see classification table for the total number of cases.

Block 0: Beginning Block

Classification Table^{a,b}

			Predicted		
			Purchase Decision		Percentage Correct
			0	1	
Step 0	Purchase	0	37	0	100.0
	Decision	1	784	223	22.14
Overall Percentage					24.90

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	-.293	.175	4.902	1	.002	.302

Variables not in the Equation

	Score	df.	Sig.
Step 0 Variables			
Age	9105	1	.023
Marital_status	3.102	1	.017
Annual_income	5.403	1	.005
Type_health_insurance_policy	12.231	1	.172
Coverage	1.708	1	.812
Reason_buyimg	3.312	1	.122

Block 1: Method = Enter**Omnibus Tests of Model Coefficients**

		Chi-square	Df	Sig.
Step 1	Step	103.415	6	.001
	Block	103.415	6	.000
	Model	103.415	6	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	76.271 ^a	.512	.725

a. Estimation terminated at iteration number 9 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	14.118	5	.005

Classification Table^a

			Predicted		
			Purchase Decision		Percentage Correct
			0	1	
Step 1	Purchase	0	29	8	78.37
	Decision	1	49	958	95.13

Overall Percentage		94.54
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a. The cut value is .500

Variables in the Equation

Step 1a	B	S.E.	Wald	Df	Sig.	Exp(B)
Age	.051	.003	12.103	1	.012	1.003
MaritalStatus	.436	.236	.105	1	.003	.814
AnnualIncome	-.028	.022	.623	1	.315	.822
Type- health Insurancepolicy	.082	.306	.075	1	.775	1.095
Coverage	.153	.405	.058	1	.719	1.101
Reason -buying	.195	.721	.079	1	.613	1.612
Constant	7.104	3.015	14.102	1	.000	.000

The model is statistically significant, which signifies that affordability of the product have statistically significant influence on the purchase decisions. Nagelkerke R Square value is 0.725, which is quite high, and signifies that the model is robust enough. From the classification table, it can be concluded that, the predictability of the outcome (i.e. purchase decision), improves from 24.90% (random prediction, without using the logistic regression model) to 94.54% (with usage of the model). Among the independent variables, age and marital status of the respondents, have statistically significant effect on the purchase decision at 5% level of significance. Thus null hypotheses no. 1.B.1, and 1. B. 2 are rejected. We fail to reject the rest of the null hypotheses.

CONCLUSION:

Awareness and perception regarding health insurance was still very initial. Although health insurance is not a new concept and people are also getting familiar with it, yet this awareness has not reached to the level of subscription of health insurance products.

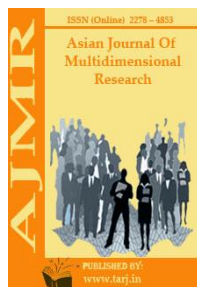
To ensure consistent quality of services, and to also be able to compare and benchmark the costs of services rendered by health providers, there is a need to move towards accreditation and grading of providers, and also the implementation of standard treatment guidelines for managing cases of specific common conditions, particularly where there is substantial scope for standardization of diagnostic and treatment practices. This could be done through joint initiatives of Government, Regulator, Insurers, along with their TPAs and health providers. However, such initiatives will need time for proper development and implementation, and indeed they should. However, a process to evolve the same should commence immediately with clear timelines and milestones, so that it gets accomplished soon. Availability of such protocols or guidelines and their cost benchmarks will foster availability of more transparent or 'package' charges from providers, which in turn will contribute to controlling costs. Standardization of treatment

provided is required before negotiating for package rates with providers, as packaged rates without clear deliverables and expectations could lead to poor outcomes and be counter-productive.

Although this is not as significant a contributor to costs in the case of inpatient care as it is otherwise for outpatient care and for the health system as a whole, it is still important to consider the promotion of Essential Drug Lists, rational use of drugs, and arrangements for procurement and use of quality generic drugs, to keep drug costs under control. However, as more hospitals move to negotiated, package-rate based reimbursement systems, such mechanisms will certainly be brought in by the providers themselves.

REFERENCES:

1. Bhat, R. and E. B. Reuben (2002). Management of Claims and Reimbursements: The Case of Mediclaim Insurance Policy, Vikalpa, Vol. 27, No. 4, October-December.
2. Chollet, D. and M. Lewis (1997). Private Insurance: Principles and Practice, in George J. Schieber edited "Innovations in Health Care Financing: Proceedings of a World Bank Conference", March 10-11, 1997, World Bank Discussion Paper No. 365, The World Bank,
3. Garg, C. Implications of Current Experiences of Health Insurance in India, Private Health Insurance and Public Health Goals in India, Report on a National Seminar, the World Bank, May 2000. Government of India (2002). Health Insurance—Issues and Challenges, Report of the Sub-Group, Ministry of Finance, Delhi
4. Gumber, A. (1997). Burden of Disease and Cost of Ill Health in India: Setting Priorities for Health Interventions During Ninth Plan, Margin, Vol. 29(2), pp. 133-172
5. Misra, R. et al. (2003). Changing the Indian Health System: Current Issues, Future Directions, Oxford University Press, New Delhi, forthcoming.
6. Naylor, D. C. et al. (1999). A Fine Balance: Some Options for Private and Public Health Care in Urban India, The World Bank,
7. Washington, D.C. Peters, D. et al. Health Policy Challenges for India: Private Health Insurance and Lessons from the international Experience by Ajay Mahal Health Insurance in India by Sujatha Rao Different Countries, Different Needs: The Role of Private Health Insurance in Developing Countries by Denis Drechsler, Johannes Jütting ;Health Insurance in India by Kasturbhai Lalbhai 8. Health Insurance "For The Poor In India" by Rajeev Ahuja
8. IRDA journals
9. Health Insurance – Wikipedia
10. Health insurance claim settlement-Insurance Institute of India book



RELATIONSHIP BETWEEN MENTAL HEALTH AND SOCIAL COMMITMENT AMONG STUDENT TEACHERS OF B.ED

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ABSTRACT

This paper has been designed to find out the relationship between mental health and Social commitment of student teachers of B.Ed., Normative survey method was used for the study. Total samples of 100 student teachers of B.Ed., in Coimbatore district were selected using Stratified random sampling technique. Mental health scale (developed by Jagdish and Srivastava, 1995) and Social commitment scale (developed by the investigator) were employed to collect the data. The results showed that there is no significant difference in mental health and social commitment of student teachers of B.Ed., based on gender. There is a significant positive relationship between mental health and social commitment of student teachers of B.Ed., and also there is a significant influence of mental health on social commitment of student teachers of B.Ed.,

KEYWORDS: *Mental Health, Social Commitment, Student Teachers, Influence, Relationship*

INTRODUCTION

Teachers are the basic source of education for most of the people of the nation and they are the ones who build the future of the country. The teachers can very easily make a decision what they want the nation to look like and educate the people accordingly. They have the capacity and the strength to fight the odds and make India a powerful and a well educated country. For healthy nation, there is a great need of mentally healthy teachers. This can be acquired through proper and sufficient in service and pre service training of teachers.

Mental Health plays a very important role in order to avoid constant worries and strains with higher disappointment levels and help in achievements (both at individual level and professional level) of student teachers of B.Ed. According to Dwivedi & Harper (2004), mental health affects our expressive, cognitive, perspective, relational, and coping abilities, undergirding our general health and wellbeing and capacity to integrate into and become productive members of society. Mental health is perceived as a positive source contributing to asset development individually, socially, and economically (WHO, 2004). Mental health consists of six dimensions. These are Positive self evaluation, Realistic perception, Integration of personality, Autonomy, Group oriented attitudes, and Environmental competence.

A teacher can influence what her students talk about, how they think and what they become. This can be done through commitment like devotion towards personal growth of students. Social commitment demands that a teacher not only cares about her students; she must understand how she fits into her community. According to Berman (1990), Social commitment is a personal investment in the well-being of others and of the planet. So there is a big challenge for student teachers of B.Ed., to maintain balanced mental health, and social commitment to perform their duties efficiently. For that, a study has to be undertaken to find out the relationship between mental health and social commitment held by student teachers of B.Ed., who are playing a central role in the process of teaching and learning.

REVIEW OF LITERATURE

Male and female employed in occupations where their own gender was dominant had better mental health than those in gender-neutral occupations. However, within-person results suggested that a movement from a gender-neutral to a male or female dominated occupation was associated with both a decline (female) and improvement (male) in mental health (Allison Milner et al, 2018). Teacher educators having high mental health always remain happy in their personal life, emotionally stable and feel relaxed most of the time than their counterparts (Omprakash, 2016).

Pupil teachers did not differ significantly in their mental health with respect to their gender and locality (Kumar et al., 2013)

Various school motivation factors (i.e. performance, social, and extrinsic motivation) and one commitment component (i.e. in-depth exploration) each had unique effects on academic achievement in addition to the effect of students' cognitive capacities (Hanke Korpershoek, 2016).

Teachers' job motivation more dominantly influence organizational commitment compared to teachers' job satisfaction (Fatwa Tentama, and DessyPranungsari, 2016).The Post Graduate Teacher Trainees differed in their perceptions regarding Professional Work Commitment than the Graduate Teacher Trainees. They were found to have higher motivation for achievement (Nilesh b. Gajjar 2014). Studies related to organizational commitment, professional commitment, teacher commitment, have been taken from educational area rather than social commitment. So that, a study to be taken to find out the relationship between mental health and social commitment of student teachers of B.Ed.,

SIGNIFICANCE OF THE STUDY

The Mental Health and social commitment are important in deciding the behavior of an individual. Behavior of students, who are the pillars of the upcoming generations, depends on the behavior of the teacher. Therefore knowing the mental health and social commitment level of teachers are vital. Educating student teachers of B.Ed., in the areas of Mental Health literacy, encouragement and prevention can have considerable positive impact on their awareness, attitudes, perspectives, and approaches to Mental Health of themselves and that of the students.

Committed teachers have a tendency to perform their roles effectively that their job requires and to create a good teacher-student relationship in accordance with the professional values. This approach facilitates student learning and improvement of terminal behaviors. However, in the conflict of the career goals and values, and the goals and values of school, the importance of dedication and commitment increases. So the present study intends to determine the relationship and impact of mental health on social commitment of student teachers of B.Ed.,

OBJECTIVES OF THE STUDY

1. To study the significant difference in mental health of student teachers of B.Ed., with respect to gender.
2. To study the significant difference in social commitment of student teachers of B.Ed., with respect to gender.
3. To study the relationship between mental health and social commitment of student teachers of B.Ed.,
4. To study the influence of mental health on social commitment of student teachers of B.Ed.,

HYPOTHESES

1. There is no significant difference in mental health of student teachers of B.Ed., based on gender.
2. There is no significant difference in social commitment of student teachers of B.Ed., based on gender.
3. There is no significant relationship between overall mental health and social commitment of student teachers of B.Ed.,
4. There is no significant relationship between dimensions of mental health and social commitment of student teachers of B.Ed.,
5. There is no significant influence of mental health on social commitment of student teachers of B.Ed.,

RESEARCH METHOD & SAMPLE

Normative survey method was used for the study. A Stratified random sample of 100 student teachers of B.Ed., were chosen from Coimbatore district, Tamil Nadu.

RESEARCH TOOLS USED

1. Mental health scale (developed by Jagdish and Srivastava, 1995)

2. Social commitment scale (developed by the investigator)

Were used to find the relationship between mental health and social commitment of student teachers of B.Ed

DATA ANALYSIS

TABLE 1: MENTAL HEALTH OF STUDENT TEACHERS OF B.ED., BASED ON GENDER

Category	N	Mean	S.D	't' value	Result
Male	16	62.13	12.148	1.30	Not Significant
Female	84	66.32	10.304		

From Table-1, the t-value 1.30 is not significant at 0.05 level. Thus there is no significant difference in mental health of student teachers of B.Ed., based on gender. Hence the hypothesis-1 is accepted. Comparing the mean scores, female student teachers of B.Ed., have high mental health than their counterparts.

TABLE 2: SOCIAL COMMITMENT OF STUDENT TEACHERS OF B.ED., BASED ON GENDER

Category	N	Mean	S.D	't' value	Result
Male	16	77.56	15.582	0.68	Not Significant
Female	84	80.43	15.264		

From Table-2, the t-value 0.68 is not significant at 0.05 level. Thus there is no significant difference in social commitment of student teachers of B.Ed., based on gender. Hence the hypothesis-2 is accepted. Comparing the mean scores, female student teachers of B.Ed., have high social commitment than their counterparts.

TABLE 3: RELATIONSHIP BETWEEN OVERALL MENTAL HEALTH AND SOCIAL COMMITMENT OF STUDENT TEACHERS OF B.ED.,

Variables	N	Table Value	'r' Value	Significant at 0.01 Level
Overall Mental health	100	0.114	0.393**	Significant
Social commitment				

Note: **Correlation is Significant at the 0.01 level

Pearson's Product Moment correlation 'r' was calculated between overall mental health and social commitment. The 'r' value was found to be 0.393 which is significant at 0.01 level. Hence, it

is concluded that there is a positive correlation between overall mental health and social commitment and hypothesis 3 is rejected.

TABLE 4: RELATIONSHIP BETWEEN DIMENSIONS OF MENTAL HEALTH AND SOCIAL COMMITMENT OF STUDENT TEACHERS OF B.ED.,

Dimensions of Mental health	Social commitment
Positive self-evaluation	0.274**
Realistic perception	0.111
Integration of personality	0.362**
Autonomy	0.037
Group oriented attitude	0.208**
Environmental competence	0.393**

Note: **Correlation is Significant at the 0.01 level

The above table reveals that there is a positive relationship between Positive self-evaluation, Integration of personality, Group oriented attitude, Environmental competence and social commitment.

The calculated 'r' values for Positive self-evaluation (0.274), Integration of personality (0.362), Group oriented attitude (0.208), and Environmental competence (0.393) are greater than the table value (0.114), and hence the hypothesis 4 is rejected.

TABLE 5 :INFLUENCE OF MENTAL HEALTH ON SOCIAL COMMITMENT COEFFICIENTS^A

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	43.026	8.845		4.865	.000
Mental health	0.563	0.133	0.393	4.231	.000

a. Dependent Variable: Social commitment

In the above table 5, the standardised beta indicates that the relative contribution of independent variable in predicting social commitment is based on the percentage of prediction of mental health (39.3%). Thus, the independent variable has influence on social commitment. The following regression equation is arrived from the above table;

Social commitment= 43.026+ 0.563 (Mental health).

TABLE 5.1 MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.393 ^a	0.154	0.146	14.115

a. Predictors: (Constant), Mental health

b. Dependent Variable: Social commitment

From the above table 5.1, it is inferred that, 14.6% (Adjusted R Square= 0.146) of variation in social commitment of student teachers of B.Ed., is explained by the above independent variable. The remaining 85.4% can be explained by unknown, hidden variables or inherent variables.

MAIN FINDINGS

Following main findings have been drawn by the investigator:

1. There is no significant difference in mental health of student teachers of B.Ed., based on gender.
2. There is no significant difference in social commitment of student teachers of B.Ed., based on gender.
3. There is a significant relationship between overall mental health and social commitment of student teachers of B.Ed.,
4. There is a significant positive relationship between dimensions of mental health and social commitment of student teachers of B.Ed.,
5. There is a significant influence of mental health on social commitment of student teachers of B.Ed.,

CONCLUSIONS

Following conclusions were drawn by the investigator:

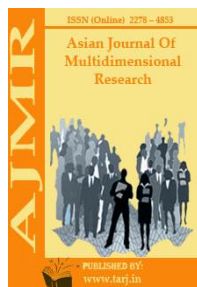
1. The female student teachers of B.Ed., have high mental health than male student teachers because they may have better self-confidence, and tackle a tougher task in an easy manner.
2. The female student teachers of B.Ed., have high social commitment than male student teachers because their affection to the development of the society may be high.
3. A significant positive relationship between mental health and social commitment indicates that student teachers of B.Ed., should possess a balanced mental health for the betterment of the society. Proper guidance and counseling should employ and develop psychological

techniques for reducing the academic stress and improving the mental health of those student teachers of B.Ed.,

REFERENCES

1. AlinaMrgrioiu. (2015). Teachers' Commitment from Special-Need Schools – a Predictor of their Humanity and Loyalty. *Social and Behavioral Sciences*, 203, 322-326.
2. Alison Cuellar, & Dhaval M. Dave. (2016). Causal effects of mental health treatment on education outcomes for youth in the justice system. *Economics of Education Review*, 54, 321-339.
3. Allison Milnera, Tania Kinga, Anthony D. LaMontagneb, Rebecca Bentleya, & Anne Kavanagha. (2018). Men's work, Women's work, and mental health: A longitudinal investigation of the relationship between the gender composition of occupations and mental health. *Social Science & Medicine*, 204, 16-22.
4. BouguilaSihem. (2013). Social Responsibility of Educators. *International Journal of Educational Research and Technology*, 4(1), 46-51.
5. CagriTugrul Mart. (2013). A Passionate Teacher: Teacher Commitment and Dedication to Student Learning. *International Journal of Academic Research in Progressive Education and Development*, 2(1), 437-442.
6. Dennis M. McInerney, Fraide A. Ganotice, Ronnel B. King, Herbert W. Marsh, & Alexandre J.S. Morin. (2015). exploring commitment and turnover intentions among teachers: What we can learn from Hong Kong teachers. *Teaching and Teacher Education*, 52, 11-23.
7. Devon J. Hensel, Jennifer Nance, & Dennis Fortenberry, (2016). The Association between Sexual Health and Physical, Mental, and Social Health in Adolescent Women. *Journal of Adolescent Health*, 59, 416-421.
8. Fatwa Tentama & DessyPranungsari. (2016). The Roles of Teachers' Work Motivation and Teachers' Job Satisfaction in the Organizational Commitment in Extraordinary Schools. *International Journal of Evaluation and Research in Education*, 5(1), 39-45.
9. Ghasemmohammadyari. (2012). Relationship between Parent's Spiritual Intelligence, Level of Education and Children's Mental Health. *Social and Behavioral Sciences*, 69, 2114-2118.
10. HankeKorpershoek. (2016). Relationships among motivation, commitment, cognitive capacities, and achievement in secondary education. *Frontline Learning Research*, 4(3), 28-43.
11. Heather E. Price & Jessica L. Collett. (2012). The role of exchange and emotion on commitment: A study of teachers. *Social Science Research*, 41, 1469-1479.
12. Helen Forbes-Mewett, & Anne-Maree Sawyer. (2016). International Students and Mental Health. *Journal of International Students*, 6(3), 661-677.
13. Irfanullah Khan, Allah Nawaz, QamarAfaqQureshi, & Ahmed Khan. (2016). The Impacts of Burnout, Absenteeism and Commitment on Intention to Leave. *Journal of Education and Practice*, 7(1), 5-9.
14. Isabel Rots, Antonia Aelterman, Peter Vlerick, & KatrienVermeulen. (2007). Teacher education, graduates' teaching commitment and entrance into the teaching profession. *Teaching and Teacher Education*, 23, 543-556.

15. Jurist lionalkumar, V. (2013). Mental health status: a study among higher secondary students. *I-manager's Journal on Educational Psychology*, 7(2), 42- 49.
16. Laura Hartreya, Suzanne Denieffeb, & John S.G. Wells. (2017). A systematic review of barriers and supports to the participation of students with mental health difficulties in higher education. *Mental Health & Prevention*, 6, 26-43.
17. Manjuvani, E. (2000). *Influence of Home and School Environment on Mental Health of Children*. New Delhi: Discovery Publishing House, 7.
18. Maria Sarmentoa. (2015). A Mental Health Profile of Higher Education Students. *ScienceDirect*, 191, 12-20.
19. Nileshkumar B. Gajjar. (2014). A Study of Professional Work Commitment of Teacher Trainee of B.Ed. College. *International Journal of Research in Humanities and Social Sciences*, 2(2), 54-57.
20. NuraySarikaya &ÇetinErdogan. (2016). Relationship between the Instructional Leadership Behaviors of High School Principals and Teachers' Organizational Commitment. *Journal of Education and Practice*, 7(3), 72-82.
21. Olga V. Rogach, Tatyana M. Ryabova, & Elena V. Frolova. (2017). Social Factors of Mental Well-Being Violation among High School Teachers. *European Journal of Contemporary Education*, 6(4), 787-796.
22. OmParkash. (2017). *A study of well- being among teacher educators in relation to mental health, emotional intelligence and socioeconomic status* (Master's thesis, MaharshiDayanand University, 2015), 1-208.
23. Shafiq, M., &Rana, A. R. (2016). Relationship of emotional intelligence to organizational commitment of college teachers in Pakistan. *Eurasian Journal of Educational Research*, 62, 1-14.
24. SibnathDeba, PoojaSathyanarayanana,,RavaliMachirajua, & Shinto Thomasa. (2017). Are there differences in the mental health status of adolescents in Puducherry? *Asian Journal of Psychiatry*, 27, 32-39.
25. TohidMoradiSheykhjan, Rajeswari K, & Kamran Jabari. (2017). Mental health and academic achievement among M.Ed. Students in kerala. *Studies in education*, 02, 115-123.
26. Vijay Kumar, Pawan Kumar, &ReenaKumari. (2013). Study of mental health of pupil teachers in relation to their gender and locality. *International Monthly Refereed Journal of Research In Management & Technology*, 11, 104-110.
27. YaghoobNami, MohmmadSalehNami, & Khalil Allah Eishani. (2014). The Students' Mental Health Status. *Social and Behavioral Sciences*, 114, 840-844.
28. YeunheeKwak,,&Yoonjung Kim. (2017). Health-related Quality of Life and Mental Health of Adults with Atopic Dermatitis. *Archives of Psychiatric Nursing*, 31, 516-521.



**ROLE OF STAKEHOLDERS IN GREEN PRACTICES OF HOTEL INDUSTRY:
EVIDENCE FROM GREATER HYDERABAD MUNICIPAL CORPORATION (GHMC)
STAR HOTELS**

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ABSTRACT

As a service industry, the tourism sector is particularly interesting as the focus of an investigation on environmental management practices for two main reasons. First, this sector has an increasing economic importance. Second, the tourist industry shows an increasingly higher environmental concern (Hunter, 1997). This paper investigates the Green Practices (GPs) among different categories of star hotels (three star to five star deluxe only) in Greater Hyderabad Municipal Corporation (GHMC) which includes both Hyderabad and Secunderabad of India. It aims to identify the level of stakeholders on GPs participation and whether GPs contribute to overall hotel performance. To achieve these objectives, stakeholder theory is selected as the theoretical basis to explicate the proposed hypothesis i.e. whether all stakeholders (government, activists, industry association, competitors, customers and top management) positively influence the green practices and whether hotels with GPs are able to drive towards better financial and non-financial performance. Data collection is carried out from 51 star hotels in the GHMC through questionnaire. A test on the hypothesis using the hierarchical regression supported the fact that stakeholder influence in the participation of GPs among GHMC star hotels are only at a moderate stage. This means that more than half of star hotels do not have written environmental policy and very few are certified to ISO-40001. It also means that except top management, activists, other stakeholders do not influence or influence in minimal in implementing green practices in star hotels.

KEYWORDS:Stakeholder; Green Practices; Star Hotels; Ghmc

1. INTRODUCTION:

The degradation of the environment constitutes a main concern of modern society and this in turn affects firms' strategy. Industries affect the environment differently and arguably, each sector may have

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developed different strategies to tackle environmental issues (Handfield et al., 1997). Investigations addressing the responses of firms to environmental concerns have overwhelmingly focused on the manufacturing industry (Foster et al., 2000). Surprisingly, service firms, the silent destroyers of the environment (Hutchinson, 1996) have attracted much less research attention. As a service industry, the tourism sector is particularly interesting as the focus of an investigation on environmental management practices or green practices for two main reasons. First, this sector has an increasing economic importance (Hunter, 1997). Second, the tourist industry shows an increasingly higher environmental concern (Hunter, 1997). Such distinctive characteristics of tourist industry are especially dominant in India, where this industry generates 7 percent to India's gross domestic product (WTTC, 2015). The tourist industry involves two main activities, namely: accommodation and transportation. In this study, we focus on the accommodation sub-sector for both its outstanding role in the offer of tourist services and for its impact on the environment.

India's tourism sector continues to grow as Foreign Tourist Arrivals (FTAs) to India increased 6.8 percent to 8.77 lakh in December 2014, as compared to FTAs of 8.22 lakh in December 2013 (Annual Tourism Report, 2014-15). Similarly, domestic tourist visits have been increased from 12829.5 lakh in 2014 to 14319.7 lakh in 2015 (Ministry of Tourism, Govt. of India). Along with this growth comes increasing interest in alternative forms of tourism experiences, arisen in response to the exploitative aspect of mass tourism especially in developing countries (Bowman, 2011). Since most hotels are clustered around the popular tourist attractions, any issue affecting the environment at a tourist spot will cascade to the hotel industry and impact their business.

The need for hotels to adopt Green practices (GPs) is clear. However, how GHMC star hotels in India embrace the concept of GPs at this point is uncertain. Therefore, there is a need to understand the current level of practices, which can serve as the basis of Telangana Tourism sector strategy in India for environmental programmes. As hotels and the tourism industry work hand-in-hand, both will be affected by the destruction of the environment. Even though the tourism sector experiences are varied around the world, still constant pressure to improve environmental management or Green Management of research in this field is noticeably neglected (CéspedesLorente et al., 2003).

The present article is structured as follows. First, we review the literature on environmental management, focusing on those investigations addressing to the hotel industry with the factors that may influence green practices and the eventual relationship between such practices and hotels' performance. Our empirical investigations are shown in due course and address the extent to which our findings show and support hypothesis. Lastly, the conclusion and recommendations are presented.

2. REVIEW OF LITERATURE:

The area of maximising stakeholder value and business success is well documented. Among the literature, the key theories listed are economic theory, stakeholder theory, resource-based view theory and institutional theory. Each comes with certain advantages and also has some limitations in its ability to explicate the views of business management on adopting GPs.

The stakeholder theory views both the internal and external stakeholders as important elements that influences hotels to adopt GPs. This theory is not limited to humans but can also include the natural environment (Le et al., 2006). These stakeholders are widely acknowledged as powerful influences over, and able to direct company decisions and performance (Amran et al., 2010). This theory states that the company's success is dependent on how successfully management manages all of the stakeholder relationships. Without the support of their stakeholders, there is no reason for a firms to exist (ElijidoTen, 2007; Cummings and Patel, 2009). In the hospitality context, for instance, a hotel is expected to provide lavish water usage for the comfort of the customer, but, at the same time, it is required to control the operating costs to maximise shareholder profits. By finding ways to comply with the shareholders' needs

and social demands, they are able to increase their competitive advantage, such as a reduction in water consumption, which reduces costs (Céspedes-Lorente et al., 2003), while at the same time building up their reputation and image.

The hotel industry does not consume as many natural resources or leave an extremely high carbon footprint or pollute on the same scale compared with other industries, like the petrochemical or mining industry; therefore, they are marginally affected by environmental regulations (Céspedes-Lorente et al., 2003). Since they suffer less regulatory pressure, the hotel industry should be in a more neutral position for investigation from other stakeholders (non-government) in respect to EMPs (Céspedes-Lorente et al., 2003). With only limited research currently available, further research is needed to explore which of the stakeholders' influence or drive GPs in hotels in GHMC of Telangana state of India. The conceptual model in Figure 1 depicts the framework adopted for this study. Pressure is exerted on hotels from different stakeholders but in particular, pressure from the government is not uniform and is dependent on the type and nature of the industry (Céspedes-Lorente et al., 2003; Kolk and Pinkse, 2007). Governments can help companies adopt a positive view and institutionalise EMPs by offering rewards and benefits (Manaktola and Jauhari, 2007). On the basis of the concepts just raised in stakeholder theory which leads to the following hypothesis:

Hypothesis 1: The government positively influences hotels to adopt GPs.

Previous research has found that increased management perceptions of pressure from external stakeholders, like activists for environmental performance improvements, significantly affect EMP adoption (Cordano et al., 2010). Moreover, Delmas and Toffel (2004) also noted that stakeholders, such as environmental activists, can exert pressure on environmental decisions. For instance, in Mexico, Greenpeace activists won a court case against Sol Melia Hotels for ecological damage (Mensah, 2004). This implies that environmental activists exert pressure on hotels to become increasingly concerned with sustainable environmental management. On the basis of the literature review and discussion, it is hypothesised that

Hypothesis 2: Activists positively influences hotels to adopt GPs.

With the growth of consumer power and social demands for environmental sustainability, industry associations may have the urgency and legitimacy to strengthen their members' competency and capability and to help them to be more competitive in addressing this new challenge. Industry associations have played an essential role in helping business become more environmentally friendly, such as in the wine industry example (Silverman et al., 2005). Moreover, research by Rivera (2001) on Costa Rican hotels indicates that membership in an

Industry-wide trade association is positively and significantly related to participation in voluntary environmental programmes. This also implies that supporters of GPs can rely on the industry associations to exert pressure on hotels to adopt GPs. Therefore, on the basis of the discussion, it is hypothesised that

Hypothesis 3: Industry associations positively influence hotels to adopt GPs.

A study carried out in Hong Kong by Chan and Wong (2006) shows that the hotels gain substantial cost savings from GPs, reducing electricity, gas and fuel, and water costs. They also found that hotels initiated GPs due to financial benefits and pressure from guest interests and municipal regulations (Chan and Wong, 2006). However, in India especially in GHMC, the reasons that hotels adopt GPs are unclear due to lack of research. GHMC which includes Hyderabad and Secunderabad is also a highly competitive tourism market, with hotels vying for guests by offering differentiated tangible and non-tangible service offerings. GPs can play a unique role here, with hotels gaining financial and non-financial benefits, whether through direct or indirect cost benefits or intangible gains through their public image. In this environment, competitive market pressures create urgency for the hotels to adopt EMPs. Consequently, competitive pressure has formed a hypothesis:

Hypothesis 4: Competitors positively influence hotels to adopt GPs.

The advances in media have increased the effectiveness of communication and raised consumers' knowledge levels. And as stakeholders, the increased consumer awareness has influences companies to adopt GPs (Amran et al., 2010). This scenario has been validated by Tsagarakis et al. (2011), who noted that tourists from countries with high environmental awareness levels are more willing to select and pay for hotels with GPs. This is becoming an important factor for consumers, as demand for 'green' increases, including textiles, construction, general commodities and hotel industry (Kim and Damhorst, 1998; Masau and Prideaux, 2003; Dodds and Kuehnelt, 2009; Qi et al., 2010). For example, Le et al. (2006) found that tourists in Vietnam demanded action on environmental protection. Although customer attitude and willingness to pay for GPs varies (Céspedes-Lorente et al., 2003), research shows that more than 66% of consumers are willing to pay a fee surcharge for energy and renewable devices (Masau and Prideaux, 2003; Tsagarakis et al., 2011). The influence of consumers for hotels to adopt GPs is increasing, which leads to the next hypothesis:

Hypothesis 5: Customers positively influence hotels to adopt GPs.

The senior management team of a hotel holds the power to direct and manage the company, including the power to adopt GPs. Top management is able to play their role by initiating and supporting the adoption of green practices, and making these central in the hotel's strategy and planning (Chan and Hawkins, 2010). Moreover, engagement and commitment from top management is crucial for GPs' long-term success (Esty and Winston, 2006). Their support is seen as the most effective way to gain employee commitment in pursuing and implementing GPs. Therefore, on the basis of the above discussion, it is hypothesised that

Hypothesis 6: Top management positively influence hotels to adopt GPs.

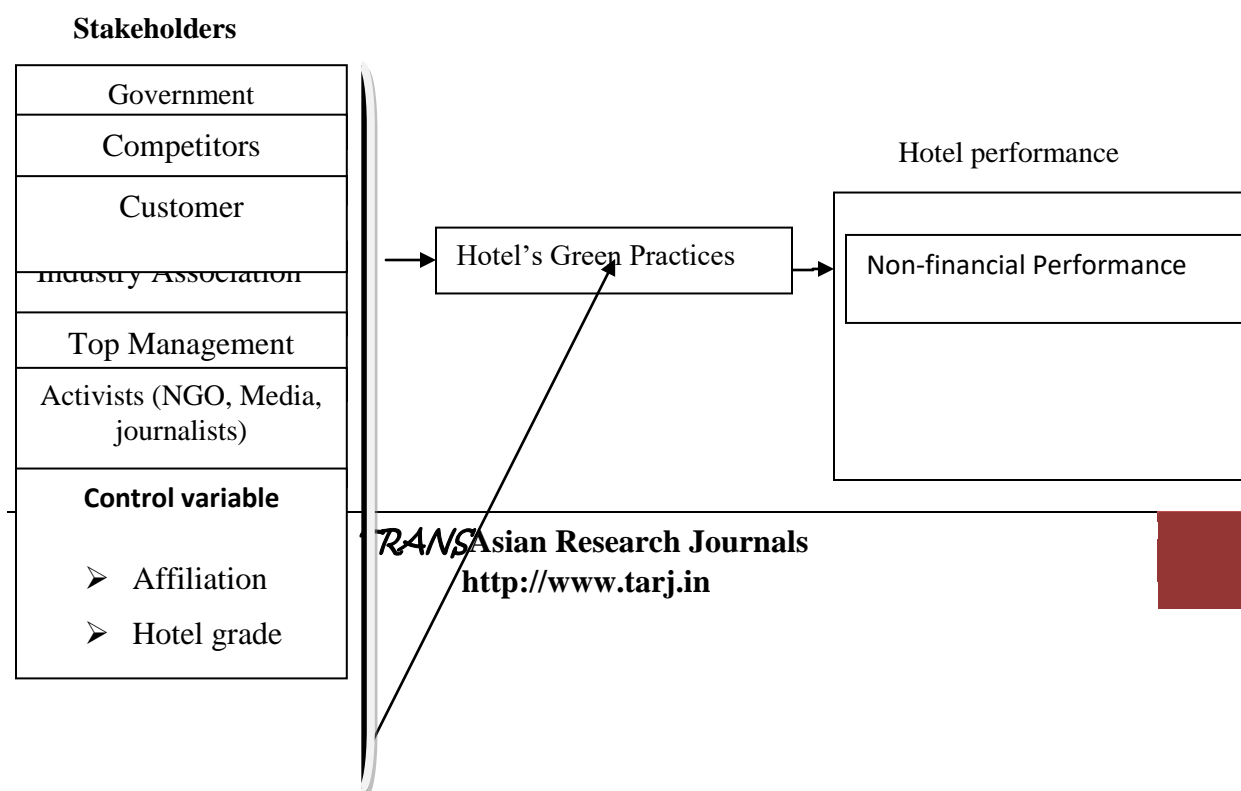


Figure 1: Conceptual framework

The GPs promote the efficient use of raw materials which contributes to cost reductions in energy and water usage (Yousef et al., 2008). The International Hotels Environmental Initiative report shows that hotel water consumption is able to be reduced by half (Céspedes-Lorente et al., 2003). GPs are also able to ensure that companies comply with the regulations and liability through deduction in waste emissions and reuse of their waste materials. These outcomes lead to enhancements in reputation and image (Han et al., 2009) and the study of Yousef (2008) shows a significant positive relationship between GPs and company performance. Other studies have shown that regardless of the size of the company, GPs contribute to financial benefits (Clemens, 2006) and advance companies' competitive advantage (Tari et al., 2010) and other intangible benefits like creating customer loyalty and improving reputation (Céspedes-Lorente et al., 2003). These benefits help hotels fulfil investors' expectations (Ahmad, 2007) and enhance their competitiveness. From the external perspective by responding to the public demands environmental protection, hotels are able to strengthen their competitive advantage in the market, as well as improve their reputation and image. From the internal standpoint, they gain benefits such as increased employee satisfaction and reduced staff turnover rate. GP implementation has the potential to deliver far-reaching benefits and to positively impact hotel performance which in this study refers to business and non-business related performance that helps the hotels to improve their competitiveness and improve or sustain their business objectives. Therefore, on the basis of the above discussion, the following two are hypothesised:

Hypothesis 7a: Hotels with GPs are able to drive towards both better financial and non-financial performance.

Hypothesis 7b: Hotels with GPs are able to drive towards non-financial performance only.

3. METHODS OF DATA COLLECTION:

Data for this study is collected from both primary and secondary sources. The main source of primary data is derived from a questionnaire survey. The hotel is used as the unit of analysis, and star hotels that operate in Greater Hyderabad Municipal Corporation (GHMC) are the same population. By 2015, there were 75 star hotels which include three, four, five, five star deluxe hotels according to Hotel and Restaurants Association of Telangana State (HRATS) and Federation of Hotel and Restaurants Association of India (FHRAI). The reason i am taking from both sources, because they have the above star category hotel list operating on the same region. The data on Green practices was collected from a sample of hotel managers in GHMC. The target population comprised all hotel managers as from August 2015 to February 2016.

The questionnaire for hotel managers is intended to elicit information on their Green practices. The nine page questionnaire was categorized into six modules. Module A is on eco-friendly activities undertaken in the last year of the star hotels and questions on managers' perception of environmental management including environmental policy, ISO 14001 certification and disposition of food, waste water and sewage. Module B is on factors or stakeholders i.e. government, competitors, customer, industry association and top management, activists responsible for implementing Green practices in star hotels and the barriers for implementing the same. Module C is on performance of hotels in terms of both financial and nonfinancial benefit after applying Green practices in hotels. Module D deals with environmental

responsible marketing. Module E is on characteristics of hotels including hotel classification, ownership type, size in terms of number of rooms, occupancy rate, majority of guests from local or foreign, staff strength, and major reasons of guest staying in hotels. Lastly, Module F is on the socioeconomic characteristics of hotel managers, such as their current position in hotels, age, sex, religion, educational background and nationality.

The field work which started in August 2015 lasted for six month. First email was written to the all hotel managers for appointment to meet and to request for filling up questionnaire. Every day, except holiday, hotels are visited from morning to afternoon and questionnaire was given to fill up. Some days, personal calls were made to some of star hotels between 9 a.m. and 5 p.m. Some of the hotel managers completed the questionnaire on their own while some were interviewed. Some hotel managers were not co-operative. Others accepted the questionnaires but it took quite an effort to collect the completed questionnaire.

A number of factors were considered in selection of the hotels. This included cost, time and resource availability. As said above, the hotels (N=75) are selected on basis of both HRATS and FHRAI. A first survey was conducted in 13th August, 2015. It targeted the entire seventy five star hotels in GHMC. The closing date for replies was October. At that time we received 38 questionnaires and proceeded with a second survey to establishments which either did not complete the questionnaire or did not identify themselves. The closing date for reception of second time survey was on February 2016 and that made a total number of 57 replies. No significant differences were found with regard to size, legal category and geographical distribution between either the population or the group of hotels that completed the survey or between the hotels that returned the questionnaire in each of the deadlines. Of the 57 questionnaire, four had not properly completed the module A and B, so they are removed from our study. The remaining was 53 responses amount to 72 percent of the total GHMC star hotels. Admittedly, 2 hotels did not fully completed other parts of the questionnaire, especially module concerning performance of hotels after green practices, characteristics of hotels, demographic profile of respondents and thus our final sample consisted of 51 observation.

TABLE 1: CHARACTERISTICS OF THE HOTEL

Characteristics	Types	(N=51)	Percentage
Number of Category	Three star	38	74.51
	Four star	3	5.88
	Five star	7	13.73
	Five star Deluxe	3	5.88
Number of Rooms	<200	36	70.59
	201-300	3	4.88
	301-400	1	1.96
	>400	1	1.96
Staff strength	<200	37	72.55
	201-300	2	3.92
	301-400	10	19.61
	>400	2	3.92
Types of Ownership	Independent	29	56.86
	Part of chain or Consortium	22	46.14
Member of Hotel Association	FHRAI	10	19.61

	Others (HAI, IHRA, SIHRA)	41	80.39
Occupancy rate(2014-15)	<50	4	7.84
	51-60	7	13.72
	61-70	22	43.14
	71-80	15	29.42
	>80	3	5.88
Have a written environmental policy	Yes	19	37.25
	No	32	62.75
Have manager/ specific person/ committee in charge of environmental management	Yes	16	31.36
	No	35	68.6
Hotels certified with ISO 14001	Yes	3	5.88
	No	48	94.08
Hotels working towards getting ISO 14001 Certification	Yes	8	15.68
	No	40	78.4
Major Customers	Domestic	45	88.2
	Foreign	6	11.76
Majority of guest book for their stay through	Internet/email (Y)	36	70.59
	Travel agency (Y)	27	52.94
	Walk in (Y)	27	52.94
	Phone booking (Y)	48	94.12
	Others(please specify) (Y)	1	1.96
Major reasons of guest stay at hotel	Business (Y)	47	92.16
	Holiday (Y)	32	62.75
	Training and Meeting (Y)	19	37.25
	Others (Y)	1	1.96

Source: Field Survey (2015)

The data collected from the field study was edited, coded, and processed using the Statistical Package for the Social Sciences (SPSS) PC version 20. The analysis starts with the characteristics of hotels. The characteristics of the hotel are depicted in table 1. The characteristics results indicate that majority of three star hotel responded the questionnaire very well. It was about 74.51 percent (38) of three star hotels responded the questionnaire out of 51 total star hotels responded. The five star hotels stood second which was 13.73 percent (7) in responding the questionnaire. The remaining percentage of responding questionnaire was same 5.88 (3) both for four stars and five star deluxe hotels. The size of hotels in terms of rooms varies from small, medium, big to very big. If we consider the size of star hotels, more than 70.59 percent (36) star hotels have below 200 rooms, followed by 4.88 percent (3) of star hotels have

rooms between 201-300 rooms. The same percentages of star hotels are having 301-400 rooms and above 400 rooms respectively.

In terms of staff strength big number of (72.55 percent) of star hotels have below 200 staff followed by 19.61 percent of star hotels have 301-400 staff member while the same percentages (3.92) of star hotels have 201-300 and above 400 staff respectively. Most of the hotels were independent. This applied mostly to three star hotels (56.86) percent. However, a sizable number of four, five, five star deluxe hotels (46.14 percent) are part of chain or consortium. Also, the membership of star hotels to FHRAI is somehow related to this study. Only 19.61 percent of star hotels were under the FHRAI membership. The remaining 80.39 percent (41) were in the others membership which includes HAI, IHRA and SIHRA.

On occupancy rate, out of total star category hotels, 43.14 percent of star hotels have 61-70 percent occupancy rate followed by 29.41 percent of star hotels of 71-80 percent occupancy rate. Very few (5.88 percent) star hotels have above (80 percent) high occupancy rate followed by 13.72 percent of star hotels have 51-60 percentages of occupancy rates. Only 7.84 percentages of star hotels have below fifty percent of occupancy rate. Of all respondents less than half (37.25 percent) have their own environmental policy or have a manager/specific person/ committee (43.14 percent) in the hotel to take charge of their environmental management practices. Most of the star hotels (86.27 percent) are not certified with ISO 14001 and a very small portion of hotels (5.88) is certified with ISO 14001. On hotels working towards getting ISO 14001 certification is very few and it is 15.68 percent (8) and majority of hotels (78.4 percent) are not interested to get the certification because so many resources are needed to follow the rules and regulation of ISO 14001 Certification.

About the type of customer of star hotels, the percentages of domestic customer are 88.2 percent followed by 11.76 percent of foreign customer. Majority of guest/ customer book their hotels for their stay through different means. 94.12 percent of guest book their hotels through phone booking followed by 70.59 through internet/ email. 52.94 percent of guest book their hotels through both by travel agency and walk in. If we take the major reasons of guest staying at star hotels, 92.16 percent of guest book star hotels for business purpose, while 62.75 percent of guest for holiday purpose and 37.25 percent for training and meeting purpose.

TABLE 2: CHARACTERISTICS OF HOTEL RESPONDENTS

Characteristics	Types	(N=51)	Percentage
Current position in the hotel	MD/GM/CEO	6	11.76
	Consultancy/Advisor		
	Director / Manager	28	54.90
	Others(Please specify)	17	33.33
Age	Under 20 years		
	21-29 years	6	11.76
	30-39 years	29	56.86
	40-49 years	15	29.41
	50-59 years	1	1.96
	More than 60		
Sex	Male	43	84.31
	Female	8	15.69

	Others		
Educational Background	Primary		
	Secondary	1	1.96
	Post. Sec	50	98.00
Nationality	Indian	50	98.04
	Others	1	1.96

Source: Field Survey (2015)

The demographic of respondent results in table 2 indicate that about 66.66 percent of the respondents occupy position of Manager and above. The remaining 33.33 percent hold others positions such as section head, senior executive, CSR coordinator and accountant. Although they do not hold an official managerial position, these respondents understand the issues and are able to answer the survey questions. About age, half of the respondents are within the age group of 30-39 years (56.86 percent) followed by 40-49 years (29.41percent) and 21-29 years (11.76 percent). About sex, most of the hotel manager (84.31percent) is male. On education, most of managers (98 percent) had post secondary education. A majority of managers are Indians (98.04 percent) and a small minority (1.96 percent) is from other nationality.

4. MEASUREMENT OF VARIABLES:

To improve, the explanatory power of the hierarchical multiple regression models is used to test the proposed hypotheses keeping three variables controlled i.e. (i) chain affiliation; (ii) star rating and (iii) origin of hotel guest. The variables for stakeholder influence constitute the independent variables while GPs is the dependant variables. Meanwhile to establish further relationship between green practice (GPs) and hotel performance, GPs is used as independent variable while hotel performance is used as dependent variable. The sources of all the measurement indicators are summarised in Table 3 as listed below.

TABLE 3: SOURCE OF INFORMATION AND MEASUREMENT SCALES

Section	Variable	Source of questions	Scale
A	Demographic	(Le et al., 2006; Mensah, 2006; Ahmad, 2007; Tarí et al., 2010)	Nominal dichotomous
B	Stakeholder influence Government Competitors Customers Industrial associations Top management Activists	(Céspedes-Lorente et al., 2003; Ahmad, 2007)	5-point Likert scale (1 – strongly disagree, 5 – strongly agree)
C	Green practices	(Mensah, 2006; Ahmad, 2007)	5-point Likert scale (1 – regular habit, 5 – never)
D	Hotel performance	(Céspedes-Lorente et al., 2003; Ahmad, 2007; Tarí et	5-point Likert scale (1 – strongly disagree, 5 – strongly agree)

		al., 2010)	
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5. DATA ANALYSIS AND RESULTS:

Two clusters of multiple regression analysis are used to test the hypothesis. The first hierarchical multiple regression analysis was performed to determine the relationship between Green practices and the six stakeholders namely, the government, competitors, customers, industry associates, top management and activists taking control variables as type of visitor, category of star hotels and ownership. Secondly, again multiple regressions are performed between green practices and its impact on hotel performance which includes both financial and non-financial performances.

TABLE 4: DESCRIPTIVE STATISTICS AND CORRELATION FOR ALL VARIABLES ^A

	Mean	S.D	1	2	3	4	5	6	7	8
Green Practice	0E-7	1.00000013								
Type of visitor	.0392	.19604	-.301*							
Category of hotel	.2745	.45071	-.712**	.328**						
Ownership	.4314	.50020	-.414**	.232***	.263*					
Top MMT and Activists	8E-7	.99999992	.772**	-.174	-.643**	-.254*				
Government	-.0000010	.99999966	-.008	-.192***	-.115	.006	.000			
Customer	4E-7	.99999968	.009	-.022	.118	-.076	.000	.000		
Competitors	2E-7	1.00000039	.221***	-.378**	-.140	-.145	.000	.000	.000	
Industry Association	-4E-7	1.00000011	.133	.221***	.079	.011	.000	.000	.000	.000

^aN=51, ***= p<0.10; *=p<0.05; **=p<0.01

Table 4 shows means, standard deviations, and correlations for all variables. As noted above, hierarchical multiple regression analysis models uses green practices (GPs) as the dependent variable. Such models tested for the effects of control variables and environmental pressures from different stakeholders (Hypothesis 1 to 6). Our control variables encompass type of visitors, category of hotels and ownership). Table 5 depicts the results of our regression models. Standardized partial regression coefficients and the change in R² are listed for each step.

TABLE 5: HIERARCHICAL REGRESSION ANALYSIS ^A

		Step 1	Step 2	Step3	Step4	Step5	Step6
		B	β	β	β	β	β
Step 1	Visitor	-.036	-.066	-.076	-.075	-.021	.456
	Category	-.637**	-.312**	-.320**	-.328**	-.312**	.233**
	Ownership	-.238*	-.187*	-.183*	-.180*	-.170*	.160*

Step 2	Top Management and Activist		.513**	.506**	.502**	.524**	.100**
Step 3	Government			-.059	-.059	-.047	.077
Step 4	Customer				.033	.033	.076
Step 5	Competitors					.145***	.082
Step 6	Industry Association						.077*
R ² at each step		.563**	.715**	.718	.719	.737***	.765*
ΔR^2 at each step		.535**	.690**	.687	.681	.694***	.721*

^a Note: β 's are standardised coefficient; ***= $p < 0.10$; *= $p < 0.05$; **= $p < 0.01$

In the first step, the category of visitors (domestic and foreign), category of hotels and ownership variables account for about 56 percent of the variance of green practices. The category of visitors and hotels and those dominated by ownership do not influence in extensive use of green practices. The second step reveals that top management and activists have a significant positive effect on the dependent variable that is eco-friendly activities. Here it is noted that we are taking both top management and activist together because they both are in factor 1 after the factor analysis results. Therefore, hotels caring about top management and activist play a significant role in influencing green practices of hotels and this provides support for Hypothesis 6 and 2. In step 3, government variable coefficient is negative and insignificant. This reject the null Hypothesis 1, shows that the govt does not influence the green practices positively. Step 4 shows that customer has a insignificant positive effect on the extensive use of green practices, as predicted in Hypothesis 5 while competitors have a significant positive effect on the green practices, supporting hypothesis 4. Finally, the effects on the dependent variable of industry association influence strategies and industry association are also significant, as shown in step 6. The highest increases in R² occur upon the inclusion of these variables. These results support Hypotheses 2, 3, 4 and 6. All variables account for about 76 percent of the dependent variable's variance. Interestingly, both the top management and activist variable seemingly influence to green practices in star hotels in GHMC.

TABLE 6: THE RELATIONSHIP BETWEEN GREEN PRACTICES AND HOTEL PERFORMANCE

		Model 1		Model 2
Dependent Variable	Both FP(except item no. iii) and Non-FP(except item no. viii, ix, x)	Beta	Fact_2(Non-FP(except v, vi, vii))	Beta
Independent variable	GP =Factor 1	.461**	GP =Factor 1	.280**
Control variable				
	Customer Type	.113		

	Star Category	.112		
	Ownership	.196		
R²		.151		.079
Adjusted R²		.077		.060
F value		2.040*		4.177**
N		51		51

Note: *, **, *** represent statistical significant at the 0.10, 0.05 and 0.01 levels (two tailed) respectively.

The second regression is used to test the influence of GPs on hotels' both financial and non-financial performances and non-financial performance only. Table 6 shows that the control variables in Model 1 do not significantly contribute to hotel both financial and non-financial performance. The items in Factor 1 of Green practices (*Reduces waste through aluminium can, Applies water saving activities through dual flush toilets, encourages guest to be eco-friendly through sticker and card in the room, uses eco-friendly less toxic cleaning products for rooms and kitchens, organising sponsoring environmental protection activities through local cultural event and NGO etc., encouraging staff to be eco-friendly through giving rewards and performance measure, planning and allocating budget for green activities and supporting NGO in cash and kind*) and all the control variables positively accounted for 15 percent of the variance ($R^2=0.151$, $F=2.040$, $p<0.10$) in hotel both financial performance i.e. *profit margin is better compared to other competitors and occupancy rate is higher compared to other competitors* (except item no. iii that includes *Protection from prosecutions, fines and legal actions after being green*) and Non-financial performance i.e. cost and expenses are lower compared with others that not being green, gaining market share by being green, customer satisfaction level improve after moving towards green and employee's satisfaction level improve after green practices. (except item no. viii, ix, x that include *green activities help to reduce the total consumption of electricity and water, enjoying reduction in cleanup costs by being green and green practices help to reduce risks i.e. health, safety and environment*). This finding partially supports hypothesis H7a concerning hotels' both financial and non-financial performance. In the same table, on the basis of Model 2, the items in GPs without any control variables significantly contribute at 28% ($R^2=0.079$, $F=4.177$) to hotels' non-financial performance i.e. *green activities help to reduce the total consumption of electricity and water, enjoying reduction in cleanup costs by being green and green practices help to reduce risks i.e. health, safety and environment*. (except v, vi, vii i.e. *Gaining market share by being green; Customer satisfaction level improve after moving towards green and Employee's satisfaction level improve after green practices*). This finding also positively supports hypothesis H7b concerning hotels' non-financial performance without any control variables.

6. LIMITATION

Our study bears some limitations that may encourage future work. First, our results on the relationship between green practices and hotels' financial and non-financial performance may be tested in view of additional factors i.e. customers' loyalty, innovativeness. Second, the variables are constructed using questions put to a single source within each organization and are based on the perceptions of the hotel manager. Although part of the data have been compared using secondary sources, without there being any apparent bias, it has not been possible to validate all the variables. However, the factorial analysis provides an initial sign that the different measurement scales group together items belonging to the same construct. Third, our study is made up of a single-industry and single-geographical scope firms. Though

control variables attempted to capture this situation, future research will reveal the generalizability of our findings.

Finally, some of our measurement scales are not validated by previous work or are industry specific. For example, to examine the stakeholders' strategies of influence, we have grouped the stakeholders that are deemed to be the most important for hotels. Admittedly, though, such important stakeholders may differ among them in their approach to firms' environmental issues, and this is an aspect that may encourage future work on this area.

7. CONCLUSIONS AND RECOMMENDATIONS:

It is concluded that hotel's level of participation in GPs was only moderate and not satisfactory. Nevertheless, a positive relation was seen with the hotels' financial and non-financial performance resulting from the adoption of GPs, which suggests that over time, green practices may become an important issue in the hospitality industry. The study found no dominant stakeholder except top management and activists positively influencing hotels to adopt GPs. In this situation, with the low demand for environmental protection, the level of GP adoption will also remain low. Environmental protection is still a relatively new concept in GHMC star hotels.

It is quite surprising to find that from the perspective of the respondents, none of the proposed stakeholders really exert pressure on the star hotels to implement GPs. This is a clear indication that Green Practices do not really matter for GHMC hoteliers and as such, they do not really feel pressure from their stakeholders. Nevertheless, there is still a positive side discovered through this research in as much as they admitted that there is significant relationship between GPs and the hotel performance.

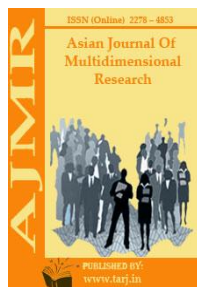
This study confirms that there is a lack of pressure on GHMC star hotels to implement GPs and this is the main reason why the level of participation in GPs within the hotel industry is low. The environmental transformation of organisations depends on not only a sense of urgency, as motivated by stakeholder pressure, but also the perception of feasibility, as derived from the existence of GPs (González-Benito et al., 2011).

REFERENCES

- Ahmad, A.S.A. (2007). The relationship between environmental management practices (EMP) and hotel performance: EMP drivers and the moderating role. *Unpublished Exploratory*, University Sains Malaysia.
- Amran, A., Zain, M. M., & Sulaiman, M. (2010). Empowering society for better CSR: the case of Malaysia. *Unpublished Paper prepared for the CSR workshop in Brisbane*. University Sains, Malaysia.
- Armstrong, J.S., & Overton, T. S. (1977). Estimating non-response bias in mail surveys. *Journal of Marketing Research*, 14(3), 396–402.
- Annual Report*, (2014-15). Ministry of Tourism, Government of India. Retrived from file:///C:/Users/User/Desktop/IIT%20Mumbai%20conference%20paper/Annual%20tourism%20report%202014-15.pdf
- Bohdanowicz, P. (2005). European Hoteliers' Environmental Attitudes: Greening the Business. *Cornell Hotel and Restaurant Administration Quarterly*, 46(2), 188-204.
- Bohdanowicz, P. (2006). Environmental awareness and initiatives in the Swedish and Polish Hotel industries survey results. *International Journal of Hospitality Management*, 25(4), 662-668.
- Bowman, K. S. (2011). Sustainable tourism certification and state capacity: keep it local, simple, and fuzzy. *International Journal of Culture, Tourism and Hospitality Research*, 5(3), 269–281.
- Brace, N., Kemp, R., & Snelgar, R. (2006). *Reliability analysis for scales and questionnaires dimensionality of scales and questionnaires In SPSS for Psychologists* (3rd edition). Palgrave Macmillan: London.

- Céspedes-Lorente, J., Burgos-Jiménez, J. D. & Álvarez-Gil, M. J. (2003). Stakeholders' environmental influence: an empirical analysis in the Spanish hotel industry. *Scandinavian Journal of Management*, 19(3): 333–358. doi: 10.1016/S0956-5221(02)00034-9
- Chan, E., & Hawkins, R.(2010). Attitude towards EMSs in an international hotel: an exploratory case study. *International Journal of Hospitality Management*, 29(4), 641–651. doi: 10.1016/j.ijhm.2009.12.002
- Chan, E., & Wong, S. (2006). Motivations for ISO 14001 in the hotel industry. *Tourism Management*, 27(3), 481–492. doi: 10.1016/j.tourman.2004.10.007
- Clemens, B. (2006). Economic incentives and small firms: does it pay to be green? *Journal of Business Research*, 59, 492–500.
- Cordano, M., Scott, M. R., & Silverman, R. (2010). How do small and medium enterprises go “green”? A study of environmental management programs in the U.S. wine industry. *Journal of Business Ethics*, 92, 463–478.
- Cummings, L., & Patel, C. (2009). Managerial Attitudes toward a Stakeholder Prominence within a Southeast Asia Context (Studies in Managerial and Financial Accounting). Emerald Group Publishing Limited, (pp.89 –112). United Kingdom.
- Delmas, M., & Toffel, M. W.(2004). Stakeholders and environmental management practices: an institutional framework. *Business Strategy and the Environment*, 13, 209–222.
- Dodds, R., & Kuehnle, J. (2009). CSR among Canadian mass tour operators: good awareness but little action. *International Journal of Contemporary Hospitality Management*, 22(2), 221–243.
- Elijido-Ten, E. (2007). Applying stakeholder theory to analyze corporate environmental performance: evidence from Australian listed companies. *Asian Review of Accounting*, 15(2), 164–184.
- Essex, S., Kent, M., & Newnham, R. (2004). Tourism development in Mallorca: Is water supply a constraint? *Journal of Sustainable Tourism*, 12(1), 4-28.
- Esty, C. D., & Winston, A.S. (2006). *Green to Gold*. Yale University Press: New Haven and London.
- Foreign Tourist Arrivals in India*. Press Information Bureau. Retrieved 11 May 2016.
- Foster, S.T., Sampson, S. E., & Dunn, S.C. (2000). The impact of customer contact on environmental initiatives for service firms. *International Journal of Operations and Production Management*, 20(2), 187–203.
- González-Benito, J., Lannelongue, G., & Queiruga, D. (2011). Stakeholders and environmental management systems: a synergistic influence on environmental imbalance. *Journal of Cleaner Production*, 19, 1622–1630.
- Gossling, S., Paul, P., Ceronc, J.P., Dubois, G., Patterson, T., & Richardson, B. R. (2005). The Eco-Efficiency of Tourism. *Ecological Economics*, 54(15), 417-434.
- Han, H., Hsu, L.T. J., & Lee, J. S. (2009). Empirical investigation of the roles of attitudes toward green behaviours, overall image, gender, and age in hotel customers' eco-friendly decision-making process. *International Journal of Hospitality Management*, 28, 519 –528.
- Handfield, R. B., Walton, S. V., Seegers, L. K., & Melnyk, S. A. (1997). “Green” value chain practices in the furniture industry. *Journal of Operations Management*, 15(3), 293–315.
- Holden, A. (2000). *Environment and Tourism*, Rutledge, New York.
- Hunter, C. (1997). Sustainable tourism as an adaptive paradigm. *Annals of Tourism Research*, 24(4), 850–67.
- Hutchinson, C. (1996). Integrating environmental policy with business strategy. *Long Range Planning*, 29(1), 11–23.
- Igarria, M., Livari, J., & Maragahh, H. (1995). Why do individuals use computer technology? A Finnish case study. *Information Management*, 5, 227–238.

- Kim, H. S., & Damhorst, M. L.(1998). Environmental concern and apparel consumption. *Clothing and Textiles Research Journal*, 16(3), 126–133.
- Kolk, A., & Pinkse, J. (2007). Towards strategic stakeholder management? Integrating Perspectives on sustainability challenges such as corporate responses to climate change. *Corporate Governance*, 7, 370–378.
- Koll, O. (2003). Stakeholder value creation and firm success. *Advances in Business Marketing and Purchasing*, 12, 141–262.
- Le, Y., Hollenhorst, S., Harris, C., McLaughlin, W., & Shook, S. (2006). Environmental management: a study of Vietnamese hotels. *Annals of Tourism Research*, 33(2), 545–567. doi: 10.1016/j.annals.2006.01.002
- Mainardes, E.W., Alves, H., & Raposo, M. (2011). Stakeholder theory: issues to resolve. *Management Decision*, 49(2), 226–252.
- Manaktola, K., & Jauhari, V. (2007). Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality Management*. 19(5), 364–377.
- Masau, P., & Prideaux, B. (2003). Sustainable tourism: a role for Kenya's hotel industry. *Current Issues in Tourism*, 6(3), 197–208.
- Mensah, I. (2004). *Environmental practices in US hotels*. Hotel Online Report.Retrieved 24 November, 2012 from http://www.hotelonline.com/News/PR2004_2nd/May04_EnvironmentalPractices.html
- Mensah, I. (2006). Environmental management practices among hotels in the greater Accra region. *International Journal of Hospitality Management*, 25(3), 414–431. doi: 10.1016/j.ijhm.2005.02.003.
- Pigram, J. (1995). *Resource Constraints on Tourism: Water Resources and Sustainability*. Changes in Tourism: People, Places, Processes. Routledge: New York, 208-228.
- Place-wise Number of Approved Hotels and Rooms in Andhra Pradesh*. (31.12.2005). Ministry of Tourism, Govt. of India.
- Qi, G.Y., Shen, L.Y., Zeng, S. X., & Jorge, O.J.(2010). The drivers for contractors' green innovation: an industry perspective. *Journal of Cleaner Production*, 18(14), 1358–1365.
- Rivera, J. (2001). Does it pay to be green in the developing world? Participation in a Costa Rican voluntary environmental program and its impact on hotel's competitive advantage. *Academy of Management Proceedings and Membership Directory*, C1-C6.
- Scanlon, N. L. (2007). An analysis and assessment of environmental operating practices in hotel and resort properties. *International Journal of Hospitality Management*, 26(3), 711–723. doi: 10.1016/j.ijhm.2006.07.003
- Silverman, M., Scott, M. R., & Cordano, M. (2005). The greening of the California wine industry: implications for regulators and industry associations. *Journal of Wine Research*, 16(2), 151–169.
- Tarí, J.J., Claver-Cortés, E., Pereira-Moliner, J., & Molina-Azorín, J. F. (2010). Levels of quality and environmental management in the hotel industry: their joint influence on firm performance. *International Journal of Hospitality Management*, 29(3), 500–510. doi: 10.1016/j.ijhm.2009.10.029
- Tourism Malaysia.(2011). *Malaysia Truly Asia-About Malaysia*. Retrieved 17 May 2011, from http://www.tourism.gov.my/about_malaysia/
- Tsagarakis, K. P., Bounialetou, F., Gillas, K., Profylienou, M., Pollaki, A., & Zografakis, N. (2011). Tourists' attitudes for selecting accommodation with investments in renewable energy and energy saving system. *Renewable and Sustainable Energy Reviews*, 15(2), 1335–1342.
- Travel & Tourism Economic Impact 2015 India*. World Travel and Tourism Council.Retrieved 15 April 2016.
- UNWTO. (2006). Retrieved August 16, 2007 from the World Wide Web: <http://www.world-tourism.org/facts/menu.html> - UNWTO 2008, Tourism Highlights, 2008 Edition



Van der Merwe, M., & Wocke, A. (2006). An investigation into responsible tourism practices in South African hotel industry. *South African Journal of Business Management*, 38(2), 15.

Werther, W. B., Chandler, D. (2006). *Strategic Corporate Social Responsibility: Stakeholders in a Global Environment*. Sage Publication: California.

World Travel & Tourism Council. (2015). Retrieved 20 July 2016, from http://www.wttc.org/eng/About_WTTC/

Yousef, E., Aidan, K., Frank, R., & Hussein, E. (2008). Green and competitive? An empirical test of the mediating role of environmental innovation strategy. *Journal of World Business*, 43, 131–145.



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**AN OVERVIEW OF TRAINING ACTIVITIES IN TEXTILE AND APPAREL
MANUFACTURING SECTOR**

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ABSTRACT

Constant change in technology makes it necessary to devise innovative methods to increase production and output of any organization. Hence, continuous upgradation of skills and capabilities and retaining of talent in the organizations is the need of the hour. The textile manufacturing sector generates huge employment for both skilled and unskilled labour in India. The present paper thus deals with the understanding of training and development activities undertaken by the manufacturing companies in the selected industrial regions. The given study is descriptive in nature utilizing primary as well as secondary data. The study presents the understanding of Employees and HR personnel/s for the training activities being carried out in their respective organizations and significant differences were found in their perceptions. The paper presents training needs, methods, implementation, assessment and the organizational effectiveness of trainings.

KEYWORDS: Indian Textile And Apparel Industry, Human Resource Development (HRD), Training and Development (T&D), Training Implementation, Training Assessment, Training Effectiveness.

INTRODUCTION:

For the economic development of any nation, it is important to devise strategic manufacturing activities as it plays a critical role in the nations' economy. Constant change in technology makes it necessary to devise innovative methods to increase production and output of any organization. Hence, continuous upgradation of skills and capabilities and retaining of talent in the organizations is the need of the hour. Manufacturing in the current scenario requires innovative methods, increased usage of information technology, talent management for sustenance in the competitive landscape. Identifying the potential of the manufacturing sector, Indian government is working to strengthen this sector for faster economic development. India is one of the fastest growing economies with manufacturing as 16% of GDP. The textile manufacturing industry of India is one of the major foreign exchange earners and employs around 30 percent of non-agricultural workforce. The sector generates huge employment for both skilled and unskilled labour in India. The total market size of Textile industry in India is estimated at US\$ 122bn including exports worth US \$37 bn and a domestic apparel market of US\$ 63bn (CII & Wazir advisors, 2017). The manufacturing setup of this sector in India is second largest in the world followed by China.

REVIEW OF LITERATURE:

HR Training and Development practices in any organization are the responsibility of four major Groups:

- The top management, accountable for the training policy.
- The human resources development department which does the whole planning and is responsible for the establishment and evaluation of the instructional Training programmes
- Superiors who facilitate the streamlines Training and Development activities
- Employee's who give feedbacks and suggestions for corporate educational endeavours.

The impact of human resource management (HRM) policies and practices on firm performance is an important topic in the fields of human resource management, industrial relations, and industrial and organizational psychology (Boudreau, 1991; Jones & Wright, 1992; Kleiner, 1990). Human resource management practices can help to create a source of sustained competitive advantage, especially when they are aligned with a firm's competitive strategy (Begin, 1991; Butler, Ferris, & Napier, 1991; Cappelli & Singh, 1992; Jackson & Schuler, 1995; Porter, 1985; Schuler, 1992; Wright & McMahan, 1992). The Perception of Personnel Management Policies Scale (PPMPS), developed and validated by Demo (2008), includes only four HRM policies: involvement; training, development and education; work conditions; and compensation and rewards. Considering the shortage of scientific validated scales to measure employee's perceptions about HRM policies, the PPMPS is a good option to be used so far (*e.g.* Rubino, Demo, & Traldi, 2011). However comprehensive instruments with higher reliability for measuring HRM policies and practices are demanded. The HRMPPS presented here sought to improve the completeness and the scope of the previous scales validated in the literature by adding policies for recruitment and selection, competency-based Performance appraisal, also often cited by authors such as Bohlander and Snell (2009), Dessler (2002), Guest (1987), Sisson (1994) and Storey (1995). Arguments made in related research are that a firm's current and potential human resources are important considerations in the development and execution of its strategic business plan. In both this largely theoretical literature and the emerging conventional wisdom among human resource professionals there is a growing consensus that organizational human resource policies can, if properly configured, provide a direct and economically significant contribution to firm performance. The presumption is that more effective *systems* of HRM practices, which simultaneously exploit the potential for complementarities or synergies among such practices and help to implement a firm's competitive strategy, are sources of sustained competitive advantage (Mark A. Huselid, 1995). HR training is the process of acquiring and improving the skills, knowledge and attitude required for job performance; it is an investment an organization makes in its people. Training can be in many forms, and the desired end is generally the same, *i.e.*, improved performance of job-related tasks. HR Training also helps in optimum utilization and development of the human resources; it brings about change in the organizational climate and helps in boosting the morale of the employee by imbibing motivation (G Bharathi Kamath, 2011).

The impact of training and management development in Nigerian banking industry was based on based on 7 of 24 banks in Nigeria and data was collected through questionnaires. The results were based on descriptive analysis and inferential statistics such as frequency distribution and analysis of variance. The result obtained showed that there was a great impact of training and management development in the Nigerian banking industry. The author stated that the efficient

utilization of human resources was significant in utilizing the other resources of the organization. The importance of well trained and experienced people to perform the organizational activities for the desired result was discussed. Training and management development to be a mixture of activities that aim at the improvement of performance of personnel in organizations so that continuous improvement in productivity can be attained (Oni, A Ijaiya, & Mohammed, 2013). As per an extensive review of literature in terms of research findings from studies that have been trying to measure and understand the impact of individual HR practices like training have on employee productivity across various sectors. The focal point of their research is on training practices and employee productivity and their relationships. They reviewed that the relationship between employee productivity and training practices vary for different industries. They conclude that Training has a very important role to play in productivity, but the results may be affected by dominant market forces. Their analysis is, thus, a comparative study of training practices and other macroeconomic and market forces that affect productivity (Singh & Mohanty, 2012). (Ljigu, 2015) has done a co-relational type of research design that aims to ascertain if there are significant associations between selected HRM practices and employees' job satisfaction. The author has utilized Descriptive statistics, frequencies and percentages to analyze the data in addition to Correlation and Regression. The author found out that HRM functions like training and development, performance appraisal and compensation package found to have a strong positive correlation with employees' job satisfaction. The results of the regression analysis also show that that recruitment and selection, training and development, performance appraisal and compensation package have a significant positive impact on job satisfaction. The results of the study, therefore, revealed that bundles of HRM Practices mainly recruitment and selection, training and development, performance appraisal and compensation package are positively related to employee job satisfaction.

SIGNIFICANCE OF THE STUDY:

Considering the role of the textile sector in the nation's economy and its huge potential, it becomes imperative to study the role for the development of talent all across the managerial functions. Along with the given factors, it is vital for any organization to get feedback about its training and development policies and practices so that necessary changes can be made for the better of the organization, its individuals and the society as a whole. Hence, the present study attempts to provide such a feedback to the concerned organization and thereby looks to contribute to the improvement of the concerned. The Indian government is taking many steps and measures to identify and develop the skills and abilities of the manpower around and these efforts need to be further strengthened by the textile and apparel manufacturing companies for the long term sustenance of this sector. The present paper thus deals with the understanding of training and development processes undertaken by the manufacturing companies in the selected industrial regions of Barnala, SAS Nagar and Ludhiana in the northern state of Punjab, India.

OBJECTIVES OF THE RESEARCH STUDY:

1. To understand the human resource development in the respective organizations.
2. To understand the various training activities being undertaken by the selected textile and apparel manufacturing organizations.

RESEARCH DESIGN & METHODOLOGY:

The given study is descriptive in nature utilizing primary as well as secondary data. Primary data has been collected by field visits of the respective companies based in Punjab carrying out training in their organizations. The secondary data has been taken from scholarly journals, annual reports, previous studies, reports, books. The total number of respondents was 254 including 40 HR personnel/s from 31 companies and 214 employees from 33 organizations. A well-structured questionnaire based on ranking as well as five-point Likert Scale was used as a research tool to conduct this study. The data collected was analyzed by the usage of SPSS v22 package and inferences were made based on descriptive statistics.

FINDINGS AND ANALYSIS:

The study presents the understanding of Employees and HR personnel/s for the training activities being carried out in their respective organizations. Significant differences were found in the perceptions of HR personnel/s and Employees. The objective wise findings of the research are summarised as follows:

Most of the HR personnel/s who preferred assessing training needs prior to the development of training programs and indicated Employee performance appraisal as a basis for determining training needs were found to be from the organizations with turnover more than 100 crore. For training methods, the viewpoint of HR personnel/s and Employees were taken. 65.0 % of HR personnel/s believed that their organizations invested more on technical than behavioural training indicating that selected organizations did not invest equally in all kind of training. 67.8 % of Employees believed that training was more of behavioural nature than technical for senior managers indicating difference in the type of training imparted at different executive levels. Most of the employees agreed that the training programs were relevant to their Job performance in the selected organizations. The lowest mean was attained by 'Training participants are aware of the knowledge and skills expected acquire from the program' indicating lesser awareness of employees towards the trainings happening in their organizations.

**TABLE 1.0 DESCRIPTIVE ANALYSIS OF TRAINING IMPLEMENTATION
FROM THE EMPLOYEES PERSPECTIVE**

Variable description	M (N=214)	SD
Training participants are aware of the knowledge and skills expected acquire from the program	3.17	1.183
Training programs are relevant to your Job performance	4.08	0.829
Training and development policies of the organization are satisfactory	3.90	1.039

The HR Personnel/s viewpoint was also taken to gain knowledge about the Training implementation in the selected organizations. HR personnel/s from organizations with more than 100 crore turnover stated more strongly that the trainees were selected based on the recommendation of department heads in their organizations.

Another analysis was done based on the responses of the employees regarding the best time to conduct trainings in the selected organizations. The results are summarised as given below:

TABLE 1.1: RANKS FOR THE BEST TIME TO CONDUCT TRAININGS IN THE SELECTED ORGANIZATIONS

	Mean rank
Trainings at the time of <i>recruitment</i>	2.68
Trainings at the time of <i>transfers within company</i>	2.15
Training at the time of <i>promotions within the company</i>	2.31
Training at the time of <i>change in technology</i>	2.86

As per the analysis, there was significant difference between the training imparted at different times within the organization. Training at the time of change in technology attained highest mean rank and the lowest mean rank was attained by training at the time of transfers within company. The differences between the best times to conduct training at various stages were found to be significant. Employees ranked training at the time of recruitment and at the time of change in technology significantly higher than that at the time of transfers within company. Employees ranked training at the time of change in technology significantly higher as compared to the training imparted at the time of promotions within the company and at the time of recruitment. The effectiveness of training was measured based on the response given as follows:

TABLE 1.3: DESCRIPTIVE STATISTICS OF TRAINING EFFECTIVENESS

	Mean rank
Trainings increase <i>employee motivation level</i>	2.73
Trainings increase <i>productivity and performance</i>	2.46
Trainings enhance the <i>career development</i>	2.96
Trainings prepare managers to take up <i>challenging roles</i>	3.22
Trainings improve <i>professional abilities</i>	3.63

The two highest ranks were given to *Training improves professional abilities* and *Training prepares managers to take up challenging roles*; and the two lowest ranks were assigned to *Training increases productivity and performance* and *Training increased employee motivation level*. Thus, surprisingly, according to the employees, training provided more benefits to the employees themselves than to the organization. Training assessment was responded on the basis of variables as listed below:

TABLE 1.4: DESCRIPTIVE ANALYSIS OF TRAINING ASSESSMENT

	M (N=214)	SD
Equal opportunity of T&D is there for all employees	3.79	1.111
Selection of trainers/ experts is satisfactory	3.73	1.131
Design of T&D programs is satisfactory	3.82	1.043
Course material, if any provided in the training programs is satisfactory	3.84	1.001
Trainings help in achieving goals and objectives of the organization	3.88	.981

It was found that satisfactory course material attained the highest mean and satisfaction wrt to the trainers was lesser in employees. The organizational effectiveness was responded by the employees as listed in the following table

TABLE 1.5: DESCRIPTIVE STATISTICS OF ORGANIZATIONAL EFFECTIVENESS

	M (N=214)	SD
Trainings are relevant to the objectives of the organization	3.69	1.104
Trainings are regularly and properly organized	3.77	1.083
Trainings directly affect production of volumes	3.98	1.057
Trainings provide return on investment	3.84	1.209
Trainings result in reducing number of complaints	3.93	1.208
Trainings help in reducing attrition	3.93	1.116
Trainings reduce non-compliance	4.00	.988
Trainings increase overall retention rate	4.10	1.138

Trainings increase overall retention rate attained the highest mean and the lowest mean was attained by Trainings are relevant to the objectives of the organization indicating well trained employees are retained in the selected organizations

SUMMARY AND CONCLUSION:

The findings indicated that relevance of training programs to the job performance attained the highest mean, however, the awareness of the knowledge and skills expected to acquire from the training program by the participants had the lowest mean indicating requiremntn of increased awareness of training in these organizations. Training at the time of change in technology attained the highest mean and Trainings at the time of transfers within company attained the lowest indicating that the change in technology is effective only if the employees are trained accordingly. Trainings improve professional abilities attained the highest mean rank, and Trainings increase productivity and performance attained the lowest indicating the preference of individual gains of training are preferred as compared to organizational gains. Trainings help in achieving goals and objectives of the organization had the highest mean and the selection of trainers/ experts is satisfactory had the lowest indicating the organizations need to be more focussed on the type of trainers for a given training. Trainings increase overall retention rate attained the highest mean and trainings are relevant to the objectives of the organization had the lowest indicating more movement of well trained employees.

The present paper explored the various training activities being carried out by the textile and apparel organizations based in the elected industrial regions of Punjab. The objective was to understand the training activities and their analysis to for further usage. The paper concentrated on the holistic and strategic approach of T&D being undertaken by these organizations. The study, thus, analysed the most common training activities that are being carried out and presented the perceptions of employees and HR personnel/s working in these organizations. The dynamic nature of trade across the globe has necessitated the skill upgradation and retaining of the well trained employees. Training and development thus constitute very important activity of an organization for long term sustenance. To understand these activities and to provide feedback was the objective of the study. Perhaps, the organizations need to strategise their training activities to continually skill their employees.

REFERENCES /BIBLIOGRAPHY:

Published reports:

CII, & Wazir advisors. (2017). *Achieving sustainable growth in Textile and Apparel Industry through manufactuirng excellence.*

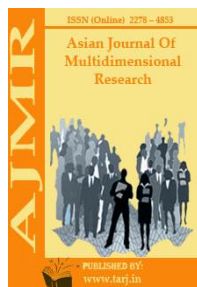
http://en.wikipedia.org/wiki/Human_Resource_Development

- 1) http://www.ehow.com/about_6301621_hr-training-development-practices.html
- 2) <http://training.anddevelopment.naukrihub.com/importance-of-training.html>; accessed in april,2013 .
- 3) www.anpad.org.br/bar, Training Needs Assessment: Where We Are and Where We Should Go, BAR, Rio de Janeiro, v. 10, n. 1, art. 5, pp. 77-99, Jan./Mar. 2013
- 4) <http://www.scribd.com/doc/49856008/Hr-Development-and-Training>
- 5) <http://www.nwlink.com/~donclark/hrd/isd/definitions.html>
- 6) http://www.iupindia.in/105/IJOB_Training_and_Development_Practices_11.html
- 7) <http://seminarprojects.com/Thread-a-study-on-training-and-development-practices-at-hcl-technologies>
- 8) <http://shodhganga.inflibnet.ac.in/handle/10603/8496>
- 9) <http://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/435>
- 10) Human Resource Management By Fisher, Schoenfeldt, & Shaw (5th, Fifth Edition)
- 11) Human resources and Personnel Management by K Aswathappa.
- 12) Human Resources and Skill requirements in the Textile sector (2022) - a Report by National Skills Development Corporation
- 13) Annual report by Ministry of Textiles, Govt of India (2011-12)

PUBLISHED JOURNALS:

- 1) Chun Lin Yang ,*The impact of Human Resources Management Practices in Manufacturing Organisations inTaiwan*
- 2) Ichniowski,Shaw,Prennushi ‘*The Effect of Human Resources Practices on Productivity*’, National Bureau of Economic Research, November 1995

- 3) Huselid, Mark a. (1995) “*The impact of Human Resource Management Practices on turnover, Productivity, and corporate Financial performance*, Academy of Management Journal, Vol. 38, No. 3, 635–872un Lin Yang
- 4) Kamath, G Bharathi,2011 “*Training Need and Gap Analysis with Regard to NGOs in Mangalore*” The IUP Journal of Organizational Behavior, Vol. X, No. 2
- 5) Khondoker Abdul Mottaleb, TetsushiSonobe,2011 “*An Inquiry into the Rapid Growth of the Garment Industry in Bangladesh*”
- 6) Ljigu, A. W. (2015). The Effect of Selected Human Resource Management Practices on Employees’ Job Satisfaction in Ethiopian Public Banks. *EMAJ: Emerging Markets Journal*, 5(1), 1. <https://doi.org/10.5195/emaj.2015.64>
- 7) Ralf Schmelter, René Mauer, Christiane Börsch, And Malte Brettel ,July–August 2010,“*Boosting Corporate Entrepreneurship Through HRM Practices: Evidence From German SMEs*”, Human Resource Management, Vol. 49, No. 4, Pp. 715– 741
- 8) Saadat U. Kirmani Training Human Resources: An evidence from Pakistan ,University of Central Punjab, Lahore, Pakistan, European Journal of Education and Learning, Vol.11, 2011
- 9) Singh, R., & Mohanty, M. (2012). Impact of training practices on employee productivity: A comparative study. *Inter science Management Review (IMR)*, (2), 87–92. Retrieved from http://interscience.in/IMR_Vol2Iss2/IMR_paper17.pdf
- 10) Srimannarayana, M(2011),”*Measuring Training & Development*” The Indian Journal of Industrial Relations. Vol. 47. No. 1. July 2011
- 11) Oni, E. O., A Ijaiya, M., & Mohammed, M. (2013). Assessing the Impact of Training and Management Development in the Nigerian Banking Industry. *International Journal of Business and Social Science*, 4(5). Retrieved from <http://search.proquest.com/docview/1373235603/fulltextPDF/38331C4D009A4851PQ/14?accountid=38977>



A COMPARATIVE STUDY TO MEASURE ANXIETY, DEPRESSION AND LIFE SATISFACTION OF CARDIAC AND NONCARDIAC PATIENTS OF KOLKATA CITY

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ABSTRACT

Depression is occurring in almost epidemic proportions in modern society (Seligman, 1990). The current study aims to explore the relationship between anxiety, life satisfaction and depression among cardiac and noncardiac patients of Kolkata. In the present study, a total of 100 patients has been taken from different hospitals [50 cardiac patients and 50 noncardiac patients] of Kolkata City. In this study, Purposive sampling technique was used to collect the data. After developing a good report with the subject's socio-demographic details, life satisfaction scale and depression scale were administered on them. Findings of the study revealed that there is a significant relationship between anxiety and depression, life satisfaction and depression among cardiac and noncardiac patients. There is no significant difference in anxiety and in depression among the cardiac and noncardiac patients.

KEYWORDS: Anxiety, Depression, Life Satisfaction, Cardiac and Non Cardiac Patients.

1. INTRODUCTION

Physical health is a system it needs some sort of do's and don'ts. It does work well if given norms are followed. The norms of a healthy body include body temperature, pulse rate, heartbeat, height, and weight. All these are required for a sound body. The person who takes

proper exercise, balanced diet, sound sleep remains free from all sorts of diseases. And the persons who fulfill such healthy requirements, he may have physical fitness. Surely, a person's physical fitness provides muscular strength and stamina for daily active and energetic life.

Health is a state of complete physical, mental and social well-being, and as a resource for living a fulltime. Factors for good health are including genetics, the environment, relationship and education. A healthful diet, exercise, screening for disease, and coping strategies can all enhance a person's health. In 1948, the World Health Organization(WHO) defined health as a state of complete physical mental and social well-being and not merely the absence of disease or infirmity. Mental and physical health are the two most common types of health. In a person who experience physical health, bodily functions are working at peak performance, due not only to a lack of disease, but also to regular exercise, balanced nutrition, and adequate rest. Treatment is received when necessary to maintain the balance. Physical wellbeing involves pursuing a healthful lifestyle to decrease the risk of diseases. Physical health and wellbeing also help reduce the risk of an injury or health issues. Examples include minimizing hazards in the workplace, practicing safe sex, practicing good hygiene, or avoiding the use of tobacco, alcohol, or illegal drugs. Mental health refers to a person's emotional, social, and psychological wellbeing. Mental health is as important as physical health to a full, active lifestyle. Mental health is not only the absence of depression, anxiety or another disorder. It also depends on the ability to enjoy life, achieve balance, adapt to adversity, feel safe and secure and achieve potentiality.

2. STATEMENT OF THE PROBLEM

“A comparative study to measure anxiety, depression, and life satisfaction of cardiac and noncardiac patients of Kolkata City.”

3. OPERATIONAL DEFINITIONS

Anxiety

Everyone has worries, distress, and fears. The term anxiety is usually defined as a diffuse, vague, ambiguous, very unpleasant feeling of fear and apprehension. The anxious individual also shows combinations of the following symptoms: rapid heart rate, shortness of breath, diarrhea, loss of appetite, fainting, dizziness, sweating, sleeplessness, frequent urination and tremors.

Depression

One of the most widely dominated and recognized of all mental disorders is depression. Depression covers a variety of negative moods and behavioral changes. Depression can refer to a symptom or a disorder. In day-to-day life, we often use the term depression to refer to normal feelings after a significant loss, such as the break-up of a relationship, or the failure to attain a significant goal.

Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration. Moreover, depression often comes with symptoms of anxiety

Life satisfaction

Life satisfaction is a complex term and is sometimes used interchangeably with the emotion of happiness, but they are indeed two separate concepts. Life satisfaction is defined as one's evaluation of life as a whole, rather than the feelings and emotions that are experienced at the moment.

Life satisfaction was defined as an individual's global assessment of his or her life in positive terms (Diener, et al. 1985)

Shim and Johnson (1978) define the life satisfaction that it is a global assessment of a person's quality of life by his own according to his or her own settled criteria of success.

4. OBJECTIVES

- 1) To study and compare anxiety traits among a group of cardiac and noncardiac patients of Kolkata city.
- 2) To study and compare the depression among a group of cardiac and noncardiac patients of Kolkata city.
- 3) To study and compare the life satisfaction among a group of cardiac and noncardiac patients of Kolkata city.
- 4) To study the relationship between anxiety traits and depression among a group of cardiac patients of Kolkata City.
- 5) To study the relationship between anxiety traits and depression among a group of noncardiac patients of Kolkata City.
- 6) To study the relationship between life satisfaction and anxiety traits among a group of cardiac patients of Kolkata City.
- 7) To study the relationship between life satisfaction and anxiety traits among a group of noncardiac patients of Kolkata City.
- 8) To study the relationship between depression and life satisfaction among a group of cardiac patients of Kolkata City.
- 9) To study the relationship between depression and life satisfaction among a group of noncardiac patients of Kolkata City.

5. HYPOTHESES

- 1) There is a significant difference between cardiac and noncardiac patients in Terms of their anxiety traits.
- 2) There is a significant difference between cardiac and noncardiac patients in terms of depression.
- 3) There is a significant difference between cardiac and noncardiac patients in terms of life satisfaction.

- 4) There is a significant positive relationship between anxiety traits and depression among a group of cardiac patients of Kolkata City.
- 5) There is a significant positive relationship between anxiety traits and depression among a group of noncardiac patients of Kolkata City.
- 6) There is a significant positive relationship between life satisfaction and anxiety traits among a group of cardiac patients of Kolkata City.
- 7) There is a significant positive relationship between life satisfaction and anxiety traits among a group of noncardiac patients of Kolkata city.
- 8) There is a significant positive relationship between depression and life satisfaction among a group of cardiac patients of Kolkata City.
- 9) There is a significant positive relationship between depression and life satisfaction among a group of noncardiac patients of Kolkata City.

6. SIGNIFICANCE OF THE STUDY

The present investigation has been designed to prove on a group of cardiac patients and noncardiac patients of Kolkata city with a view to aim at studying their anxiety, depression and life satisfaction.

7. DELIMITATION OF THE STUDY

No research is free its limitation. This investigation has some limitations which are as follows:-

- 1) The purposive sampling was used in this present investigation.
- 2) The sample size was small.
- 3) The study was based in Kolkata City only.
- 4) Gender of the present study was not controlled.

8. REVIEW OF RELATED LITERATURE

Bhadoria (2013) conducted a study to investigate the differences in the level of anxiety and depression among working and non-working women. The results revealed that the mean score of working women is lower than the mean score of non-working women in the level of anxiety. Also found, a significant mean difference in the level of anxiety and depression exists with respect to both working and non-working women. Non working women are more depressed than working women.

Chettri (2015) conducted a research on “anxiety and life satisfaction of working and non-working mothers” The results showed that there was no difference on the level of anxiety among working mothers than the non-working mothers though the mean anxiety scores of both the group are high. There exists no significant difference in life satisfaction level among working and non-working mothers through the mean scores of life satisfaction of working mothers are higher than non-working mothers. There exists a negative and significant correlation between anxiety and life satisfaction among working and non-working mothers. There exists no significant interaction effect of low and high anxiety level on the life satisfaction among working and non-working mothers. The findings showed that anxiety has no significant relationship with life satisfaction.

Jeff C Huffman, Christopher M Celano, and James L Januzzi (2010) conducted a research on “The relationship between depression, anxiety, and cardiovascular outcomes in patients with acute coronary syndromes” the results shows that among patients with cardiac disease, depression is common. The syndrome of major depression is present in approximately 15% of patients with cardiac disease, including those suffering ACS. Such a rate is substantially higher than that seen in the general population. Though some cardiac illnesses may have associated impairments of appetite, concentration, sleep, and energy, true depression is not a normal consequence of cardiac disease. Anxiety is also common among patients with having an acute cardiovascular disease.

A Steptoe and D L Whitehead (2005) conducted a study to analyze “Depression, stress, and coronary heart disease: the need for more complex models”. The analysis reveals that no direct evidence that confounding with clinical severity accounts for the associations between depression and mortality. The study also found that depression is associated with inflammation, disturbed autonomic balance, poor adherence to medication and lifestyle advice, and to heart failure.

Zohreh Khayyam-Nekouei, Neshatdoost, Yousefy, Sadeghi,⁴ and Gholamreza (2013) conduct a research on “Psychological factors and coronary heart disease” This study showed that psychological factors as protective or risk factors have an important role in CHD; the most important of which are depression, anxiety, stress, occupational status, and social support. This study also showed different types of stress such as anxiety, depression, social isolation, social support, acute and chronic life event, hostility. Life satisfaction was studied amongst the below poverty line in India,

Biswas-Diener, R., & Diener, E. (2001) Satisfaction with Life Index was created calculating, subjective well being on the basis of health wealth, and access to basic education.

White, Adrian (2007). Tremblay et al. (2006) examined the role of subjective vitality and the perception of stress as mediators between general life satisfaction and post-traumatic physiological and psychological health. They found that satisfaction with life optimistically predict subjective vitality and negatively predicted perceived stress. Siever LJ and Berkhof H, (1988) found that there is a positive correlation between anxiety, depression and cardiac problem. These psychological factors are more prone to the development of the cardiac problem.

9. METHODOLOGY AND DESIGN OF THE STUDY

Research design

For the present study descriptive survey method was used by the investigator

Sample

In the present study total of 100 patients has been taken from different hospitals [50 cardiac patients and 50 noncardiac patients] of Kolkata City. Purposive sampling techniques were used to collect the data.

Study area

In the present investigation subject(cardiac patients) were selected from various medical college(Calcutta National Medical College and Institute of Post Graduate Medical Education & Research) in Kolkata.

The Tools Used

In order to verify the hypothesis the following tools were used in this present investigation.

General Information Schedule:

This questionnaire consists of items like name, age, sex, address, educational qualification, occupation, marital status, family type, monthly income, duration of illness, duration of stay etc. The final form of the questionnaire has been presented in the 'Appendix-I

The State Trait Anxiety Inventory [STAI]

The State Trait Anxiety Inventory[STAI] was developed by Spilberger, Gorsuch, Lusheme, Vaggand Jacobs (1983) for measuring trait and state anxiety of the individual. It is a self-report inventory which measures the presence and severity of current symptoms of anxiety and generalized properties to be anxious.

Singh and Joseph Life Satisfaction Scale [L-S Scale]:

This scale is developed by Dr. Promila Singh and George Joseph in 1971, to measure life satisfaction. It consist of 35 items based on 5 dimensions i.e. taking pleasure in everyday activities, considering life meaningful, holding a positive self-image, having a happy and optimistic outlook, experience of success in achieving goals, answerable along with 5 point response key ranging from always to never [Always, Often, Sometimes, Rarely, and Never]. All these responses have a numerical weight age on 1-5 scale in descending order, where "Always" is rated as 5 and "Never" is rated as 1 respectively. Scoring of individual responses can be done by summing up. High score indicates high life satisfaction.

Statistical technique used in the study

The obtained data was analysed by using the appropriate statistical technique with the help of IBM-SPSS version 16.0. In order to depict a typical picture of the general characteristics features of two referenced groups descriptive statistics like frequency and percentages were calculated. Mean and Standard Deviation were calculated for state trait anxiety inventory(only for trait anxiety), beck depression inventory and life satisfaction scale. Keeping the hypotheses in mind 't'-test for equal independent sample was computed to bring out the difference between two groups. Relationship were also made between anxiety trait and depression, and life satisfaction and anxiety traits by applying Pearson Product Moment Correlation.

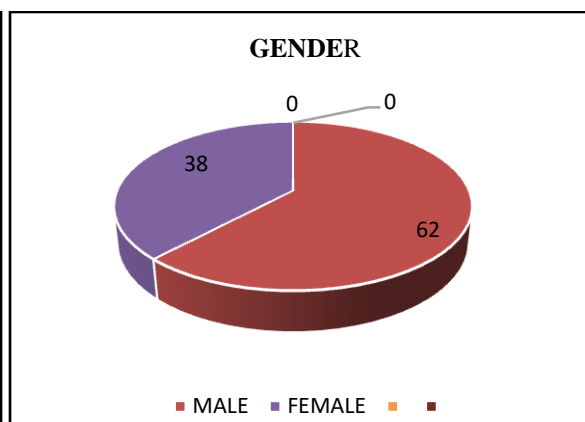
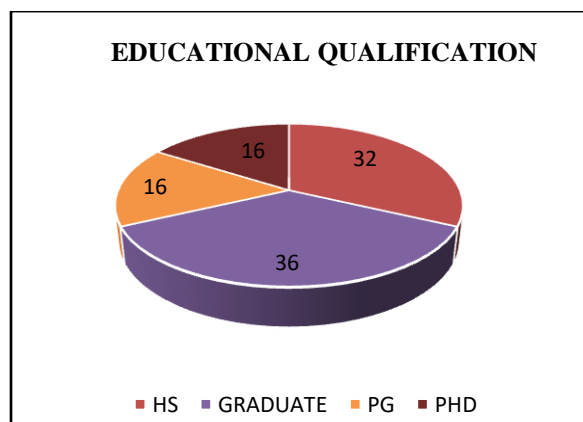
10. Results and Interpretation

The results of the analyses of data collected are compiled and presented in the table below:-

Table 1 Presented the “General Characteristic Features” regarding the selected cardiac and non-cardiac patients of Kolkata City in terms of their age, educational qualification, family type, family income, duration of illness depicted the characteristics features of the subjects under study

TABLE -1: SHOWING THE “GENERAL CHARACTERISTIC FEATURES” OF CARDIAC AND NON-CARDIAC PATIENT OF KOLKATA CITY.

GENERAL CHARACTERISTICS FEATURES	CARDIAC PATIENT		NON-CARDIAC PATIENT	
	N=50		N=50	
1 AGE IN MODE VALUE	55 YEARS		53 YEARS	
2. EDUCATIONAL QUALIFICATION	f	%	F	%
i. H.S	16	32	18	36
ii. GRADUATION	18	36	32	64
iii. POST GRADUATION	8	16	-	-
iv. Ph.D. LEVEL	8	16	-	-
3 FAMILY TYPE				
i. JOINT	20	40	12	24
ii. NUCLEAR	30	60	38	76
4 GENDER				
i. Male	31	62	22	44
ii. Female	19	38	28	56
5 DURATION OF ILLNESS				
i. 5 YEARS	21	42	-	-
ii. 7 YEARS	29	58	-	-



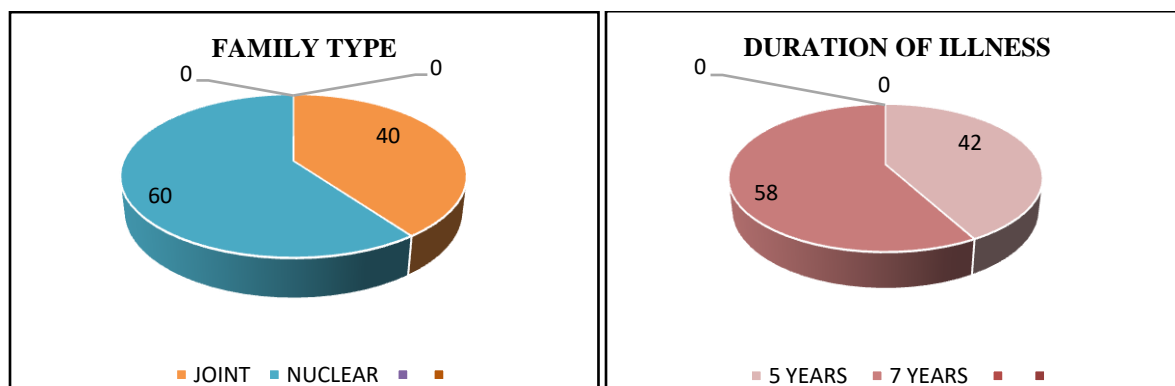


FIGURE: 2.1Diagrammatic representation to show the ‘General Characteristic Features’ of cardiac patients of Kolkata City.

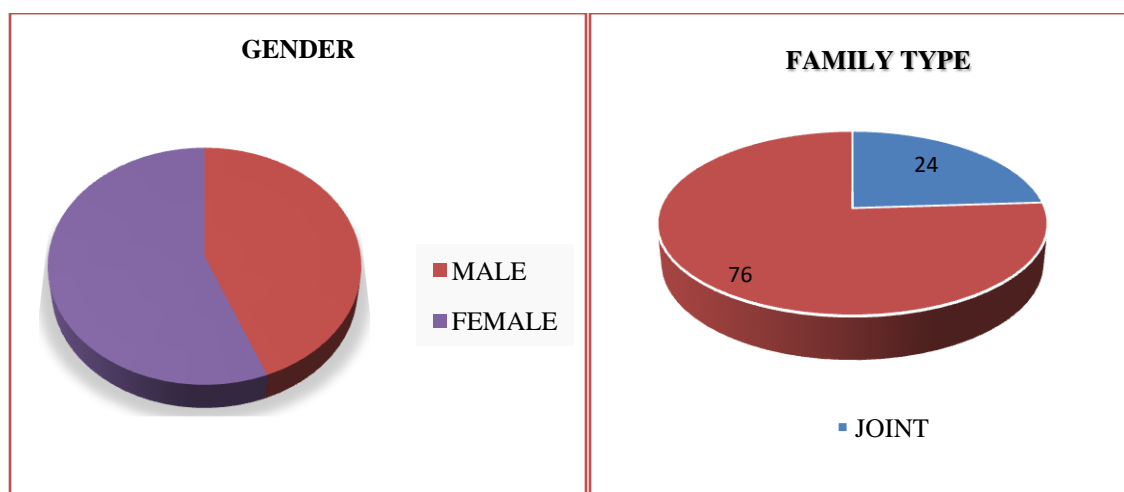
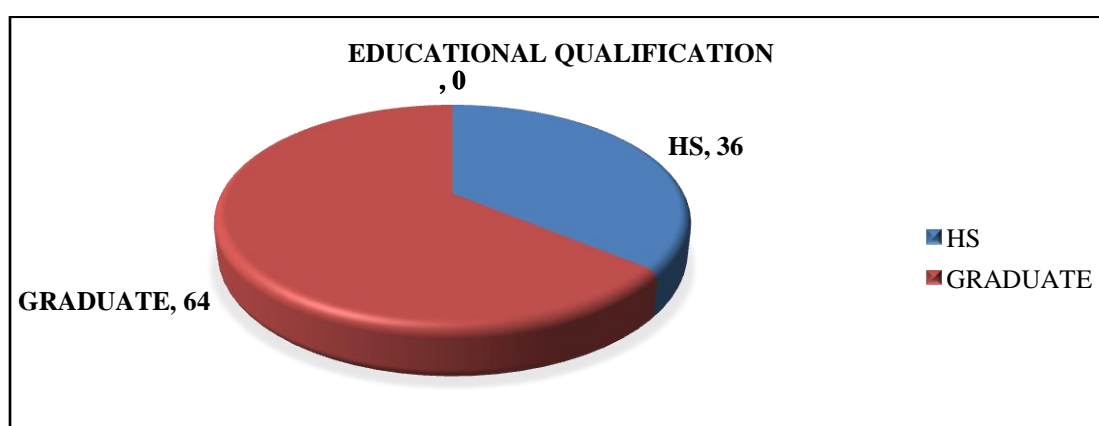


FIGURE: 2.2 Diagrammatic representation to show the ‘General Characteristic Features’ of non-cardiac patients of Kolkata City.

Hypothesis 1–“ There is a significant difference between cardiac and non-cardiac patients of Kolkata City in terms of their anxiety traits”

TABLE-2: SHOWING THE COMPARISON BETWEEN THE CARDIAC AND NONCARDIAC PATIENTS OF KOLKATA CITY IN TERMS OF THEIR ANXIETY TRAITS. (N=100)

CATEGORY	ANXIETY TRAITS SCORE			‘t’ VALUE	REMARKS
	N	MEAN	SD		
CARDIAC PATIENTS	50	44.84	8.25	.365*	Insignificant
Non-CARDIAC PATIENTS	50	44.18	7.65		

At 0.5 significance level

It is observed from the table that the t- value is 0.349 which is Insignificant. Thus it shows that there is no significant difference in relation to anxiety among cardiac and noncardiac patients. Therefore, hypothesis no. 1 i.e. There is a significant difference between cardiac and non-cardiac patients of Kolkata City in terms of their anxiety traits” is rejected.

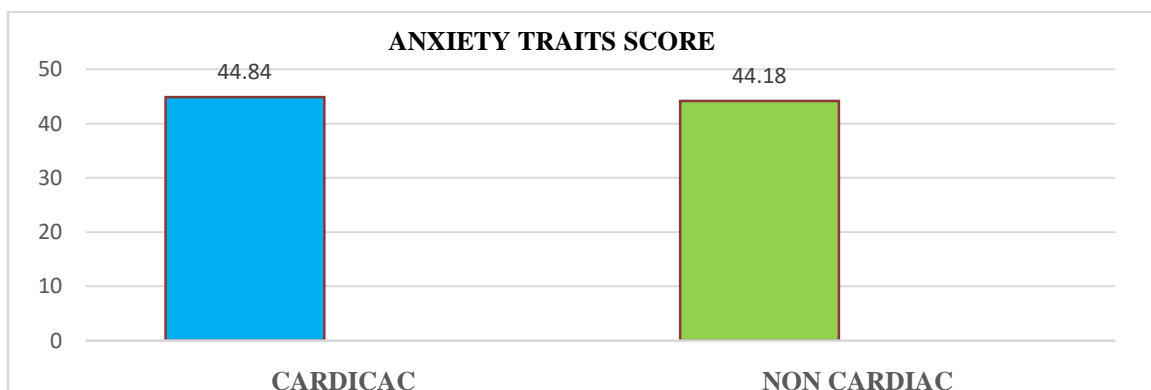


FIGURE: 3. shows the mean of cardiac and non-cardiac patients of Kolkata City.

Hypothesis-2: There is a significant difference between cardiac and noncardiac patients in terms of depression.

TABLE-3: SHOWING THE COMPARISON BETWEEN THE CARDIAC AND NON-CARDIAC PATIENTS OF KOLKATA CITY IN TERMS OF THEIR DEPRESSION TRAIT.

CATEGORY	DEPRESSION SCORE			‘t’ VALUE	REMARKS
	N	MEAN	SD		
CARDIAC PATIENTS	19	19.12	9.72	1.39*	Insignificant
Non-CARDIAC PATIENTS	50	19.50	9.19		

At 0.5 significance level

It is observed from the table that the t- value is 1.39 which is insignificant. Thus it shows that cardiac and noncardiac show no significant difference in relation to depression. Therefore, hypothesis no. 2, i.e. There is a significant difference between cardiac and noncardiac patients in terms of depression is rejected. Both the cardiac and noncardiac patients are suffering from same level of depression.

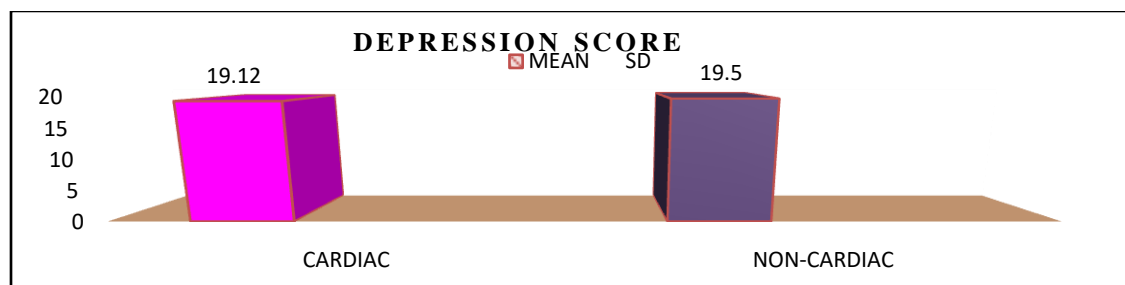


FIGURE:4 Diagrammatic representation to show the mean of depression of cardiac and non-cardiac patients of Kolkata City.

Hypothesis-3: There is a significant difference between cardiac and noncardiac patients in terms of life satisfaction

TABLE-4: SHOWING THE COMPARISON BETWEEN THE CARDIAC AND NONCARDIAC PATIENTS OF KOLKATA CITY IN TERMS OF THEIR LIFE SATISFACTION.

Category	LIFE SATISFACTION SCORE			‘t’ VALUE	REMARKS
	N	MEAN	SD		
CARDIAC PATIENTS	50	132.28	17.51	2.87	Significant at 0.05 level
Non-CARDIAC PATIENTS	50	143.41	22.38		

Significant at 0.05 levels

It is observed from the table that the t- value is 2.87 which is significant at 0.05 level. Thus it shows that cardiac and noncardiac patients show significant difference in relation to life satisfaction. Therefore, hypothesis no. 3 i.e. there is a significant difference between cardiac and noncardiac patients in terms of life satisfaction is accepted.



FIGURE: 5 Diagrammatic representation to show the mean of life satisfaction of cardiac and non-cardiac patients of Kolkata City

Hypothesis-4: There is a significant positive relationship between anxiety traits depression among a group of cardiac patients of Kolkata City”.

TABLE-5: SHOWING THE CORRELATION COEFFICIENT OF ANXIETY TRAITS WITH DEPRESSION OF CARDIAC PATIENTS OF KOLKATA CITY

CATEGORY	‘r’ VALUE	REMARKS
CARDIAC PATIENT	.482***	Significant at 0.01 level

It is observed from the table that the r- value is 0.482 which is significant. Thus it indicates that anxiety traits has a significant positive relation with depression among the cardiac patients. Thus the hypothesis-4 which states “is accepted in this investigation.

Hypothesis-5: “There is a significant positive relationship between anxiety traits and depression among a group of noncardiac patients of Kolkata City”.

TABLE-6: SHOWING THE CORRELATION COEFFICIENT OF ANXIETY TRAITS WITH DEPRESSION OF NON-CARDIAC PATIENTS OF KOLKATA CITY

CATEGORY	‘r’ VALUE	REMARKS
NON- CARDIAC PATIENT	.394***	Significant at 0.01 level

Data depicted in “Table-6” indicates that anxiety traits has a significant positive relation with depression among a group of cardiac patients. Thus the hypothesis-5 which states is accepted in this investigation. Depression is one of the causes of cardiovascular diseases.

Hypothesis 6. There is a significant positive relationship between life satisfaction and anxiety traits among a group of cardiac patients of Kolkata City”

TABLE-7: SHOWING THE CORRELATION COEFFICIENT OF LIFE SATISFACTION WITH ANXIETY TRAITS OF CARDIAC PATIENTS OF KOLKATA CITY

CATEGORY	‘r’ VALUE	REMARKS
CARDIAC PATIENT	.17	Insignificant

It is observed from the table that the r- value is 0.17 which is insignificant. Thus it indicates that life satisfaction has no significant relation with anxiety traits among a group of cardiac patients. Anxiety is a biological trait of personality that is why its relation with life satisfaction is not positively correlated.

Hypothesis-7: There is a significant positive relationship between life satisfaction and anxiety traits among a group of noncardiac patients of Kolkata City”

TABLE-8: SHOWING THE CORRELATION COEFFICIENT OF LIFE SATISFACTION WITH ANXIETY TRAITS OF NON-CARDIAC PATIENTS OF KOLKATA CITY

CATEGORY	‘r’ VALUE	REMARKS
NON-CARDIAC PATIENT	-.355	Significant at 0.05 level

Data depicted in “Table-8” indicates that life satisfaction has a significant negative relation with anxiety traits among a group of noncardiac patients.

Hypothesis-8: “There is a significant positive relationship between life satisfaction and anxiety traits among a group of cardiac patients of Kolkata City”

TABLE-9: SHOWING THE CORRELATION COEFFICIENT OF DEPRESSION WITH LIFE SATISFACTION OF CARDIAC PATIENTS OF KOLKATA CITY

CATEGORY	‘r’ VALUE	REMARKS
CARDIAC PATIENT	.396**	Significant at 0.01 level

Data depicted in “Table-9” indicates that depression has a significant positive relation with life satisfaction among a group of cardiac patients. Depressed people are less satisfied in life and it is found that cardiac patients are more depressed than the noncardiac patients.

Hypothesis-9: “There is a significant positive relationship between depression and life satisfaction among a group of non-cardiac patients of Kolkata City”

TABLE-10: SHOWING THE CORRELATION COEFFICIENT OF DEPRESSION WITH LIFE SATISFACTION OF NON-CARDIAC PATIENTS OF KOLKATA CITY

CATEGORY	‘r’ VALUE	REMARKS
NON-CARDIAC PATIENT	.465**	Significant at 0.01 level

*P<0.05, **P<0.01

Data depicted in “Table-10” indicates that depression has a significant positive relation with life satisfaction among a group of non-cardiac patients.

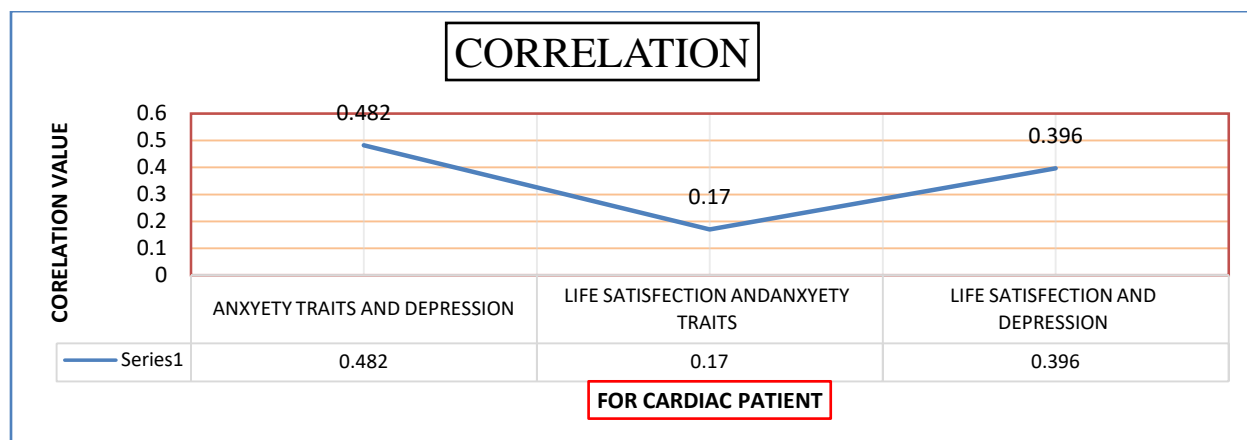


FIGURE: 6 Diagram showing relationship among anxiety traits, depression and life satisfaction among cardiac patients of Kolkata City

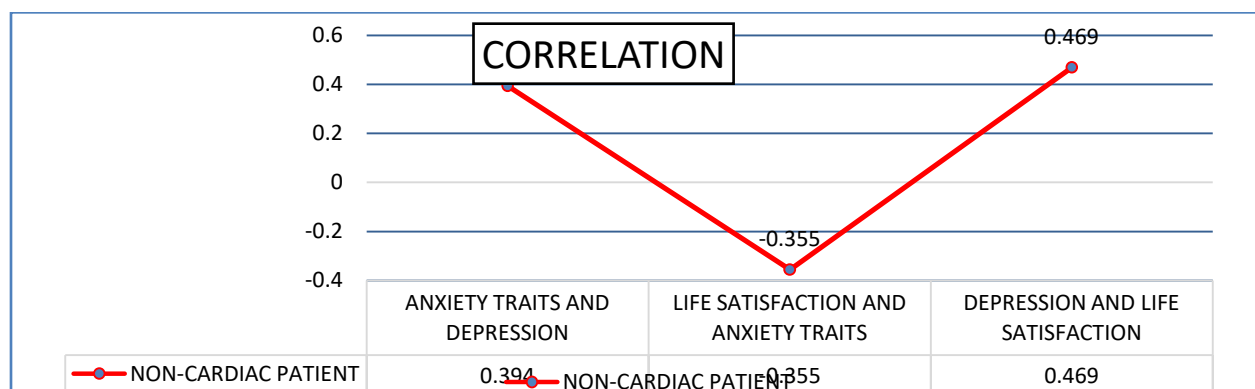


FIGURE: 7 Diagram showing relationship among anxiety traits, depression and life satisfaction among non-cardiac patients of Kolkata City.

11. DISCUSSION AND FINDINGS

The present investigation is an attempt to measure the anxiety, depression and life satisfaction of cardiac and non-cardiac patients. The present discussion section will mainly focus on how the objectives and hypotheses are fulfilled in the study.

In the present study, when the anxiety trait score of both cardiac and noncardiac patients were compared it has been found that, both cardiac and noncardiac patients have expressed moderate level of anxiety. There is no significant difference among this two groups in terms of their anxiety traits.

Comparing the depression score of cardiac and noncardiac patients, it found that, both cardiac and noncardiac patients have scored mild level of depression. There is no significant difference among this two groups in terms of their depression level. But in few cases cardiac patient's level of depression is higher than the noncardiac patients. In this present

study, life satisfaction of cardiac patients differ significantly with non-cardiac patients. Noncardiac patients were much satisfied in their life than cardiac patients.

The relation between anxiety and depression showed that anxiety and depression were positively correlated with each other for both cardiac and non-cardiac patients. This means that, high or low magnitude of anxiety traits is associated with the high or low magnitude of depression. The relation between depression and life satisfaction showed that depression and life satisfaction were positively correlated with each other for both cardiac and non-cardiac patients. Depressed people are less satisfied in their life.

FINDINGS

The major findings of the study are as follows:-

- 1) The present study found that both cardiac and non-cardiac patients of Kolkata City have moderate level of anxiety traits and no significant difference found them in terms of their anxiety traits due to their lack of self-confidence, feeling of insecurity, worrying attitudes toward something that really does not matter etc.
- 2) From the present study it has been found that both cardiac and noncardiac patients have mild level of depression and no significant difference was found them in terms of their depression.
- 3) The present investigation showed that non-cardiac patients of Kolkata City have high level of life satisfaction than cardiac patients. Sometimes cardiac patients are not satisfied with their life, they are not optimistic about their future, they are not capable to solve their problem effectively, they don't want to face unanticipated hardship etc.
- 4) Anxiety traits was positively correlated with depression among cardiac patients.
- 5) Similarly, anxiety traits was positively correlated with depression among non-cardiac patients.
- 6) Life satisfaction is positively correlated with anxiety traits among cardiac patients.
- 7) Depression is positively correlated with life satisfaction among cardiac patients.
- 8) Similarly depression is positively correlated with life satisfaction among noncardiac patients.

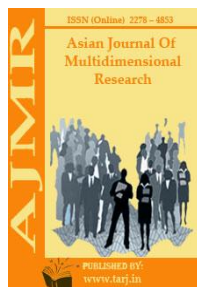
12. CONCLUSION

Cardiovascular disease(CVD) is a major public health problem that has reached epidemic proportions in the recent world. Recently the World Health Organization(WHO) indicate that every year 17.7 million people globally died from CVDs, it represents approximately 32% of all global death, mainly due to coronary heart diseases (8 million) and near about 7 million due to stroke. The major risk factor contributing to CVDs are tobacco use, consumption of high salty food and high blood pressure The origin of CVD is multifactorial including behavioural and psychological factor. Some psychological factor like anxiety and depression have been independently associated with negative cardiac outcomes in patients with acute cardiac events. Persons with depression are more likely to eventually develop CVD and also have a higher mortality rate than the general population. Along with this the anxious person are more prone to develop severe cardiac outcome. People with

cardiovascular diseases such as hypertension, diabetes, and hyperlipidaemia need early detection and management using counselling and medicines, as appropriate. From the present study we can conclude that there is a close relationship between the anxiety and depression and effect of these two factors on CVDs. With high anxiety level there is a risk of high CVDs.

REFERENCES

1. Anxiety. (n.d.). Retrieved from <http://www.apa.org/topics/anxiety/>
2. Chauhan, Yogendra J , Vanar, Bhagwatsinh, (2017). A comparative study of depression mental health and life satisfaction of players of different games.
3. Chettri, T.M (2015). Anxiety and life satisfaction of working and non-working mothers. School of human sciences, SU.
4. Coleman, A. M. (2001). Dictionary of Psychology. Oxford University Press, New Delhi.
5. Dr. Anand S.P (2005). ABC's of Educational Psychology. Third edition, New Delhi: Mahamaya Publication.
6. Glassman AH, Shapiro PA (1998) Depression and the cause of coronary artery diseases. Am J Psychiatry.
7. Gupta, S.P (2002), Statistical Method
8. Hasnain, N., Ansari, A., & Sethi, S. (2011). Life satisfaction and self esteem in married and unmarried working women. Journal of the Indian Academy of Applied Psychology, 37(2).
9. http://www.who.int/global_hearts
10. Jeff C Huffman, Christopher M Celano, and James L Januzzi (2010). The relationship between depression, anxiety, and cardiovascular outcomes in patients with acute coronary syndromes. Neuropsychiatric Disease and Treatment 2010, 6,
11. Jerslid, A.T. (1968). Educational Psychology, Prentice Hall of India Pvt. Ltd., New Delhi.
12. Kothari, C.R (2009). Research Methodology (Methods and Techniques)
13. Lynn P. Rehm Santa Rosa, CA; (2010). Advances in Psychotherapy – Evidence-Based Practice
14. Mangal, S.K (2013). Statistics in Psychology and Education
15. Mangl, S.K, (2009). General Psychology
16. Mourad G (2015). Improving care for patients with non-cardiac chest pain. – Description of psychological distress and costs, and evaluation of an Internet-delivered intervention. Linköping University Medical Dissertations No. 1477.
17. Nazari B, Bakhshi S, Kaboudi M, Dehghan F (2017). A Comparison of Quality of Life, Anxiety and Depression in Children with Cancer and Healthy Children, Kermanshah-Iran. International Journal Paediatrics. 2017; 5(7).
18. NCERT (2007). Psychology
19. Nordqvist C (2017). Health: What does good health really mean?
20. Patrick J. Smith, James A. Blumenthal (2011). Psychiatric, behavioural aspect of CVD: epidemiology, mechanism and treatment, Cardiologia.
21. Srivastava D.N, - "General Psychology" IInd edition 1991 Vinod Pustak Mandir, Agra -2
22. Steptoe, A and Whitehead DL, (2005). Depression, stress, and coronary heart disease: the need for more complex models, Heart. 2005 Apr; 91(4): 419–420.
23. World Health Organization (WHO) World health statistics (2016). Monitoring health for the SDGs, sustainable development goals. 2016. [2015 Jan 9]. Internet. Available from: http://www.who.int/gho/publications/world_health_statistics/2016/en/.



ATTITUDE OF STUDENTS TOWARDS PROJECT BASED LEARNING OF ECONOMICS IN SECONDARY SCHOOL

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ABSTRACT

Teaching economics through project method is intended to reinforce the teaching learning activity in a classroom by economics teacher by assigning students projects in economics. Project based learning (PBL) that in values a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real world challenges and problems. In this study, the prospective students studying in secondary school of Jamshedpur will constitute the target population. Sample will consist of 120 students of secondary school (class 9th) students from Jamshedpur. In this study survey on 6 numbers of secondary schools. Tools to know the attitude of students towards project based learning of economics on standardize scale is

- 1) Question related to personal information.*
- 2) Question which are related to measure attitude of responses. Data will be can collected by the researcher by personally visiting the school. Data gathered will analysed using Mean, S.D. and T-test.*

KEYWORDS: *Attitude, Project Based Learning, Economics and Secondary School Students.*

I. INTRODUCTION

Education is the base for all activities or development the country, it plans significant role for the success of political, economic and strategies development by government.

Education is the process of facility learning or the acquisition of knowledge, skills, value, belief and habits. Educations frequently take place under the guidance of educators, but learners may also educate themselves. Education can take place informal or informal setting and any experience that has a formative effect on the way on thinks, feels or acts may be considered educational. Education thus is an essential prerequisite of modernization. It enables people to know the world beyond their own surroundings and transforms them to become rationalist and humanist in outlook and world view .However, it has to be kept in mind that the education has got modernized and in turn is contributing to the process of modernization of the Indian Society.

The traditional education system of India was quite different from the contemporary one. In traditional Indian society, the number of educational institutions was too small and the content of education was esoteric and essentially related with region, philosophy, metaphysics and scriptural subjects.

Modern education is exoteric, open and liberal. The world-view is scientific-rational; the theme consists of freedom, equality, humanism and denial of faith in dogma and superstitions. The course contents are rationalistic and in tune with the need of the present day society.

The modern education lays emphasis on the subjects like freedom, nationality, law, human rights, democracy and scientific world view. The other parts of education are the co-curricular and extra-curricular activities, which are often organized for total personality development of a student.

II.SIGNIFICANCE OF THE STUDY

Project-based learning (PBL) is something that students to integrate in their classes. They start thinking about alternate ways to enable students to:

- produce authentic assessments,
- create and study something that was interesting and engaging for them, and
- Provide some real-world learning experiences.

Project-based learning not only provides opportunities for students to collaborate or drive their own learning, but it also teaches them skills such as problem solving, and helps to develop additional skills integral to their future, such as critical thinking and time management. And maybe more importantly, it provides students with an opportunity to create authentic projects which are personal and meaningful to them. Students have the chance to pursue their own interests and as a result, opportunities for learning for students and teachers are tremendo

There are many options available for implementing and producing evidence of project-based learning, whether it be in the traditional paper format style or through technology. Either way, giving students the opportunity to create a project to evidence their learning is beneficial. It not only leads to authentic products and meets the students where they are, but also gives them an opportunity to express themselves in unique ways, because it is more personalized and pertinent to their needs and interests. A great way to do this is through project-based learning . PBL leads to a more student-centered classroom and provides opportunities for students to learn from one another. It also enables the teacher to become more of a facilitator, and in addition to learning

about the students, it reinforces the student-centered classroom, where students are empowered in their learning.

It also teaches them the vital technology skills that they need moving forward, and gives them skills that can be used in other classes, and for their future. Learning to create multimedia presentations, to problem solve, think critically, quickly access resources, and communicate with others helps to empower students, and give them more control in their learning and growth process. We want to empower our students in their learning.

There are an increasing number of tools available for use in the classroom that enable students to have a choice and be creative, while also learning valuable technology skills for their future. These tools give students options for showing what it is they have learned and can do with the material, but in a way that is comfortable and relevant and meets their interests and needs. Most importantly, the students have choices and this makes a huge difference.

In this paper the researcher made an attempt to see how this method could be made use of for the integrity of learning for the economics students.

III.STATEMENT OF THE PROBLEM

Attitude of Students towards Project Based Learning of Economics In Secondary School

IV. OPERATIONAL DEFINITIONS

ATTITUDE: A predisposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation

STUDENTS: persons who are studying at a university or other place of higher education.

TOWARDS: in the direction of

PROJECT BASED: a student-centered pedagogy that involves a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real-world challenges and problems

LEARNING: gain or acquire knowledge of or skill in (something) by study, experience, or being taught

ECONOMICS: the branch of knowledge concerned with the production, consumption, and transfer of wealth

SECONDARY SCHOOL: a school intermediate between elementary school and college and usually offering general, technical, vocational, or college-preparatory courses

V. OBJECTIVES OF THE STUDY

1. To study the attitude of project based learning of secondary school students with respect to gender.
2. To study the attitude of project based learning of secondary school students with respect to locality.

3. To study the attitude of secondary school students towards project based learning with respect to type of school.
4. To study the attitude of secondary school students towards project based learning with respect to medium of instruction.

VI. TOOL USED

To measure the attitude of students towards project based learning in economics of secondary school students questionnaire was used related to measure attitude of respondents.

VII. METHOD USED

Survey Method was used to assess the attitude of students towards project based learning in Economics.

VIII. POPULATION OF THE STUDY

Secondary School students from Jamshedpur

IX. SAMPLE

160 School Students

X. STATISTICAL TECHNIQUES USED

1. Mean
2. Standard Deviation
3. Critical ratio test ('t' test)

XI. DELIMITATIONS OF THE STUDY

1. 9th Standard secondary school students of Jamshedpur.
2. Project based learning
3. 160 secondary school students of Jamshedpur
4. Survey Method was used.

XII. NULL HYPOTHESES

1. There is no significant difference between the mean scores of secondary school in their project based learning on the basis of gender.
2. There is no significant difference between the mean scores of secondary school in their project based learning on the basis of locality.
3. There is no significant difference between the mean scores of secondary school in their project based learning on the basis of type of school.
4. There is no significant difference between the mean scores of secondary school in their project based learning on the basis of medium.

XIII. ANALYSIS OF HYPOTHESES

1. There is no significance difference between the means scores of secondary school in their project based learning on the basis of gender.

TABLE – 01 GENDERWISE DIFFERENCE OF SECONDARY SCHOOL STUDENTS IN PROJECT BASED LEARNING

Gender	N	Mean	STD	t-value	Remarks
Male	80	47.02	13.95	0.84	NS
Female	80	45.23	12.82		

(At 5% level of significance, the table value of t' is 1.96)

It is inferred from the **table 1** that the t-value is 0.84 which is less than the table value 1.96 at 5% level of significance. Therefore, the Null Hypothesis is accepted. It means that there is no significant difference between the mean scores of secondary school teachers in their project based learning on the basis of gender.

2. There is no significance difference between the means scores of secondary school in their project based learning on the basis of locality.

**TABLE – 02
AREAWISE DIFFERENCE OF SECONDARY SCHOOL STUDENTS IN PROJECT
BASED LEARNING**

Area	N	Mean	STD	t-value	Remarks
Rural	51	44.92	12.68	0.80	NS
Urban	109	46.69	13.72		

(At 5% level of significance, the table value of t' is 1.96)

It is inferred from the **table 2** that the t-value is 0.80 which is less than the table value 1.96 at 5% level of significance. Therefore, the Null Hypothesis is accepted. It means that there is no significant difference between the mean scores of secondary school teachers in their project based learning on the basis of area of school.

3. There is no significance difference between the means scores of secondary school in their project based learning on the basis of age type of school.

**TABLE – 03 TYPE OF SCHOOLWISE DIFFERENCE OF SECONDARY SCHOOL
STUDENTS IN PROJECT BASED LEARNING**

Type of School	N	Mean	STD	t-value	Remarks
Government	80	41.07	14.99	5.15	S
Private	80	51.18	9.16		

(At 5% level of significance, the table value of t' is 1.96)

It is inferred from the **table 3** that the t-value is 5.15 which is more than the table value 1.96 at 5% level of significance. Therefore, the Null Hypothesis is rejected. It means that there is a significant difference between the mean scores of secondary school teachers in their project based learning on the basis of type of school.

4. There is no significance difference between the means scores of secondary school in their project based learning on the basis of medium.

TABLE – 04 MEDIUMWISE DIFFERENCE OF SECONDARY SCHOOL STUDENTS IN PROJECT BASED LEARNING

Medium	N	Mean	STD	t-value	Remarks
English	80	41.07	14.99	5.15	S
Hindi	80	51.18	9.16		

(At 5% level of significance, the table value of 't' is 1.96)

It is inferred from the **table 4** that the t-value is 5.15 which is less than the table value 1.96 at 5% level of significance. Therefore, the Null Hypothesis is rejected. It means that there is a significant difference between the mean scores of secondary school teachers in their project based learning on the basis of medium of insructions.

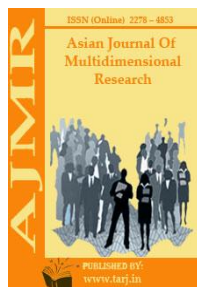
CONCLUSION

Project-based learning(PBL) not only provides opportunities for students to collaborate or drive their own learning, but it also teaches them skills such as problem solving, and helps to develop additional skills integral to their future, such as critical thinking and time management. And maybe more importantly, it provides students with an opportunity to create authentic projects which are personal and meaningful to them. Students have the chance to pursue their own interests and as a result, opportunities for learning for students and teachers are tremendous. It also teaches them the vital technology skills that they need moving forward, and gives them skills that can be used in other classes, and for their future. Learning to create multimedia presentations, to problem solve, think critically, quickly access resources, and communicate with others helps to empower students, and give them more control in their learning and growth process. We want to empower our students in their learning.

REFERENCE

- Knoll, Michael (1997). The Project Method: Its Vocational Education Origin and International Development, *Journal of Industrial Teacher Education*, 43 (3).
- Markham, Thom et al. (2003), *Project Based Learning Handbook*, Buck Institute for Education,.
- Morsund, David (2002) Project-based learning: Using Information Technology, 2nd Edition
- Sharma, (2008), Economics Teaching, Rajat Parkashan, New Delhi
- Singh ,yogesh (2011), Economics Teaching,APH Publishing Corporation , New Delhi
- Synteta, P. (2003). Project-Based e-Learning in Higher Education: The model and the method, the practice and the portal. *Studies in Communication, New Media in Education*. pp. 263-269.
- Synteta, P.(2002). Project-Based e-Learning: The Model and the Mehod, the Practice and the Portal. Unpublished PhD proposal (Accepted oct, 2002), University of Geneva, Geneva, Switzerland.

<http://www.easybib.com/guides/project-based-learning-benefits-students> retrived on 01.08.2018



A STUDY OF CUSTOMER SATISFACTION W.R.T.BANK OF MAHARASHTRA IN PUNE DISTRICT

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ABSTRACT:-

Customer being the backbone of banking activities, it is necessary to increase the level of satisfaction by providing more and better services. This research paper is an attempt to identify the level of satisfaction among various customers of banks using variety of services. The present paper gives primarily an idea about satisfaction level of customers using different services.

KEYWORDS: Backbone, Banking Activities, Satisfaction Level, Services etc.

INTRODUCTION:-

Customer satisfaction is a prime activity of service sector especially banks. Customers are the main source of income earned by bank, so there is a need to maintain good relationship with existing customers, by enhancing customer satisfaction. With the sudation of technology, banks have started offering core banking facility to its customers to complete different transactions with the help of internet banking, mobile banking and so on. These all facilities no doubt have reduced time and energy of customers, but have also helped banks to enhance customer satisfaction. Along with technology, banks are taking extraefforts by training its staff regarding customer service. By disclosing different codes like RTGS, NEFT etc. in banking premises, banks are making its customers aware about new facilities. Banks are also using flash boards to provide information about frauds and proper usage method of using online banking in Marathi as regional language. To safeguard the interest of our customers, banks are opening separate

counters to guide customers about using Green Channel Banking i.e. paperless banking. Instead of this number of complaints registered with Banking Ombudsman are rising. One lacuna found was bias that banks are not operating in our favor, bankers are only interested in their profits only and so on. The main reason behind this is communication gap and loss of confidence regarding banks' trust worthiness. Strenuous efforts are to be taken by banks to reduce the gap between customers and bankers to increase the level of satisfaction among customers.

OBJECTIVES:-

- 1) To study and compare satisfaction of customers of the bank with respect to demographic factors.
- 2) To study and compare satisfaction of customers for five types of service of nationalized banks.

HYPOTHESIS:-

- 1) There is no association between customer satisfaction and gender of respondent.
- 2) There is no association between customer satisfaction and age of respondent.
- 3) There is no association between customer satisfaction and income of respondent.

RESEARCH METHODOLOGY:-

- 1) Research Type: - Descriptive Research Method
- 2) Sampling Technique: - Stratified Random Sampling
- 3) Sample Size: - 300 Customers in Pune districts
- 4) Data Type: - Primary & Secondary data
- 5) Tool for Data Collection: - Questionnaire for 300 Customers

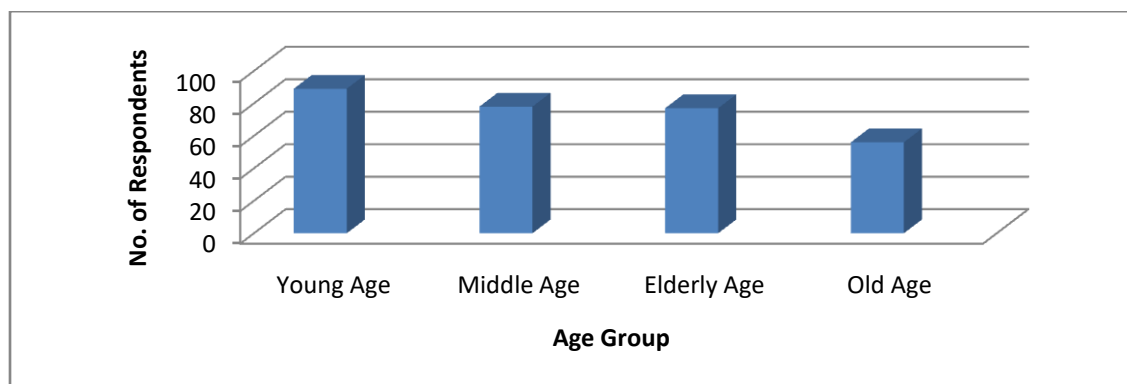
To test hypothesis chi-square test is applied.

DATA ANALYSIS & INTERPRETATION:-

i) Age Group (Customer Satisfaction)

Age Group	Number of Respondent	Percentage
Young Age (18 years to 25 years)	89	29.67
Middle Age (26 years to 40 years)	78	26
Elderly Age (41 years to 60 years)	77	25.66
Old Age (above 60 years)	56	18.67
Total	300	100

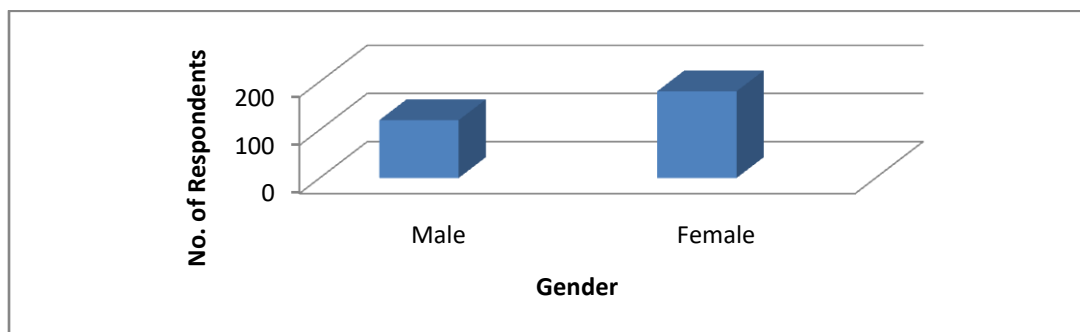
Table 1.1

**Fig. 1.1**

Interpretation:-Above fig.1.1 indicates that, out of total 300 respondents, 89 belongs to 'Young' age group (18 to 25 yrs), 78 belongs to 'Middle' age group (26 to 40 yrs) whereas 77 respondents are from 'Elderly' age group (41 to 60yrs) and remaining 56 respondents are from 'Old' age group

ii) Gender (Customer Satisfaction)

Gender	Number of Respondent	Percentage
Female	180	60
Male	120	40
Total	300	100

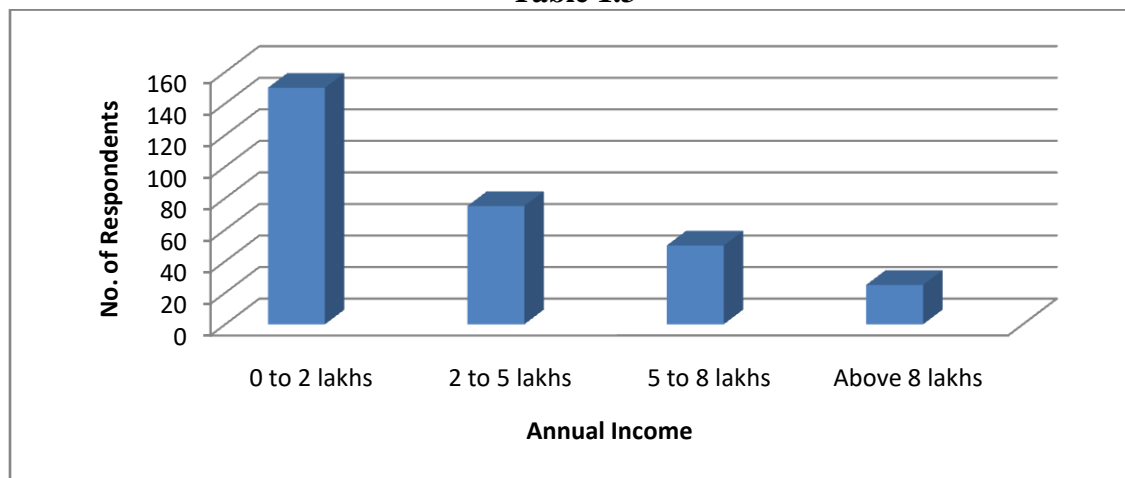
Table 1.2**Fig. 1.2**

Interpretation:-Above fig.1.2 indicates that out of total 300 respondents 180 are female respondents whereas 120 are male respondents.

iii) Annual Income (Customer Satisfaction)

Annual Income	Number of Respondent	Percentage
0 to 2 lakhs	150	50
2 to 5 lakhs	75	25
5 to 8 lakhs	50	17

Above 8 lakhs	25	8
Total	300	100

Table 1.3**Fig. 1.3**

Interpretation:- Above fig.1.3 indicates that in this sample out of total 300 respondents maximum 150 respondents are from below 2 lakhs annual income group and only 25 respondents are from above 8 lakhs annual income group.

Parameters of Services of Bank:

To study customer's satisfaction of services of banks, services are classified into five types.

i) Satisfaction of Depositors:

Nomination, Insurance on deposits, Chequebook & dropbox, Interest calculations, Zero balance a/c for students etc

ii) Satisfaction of Borrowers:

Easy EMI, vehicle loan, Tourism loan, Education loan etc

iii) Satisfaction of E - Banking:

Core banking, ATM facility, Debit & Credit cards, Paperless banking etc

iv) Satisfaction of Utility services:

Information in regional language, Exchange of mutilated currency notes, Notice regarding counterfeit notes etc.

V) Satisfaction of complaints and grievances redressal:

Operating call centers, Periodical survey, Branch level committee of customers, Appointment of a separate authority, Customers meet, etc.

Statistical Analysis:-

Information about satisfaction of each type of services is collected through Questionnaire. Response to these questions is rated as follows.

Strongly disagree = 1, Disagree = 2, Agree = 3, Strongly agree = 4

Mean score (in percent) of satisfaction is calculated and results are as follows:

Services of Banks	N (Number of Respondents)	Minimum (%)	Maximum (%)	Mean
Satisfaction score of Depositors	300	47.22	94.44	71.70
Satisfaction score of borrower	300	28.57	100.00	65.69
Satisfaction score of E Banking	300	50.00	100.00	74.70
Satisfaction of Utility services	300	37.50	141.67	68.04
Satisfaction of complaints and grievance redressal	300	25.00	91.67	60.73

Table 1 4

Interpretation:-Above table indicate that maximum satisfaction of customers is for EB banking service and least satisfaction is for complaints and grievances redressal.

To study objectives and test hypothesis of research paper respondents are classified in to three categories according to their satisfaction score. Satisfaction levels are considered as 'Low', 'Medium', and 'High'. Chi-Square test is applied to test association between satisfaction and demographic factor.

Null Hypothesis (H01):

H-0:-There is no association between customer's satisfaction and AGE of respondent.

H -1:- There is an association between customer's satisfaction and AGE of respondent.

Sr. No.	Type of Service	Degree of Freedom	Calculated Chi-Square	Table Chi Square Value (5% of LOC)	Result of Test
1	Depository	4	15.92	12.60	Significant
2	Borrowing	4	25.87	12.60	Significant
3	E-Banking	4	12.65	12.60	Significant
4	Utility Service	4	17.06	12.60	Significant
5	Complaints and Grievance redressal	4	21.12	12.60	Significant

Table 1.5

Above table indicates that satisfaction of customer's towards services.

- 1) The score of satisfaction of customers towards depository services is significant. The calculated value of chi-square test (15.92) is higher than table value (12.6).
- 2) The score of satisfaction of customers towards borrowing services is significant. The calculated value of chi-square test (25.87) is higher than table value (12.6).
- 3) The score of satisfaction of customers towards E-Banking services is significant. The calculated value of chi-square test (12.65) is higher than table value (12.6).
- 4) The score of satisfaction of customers towards Utility services is significant. The calculated value of chi-square test (17.60) is higher than table value (12.6).
- 5) The score of satisfaction of customers towards complaints & Grievance redressal services is significant. The calculated value of chi-square test (15.92) is higher than table value (12.6).

As the chi-square calculated value is greater than tabulated value at 5% level of significance (LOS), therefore null hypothesis (H₀) is rejected Therefore conclusion is there is an association between customer's satisfaction and AGE of respondent.

Null Hypothesis-(H₀₂):

There is no association between customer's satisfaction and GENDER of respondent.

H₀₂: There is an association between customer's satisfaction and GENDER of respondent.

Sr. No.	Type of Service	Degree of Freedom	Calculated Chi-Square	Table Chi Square Value (5% of LOC)	Result of Test
1	Depository	4	4.33	5.99	Non-Significant
2	Borrowing	4	1.25	5.99	Non-Significant
3	E-Banking	4	3.01	5.99	Non-Significant
4	Utility Service	4	0.32	5.99	Non-Significant
5	Complaints and Grievance Redressal	4	2.01	5.99	Non-Significant

Table:-1.6

- 1) The score of satisfaction of customers towards depository services is not significant. The calculated value of chi-square test (4.33) is lesser than table value (5.99).
- 2) The score of satisfaction of customers towards borrowing services is not significant. The calculated value of chi-square test (1.25) is lesser than table value (5.99).
- 3) The score of satisfaction of customers towards E-Banking services is not significant. The calculated value of chi-square test (3.01) is lesser than table value (5.99).

4) The score of satisfaction of customers towards Utility services is not significant. The calculated value of chi-square test (0.32) is lesser than table value (5.99).

5) The score of satisfaction of customers towards complaints & Grievance redressal services is not significant. The calculated value of chi-square test (2.01) is lesser than table value (5.99).

As the chi-square calculated value is lesser than tabulated value at 5% l.o.s., therefore null hypothesis (H02) is accepted. Therefore conclusion is There is no association between customer's satisfaction and GENDER of respondent.

Null Hypothesis (03):-

There is no association between customer's satisfaction and ANNUAL INCOME of respondent.

H03: There is an association between customer's satisfaction and ANNUAL INCOME of respondent.

Sr. No.	Type of Service	Degree of Freedom	Calculated Chi-Square	Table Chi Square Value (5% of LOC)	Result of Test
1	Depository	4	13.78	12.60	Significant
2	Borrowing	4	10.65	12.60	Non-Significant
3	E-Banking	4	1.05	12.60	Non-Significant
4	Utility Service	4	15.83	12.60	Significant
5	Complaints and Grievance Redressal	4	11.40	12.60	Non-Significant

Table:-1.7

1) The score of satisfaction of customers towards depository services is significant. The calculated value of chi-square test (13.78) is higher than table value (12.6).

2) The score of satisfaction of customers towards borrowing services is not significant. The calculated value of chi-square test (10.65) is lesser than table value (12.6).

3) The score of satisfaction of customers towards E-Banking services is not significant. The calculated value of chi-square test (7.05) is lesser than table value (12.6).

4) The score of satisfaction of customers towards Utility services is significant. The calculated value of chi-square test (15.83) is higher than table value (12.6).

5) The score of satisfaction of customers towards complaints & Grievance redressal services is not significant. The calculated value of chi-square test (11.40) is lesser than table value (12.6).

Therefore conclusion is there is no association between customer's satisfaction and ANNUAL INCOME of respondent.

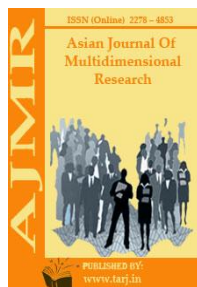
FINDINGS & CONCLUSION:

Findings of this research are as follows.

1. From comparison of satisfaction score of all 200 respondents for five types of services it is found that customer's satisfaction is at most for E-banking services. Bank provides services like online fund transfer, rail ticket reservations, booking for holidays, online purchase, Credit card facilities to enhance customer's satisfaction.
2. Another finding is Customers satisfaction is least for complaints and grievance redressal is due to communication gap, unawareness among customers regarding rights.
3. Finding of Null hypothesis-2 is there is no association between customer's satisfaction for all five types of services and AGE of respondent. It is concluded that young age group respondents are more satisfied as compared to Elderly age group and Old age group respondents.
4. Finding of Null hypothesis-1 is there is no association between customer's satisfactions for all five types of services and GENDER of respondent. It is concluded that male and female group respondents are equally satisfied.
5. Finding of Null hypothesis-3 is there is no association between customer's satisfaction for borrowing, E-banking and complaints and grievance redressal services with income of respondent. But there is association between depository services and utility services with income of respondent. It is also observed that respondents of income group below 2 lakhs are more satisfied for depository services and as income increases satisfaction is decreasing. For utility services conclusion is similar to satisfaction of depository services.

REFERENCES:-

1. "Service marketing" by S.M.Jha
2. "Customer Relationship Management" by Sheth J.N & Parvatiyar A
3. "Service Sector Marketing" by Bhattacharya
4. RBI Bulletins
5. IUP Journal of bank management
6. Professional Banker



ASSESSMENT OF NDVI AND NDWI OVER BURHISUTI WETLAND OF ASSAM USING IRS LISS III DATA

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ABSTRACT

Natural wetlands are considered as a source of natural resources. Wetland monitoring using remote sensing methods is always found to be accurate and scientific by researchers. The Burhisuti wetland is situated in the easternmost part of Assam to the north bank of Brahmaputra River. This is an inland wetland of natural origin that covers a geographical area of 24.29 sq. km. This study attempts to make an assessment of the status of NDVI and NDWI parameters of Burhisuti wetland of Assam using IRS LISS III satellite imageries of 2008 and 2013 for post-monsoon season. The NDVI and NDWI techniques are most effectively used remote sensing indices derived from multispectral satellite imagery for assessing surface water and vegetation status over the earth's surface in general and over wetland surface in particular. The mean NDVI value generated from LISS III imagery of 2008 for the study area is found to be 0.329 that changed to 0.432 during 2013. Similarly, the mean NDWI value generated from LISS III imagery of 2008 for the study area is found to be -0.035 that changed to -0.297 during 2013. The study has also assessed three intensity zones (low, moderate and high) over the study area based on NDVI and NDWI value range. The high intensity NDVI zone in the study area mainly represents the area with dense vegetation, while the high intensity NDWI zone represents the area with clear surface water. It has been also observed from the study that among the three intensity zones, the moderate intensity zones with mix pixels of water and vegetation share maximum proportions to the study area for both indices during 2008 to 2013.

KEYWORDS: NDVI, NDWI, LISS III data, intensity zones, Burhisuti wetland.

1. INTRODUCTION

Wetlands are important sources of natural resource (National Wetland Atlas, ISRO, 2011). Scientific monitoring of wetland resources got a new dimension after the advent of remote sensing application in wetland studies. Satellite imagery derived from remote sensing utilizes electromagnetic wavelengths to record earth's surface features at various bands of wavelength. Beside, satellite imagery provides temporal coverage of same area. Therefore, it is very much effective to generate useful information about the earth's surface features in general and about wetland resources in particular using remotely sensed satellite imageries. Indian Remote Sensing Satellite (IRS) with Linear Imaging Self Scanner (LISS) III sensor provides multi-temporal satellite imageries at 23.5 meter resolution over the earth's surface. Various studies were carried out using the IRS LISS III satellite imageries for mapping and monitoring of wetland resources, land use and land cover by different scholar at local and regional and national levels (Chatterjee et al., 2003; Nandy & Kushwaha, 2011; Mallupattu et al., 2013; Panhalkar et al., 2014; Kavyashree & Ramesh, 2016). Normalized Difference Vegetation Index (NDVI) and Normalized Difference Water Index (NDWI) are two important and most widely used remote sensing indices in geoinformatics which involves spectral bands of multi-spectral and multi-temporal satellite datasets for vegetation, water resource, wetland studies (Ji et al., 2009; Rokni et al., 2014; Ashraf & Nawaz, 2015). In this study, an attempt has been made to assess the NDVI and NDWI status over Burhisuti wetland located in Assam using IRS LISS III data of 2008 and 2013. The study provides an understanding on the changing surface condition of Burhisuti wetland based on the indices derived results.

2. STUDY AREA

Burhisuti wetland is located in the easternmost part of Assam to the north bank of Brahmaputra river (within Dhemaji district). Burhisuti wetland is an inland natural wetland that covers a geographical area of 24.29 sq. km, and the coordinated extension of the wetland is 27°41'27.34'' to 27°43'41.78'' north latitudes and 95°00'44.36'' to 95°04'12.82'' east longitudes (*Figure 1*). The wetland was originated naturally form the cut out of Burhisuti stream that meets the main stream of Brahmaputra river in Dhemaji district of Assam.

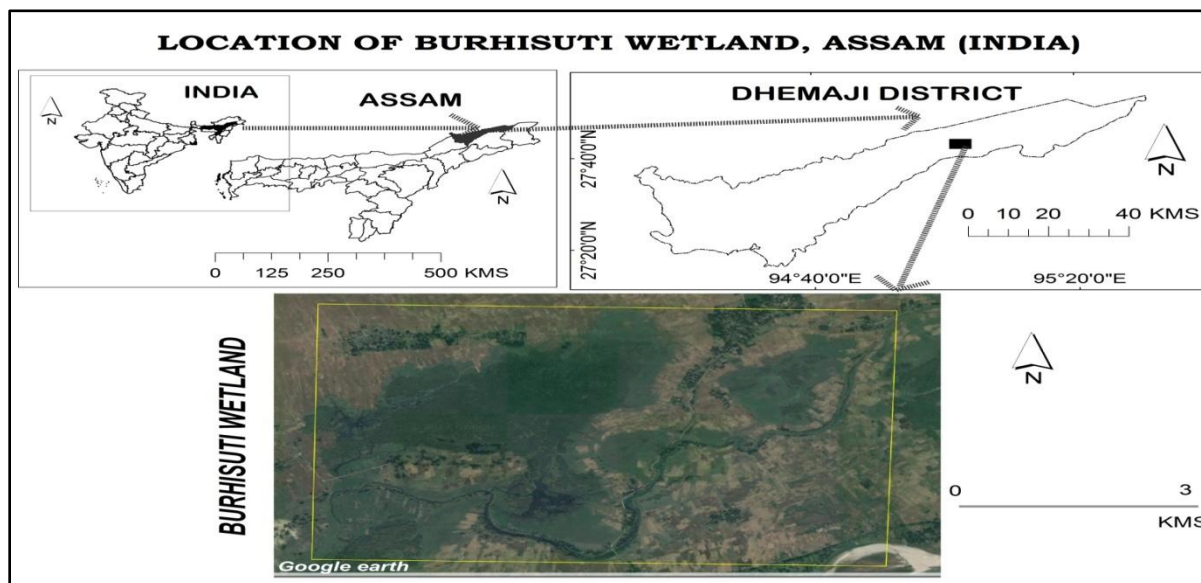


Figure 1: Location of the study area

3. OBJECTIVES

The main objectives of the paper are:

- (i) To generate NDVI and NDWI maps of the study area for the year 2008 and 2013 using LISS III data.
- (ii) To calculate the intensity values of the prepared NDVI and NDWI maps for surface condition assessment of the study area for the year 2008 and 2013.

4. MATERIAL AND METHODS

IRS LISS III satellite data (for 2008 & 2013) of the study area collected from NRSC's Bhuvan geo-portal have been used as the main satellite datasets for this study (Figure 2). The LISS III data have a pixel size of 23.5 meter with 4 spectral bands (Table 1). The collected LISS III data are pre-processed under GIS environments using operations like image rectification, image subsetting, projection conversion, false colour composite visualization for further analysis of NDVI and NDWI.

TABLE 1: IRS LISS III DATA SPECIFICATION

IRS LISS III tiles, year: 2008 & 2013, season: post-monsoon, resolution: 23.5 meter, projection: WGS84UTM46N.	
Band	Wavelength (micrometer)
B2 (green)	0.52-0.59
B3 (red)	0.62-0.68
B4 (near infrared)	0.77-0.86
B5 (mid infrared)	1.55-1.70

Source: Bhuvan, NRSC.

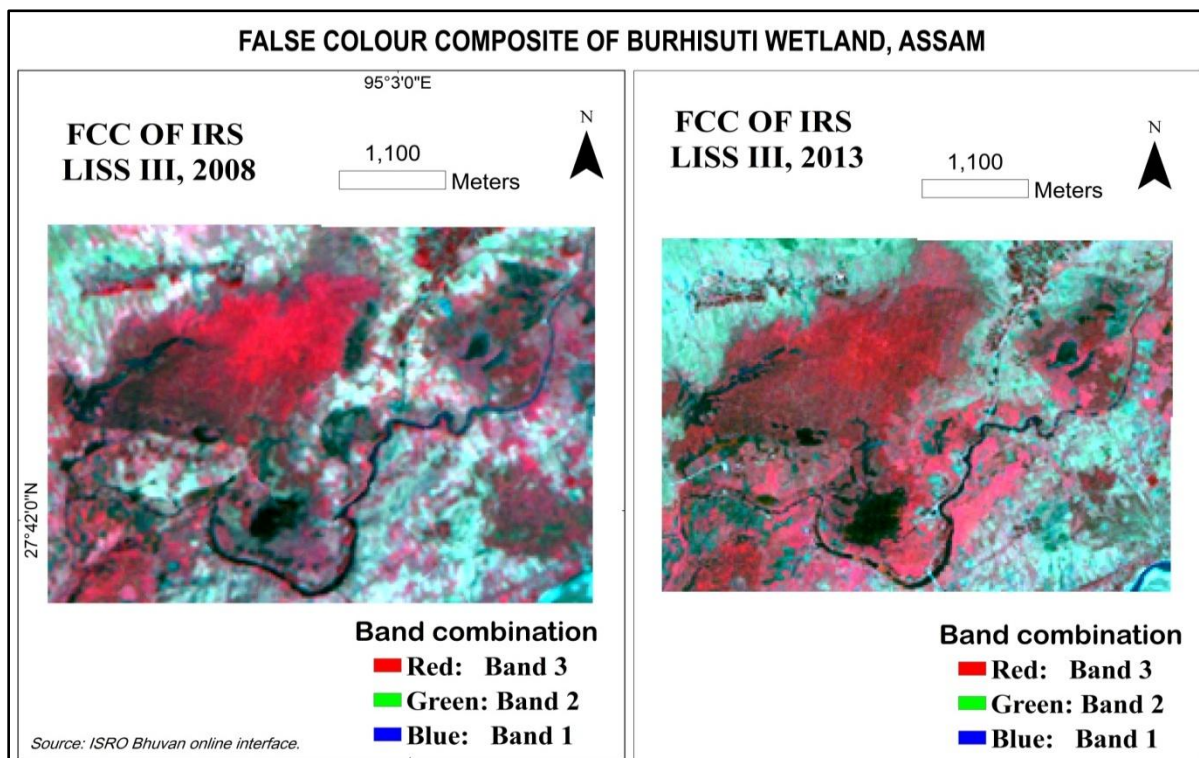


Figure 2: IRS LISS III data of the study area

NDVI and NDWI are the two remote sensing indices used in the study (Table 2). NDVI technique involves the near infrared and red spectral bands for normalized visualization of green vegetation with positive values and non-vegetation areas like water with negative values over a greyscale map. On the contrary, NDWI technique involves the green and near infrared spectral bands for normalized visualization of surface water with positive values and non-water areas like vegetation, sand with negative values over a greyscale map. Both NDVI and NDWI techniques are widely used in wetland monitoring and assessment (Das, 2017).

TABLE 2: METHODS USED IN THE STUDY

NDVI= (NIR-RED)/(NIR+RED), the values of NDVI range between 0 and ± 1 , and negative values or values close to 0 represent surface water areas, whereas positive values or close to 1 represent healthy vegetation (Fuller, 1998).

NDWI= (GREEN-NIR)/(GREEN+NIR), the values of NDWI range between 0 and ± 1 , and negative values or values close to 0 represent vegetation, whereas positive values or close to 1 represent surface water/deep water bodies (McFeeters, 1996).

5. RESULTS AND DISCUSSION

To deal with the first objective of this study, NDVI and NDWI maps are generated using LISS III data of the study area for the year 2008 and 2013. Both NDVI and NDWI maps of Burhisuti wetland (2008 & 2013) are generated under GIS environments. Both NDVI and NDWI maps are

created in grey scale with pixel value range between 0 to ± 1 (Figure 3 & 4). For NDVI maps of the study area (2008 & 2013), white colour are assigned to depict green vegetation cover, whereas dark black colour depicts no vegetation or water pixels. On the contrary, NDWI maps of the study area depict clear open water cover in white colour, whereas no water pixels are depicted in dark black colour (Figure 3). The NDVI value range is between -0.210 to 0.632 during 2008 in the study area, which is changed between -0.154 to 0.681 in 2013 (Table 3). Similarly, NDWI value range is between -0.288 to 0.538 during 2008, which is changed between -0.508 to 0.405 in 2013 in the study area (Table 4).

TABLE 3: NDVI STATISTICS OF THE STUDY AREA, 2008-2013

NDVI	2008	2013
Range	-0.210 to 0.632	-0.154 to 0.681
Mean	0.329	0.432
S. D.	0.110	0.112

TABLE 4: NDWI STATISTICS OF THE STUDY AREA, 2008-2013

NDWI	2008	2013
Range	-0.288 to 0.538	-0.508 to 0.405
Mean	-0.035	-0.297
S. D.	0.085	0.089

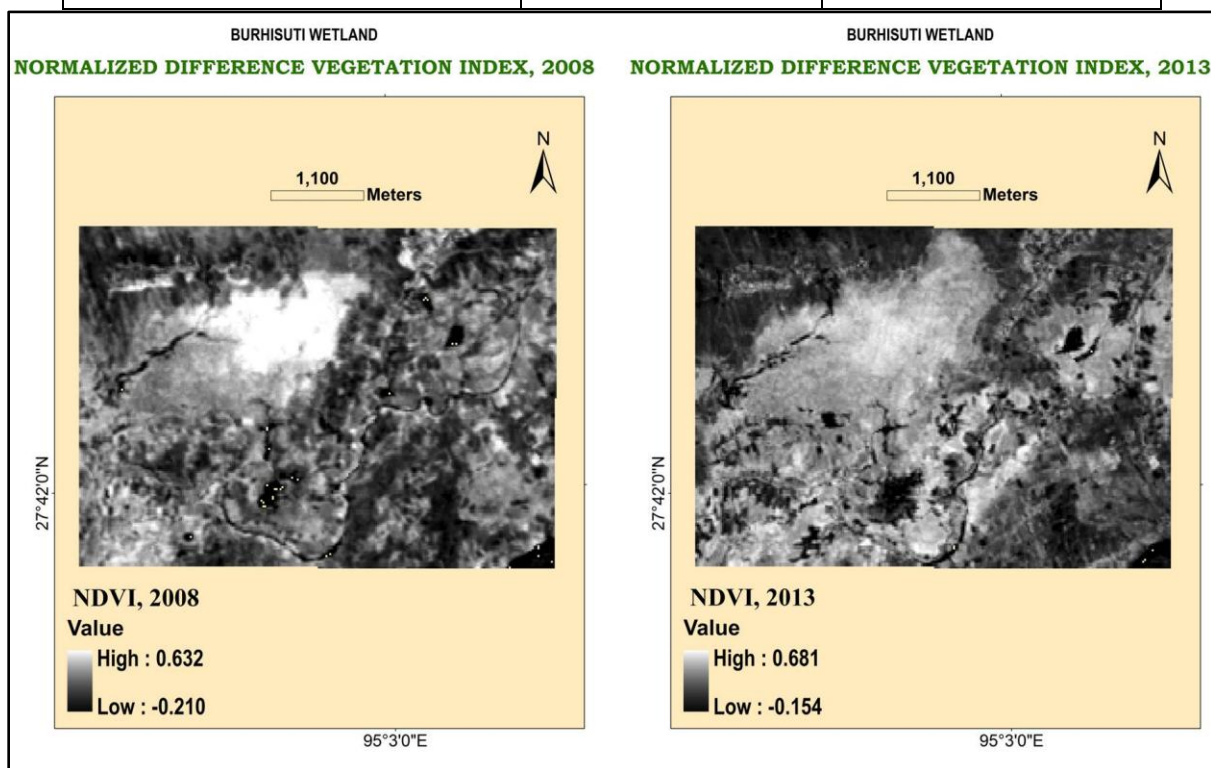


Figure 3: NDVI maps of the study area, 2008-2013

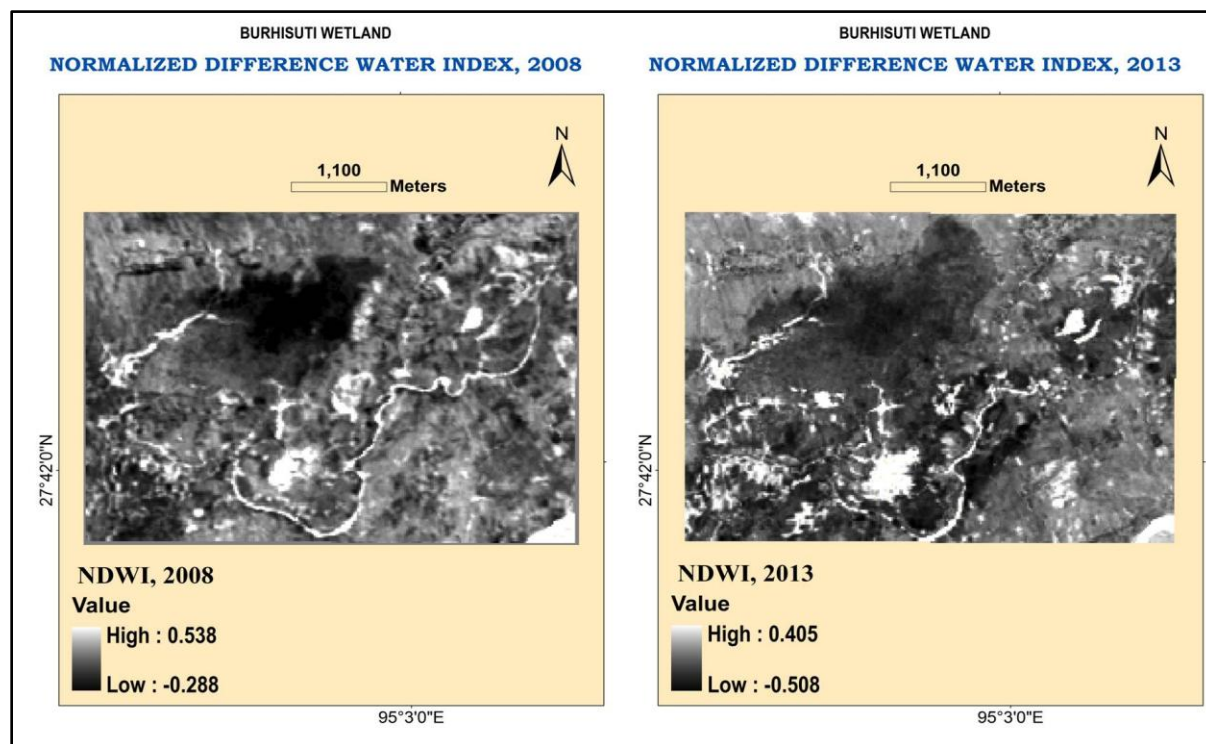


Figure 4: NDWI maps of the study area, 2008-2013

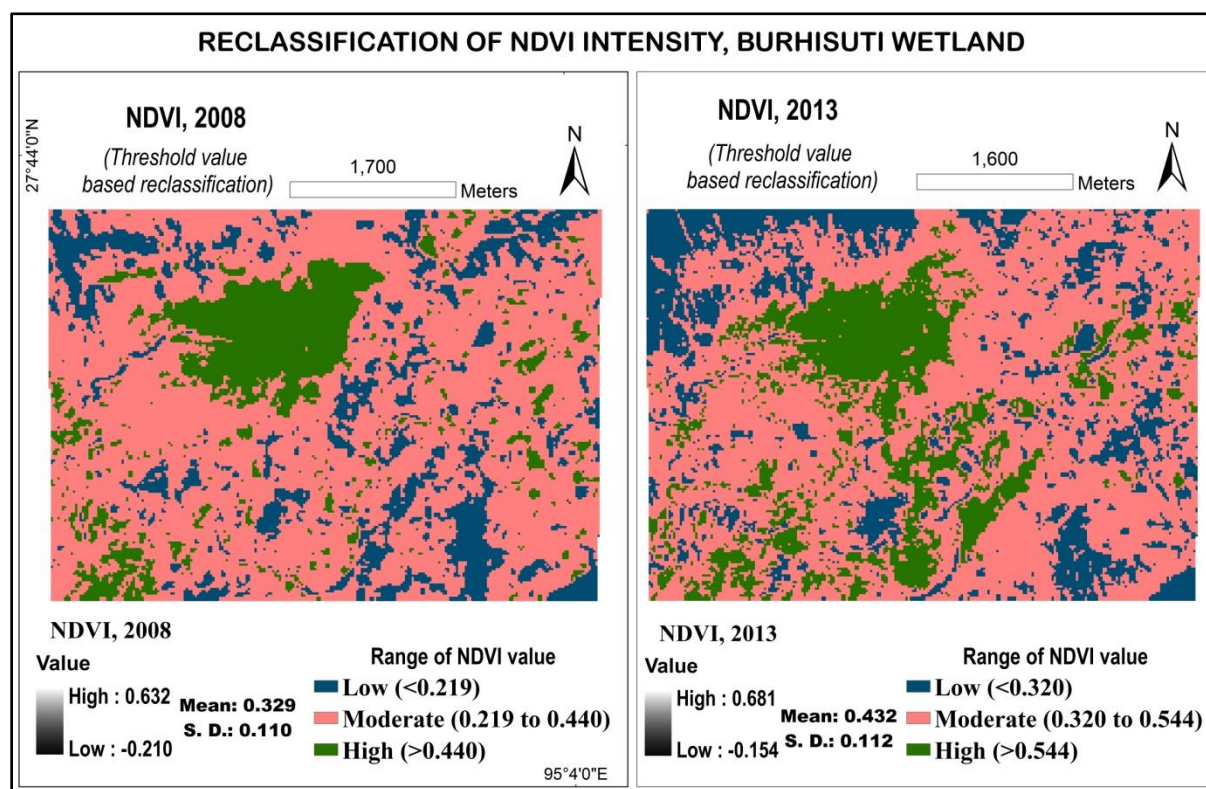


Figure 5: NDVI intensity maps, 2008-2013

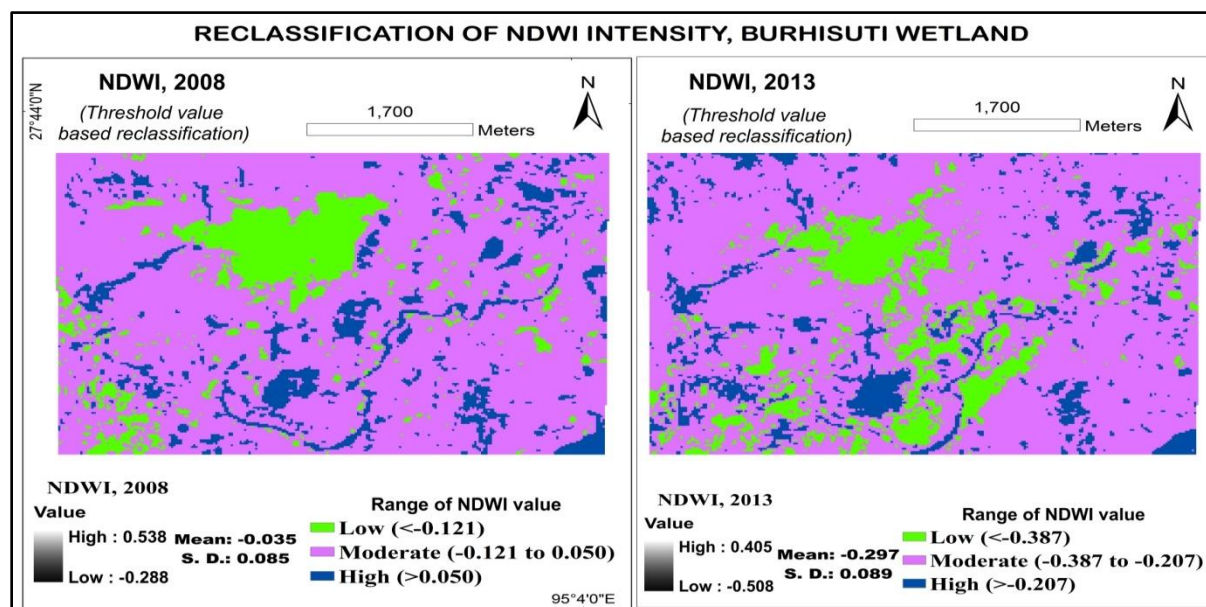


Figure 6: NDWI intensity maps, 2008-2013

TABLE 5: NDVI INTENSITY STATISTICS, 2008-2013

NDVI, 2008				
Category	Pixels	Pixel resolution	Area (sq. km)	Percentage
Low	7030	23.5 m x 23.5 m	3.88	15.98
Moderate	30553		16.87	69.46
High	6405		3.54	14.56
Total	43988		24.29	100.00
NDVI, 2013				
Category	Pixels	Pixel resolution	Area (sq. km)	Percentage
Low	8122	23.5 m x 23.5 m	4.49	18.46
Moderate	28036		15.48	63.74
High	7830		4.32	17.80
Total	43988		24.29	100.00

TABLE 6: NDWI INTENSITY STATISTICS, 2008-2013

NDWI, 2008				
Category	Pixels	Pixel resolution	Area (sq. km)	Percentage
Low	5143	23.5 m x 23.5 m	2.84	11.69
Moderate	34085		18.82	77.49
High	4760		2.63	10.82
Total	43988		24.29	100.00
NDWI, 2013				
Category	Pixels	Pixel resolution	Area (sq. km)	Percentage
Low	5906	23.5 m x 23.5 m	3.26	13.43
Moderate	33449		18.47	76.04
High	4633		2.56	10.53
Total	43988		24.29	100.00

To deal with the second objective of the study, the intensity values of the prepared NDVI and NDWI maps of the study area for both years (2008 & 2013) are calculated under GIS environments. After generation of NDVI and NDWI maps of the study area, the intensity of both NDVI and NDWI are categorised into three classes, viz. low, moderate and high using mean, standard deviation (S. D.) and value ranges observed from NDVI and NDWI maps (Somvanshi et al., 2011). The low intensity zone is classified using a threshold value derived from the resultant index value of mean-S.D. The indices pixel values below this derived threshold value come under low intensity zone. On the other hand, the high intensity zone is classified using a threshold value derived from the resultant index value of mean+S.D. The indices pixel values above this derived threshold value come under high intensity zone. The intensity zone between the low and high intensity zones automatically comes under moderate intensity zone (Figure 5 &

6). The low intensity zone in NDVI intensity zones mainly depicts non-vegetation areas, whereas the high intensity zone represents vegetation cover. Similarly, the NDWI maps of the study area depict water cover areas with high intensity zones and non-water cover or vegetation areas with low intensity zones. This means both NDVI and NDWI intensity maps of the study area depict the opposite conditions of vegetation and surface water cover areas. From the NDVI intensity maps of the study area, it has been found that the low, moderate and high intensity zones covers 3.88 sq. km (15.98%), 16.87 sq. km (69.46%) and 3.54 sq. km (14.56%) respectively during 2008; whereas in 2013 the low, moderate and high intensity zones covers 4.49 sq. km (18.46%), 15.48 sq. km (63.74%) and 4.32 sq. km (17.80%) respectively (*Table 5*). Similarly, assessing the NDWI maps of the study area, it has been found that there are 2.84 sq. km (11.69%) of low, 18.82 sq. km (77.49%) of moderate and 2.63 sq. km (10.82%) of high intensity zones during 2008 which changed to 3.26 sq. km (13.43%) of low, 18.47 sq. km (76.04%) of moderate and 2.56 sq. km (10.53%) of high intensity zones in 2013 (*Table 6*). In both NDVI and NDWI maps of the study area for 2008 and 2013, it has been observed that there are maximum proportions of moderate intensity zones in the study area.

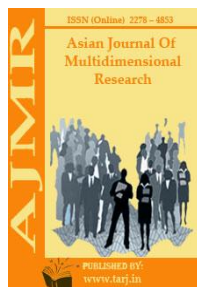
6. CONCLUSION

The study has assessed the status of NDVI and NDWI over Burisuti wetland of Assam using IRS LISS III data of the study area from 2008 to 2013. The temporal analysis of NDVI and NDWI has observed changes of surface condition of Burhisuti wetland from 2008 to 2013. The study area is found to be a wetlandscape with swamp vegetation and surface water cover. From the study it has been assessed that the moderate intensity zones have maximum proportions of area coverage with mix pixels of vegetation and surface water areas in both 2008 and 2013. The central part of the study area has dense vegetation coverage, whereas clear surface water areas are observed mainly in the southern parts of the study area. This study is found to be effective in assessing wetland condition at micro level with temporal dimension using remote sensing technique with moderate resolution satellite data.

REFERENCES

- Ashraf, M. and Nawaz, R., 2015. A comparison of change detection analyses using different band algebras for baraila wetland with Nasa's multi-temporal landsat dataset. *Journal of Geographic Information System*, 7(1), pp.1-19
- Chatterjee, C., Kumar, R. and Mani, P., 2003. Delineation of surface waterlogged areas in parts of Bihar using IRS-1C LISS-III data. *Journal of the Indian Society of Remote Sensing*, 31(1), pp.57-65
- Das, K., 2017. NDVI and NDWI based Change Detection Analysis of Bordoibam Beelmukh Wetlandscape, Assam using IRS LISS III data. *ADBU Journal of Engineering Technology*, 6(2), pp.17-21
- Fuller, D.O., 1998. Trends in NDVI time series and their relation to rangeland and crop production in Senegal, 1987-1993. *International Journal of Remote Sensing*, 19(10), pp.2013-2018

- Ji, L., Zhang, L. and Wylie, B., 2009. Analysis of dynamic thresholds for the normalized difference water index. *Photogrammetric Engineering & Remote Sensing*, 75(11), pp.1307-1317
- Kavyashree, M. and Ramesh, H., 2016. Wetland mapping and change detection using remote sensing and GIS. *International Journal of Engineering Science*, 6(8), p.2356.
- McFeeters, S.K., 1996. The use of the Normalized Difference Water Index (NDWI) in the delineation of open water features. *International journal of remote sensing*, 17(7), pp.1425-1432
- Mallupattu, P.K., Reddy, S. and Reddy, J., 2013. Analysis of land use/land cover changes using remote sensing data and GIS at an Urban Area, Tirupati, India. *The Scientific World Journal*, 13(1), 1–6.
- Ministry of Environment and Forests, 2011. NATIONAL WETLAND ATLAS. *Indian Space Research Organization*, Government of India.
- Nandy, S. and Kushwaha, S.P.S., 2011. Study on the utility of IRS 1D LISS-III data and the classification techniques for mapping of Sunderban mangroves. *Journal of Coastal Conservation*, 15(1), pp.123-137
- Panhalkar, S. S., and Pawar, C. T., 2014. Change Detection Analysis of Hiranyakeshi Basin Using Multi- Temporal Remote Sensing Data and Geoinformatic Technique. *International Journal of Research Studies in Science, Engineering and Technology*, 1(2), pp.1–6.
- Rokni, K., Ahmad, A., Selamat, A. and Hazini, S., 2014. Water feature extraction and change detection using multitemporal Landsat imagery. *Remote Sensing*, 6(5), pp.4173-4189.
- Somvanshi, S., Kunwar, P., Singh, N.B. and Kachhwaha, T.S., 2011, January. Water turbidity assessment in part of Gomti River using high resolution Google Earth's Quickbird satellite data. In *Geospatial World Forum* (pp. 18-21)



FACTORS AFFECTING CUSTOMERS' WILLINGNESS TO PURCHASE ORGANIC FOOD IN INDIA: A LOGISTIC REGRESSION MODEL

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ABSTRACT

Concern for health, environment and food safety is increasing demand for chemical free, eco-friendly green products such as organic food across the globe. Indian is one such nation with potential market for organic food. Customers though are willing to pay, exhibit various reasons for purchase and non-purchase of organic food. The present study is focused in highlighting those reasons and analyzes the effect of various factor on customer's willingness-to-pay. A sample of 418 responses has been tested using a logistic regression model. It is observed that health, safety, environmental concern, price of the product along with income and trust affect the purchase decision. Interesting results related to income and convenience to purchase along with remarks to marketers is highlighted in this study.

KEYWORDS: Convenience, Interesting, Organic,

INTRODUCTION:

An increased awareness of consumers towards health and the environment has given rise to the demand for eco-friendly and green products. On the other hand, marketers also thoughtfully responsible towards societal marketing and need for the delivery of quality and healthy products. This situation is giving rise to the increased demand for farm based or organic products which

are more naturally grown with less or no chemicals involved to produce. Increasing concern for health among consumers due to various reasons like environmental pollution in urban areas, work stress etc. has evolved urban population as the most potential market for organic food across the globe.

According to a report by Zion Market Research, organic food market globally was value at USD 124.76 billion in 2017 and is expected to grow around USD 323.09 billion by the end of 2024. Europe enjoys a 33% of total share globally, due to changing lifestyle and health awareness. Industrially developed countries like Japan, Australia, Singapore, Korea and Hong Kong are some of the major markets for organic food in Asia Pacific. Besides having a significant farming, Asian market is one of the top in import of organic food. There is a huge potential for developing countries in the organic food market. The increase in the environmental and health concern, organic food market is to see exponential growth in the future. The reasons for this increase may be not majorly different among different countries, however it is important to examine the major underlying reasons country-wise as the economic and environmental situation is different among nations.

Indian being a developing nation with potential opportunities and challenges is proving to be an attractive market for organic food. Farming is the main occupation of the majority of the people. However, the low technological advancements in this sector is demanding for more quality food production. On the other hand, concern for health, need for environment protection is also demanding for chemical free, eco-friendly green products. Hence, it is interesting to study the customer's opinion regarding organic food and their willingness to pay.

A REVIEW OF LITERATURE:

Organic food is defined by The Department for Agriculture and Rural Affairs (DEFRA) as "Organic food is the product of a farming system which avoids the use of man-made fertilizers, pesticides; growth regulators and livestock feed additives" (DEFRA). According to Agriculture & Processed Food Products Exports Development Authority (APEDA, 2018) of India, organic food is defined as "Organic products are grown under a system of agriculture without the use of chemical fertilizers and pesticides with an environmentally and socially responsible approach". Hence, it is considered as more natural and harmless food products.

Several scholars in the organic food literature have published impactful research studies. Chakrabarti (2010), in his study highlighted the major factors influencing the organic food purchase through a experts survey method and reported concern for health as the major factor along with utility, certification and store reputation. Households who perceive organic products as healthier more often buy than other households (Andersen, 2008). Concern for good health is the major reason for the purchase of organic food is proven through some major consumer surveys (Alvensleben, 1998; Huang, 1996; Schifferstein & Ophuis, 1998).

Knowledge and education is also an important element in marketing organic food products (Hill & Lyncheaun, 2002). While talking about the consumer behavior in organic food purchase, subjective norms influence the decision through attitude of the customer (Tarkiainen & Sundqvist, 2005). Several studies have also reported the taste as an important element for

organic food purchase (Fotopoulos & Krystallis, 2002). Yiridoe, Bonti-Ankomah, and Martin (2005), has given a comprehensive review on the issues related to consumer behavior and organic food. Various themes that relate to the rationale associated with consumers purchase decisions have been discussed in the literature (Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007).

Guthman (2003), in his study provides the difference in the consumers personalities in consuming fast food and organic food. The reasons for consuming fast food is identified and highlighted in the food literature (Nagaraj & Vijayalakshmi, 2018). However, the present study is confined to the organic food purchase and factors influencing the purchase. Though there are several researches already highlighting the factors, the present study aims to conduct a logistic regression model to record the effect of the listed factors on willingness-to-purchase organic food in India.

OBJECTIVES OF THE STUDY:

After a thorough review of literature, it is evident that there is a need to study the potential reasons for purchase and non-purchase organic food in India. And also to test the effect of various factors on willingness-to-purchase (WTP) of organic food in India. Hence, there are two major objectives of the present study, first to identify the reasons for customers purchase and non-purchase of organic food. Second, to examine the effects of all potential factors effecting the customers' willingness-to-purchase (WTP) organic food in India.

VARIABLES FOR THE STUDY:

No or less use of chemicals in the process of production or farming (No Chemicals), naturally farmed products (more natural), no harm to environment (for better environment), supports farmers health (for farmers), supports better health (healthier), protects wildlife and animals (for wildlife), better in taste (good taste), more quality (quality), no added preservatives and hormones (no added hormones), no trustable than non-organic products (trust-worthy), better looking (looks better), no complicated packaging (easy packaging) and comparatively fresh (freshness) are the 13 reasons listed as the reasons for purchase of organic food.

The 9 reasons identified for non-purchase of organic food are very expensive (expensive), no convenient stores (inconvenience), comparatively less healthy than other products (less healthy), limited variety (lacks variety), not better for environment (non-environmental), less available (limited availability), no or less knowledge (little knowledge), not better taste (less tastier), limited or less trust (less trust-worthy).

To predict the willingness-to-purchase (WTP) 12 potential predictors have been identified from the literature. Age of the respondent (age), education of the respondent (education), income of the respondent (income), gender of the respondent (gender), respondent having kids below 12 years (kids), perceived price of organic food (price), degree of trust (trust), greater concern for one's own health (health), concern for environment (environment), knowledge about organic food (knowledge), concern for safe food (safety) and convenience of purchase (convenience).

Age was recorded as a continuous variable, education as number of years completed, income as actual amount per month, gender as male or female, having kids as yes or no, price as a dichotomous variable expensive or not expensive; trust, health, environment & safety on a 5-point Likert scale, knowledge & convenience as yes or no. The WTP is recorded as Yes = willing to purchase and No = not willing to purchase organic food.

METHODOLOGY:

Based on the two objectives of the study, the reasons for purchase and non-purchase were identified from the work of Yin, Wu, Du, and Chen (2010), and Paul and Rana (2012). Present study listed 13 reasons for purchase and 9 reasons for non-purchase of organic food. To predict the willingness-to-purchase (WTP), 12 potential factors have been identified from the related literature. These variables have been designed into a structured questionnaire with relevant scaling.

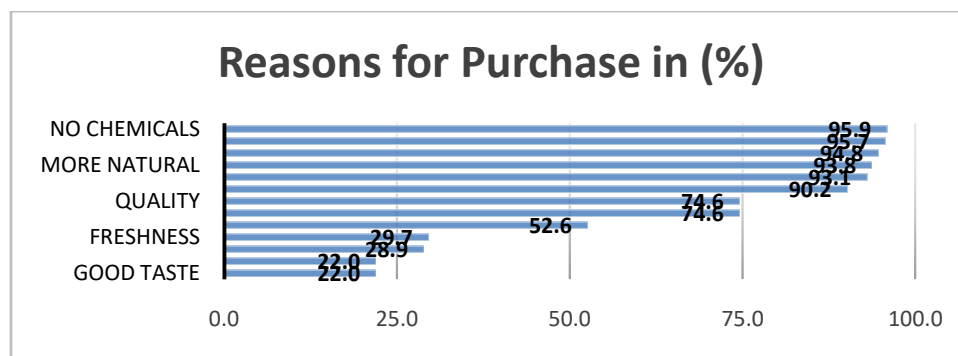
The study follows a descriptive cross sectional design, where a convenient sampling technique with mall intercept method is adopted. The study is conducted in the Hyderabad city. Malls with organic food products stores are selected for the distribution of questionnaire. The questionnaires were distributed to the visitors of the mall. The visitors were explained about the academic research purpose of the study and instructed to respond to the best of their knowledge about organic food. A total of 418 usable responses have been collected of which 196 customers agreed to their willingness and 222 denied their willing to purchase organic food. For the reasons to purchase and non-purchase the respondents were asked to select the most important reasons of their choice based on their experience and knowledge.

DATA ANALYSIS& RESULTS:

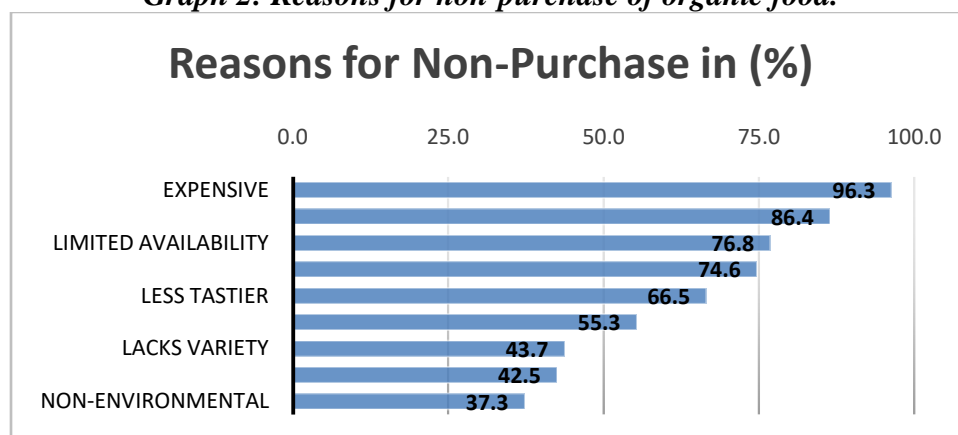
A total of 418 respondents answered the questionnaire. The minimum and maximum age of the respondents is 24 and 40 respectively and average age is 31 years. The average number of years of education is 15 i.e. on an average the respondents were graduates. The minimum and maximum monthly income is 20,000 and 60,000 per month respectively and average income is 42,000. 52% of the respondents were female and 48% were male.

According to the first objective of the study, the reasons for purchase and non-purchase of organic food were calculated and are shown in Graph 1 and Graph 2. 196 respondents accepted their willingness to purchase and according to them reasons like absence of chemicals, environmental concern, health and natural production are the top most reasons for purchase. Taste, packaging and freshness are accounting to be the less responsible for purchase. They have also indicated that quality and trust as important reasons for purchase of organic food.

Graph 1: Reasons for purchase of organic food.



Graph 2: Reasons for non-purchase of organic food.



In the similar lines, 222 respondents who disagreed for purchase of organic food indicate that higher prices, non-availability, inconvenience in purchase and lack of knowledge as the major reasons of non-purchase. They have also indicated that reasons like taste, health concern, trust and environmental concern as important however comparatively little less important.

In the second part of the analysis, a logistic regression test was conducted using SPSS 20.0 with the 12 predictor variables to predict customers' WTP organic food. The results are shown in Table 1. For the results obtained it is clearly evident that factors like income, health, environment, trust, price and food safety effect the willingness-to-purchase organic food. Model – 1 indicates the influence of income, health, environment, trust, price and food safety along with convenience on WTP. The accuracy of prediction obtained for this model is 76.8% indicating a good prediction magnitude. Model – 2 was conducted after discarding the low Wald values. Model – 2 almost indicates the same predictors as the previous model with a minor improvement in prediction accuracy of 77%. However, Model – 2 does not indicate convenience as a predictor of WTP. It is also interesting to see the negative effect of income on WTP.

TABLE 1: RESULTS OF LOGISTIC REGRESSION MODELS

Factors	Model – 1			Model – 2		
	Beta-value	Wald	Exp(B)	Beta-value	Wald	Exp(B)
Age	0.015	0.320	1.015	-	-	-

Education	-0.106	2.527	0.899	-	-	-
Income	-0.047**	19.257	0.954	-0.046**	19.122	.955
Gender	0.167	0.410	1.181	-	-	-
Kids	0.229	0.771	1.257	-	-	-
Price	0.717**	7.414	2.049	.772**	8.819	2.165
Trust	0.207*	4.720	1.231	.190*	4.179	1.209
Health	0.954**	62.504	2.595	.947**	63.642	2.578
Environment	0.610**	36.976	1.840	.599**	36.813	1.820
Knowledge	-0.221	0.708	0.802	-	-	-
Safety	0.220*	5.306	1.246	.217*	5.250	1.243
Convenience	0.183*	3.956	1.201	.161	3.155	1.175
Constant	-3.615*	4.945	0.027	-4.612**	34.077	.010
Prediction accuracy (%)	76.800			77.000		
-2Log-likelihood	375.600			380.455		
Cox and Snell R ²	0.384			0.376		
Nagelkerke R ²	0.512			0.503		
Significance (P)	0.000			0.000		

Note: Values are significant at * = 5% and ** = 1% levels.

DISCUSSION:

The major reasons perceived by the customers for purchase of organic food are no harmful chemicals involved in the process of production, no added hormones thus generating natural, healthier and environmental friendly products. Since the customers believe that organic food products are chemical and added hormones free, marketers and producers should consider to highlight the label of chemical free on the packaging with a standard certification in addition. Health is the major concern for customers in urban areas as the food available is more contaminated or adulterated. Hence, customers are more inclined towards chemical free organic food and this is expected to grow potentially in the future.

Quality, trust and concern for farmer's health and livelihood is also an important factor reason for purchase. Taste, freshness and attractive packaging is the least concern for the people who buy organic food. Hence, organic food sellers should concentrate more on the health and environmental benefits.

The major reasons for non-purchase of organic food are higher cost, inconvenience and less availability. Since, the organic food farming is little expensive and the distribution system is not yet developed completely, it is evident of the higher cost and availability on store shelves. Lack of proper knowledge is also another important reason to non-purchase. Less tasty, less healthy and lacks variety are some other minor reasons for non-purchase of organic food.

Results of the logistic regression show that concern for health is the major factor that affects organic food purchase. It has the highest impact of 0.94 and is significant at $p < 0.05$. As discussed, the customers are more concerned about their health due to various reasons like pollution, contaminated environment and adulterated food. Organic food which is more chemical

free and grown naturally is a perceived solution for the health concern. The next major factor influencing the purchase is the price of organic food. The price of the organic food is little higher than the non-organic, however the value obtained is positively significant indicates that though the prices are higher, consumers are willingly ready to spend that premium amount for their health.

Concern for environment is one of the next major influencer or organic food purchase. People are much aware of the use of chemicals in food production and its negative impact on environment. This concern for saving the environment and encouraging eco-friendly and green products, consumers are preferring organic food. Trust in organic food and concern for food safety are another important factors affecting the purchase. In model – 1 convenience of purchase resulted to be significant, it is not significant in the second model. However, it can be easily understood convenient stores are not available to buy organic food. It is treated as a specialty product and is not easily available at wider space.

Income of the customer also effects the purchase, however, the model results suggest that it is negatively significant and not by a very high magnitude i.e. only 0.04. It is evident that with the rise in income the purchase of organic food is reduced by a very smaller or negligible margin. However, the results suggest the effect of income on purchase of organic food.

CONCLUSION& SUGGESTIONS:

Looking at the findings of the study, it is evident that concern for health, environment and food safety motivates the consumers to purchase organic food. Keeping this in mind, regulatory authorities along with marketers should highlight and educate consumers about the benefits of consuming organic food in terms of health, safety and environment. Large scale campaigns have to be conducted along with non-profit organizations. Government should also encourage farmers to produce more organic food through subsidized facilities.

Consumers are no doubt interested in purchasing organic food, however high prices dominate their purchasing interest. Apart from increasing awareness and educating people about the organic food consumption, regulatory bodies should also take necessary steps to reduce the price of organic products. Since trust is also an important factor, government should mandate and standardize the certification procedure. It can also be coupled with discounts and subsidized monetary facilities to farmers with the certification procedure.

Customers agree that there is an inconvenience in purchasing organic products. This may be due to less availability of organic products than the other products. Organic food products are more often available in specialty stores than the usual departmental stores or grocery malls. Hence, marketers should concentrate more on the distribution of organic food and its availability at a larger scale. Organic food market has a he potential in the near future, and marketers cannot ignore such opportunity.

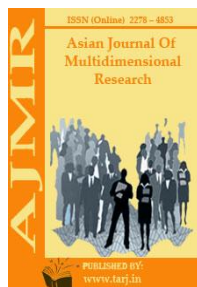
LIMITATIONS:

The study is conducted in only one metropolitan city Hyderabad. Further studies can consider PAN India as study locations and collect a larger and heterogeneous sample in order to improve the generalizability of the results. The sample size of the present study is also small considering the objectives. The study with its limited objectives is based on simple logistic model, however future

research can conduct a large scale study with more robust techniques and comprehensive models including potential antecedents and consequences of willingness-to-pay (WTP) for organic food in India.

REFERENCES:

- Alvensleben, R. v. (1998). Ecological aspects of food demand: the case of organic food in Germany. *Institute for Agricultural Economics, University of Kiel*, 4, 68-79.
- Andersen, L. M. (2008). Organic milk—who and why? *Information Provision to Consumers as an Instrument of Environmental Regulation*, 14.
- APEDA. (2018). National Programme for Organic Production (NPOP). from http://apeda.gov.in/apedawebsite/organic/Organic_Products.htm
- Chakrabarti, S. (2010). Factors influencing organic food purchase in India—expert survey insights. *British Food Journal*, 112(8), 902-915.
- DEFRA. Department for Environment Food & Rural Affairs. from <https://www.gov.uk/government/organisations/departement-for-environment-food-rural-affairs>
- Fotopoulos, C., & Krystallis, A. (2002). Purchasing motives and profile of the Greek organic consumer: a countrywide survey. *British Food Journal*, 104(9), 730-765.
- Guthman, J. (2003). Fast food/organic food: Reflexive tastes and the making of 'yuppie chow'. *Social & Cultural Geography*, 4(1), 45-58.
- Hill, H., & Lyncheaun, F. (2002). Organic milk: attitudes and consumption patterns. *British Food Journal*, 104(7), 526-542.
- Huang, C. L. (1996). Consumer preferences and attitudes towards organically grown produce. *European Review of Agricultural Economics*, 23(3), 331-342.
- Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour: An International Research Review*, 6(2-3), 94-110.
- Nagaraj, S., & Vijayalakshmi, S. (2018). A study on food ordering mobile apps. *Asian Journal of Research in Social Sciences and Humanities*, 8(7), 10-23.
- Paul, J., & Rana, J. (2012). Consumer behavior and purchase intention for organic food. *Journal of Consumer Marketing*, 29(6), 412-422.
- Schifferstein, H. N., & Ophuis, P. A. O. (1998). Health-related determinants of organic food consumption in the Netherlands. *Food quality and Preference*, 9(3), 119-133.
- Tarkiainen, A., & Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *British Food Journal*, 107(11), 808-822.
- Yin, S., Wu, L., Du, L., & Chen, M. (2010). Consumers' purchase intention of organic food in China. *Journal of the Science of Food and Agriculture*, 90(8), 1361-1367.
- Yiridoe, E. K., Bonti-Ankomah, S., & Martin, R. C. (2005). Comparison of consumer perceptions and preference toward organic versus conventionally produced foods: A review and update of the literature. *Renewable Agriculture and Food Systems*, 20(4), 193-205.



WOOL-BEARING PRODUCTIVITY OF LOCAL GOAT OF KARAKALPAKSTAN

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ABSTRACT

The article presents the results of studying shearing and quality of wool of local goat of Karakalpakstan. Wool of goat of Uzbekistan is heterogeneous, consists of thin soft pile and coarse bright hair. Pile, which grows during one autumn and winter, lose color in spring. Natural length of wool was measured in the range of paddle, barrel and haunch with the help of metal ruler. Examples of wool were sheared for studying the relation of different types of fiber in wool and their thinness with the range of barrel. In wool of goats, over hair fiber was more than in wool of young goats. By this pile fibers were characterized by necessary thinness, and over hair was enough thick and crimp. Studying natural wool length of goats showed that in all situations in bucks the same as goats, the wool on haunch was longer than on paddle and barrel. And wool length on paddle and on barrel was approximately the same. Hair resilience changes according to the moisture and etc. More rich and lush pastures, and also wet climate favors development of the wool-bearing productivity of animals. Till the recent times in the most regions of Uzbekistan pile did not comb out from goat. In spring it was sheared off together with hair, and after it was separated by hand.

KEYWORDS: *Shearing, Wool Length, In-Kid, Sex, Types Of Fiber, Age.*

INTRODUCTION

Wool-bearing productivity of goat depends on the whole range of factors, among them the most important are breed, direction of productivity, sex, age, physiological condition (in-kid, lactation) of animals, conditions of their feeding and content and etc.[1,2,3].

Structure and quality of hair, feeding and climate are important influence to the wool-bearing productivity of animals. Amount of forming organism of under fur (downy fiber) depends on overtopping temperature of air, at low temperature it is formed more. Hair resilience changes according to the moisture and etc. More rich and lush pastures, and also wet climate favors development of the wool-bearing productivity of animals [1].

Proceeding from the above mentioned, there was an aim confronting us: studying wool-bearing productivity of local goat of Karakal pakstan. Experimental research was carried out in the condition of agricultural farming “Bakhrom Shabandoz” of Karauzak region in perennial pasture.

Dependence of wool-bearing productivity of animals on their belonging to different breed and constitutional types was marked [2].

Wool of goat of Uzbekistan is heterogeneous, consists of thin soft pile and coarse bright hair. Pile, which grows during one autumn and winter, lose color in spring. Hair differs from pile by the future unclipped, fades slowly, and on some animals continues to grow sometimes several years, reaching long length. Till the recent times in the most regions of Uzbekistan pile did not comb out from goat. In spring it was sheared off together with hair, and after it was separated by hand. Native goats give average 100-150 g. pile at combing, seldom 200g, the length 5-7 cm and the thinness 14-16mk. The length of spines of local goats are 12-15 cm. The thinness is from 60 to 100 um and more. Hair owns slimpsy flakiness, due to the difference from the wool of sheep almost does not tumble. Goats are sheared once a year in May. Average shearing of Uzbek goats is 430-490 g, and of bucks 530 g [3].

The study of the wool-bearing productivity of goats was carried out in the period of shearing (in May) through individual weighing of sheared wool with the help of spring-controlled scales. Natural length of wool was measured in the range of paddle, barrel and haunch with the help of metal ruler. Examples of wool were sheared for studying the relation of different types of fiber in wool and their thinness with the range of barrel.

Wool-bearing productivity

Sex of animals	Age (year)	number	Shearing, g	The length of sickle, cm		
				On paddle	On barrel	On haunch
Female goats	1	25	627±24,6	9,5±0,79	3,7±0,59	12,4±0,49
	3-4	25	816±28,7	10,4±0,64	11,6±0,64	13,2±0,52
	6-7	25	708±20,4	10,9±0,59	11,0±0,52	14,0±0,50
Male goats	1	25	660±21,8	11,2±0,91	12,4±0,71	13,5±0,69
	3-4	25	896±36,5	12,0±0,84	12,6±0,84	15,2±0,58
	6-7	25	847±30,4	11,4±0,71	12,6±0,79	14,9±0,51

Relation and thinness of different types of fiber, (n=3), %

Sex, age	Relation of types of fiber, %			Thinness of fiber, um		
	Pile	Transitive fiber	Over hair	Pile	Transitive fiber	Over hair
	M±m	M±m	M±m	M±m	M±m	M±m
Female 1 3-4 6-7	70,6±4,3	8,7±1,1	20,7±1,2	14,4±1,1	31,7±2,4	80,7±3,1
	69,2±3,9	9,4±1,3	21,4±1,4	16,6±1,2	35,2±2,6	82,1±3,6
	67,3±32,7	10,2±1,3	22,5±1,6	15,1±1,2	36,4±2,7	82,0±4,1
Male 1 3-4 6-7	69,0±4,0	9,4±1,4	21,6±1,6	14,9±1,3	30,4±2,5	86,7±4,1
	67,4±3,5	10,4±1,5	22,2±1,7	17,4±1,3	35,9±2,7	89,6±4,3
	65,9±3,2	11,3±1,6	22,8±1,9	21,9±1,4	36,4±2,9	92,8±4,6

The data of wool shearing and natural length was presented on the table1.

Analysis of the data shows that wool shearing of goats was within $627 \pm 74,6 - 816 \pm 78,9$ g, by this it was not the same on animals of different age. The most shearing was on the goat of 3-4 years old - $816 \pm 78,7$ and it came before the indicators of goat-yearlings to 30,1% and old age goats to 15,2 percent.

Analogous difference was marked also in the groups of goats. The most wool shearing was registered on goats of 3-4 years old - $896,0 \pm 36,5$; the least shearing was registered on yearling goats - $660,0 \pm 21,8$ g. According to the wool shearing elder goats took the middle position - $847,0 \pm 30,4$ g.

Sex dimorphism was shown distinctly according to the shearing indicators. On all age groups wool shearing of bucks was more than goats and the difference was -33,0; 80,0 and 39,0 grams.

Studying natural wool length of goats showed that in all situations in bucks the same as goats, the wool on haunch was longer than on paddle and barrel. And wool length on paddle and on barrel was approximately the same.

In age aspect wool length on all parts of the body of 3-4 years old goats was the longest. Analogous difference was marked according to the wool length of goats. Table2.

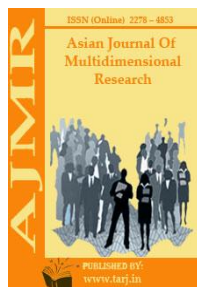
Studying the relation of different types of fiber in the wool of goats showed that the wool mainly consists of pile and over hair fiber; the content of transition hair was with in 8, 7-10,4%. By increasing age, the content of pile fiber much more decreased and over hair – increased. In wool of goats, over hair fiber was more than in wool of young goats. By this pile fibers were characterized by necessary thinness, and over hair was enough thick and crimp. According to the relation of pile of transition and over hair, indicators of local goats of Karakalpakstan were near to the indicators of goats of other regions of Uzbekistan.

In this way, the results of studying quantity and quality of the wool of local goats of Karakalpakstan lets to make a conclusion, that they are characterized with comparatively restrained wool

productivity, in this, wool is distinguished by the high amount of pile and over hair fiber. Pile and transition fiber are comparatively thin, while over hair is rough and crimp, which negatively reflects to their value.

LIST OF THE USED LITERATURE

1. Ivanov M. F. 1935
2. YusupovS. And others. – Goat husbandry: the condition and perspectives of development// Tashkent. Journal. “Zoo veterinary” №8// 2016, p-30-321.
3. KiatkinP. F. – Ways and methods of raising new breed of woolly goats. Tashkent. 1968, p-259.



RETAIL CUSTOMER TOWARDS MODERN RETAILING AN EMPIRICAL STUDY

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ABSTRACT

Retailers are expected to emerge with strategies that can retain and attract the right kind of customers. A universal goal of competitive retail business is to understand customer attitude. Converting an occasional purchase to repeat purchase through satisfaction is the major objective of making strategy. Retailers are making the great efforts to bridge the gap between customer expectations and their offerings. The study is aimed to predict the variability of customer satisfaction based on its demographic and purchasing patterns of all the dependent variables. This research also identifies the factors influencing customer's choice in buying from the organized retail formats. This study is based on 1000 sample respondents of organized retail outlets in Nellore city, Andhra Pradesh. Multiple regression and Garrett ranking method are applied to this research. The findings of the study reveals that product quality, brand image, price, location convenience and range of merchandise found to be important factors as far as customer choice in buying at organized retail formats are concerned.

KEYWORDS: *customer attitude, customer satisfaction, customer choice, organized retail form*

1. INTRODUCTION

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Retailing is one of the pillars for Indian economy. It accounts for 10% of GDP and 8% of employment. Retailing is the second largest employer after agriculture, employing more than 35 million people. India is the fifth largest retail market in the world. As per Boston Consulting Group and Retail Association of India report, Indian retail market is expected to double to USD one trillion by 2020 from \$600 billion in 2015 driven by income growth, urbanization, and attitudinal shift while modern trade is expected to grow \$180 billion in 2020 from \$60 billion in 2015. Organized retailing is comprise only 5% of the Indian retail market where as remaining 95% market is comprised of 12 million mom-and-pop shops. Organized retailing in India has reached to a point of inflexion after witnessing unprecedented growth over the last few years. It has a lot of potential for further growth and for penetration into the semi-urban and rural markets.

2. STATEMENT OF THE PROBLEM

Retailers are expected to emerge with strategies that can retain and attract the right kind of customers. A universal goal of competitive retail business is to understand customer attitude. Converting an occasional purchase to repeat purchase through satisfaction is the major objective of making strategy. Retailers are making the great efforts to bridge the gap between customer expectations and their offerings. The retailers who are meeting the customer expectations are better surviving in the market. The present study is going to help the retailers to convert the occasional customers as regular customers by understanding purchasing patterns.

3. OBJECTIVES OF THE STUDY

The following are the important objectives of the present study

1. To predict the variability of customer satisfaction based on its demographic and purchasing patterns of all the dependent variables.
2. To identify the factors influencing customer's choice in buying from the organized retail formats.
3. To suggest the ways and means to improve the performance of organized retail formats.

4. RESEARCH METHODOLOGY:

The nature of research is descriptive, which follows primary data and secondary data. The primary data was collected through structured questionnaire from 1000 respondents in Nellore city, Andhra Pradesh. The respondents are selected at varies shopping malls while they are visiting the malls at different times on convenience basis.

4.1 Tools for analysis:

Multiple regression and Garrett ranking method are applied to this research.

4.2 Sample profile:

The below table 1 describes the profile of the respondents with their gender, age, income, education, occupation, marital status and their family size.

TABLE-1 SAMPLE PROFILE

Variable	Description	Frequency	%
Age	25 or below	275	27.5
	26-30	181	18.1
	31-35	140	14.0

	36-40	175	17.5
	Above 40	229	22.9
Gender	Male	614	61.4
	Female	386	38.6
Education	SSC or below	163	16.3
	Inter/diploma	170	17.0
	U.G	288	28.8
	P.G & Above	330	33.0
	No formal education	49	4.9
Occupation	Professional	65	6.5
	Employee	244	24.4
	Self-employed	69	6.9
	Unemployed	25	2.5
	Business	137	13.7
	Student	199	19.9
	Home maker	161	16.1
	Farmer	70	7.0
	Retired	30	3.0
Income per month	10000 or below	142	14.2
	10001-20000	154	15.4
	20001-30000	161	16.1
	30001-40000	174	17.4
	40001-50000	187	18.7
	Above 50000	182	18.2
Family size	Single	63	6.3
	Two	65	6.5
	Three to four	529	52.9
	Above four	343	34.3
Marital status	Married	617	61.7
	Single	383	38.3
Family structure	Nuclear	562	56.2
	Joint family	438	43.8

5. RESULTS AND DISCUSSIONS

5.1 Customer level of satisfaction towards organized retail formats -Multiple Regression Analysis

A regression analysis is a statistical tool used to find out the relationship between two or more variables. The objective of this analysis is to predict the variability of the dependent variable based on its co-

variants with all the dependent variables. It is useful to predict the phenomena of dependents through multiple regression analysis models, if the levels of independent variables are provided.

The following analysis shows the relationship between the customer level of satisfaction towards organized retail formats and the 17 variables that were studied. The result are shown in the below table 2.

TABLE-2 CUSTOMER LEVEL OF SATISFACTION TOWARDS ORGANIZED RETAIL FORMATS

Sl. No.	Variables	Non-standardized coefficients		T	Sig.
		B	SE		
	(Constant)	1.140	0.138		
1	Age	-0.032	0.012	-2.699	1%
2	Gender	0.054	0.024	2.197	5%
3	Occupation	-0.050	0.017	-2.886	1%
4	Education	0.044	0.011	4.034	1%
5	Monthly Income	0.037	0.016	2.296	5%
6	Family size	-0.044	0.012	-3.610	1%
7	Marital Status	-0.006	0.011	-0.521	NS
8	Family Structure	0.044	0.012	3.679	1%
9	Retail outlet type	0.032	0.011	2.926	1%
10	Period of awareness	-0.011	0.019	-0.559	NS
11	Purpose of visit	-0.036	0.010	-3.514	1%
12	Frequency of purchase	-0.052	0.024	-2.205	5%
13	Average Purchase	-0.064	0.034	-1.903	NS
14	Mode of Payment	-0.010	0.020	-0.475	NS
15	Average time spent	0.054	0.008	6.465	1%
16	Mode of transport	0.019	0.007	2.822	1%
17	Time slot	0.011	0.013	0.859	NS

R-Value	R ² -Value	Degree of freedom – V ₁	Degree of freedom – V ₂	F Value	Significance
0.945	0.893	17	982	482.07	1% Level

Source: primary data

The multiple regression components are found statistically a good fit as R^2 is 0.893. It shows that seventeen variables contribute to 89.3% of the variations of the customer level of satisfaction towards organized retail formats and this is the statistical significant at 1% and 5% levels. The above table indicates that the coefficient of gender, education, monthly income, family structure, retail outlet type, average time spent, mode of transport and time slot are positively associated and age, occupation, family size, marital status, period of awareness, purpose of visit, frequency of purchase, average purchase, and mode of payment are negatively associated with the customer level of satisfaction towards organized retail formats.

Further, it indicates that the contribution of age, gender, occupation, education, monthly income, family size, family structure, retail outlet type, purpose of visit, frequency of purchase, mode of transport are statistically significant that their influence is stronger than other variables.

The rate of increase in the customer satisfaction towards organized retail formats could be made possible with better performance of the independent variables, such as; at 2.197 units change in gender of the customer, at 4.034 units change in the education of customer, at 2.296 change in monthly income of the customer, at 3.679 change in family structure, at 2.926 change in retail outlet type, at 6.465 change in average time spent, at 2.822 change in mode of transport and at 0.859 change in time slot by improving those regressed units. The most dominant factor is the average time spent by the customer in the organized retail outlet and it is influencing the customer level of satisfaction towards organized retail formats. The other factors also have an impact on customer level of satisfaction towards organized retail formats in the following way such as; at -2.699 units change in the age, at -2.886 change in occupation, at -3.610 change in family size, at -0.521 change in marital status, at -0.559 change in period of awareness, at -3.514 change in purpose of visit, at -2.205 change in frequency of purchase, at -1.903 change in average purchase and at -0.475 change in mode of payment of the customers whoever visited the organized retail formats.

5.2 Factors influencing customer's choice in buying from organized retail formats- Garrett Ranking analysis

The following list of factors which influence the customer's choice in buying at organized retail outlets were collected from the secondary data. With the implementation of Garrett Ranking method the significance of customer choices while buying was analyzed. The following table indicates the list as well as the rank order.

TABLE - 3 FACTORS INFLUENCING CUSTOMER'S CHOICE IN BUYING FROM ORGANIZED RETAIL FORMATS

S.No.	Factors	Total score	Mean score	Rank
1.	Brand image	61896	61.9	II
2.	Group influence and personal references	45898	45.9	VI
3.	Purchasing power	41244	41.2	IX
4.	Product quality	65468	65.5	I
5.	Location convenience	52367	52.4	IV
6.	Advertising	44038	44.0	VIII
7.	Price	59746	59.7	III
8.	Range of merchandise	45994	46.0	V
9.	Store shopping experience	38710	38.7	X
10.	Promotional offers	45455	45.5	VII

Source: primary data

From the above analysis it is evident that the Garrett mean score of 65.5, for the product quality is the top most factor which influence the buying decision of the respondents, followed by the mean score of 61.9 and 59.7 for the brand image and price. It is followed by the factors like location convenience and range of merchandise with the Garrett mean score of 52.4 and 46.0. Also the other factors which influence the customer choices while buying as Garrett mean scores of 45.9, 45.5 and 44.00 are group influence and personal references, and promotional offers and advertising. With the Garrett mean score of 41.2 and 38.7

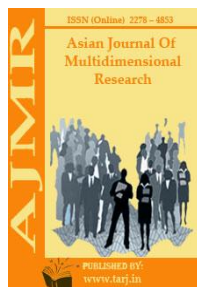
for purchasing power and store shopping experience found to be the last ranks of order as far as customer choice in buying at organized retail formats are concerned.

6. CONCLUSION

The research recommends that there is a space for organized retailers in an emerging district like Nellore which is one of the best Tier-II cities in Andhra Pradesh. In this area the retail sector was in high swing and the respondents are highly interested towards these formats. Primarily younger the age group, higher income, education profile and employees, students, dependents like home makers, are more favoured to visit organized retail stores and with a higher level satisfaction. Purchasing patterns like purpose of visit, frequency of purchase and transport facility are having positive impact on customer decisions. Product quality, brand image, price, location convenience and range of merchandise found to be important factors as far as customer choice in buying at organized retail formats are concerned. If it understands well by retail outlets, it brings repeated customers, good word of mouth and more profitability.

REFERENCES:

- Dhabolkar, A., Dayle, Thorpe and Joseph, O. Rentz (1996), "A Measure of Service Quality for Retail Stores: Scale Development and Validation" *Journal of Academy of Marketing Science*, 24(1): 3-16.
- Jayasankara Prasad and Raghunadha Reddy, (2007), "A Study on Role of Demographic and Psychographic Dynamics in Food and Grocery Retailing in India", *Vision-The journal of business perspective* vol.11, No.4, pp.21-30.
- Piyushkumar S., and Banerjee A., (2004), "Store Choice Behavior in Evolving Market", *International journal of retail & distribution management*, 32(10), pp: 482-494.
- Ramesh K.C., (2013), "Modeling Store Characteristics as Antecedents of Impulse Purchase", *Indian Journal of Marketing*, Vol.43. No.2, pp: 27-36.
- Sivadas E., and Jamine B. P., (2002), "An Examination of Relationship between Service Quality, Customer Satisfaction and Store Loyalty" *International Journal of Retail & Distribution Management*, Vol.28, No.2, pp 73-82.



DIFFERENT CATEGORIES OF SOFTWARE: SOFTWARE THAT PLAY PIVOTAL ROLE IN RESEARCH WORK

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ABSTRACT

In today's world we are largely depending on the computers to do a large number of our works but one major point that is very important to under – stand is that a computer has the ability to work very fast and efficiently for us but it does not possess the ability to work on its own i.e. someone is required to operate it. A computer has to be given the instructions, which will make it to perform a particular task in a given time. With the help of the suitable software's, the computer is able to provide the required results to us and hence it can be said that the software leads the computer to function in the way we expect or want it to work or perform .Current Research paper explores software that play pivotal role in research work

KEYWORDS:Software, Computer, Operating System

1.1INTRODUCTION

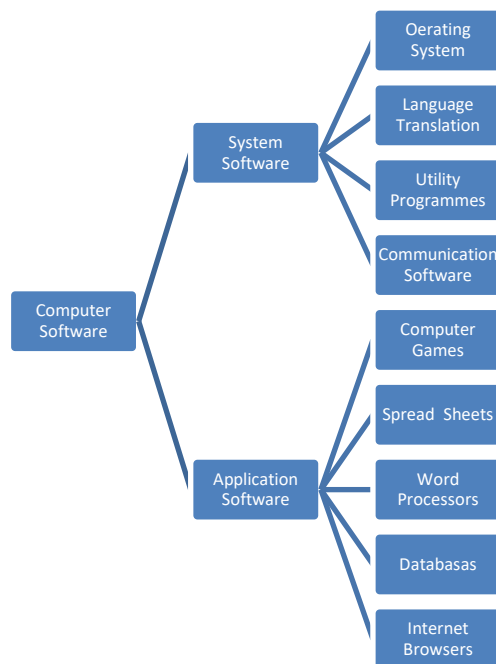
In today's world we are largely depending on the computers to do a large number of our works but one major point that is very important to under – stand is that a computer has the ability to work very fast and efficiently for us but it does not possess the ability to work on its own i.e. someone is required to operate it. A computer has to be given the instructions, which will make it to perform a particular task in a given time.

So it can be said that only by guiding the computer by giving instructions, a computer can be made to work and solve different problems etc. These instructions that are given to the computer by which it works or performs the various activities are referred to as the computer programs. With the help of the suitable software's, the computer is able to provide the required results to us and hence it can be said that the software leads the computer to function in the way we expect or want it to work or perform. To have an in – depth understanding about the data communication

and the information technology enabled services, one needs to have a complete detailed knowledge about the software.

Software can be defined as the “*instructions that direct the operations of the hardware*”. It actually constitutes the complete detailed instructions that are responsible for the control of the operation of the computer system. The set of the instructions that are used for performing some of the specific tasks are generally referred to as the ‘Routine’ but the complete set of the instructions or the commands that have the duty of executing the related set of the tasks are generally referred to as the ‘Program’. One important point that is very necessary to understand here is that of the fact that in the process of the data communications, these software instructions are also referred to as the ‘Code’.

1.2: TYPES OF SOFTWARE; various types of software are depicted in figure below



Fig; 1: Types of Software

A. Operating system

An operating system or OS is a software program that enables the computer hardware to communicate and operate with the computer software. Without a computer operating system, a computer and software programs would be useless. The picture is an example of MicrosoftWindows XP, a popular operating system and what the box may look like if we were to visit a local retail store to purchase it.

When computers were first introduced, the user interacted with them using a command line interface, which required commands. Today, almost every computer is using a Graphical User Interface (GUI) operating system that is much easier to use and operate.

Examples of computer operating systems

- a) Microsoft Windows 10 - PC and IBM compatible operating system. Windows is the most common and used operating system.
- b) Apple macOS - Apple Mac operating system. Today, the only Apple computer operating system is macOS.
- c) Ubuntu Linux - A popular variant of Linux used with PC and IBM compatible computers.
- d) Google Android - Operating system used with Android compatible phones and tablets.
- E) IOS - Operating system used with the Apple iPhone and iPads...

B) TRANSLATORS

Computers only understand machine code (binary), this is an issue because programmers prefer to use a variety of high and low-level programming languages instead.

To get around the issue, the high-level and low-level program code (source code) needs to pass through a translator. A translator will convert the source code into machine code (object code).

There are several types of translator programs, each able to perform different tasks.

i) Compiler

Compilers are used to translate a program written in a high-level language into machine code (object code).

Once compiled (all in one go) the translated program file can then be directly used by the computer and is independently executable.

Compiling may take some time but the translated program can be used again and again without the need for recompilation.

An error report is often produced after the full program has been translated. Errors in the program code may cause a computer to crash. These errors can only be fixed by changing the original source code and compiling the program again.

ii) Interpreter

Interpreter programs are able to read, translate and execute one statement at a time from a high-level language program. The interpreter stops when a line of code is reached that contains an error. Interpreters are often used during the development of a program. They make debugging easier as each line of code is analysed and checked before execution. Interpreted programs will launch immediately, but our program may run slower than a compiled file. No executable file is produced. The program is interpreted again from scratch every time we launch it.

iii) Assembler

Assemblers are used to translate a program written in a low-level assembly language into a machine code (object code) file so it can be used and executed by the computer. Once assembled, the program file can be used again and again without re-assembly.

C) UTILITY PROGRAMMES

Strictly speaking the operating system is the software that controls and manages the computer system but most operating systems also include programs called utilities. Utilities are not essential for the computer to work but either make it easy for the user to use it in some way or provide housekeeping functionality. We can categorise these utilities as follows:

- a) Security utilities that keep our computer safe from hackers and viruses.
- b) Disk organisation utilities that organise our files into folders and tidy up the disk.
- c) Maintenance utilities that perform system diagnostics and get software updates.

a) Security utilities

Security is about keeping the computer system safe from hazards. Hazards come in many forms but include viruses, hackers and spyware. To keep this in perspective though, the most dangerous thing a computer has to face is the users themselves who are likely to accidentally delete files or put them in the wrong place! The backup utility is probably the most important one of them all.

b) Antivirus software

A virus is a program that is installed on a computer without our knowledge or permission with the purpose of doing harm. It includes instructions to replicate automatically on a computer and between computers. Some viruses are just annoying but don't really do any damage but some viruses will delete and/or change system files so work files are corrupted or the computer becomes unusable.

Antivirus software will protect a computer in three ways:

It prevents harmful programs being installed on the computer.

It prevents important files, such as the operating system, being changed or deleted.

If a virus does manage to install itself, the software will detect it when it performs regular scans. Any virus detected will be removed (inoculated!).

New viruses are found regularly so it is important that any antivirus software gets regular updates from the internet.

C) Firewall

If a computer is connected to the internet it is potentially accessible to anyone else on the internet. If a local area network, such as a school network, is connected to the internet then all the file servers, the email server, the web server and all the computers are potentially accessible. Some people hack "just because they can" but often it is for identity theft or just getting our bank account details so they can empty our account. Occasionally people hack with malicious intent but this is less common.

A firewall blocks access from the internet onto a PC or network. These work using several factors, for example:

Where the access is from (the computer's address)

- i) The type of traffic
- ii) Specific web sites

A firewall doesn't just stop unwanted access from the outside world via the internet; it can also stop computers on a network from accessing specific sites or categories of site on the network. This feature is used to stop staff in companies watching the cricket while they should be working or from using social networking sites during work hours. In school we'll find that many sites have been blocked. Try going to a games website or getting to Facebook on a school computer and we will probably get a message

saying that the site has been blocked. It is the firewall software that stops this traffic getting out of the local area network and onto the internet.

Operating systems like MS Windows have firewall utilities included but we can also buy firewall software separately. Free firewall software can also be downloaded from the internet and many banks provide free firewall software to customers using their internet banking services.

d) Spyware protection

Programs that secretly record what we do on our computer are called spyware. The purpose of the software is to capture passwords, bank account details and keywords used in internet shopping and banking. These details can then be used to make purchases on the internet.

A spyware protection utility runs in the background on a PC. It detects spyware programs and prevents them installing. It needs to regularly update itself from the internet so it can detect any new threats.

Some spyware is used for legitimate purposes though. Companies can use spyware to track what is happening on an employee's computer. This is not common and the employee should know it is happening. Parental control software may also use spyware-type programs.

e) File transfer & file management

We take it for granted that we can organise our files into folders and easily move files around within the folder structure. This utility provides a logical view of how the files are organised to make it easier for the user. There are no little yellow folders actually on the disk, just lots of binary!

f) Disk defragmenter

The file management utility above makes the secondary storage look like a nicely organized filing cabinet but it doesn't really look like this. Files are stored on the hard disk wherever there is space. If we have a big file it might get split up into sections so it can be stored in the available gaps. This isn't very efficient because the operating system then has to keep track of where all the pieces are. After a while hundreds of files are stored in bits all over the disk. Files have become "fragmented".

The disk defragmenter should be run to improve the efficiency of the computer. It moves the separate parts of the files around so they can be stored together. This makes them quicker to access. The defragmenter also groups all the free disk space together so files can be stored in one place. The defragmenter utility optimises disk performance.

g) Formatting

All storage media (disks, memory sticks etc) need formatting. Mostly we buy portable devices already formatted so we don't have to format a floppy disk or USB memory stick, but hard disks in computers will be formatted by the operating system so they are ready to store files in the way the operating system expects.

This is a small sample of the utility programs packaged in most computer operating systems.

D) COMMUNICATION SOFTWARE

Communication software is usually represented by an application or a program that serve to send information from one computer (system) to another. Communication software is used for remote access and transmitting files in the agreed and set by parties file formats. Video chat, video messaging email Web conferencing are some of the examples of communication software

1.3: APPLICATION SOFTWARE –

Application software, also known as applications, or apps for short, cover a whole range of programs that can run on almost any device, from desktop computer and laptop to smartphone and tablet. Really, an application is pretty much anything that runs on a device to complete a task.

Application software is generally more intuitive than full-blown software, with a simple user interface (UI) and crucially, built with the end user's best interests at heart. The programs can be used for a vast array of different purposes, from managing social media, to productivity software for creating and editing documents or a web browser to navigate the internet, all the way up to more sophisticated use cases, such as enabling us to add entries into a database. Simpler apps with only one function are things like a device's pre-installed calendar.

What's important to note is that although the line between software and applications is blurred, there's one major difference between how the two work. Application software doesn't use the computer's core running system like utilities or maintenance programs that are normally preinstalled on a computer or device do. Applications run completely independently and thus, they don't rely on the computer's core to provide them with information.

A) APPLICATION SOFTWARE TYPES

I) Desktop applications

Desktop applications are 'installed' on a user's computer. They are normally pretty high-powered software that uses the computer's memory directly to carry out an action. Other characteristics include that they allow people to manipulate datasets, graphics or numbers to create an output. Examples of desktop applications include productivity applications such as a word processor, a music player or video player.

II) Web-based applications

While most application software can be installed directly to a machine, many allow users to access tools through web browsers and some only exist in web format. Not only do these services free up space on a user's hard drive or network, being web-based means they can be accessed from anywhere in the world at any time, with data being stored in the cloud. This also means the application is kept up-to-date automatically, without the risk of a user running an insecure version.

Some of the examples of application software are

Microsoft Office
Adobe photo shop
Audacity
Inks cape
Visual studio
VLC media player
Jet audio
Picasa
Google chrome
Tally

1.4: BEST RESEARCH SOFTWARE

If we are conducting research, it is very important that we have appropriate methods and tools to carry out our research. If we are a non-native English speaker, then we need a research tool to help us with our written language. If our research involves data analysis, then we need a good statistical research tool for our work. It is also important that we keep tabs on what other people in our research arena are doing, so we need research tools such as Google Scholar and Research Gate to collaborate with our peers. We also need a good plagiarism checking software to avoid academic misconduct. Finally, we need a research

project management software to stay on top of the deadlines. In this blog, we review some of the useful tools for research that researchers can use to be more productive.

Statistical testing tools

One of the most important requirements while writing up our research is the use of appropriate statistical methods and analysis to back up our claims. Whether we are doing quantitative or qualitative research, statistical analysis will be an indispensable part of our workflow. There are plenty of research tools available that allows us to do a wide variety of statistical analyses for our research. However, most of the time, we will find ourselves performing basic calculations such as mean, standard deviation, confidence intervals, standard error, etc. to make our work sound scientific. Also, we need to use some form of statistical test to test the significance of the difference between two groups or cohorts and compute the p-value. Some of the widely used statistical tests for this purpose include T-test, F-test, Chi-square test, Pearson correlation coefficient and ANOVA.

i) Excel

One of the widely used tools for research is Microsoft Excel. MS Excel has plenty of features that will come in handy when we are doing a research project. Excel is a must have research tool if our study involves a lot of quantitative analysis. Excel offers a wide range of statistical functions such as AVERAGE, MIN, MAX, SUM, etc that we can apply to the cells in a few clicks. We can visualize our data using a wide variety of chart types, for example, bar plot, scatter plot, etc. We can use pivot tables to organize and generate summaries of our data easily. For complex statistical analysis, we can use Data Analysis ToolPak Excel add-in. This add-in comes with a wide variety of statistical analysis tools such as Descriptive statistics, Histogram, F-test, Random number generation, Fourier analysis, etc.

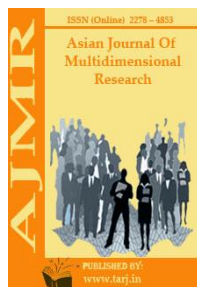
ii) Google Scholar

Google Scholar is a free online research tool offered by Google. This tool allows users to search for academic literature, scientific articles, journals, white papers and patents across the web. This is an excellent tool for research. It not only searches well-known databases, it also looks for articles in university repositories, so our chances of finding the full-text PDF of the research article we are after is very high. We can set up keyword alerts so that Google Scholar notifies us when there is a new article in our field or from our co-authors. We can manage multiple libraries of papers. We can label paper or article, and Google Scholar will organize them for us. Google Scholar displays vital information about the article such as citation number, versions and other articles citing the current article. Google Scholar also alerts us if somebody else has cited our paper. We can download citations in a wide variety of formats – MLA, APA, Chicago, Harvard, Vancouver, – and we can easily export the citation to End Note and other bibliography managers. On the whole, Google Scholar is an indispensable tool for researchers.

Beside there are various statistical software's like SPSS, E View which can be used for research depending upon research requirements.

REFERENCES

1. <https://study.com/academy/lesson/what-is-application-software-definition-examples-types.html>.
2. <https://en.wikipedia.org/wiki/Software>
3. <https://www.informationq.com/computer-software-overview/>
4. “Renata Tesch” Qualitative Research: Analysis Types and Software
5. “Nagpal D.P”. Computer Fundamentals, 2010



PRIORITY WAYS OF THE FOOD SAFETY SUPPORT IN UZBEKISTAN

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ABSTRACT

The article examines the current state of food security and priority areas for progressive reforms in the country. The population of the Republic of Uzbekistan increases from year to year, and due to its high quality and high-quality food supply is one of the most pressing issues, a number of measures are being taken to further develop the industrial sector, including the food industry. The country has been implementing a thoroughly planned reform of the foodstuffs of the country's rising population, including measures to ensure the structural reorganization, modernization and diversification of production for 2015-2019 by the President of the Republic of Uzbekistan dated March 4, 2015. The main types of foodstuffs such as cereals, meat, milk, eggs and fruits, and vegetables were gradually increased per capita, and cooperation with foreign organizations and investors focused on their processing. Measures on the development of the food industry are aimed at supporting local producers of import-substituting products, ensuring their predominance in the national market, increasing competitiveness and expanding domestic commodity exchange markets. The production of competitive food in the world market and their export the main problems of the world community through the creation of favorable conditions for foodstuffs, balanced export and food imports. ment to make contributions.

KEYWORDS: Food Products; Population's Demand, Food Security; The Strategy Of Action; Food Industry; Investment, Export, Import, Industrial Products.

INTRODUCTION

It is well-known that one of the pressing problems facing the world is to supply foodstuffs and consumers at affordable and affordable prices to meet the population's needs. This problem is

compounded by the ever-increasing population growth of the Earth, and, consequently, the lack of quality and quantity.

From the first years of independence, food security in our country has been regarded as one of the priorities of the country's socio-economic policy. The main types of foodstuffs such as cereals, meat, milk, eggs and fruits, and vegetables were gradually increased per capita, and cooperation with foreign organizations and investors focused on their processing. As a result, today all significant types of foodstuffs are produced in our country, and food safety has been achieved in our country.

Part 3 of the Decree of the President of the Republic of Uzbekistan Sh.M.Mirziyoev "On the Strategy for the Further Development of the Republic of Uzbekistan," dated February 7, 2017, President Decree Number - 4947, is the priority areas for the development and liberalization of the economy, and during 2017-2021:

- Implementation of investment projects on construction, renovation and modernization of new processing plants equipped with state-of-the-art high-tech equipment for the deep processing of agricultural products, semi-finished and ready-made food and packaging products;
- Ensuring food security, increasing the production of fruits, vegetables, potatoes, and grapes, and preventing a sharp rise in prices on the domestic market;
- Fruit and vegetable production increased by 105.7%, potatoes - 106.3%, melons - 106.1%, fruit - 106%, grapes - 105.7%, meat - 105.6% , milk - 108.1%, eggs - 111.3%, fish - 120%, honey - 118.2%;
- Construction of greenhouses on 50 hectares of land on 394 hectares and on 176 hectares of 6885 individual farms;
- It is a strategic task to provide practical assistance in the production of lightweight construction greenhouses, small poultry farms, fishing, beekeeping farms and other high-productive and high-yielding products, as well as the sale of produced products, using alternative energy sources in the population's farms and dehqan farms. [1]

TABLE 1
INFORMATION ON THE POPULATION OF THE REPUBLIC OF UZBEKISTAN AS
OF JANUARY 1, 2018 [2]

	Доимий аҳоли сони, минг киши			Доимий аҳоли сонининг ўсishi суръати, %		
	Жами	шу жумладан:		Жами	шу жумладан:	
		шаҳар	қишлоқ		шаҳар	қишлоқ
Ўзбекистон Республикаси	32 653,9	16 533,9	16 120,0	101,7	101,7	101,6
Қорақалпоғистон Республикаси	1 842,4	905,6	936,8	101,4	101,2	101,5
<i>вилоятлар:</i>						
Андижон	3 011,6	1 576,5	1 435,1	101,7	101,6	101,7
Бухоро	1 870,0	698,6	1 171,4	101,4	101,0	101,7
Жиззах	1 324,9	622,2	702,7	101,8	101,7	102,0
Қашқадарё	3 148,1	1 358,4	1 789,7	101,9	102,4	101,5
Навоий	957,8	467,5	490,3	101,6	101,4	101,7
Наманган	2 699,0	1 743,2	955,8	101,8	101,5	102,1
Самарқанд	3 719,6	1 390,9	2 328,7	101,9	101,3	102,2
Сурхондарё	2 513,1	892,9	1 620,2	102,1	101,7	102,2
Сирдарё	815,7	349,8	465,9	101,6	101,1	101,9
Тошкент	2 861,3	1 412,3	1 449,0	101,1	102,3	100,1
Фарғона	3 620,1	2 049,6	1 570,5	101,6	101,3	101,8
Хоразм	1 804,7	600,8	1 203,9	101,6	104,9	100,0
Тошкент шаҳри	2 465,6	2 465,6	x	101,7	101,7	x

As shown in Table 1 above, the population growth rate in Surkhondarya region is 102.1%, in Kashkadarya and Samarkand regions - 100.9%. , while the lowest growth rates were in Tashkent region - 100.1%.

Taking into account that the population of the country increases from year to year and, accordingly, their demand for food products, the President of the Republic of Uzbekistan Sh.M.Mirziyoev on October 9, 2017, urged to use the natural and economic potential of the country effectively, Protecting the rights and legitimate interests of farmers, dehkan farms and landowners, improving the system of effective use of agricultural land On the other ", Decree No. PF-5199 of the Cabinet of Ministers of the Republic of Uzbekistan. This Decree envisages the elaboration of a comprehensive program on food security in the republic for 2018-2020 and the termination of land lease agreements with farms, which have not set up multi-sectoral activities since January 1, 2022, under the law. [3]

The country has been implementing a thoroughly planned reform of the foodstuffs of the country's rising population, including measures to ensure the structural reorganization, modernization and diversification of production for 2015-2019 by the President of the Republic

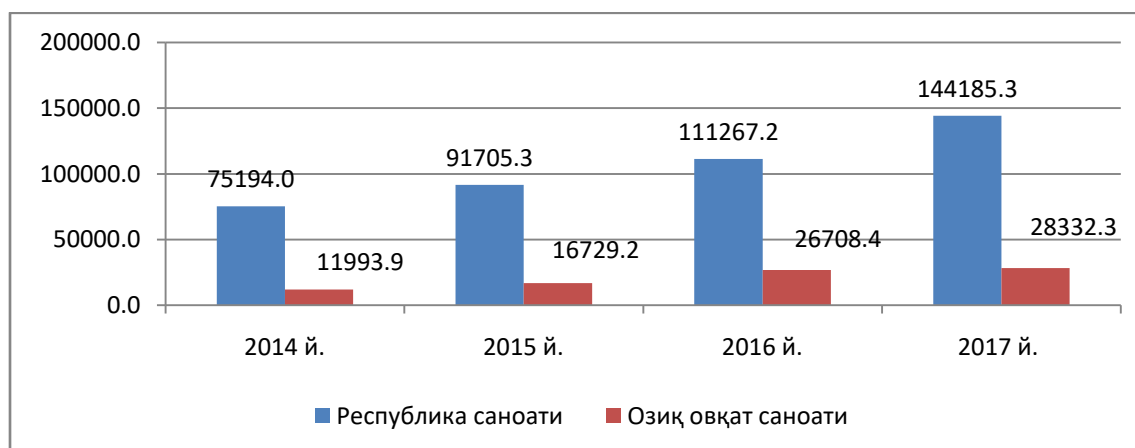
of Uzbekistan dated March 4, 2015. The Decree of the President of the Republic of Uzbekistan "About measures for organization of new industries in the food industry, modernization and increase of capacity" it is planned that only 304 large projects and 5,000 new production enterprises will be created in accordance with the state investment program and will additionally produce 100,000 tons of food products and 130 new products per year. [4] In implementing these projects, special attention will be paid to further activities of free economic zones, the introduction of new technologies and deep processing of raw materials, and making a worthy contribution to the employment of the population.

The Decree of the President of the Republic of Uzbekistan "On measures to develop the raw material base for 2016-2020, deep processing of fruits and vegetables, meat and dairy products, and means to increase the volume of exports and exports of food products and commodities amounted to 596 million soums. It is envisaged to implement 180 investment projects with the total cost of US dollars. Out of these, 74 projects will be implemented due to foreign investments and loans from international financial institutions, including 163 mln. US dollars. [5]

In order to further improve food security, the President of the Republic of Uzbekistan, Ministry of Justice and the State Tax Committee of the Republic of Uzbekistan have been tasked with reducing the cost and stabilization of foodstuffs, eliminating bureaucracy and bottlenecks in entrepreneurial activity, as well as providing motivated proposals for improving the business environment in the country. Exporters and importers of foods, foreign investors and overseas y Establish regular open and direct dialogue with partners on a regular basis. [6]

As a result of the carried out socio-economic reforms, the food industry, along with industrial development is rapidly developing in our country. As of January 1, 2018, the share of the food industry in the country's industrial output is 19.6% or 144185.3 billion soums. The volume of industrial production made up 28332.3 billion soums, of which the share of the food industry accounted for. (Figure 2). These indicators are respectively 24% in 2016, 18.2% in 2015, and 16% in 2014.

Picture 2. Dynamics of the Republic's processing and food industries 2014-2017 billion soums [6]



The statistical data shows that the share of the food industry in 2014-2016 has a tendency to grow, and the percentage of food production in 2017 is 19.6 percent, not by the decline in food production, but by the volume of the industrial output in comparison with the previous year. In 2016, the output of goods for 26708.4 billion soums, in 2017 - 28332.3 billion soums. The production of food products made up 1623.9 billion soums compared to 2016. More than one million soums were produced. It is noteworthy that this definite tendency is not only quantitative but also qualitatively.

The population of the Republic of Uzbekistan increases from year to year, and due to its high quality and high-quality food supply is one of the most pressing issues, a number of measures are being taken to further develop the industrial sector, including the food industry.

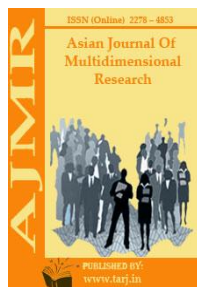
Measures on the development of the food industry are aimed at supporting local producers of import-substituting products, ensuring their predominance in the national market, increasing competitiveness and expanding domestic commodity exchange markets.

In summary, the fact that food security in our country is at the level of world standards and the work carried out by the World Food and Agriculture Organization (FAO) as an example to other countries of the world is an excellent way to ensure food security in our country. indicates that the

In food production, it should be noted that the constant growth of the population of our country with the tendency of continuous growth, the uninterrupted supply of nutrient and harmless foodstuffs, increase of entrepreneurial activity and efficient use of innovative technologies, the production of competitive food in the world market and their export the main problems of the world community through the creation of favorable conditions for foodstuffs, balanced export and food imports.ment to make contributions.

REFERENCES:

1. The Decree of the President of the Republic of Uzbekistan Sh.M.Mirziyoev "On Strategy for Further Development of the Republic of Uzbekistan" dated 7 February 2017, N UP-4947
2. Information from the State Statistical Committee
3. The Decree of the President of the Republic of Uzbekistan from October 9, 2017, N UP-5199 "On measures to radically improve the rights of farmers, dehkan farms and landowners, effective use of agricultural land "
4. Decree of the President of the Republic of Uzbekistan from March 4, 2015 "On Measures to Ensure Structural Change, Modernization and Diversification of Production in 2015-2019".
5. The Decree of the President of the Republic of Uzbekistan "On measures to develop the raw material base for 2016-2020.
6. PF-5303 of the Presidential Decree of 16 January 2018 "On Measures for Further Ensuring Food Security of the Country."
7. The author has prepared the data on the State Committee on Statistics.



UNLEASHING THE POWER OF EMOTIONAL INTELLIGENCE AND PERSONALITY

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ABSTRACT

Personality is used in terms of influencing others through external appearance and inner awareness. It is stable set of characteristics and tendencies that determine the commonalities and differences among people. Personality factors are extremely settings. Often the 'wrong' kind of personality proves disasters and undesirable tensions and worries in organizations. $B=f(P, E)$. This formula suggests that our behaviour at any time is complex combination of our unique personality traits and the demand of the environment. In fact, according to meet lewin, behaviour is the function of personality and environment.

KEYWORDS: *Personality, Behaviour, Factors.*

INTRODUCTION

What we hope or aspire to become is our personality. It's said to be the minor of One's total behaviour. It is total integration of physical intellectual, emotional, social and character make up of individual which is expressed in terms of behaviour, experiences, manners, attitudes, values, beliefs, ambitions, aspirations, interest, habits, sentiments, temperaments and traits. It pervades every aspect of human life. If intelligence is thinking and rationalizing, and emotions combine the quality of thinking along with feeling, then can it be surmised that emotions too can be analyzed and assessed like any other intelligence? This is the premise of the theory of emotional intelligence which emphasizes on the importance of emotional regulation and emotional management in an individual's life. The following segment traces the evolution of the theory.

ETYMOLOGICAL DEFINITION

The word 'Personality' is derived from latin word 'Persona' which means the mask or dress which the actors used to wear in Greek drama. But it is a narrow concept of personality because 'Persona' is something external in nature and it does not include inner traits. Every person has his own physical and mental and inner qualities. The personal quality is known as personality. So personality is the study of the basic traits of an individual, relationship between these traits, and the way in which a person adjust to other people and situations. It is the sum total of the ways in which an individual reacts and interacts with others. Heredity plays an important role in determining one's personality. Personality is also determined by biographical factors, cultural, situational and family factors. Now, we can say that personality is not just the external appearance of a person.

REVIEW OF LITERATURE

Jupiter has bestowed far more passion than reason – you could calculate the ratio as 24 to one. He set up two raging tyrants in opposition to Reason's solitary power: anger and lust. How far can reason prevail against the combined forces of these two, the common life of man makes quite clear (as cited by Goleman, 1995).

Young (1943) defined emotions as “acute disturbances of the individual ... and believed that emotions made people lose control”. But, not all felt or accepted emotions as „disorganized interruptions (Salovey and Mayer, 1990). Mowrer (1960) opined that “... emotions are of quite extraordinary importance in the total economy of living organisms and do not deserve being put into opposition with intelligence. The emotions are, it seems, themselves a higher order of intelligence.”

Stanley, Schachter and Jerome Singer proposed that emotion involved both physiological arousal and the cognitive appraisal of this arousal. Even when people experienced a state of nonspecific physiological arousal like anger, happiness or others, they tried to evaluate and reason it to figure out what those arousals meant for them (Dursun et. al. 2010).

Charles Birch (1995) said that “Feelings are what matter the most in life”. Whether it matters the most is contentious, but it certainly is essential. The terms feelings and emotions are generally used interchangeably, and as Wierzbicka (1999) observes certain languages (French, German, Russian) do not have an equivalent term for the English word emotion.

Gardner (1998) makes a compelling point when he questions – were the IQ tests in this world to disappear, will it be impossible to identify a person as intelligent or otherwise? Such questions have led us to a new world of understanding which has agreed that apart from the intellectual prowess, there are other inherent abilities in an individual which should also be taken into consideration before assessing his/her intelligence.

Goleman (1998) on the other hand points out to emotional self awareness, self control, empathy, problem solving, conflict management, leadership, etc. as the characteristics of an emotionally intelligent person.

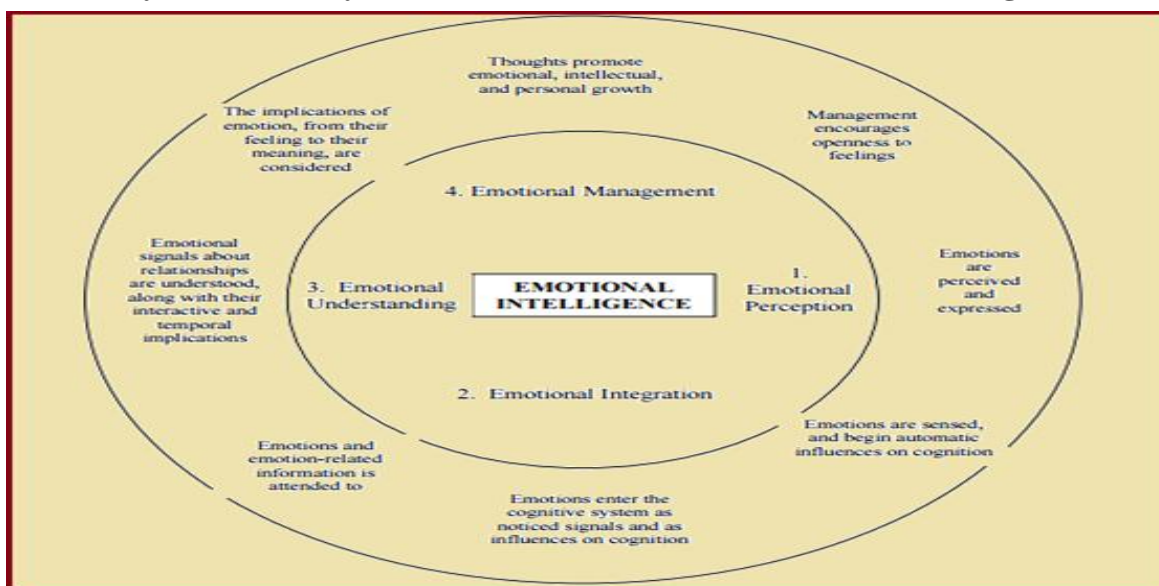
ELEMENTS OF EMOTIONAL INTELLIGENCE:

EI is natural, emotional competencies are the offshoot of EI. It includes:

- a) Self-Awareness: Emotional Self-awareness, Accurate Self-Assessment and Self-Confidence.
- b) Self-Management: Self-Control, Trustworthiness, Conscientiousness, Adaptability, Achievement Drive and Initiative.
- c) Social Awareness: Empathy, Social Orientation and Organizational Awareness.
- d) Relationship Management: Developing Others, Influence, Communication, Conflict Management, Leadership, Change Catalyst, Building Bonds, Teamwork and Collaboration.

FIGURE 1

Mayer and Salovey's (1997) four branch model of emotional intelligence



OBJECTIVES OF THE STUDY

- To evaluate the effective criteria for employee emotional intelligence.
- To collect and disseminate information relative to emotional intelligence in personality.

Research Design for the study: Descriptive research. Various resources of Data Collection: Secondary data (magazine books journals).

Psycholonomic view: Freud is the view that there are three main constituents of personality.

- a) ID: Id immoral, illogical and unconscious. It is sum total of natural and general tendencies that cannot be satisfied in the society.
- b) Ego: Ego is social self. It is the sum total of consciousness, will power and intelligence and reasoning. It has relationship with id as well as with super ego.
- c) Super ego: It is known as moral self. It is the higher part of the personality. Its function is to warn the ego about its defects and wrong actions. Freud further says that if there is a balance between Id and superego these will be balanced personality and if there is not proper balance between ID and superego there will be maladjusted personality.

DETERMINANTS OF PERSONALITY

(1) Biological factors:

- a) Heredity: It means the transmission of the qualities from ancestor to descendant through a mechanism lying primarily in the chromosomes of the germ cells. Physical stature, facial attractiveness, temperament, reflexes etc. are inherited from one's parents.
- b) Brain: There is a journal feeling that brain plays an important role in the development of one's personality. However, no conclusive proof is available so far about the nature of relationship between the brain and personality. However, no conclusive proof is available so far about the nature of relationship between the brain and personality.

OTHER FACTORS

- 1) Intelligence: There is definitely some relationship between intelligence and personality. Intelligence is mainly hereditary. Persons who are very intelligent.
- 2) Motives: Motives are the inner devices of the individual. Individuals differ in variable. Which determine the inner drive. The behaviour of an individual to accomplish the goal varies because of his inner devices.
- 3) Personality: Character primarily means honesty. It is resistance to stealing and cheating others. Character is a very important requirement for responsible jobs. It is likely that an individual may not steal under normal circumstances.
- 4) Interest: The individual normally has many interests in various areas. The top executive in any organization do not have interests in common. The organization should provide opportunities like job rotations and special training programs to satisfy the interests of executives.
- 5) Schema: It is an individual's belief, frame of reference, perception and attitude which the individual poses towards the management. The job, working conditions, incentive system and development towards religion, government and the satisfaction derived from the environment and culture influences of his community.

MEASUREMENT OF PERSONALITY

Personality cannot be quantitatively measured as we measure height or weight. We evaluate personality because it helps us to know about the physical, mental, emotional and social

behaviour of the individual. It also helps us in knowing the unconscious mind. Moreover, unless we have succeeded in measuring the personality of the students it will not be possible for us to furnish proper guidance to the students. It would be better to speak of evaluating or appraising Personality rather than measuring it for, here we are concerned of the methods of measuring personality are given below:

- A. Objective method: In objective method, we do not depend upon subject's own statements or response, but upon his behaviour as revealed to the others who serve as observes, examine or judges. Objective methods are said to be scientific as they depend on the objective data.
- B. Subjective method: In this method of measuring the personality, the individual is asked to evaluate himself. Data is also collected with the help of his/her friends, relatives and associates Autobiography. Case history method, interview technique and questionnaire are also included in subjective method.

THE DEVELOPMENT OF SELF-PERSONALITY

Rogers feels that the fundamental force motivating the human organism is self-actualization, i.e. "a tendency toward fulfillment, toward the maintenance and enhancement of the organism. The tendency of self-actualization of both the organism and the self is subject to the profound of self-concept is fundamental to the development of individual's personality."

Characteristics of a good personality inventory are:

- 1. Significant information: A good personality inventory seeks information which is not obtainable from other sources. It deals with significant topic.
- 2. Short and attractive: It should be short, comprehensive. Clearly printed and attractive in appearance.
- 3. Clear directions: It should contain directions which are clear and complete.
- 4. Clear purpose: The purpose of personality inventory should be made clear.
- 5. Well worded: Personality inventory should be well worded.
- 6. Good order: It should present questions in good order, proceeding from general to the more specific responses from general to the more specific responses, from simple to complex.
- 7. Sufficient interest: It should be of sufficient interest.
- 8. Easy to tabulate and interpret: It should be easy to tabulate and interpret.
- 9. No embarrassing questions: It should avoid annoying or embracing questions.

PERSONALITY AND ORGANIZATIONS

In Organizations, the difference in personalities of individual's are aggregated and lost when they are regarded as having somewhat identical patterns of behavioral tendencies. Some people in organizations respond most favorably to rule conscious, conformity demanding, security laden and most protective principles. In other words, there is a passion for bureaucracy for these people. On the extreme side some other people prefer autonomy, flexibility in operations and jobs dynamism, etc. in the organization. Therefore, a good match between individual personality and organization is essential. Unfortunately, mismatches between personality and organizational requirements may also be bound to happen some times, For instance, bureaucratization may be associated with the people characterize by greater intellectual flexibility, higher valuation of self, direction, greater openness to new experience and more personality and organization structure

may lead to confusion and chaos, and loss of interest by the members in the organization, low morale and job satisfaction.

PERSONALITY TRAITS AND TYPES

A personality trait may be defined as an enduring attribute of a person that appears constantly in a variety of situations such as follows:

TABLE 1SIXTEEN PRIMARY TRAITS

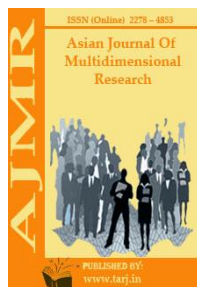
Reserved	Vs.	Outgoing
Less intelligent	Vs.	More intelligent
Submissive	Vs.	Emotionally Stable
Serious	Vs.	Happy-go-lucky
Expedient	Vs.	Conscientious
Timid	Vs.	Venturesome
Relaxed	Vs.	Tense
Tough minded	Vs.	Sensitive
Trusting	Vs.	Suspicious
Practical	Vs.	Imaginative
Fortnight	Vs.	Shrewd
Self-assumed	Vs.	Apprehensive
Conservative	Vs.	Experimenting
Group Dependent	Vs.	Self-Sufficient
Uncontrolled	Vs.	Controlled

CONCLUSION

Personality is the study of basic traits of an individual, relationship between traits and the way in which a person adjusts to the people and situations. Personality determines our thoughts, actions and gives directions to our specific goals. Personality inventory should be well worded. There is definitely some relationship between personality and intelligence. The theory of emotional intelligence promises to predict and improve the life skills of individuals. The proponents of the theory believe that in understanding, analyzing and managing emotions in themselves and others, lies the key to an improved quality of life. As the operationalisation of the theory is the crucial factor which validates their claim, the first and foremost challenge that faces the theorists is to design an instrument or improve upon existing measures which will accurately evaluate and assess the emotional skills of an individual. This will also set to rest the other fundamental question whether emotional intelligence is a distinct form of intelligence or simply old wine in new bottle.

REFERENCES

- Abraham, R. (1999) Emotional Intelligence in Organizations: A Conceptualization. [Monograph] Genetic, Social, and General Psychology Monographs, pp.125, 209-27.
- Minnesota Counseling Inventory by Berlie and Layton Published by Psychological Corporation.
- The Emotionally Intelligent Workplace (pp.27-44) San Francisco: jossey-Bass.
- Malcolm Higgs et al., Journal of Managerial Psychology.
- Mayer, J. D. (2001). A field guide for emotional intelligence. In J. Ciarrochi & J. P. Forgas & J. D. Mayer (Eds.), Emotional intelligence and everyday life. (pp. 3-24). New York: Psychology Press.
- Mowrer, O.H. (1960). Learning theory and behavior. New York: John Wiley and sons.
- Woodworth, R. S. (1940). Psychology. 4 th edition. New York: Henry Holt.
- Sternberg, R.J. Conway, B.E., Ketron, J.L., & Bernstein, M. (1981). People's conceptions of intelligence. Journal of Personality & Social Psychology, 41, 37-55.
- Salovey, P. & Mayer J. D. (1990) Emotional intelligence. Imagination, Cognition, and Personality (pp.185 – 211)



LANGUAGE AS A REPRESENTATIONAL TECHNOLOGY: A QUALITATIVE SOCIOLOGICAL REVIEW IN CASE OF HIV/AIDS RELATED STIGMA STUDY

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ABSTRACT

Background: The most of the people apply to words about HIV affect the way people living with HIV feel about themselves, differently. Such words also have an impact on most of the people make out another way of think about those living with HIV. However, HIV/AIDS stigma denotes the possession of negative traits that marks one out as different from others through the stigmatized language. Therefore, many people with an HIV positive status choose not to disclose. **Methods:** We conducted a qualitative based phenomenological theory to develop a theoretical model explaining how language impact on HIV disclosure and what the mechanisms are that determine whether people choose to disclose or not. We conducted in-depth interviews among 20 people living with HIV in Paschim Medinipore district, West Bengal province, India. Data were analyzed using thematic analysis method, performing three levels of open, axial, and selective coding. **Results:** Our theoretical model illustrates how the language performs varieties of institutional function in names of representational technology and dominant systems to social control over people with HIV, namely a community protection and a public health system, independently or jointly with state operator, shape contexts, mechanisms and outcomes for HIV disclosure. **Conclusion:** This theoretical model can be used in understanding the processes of stigmatization of HIV disclosure in a societal level where HIV is concentrated in vulnerable populations and is highly stigmatized, and in determining how HIV related discourse to mould and shape larger

masses thoughts and knowledge. Discourse therefore; seem to be culturally and socially organized way of saying.

KEY WORDS:*Language, Stigma, Institutional Discourse, Social Control Mechanism.*

If we spoke a different language, we would perceive a some what different world.

Ludwig Wittgenstein

INTRODUCTION:

Language is a vigor component of thoughts and socialization, integrated part of culture, symbol of social and cultural identity, a mode of communication and representation. Languages have a deep bond to the thought and culture of the people who speak them and every language divides up the world differently. Have capacity to produce and disseminated discourse with institutional values, meaning and positions. Institution's power and politics are frequently exercised through the powerful discourse of their members. We only have to think of the news media in this respect .This is an impression they certainly strive to create. The sourcing and legitimization of the news is therefore bound up with the action, opinion and values of dominant groups in society. In this ways, the medical institution and media tend to function ideologically, not so much due to bias, but simply through the nature of established routine practices. Yet in the some way, these institutions promote and legitimized discourse of who is and is not good citizen and who are the evil –doers (PLWH) among us. Some extend neo-liberal discourse of social control, which construct crime or punishment as an individual product rather than structural problem and the individual offender as invested with bushy choice and self-responsibility to outcome .We are particularly concerned with the hegemonic rise of specific institutional discourses over others in late modern society. In this regards, Language plays such a significant role in post modern era because of it being a “knowledge driven”, that is , constantly generating knowledge about the world and how people are to act in the pattern world that has re-created by media. Simultaneously, institution plays a vital role in this manner as they are primary sites for ‘reality construction’. Generally, regards language as constitutive of institution (deetz 1982). In this view, language is the principle means by which institution creates a coherent social reality that forms their sense of who they are. The concept of “variation” is not as Saussure thought of artifact of individual choice but a product of social differentiation. As Saussure alleged each one has equal surfeit to langue, and the homogeneities of langue are achieved not natural. Language as a sign scheme is not simply an illogical relation between signifier and signified, but an ideologically provoked system of signs which pedals and shapes all the social realities. As a matter of fact, language can be worn to control the way people think. At the individual level it is very common for a person who needs to avow his/her authority and dominance to use longer words to electrify. We usually make use of the sentimental aspect of language, when we have many utterances in mind to communicate the same message but ‘selecting one as appropriate’ and not another is presentation ourselves to be receptive to power and social affairs between us and the individuals or groups we are addressing (PLWH). Why is standard associated with authority, discipline, social and moral order, its speakers seeming as educated, having esteem for

societies' standards and norms? It would not be illicit to argue that, because they prop up power as a result "inclusion" is that they are element of socially powerful group. It is concerning about apply of power and influences to control inclusive social patterns of language use. Language is defined at this time as a means of social control as representational technology, used by dominant group who exercised the power and AIDS discourse, a viewpoint by which language precincts can be seen as a method of discriminating against vulnerable groups like HIV positive people. As **Densie Daoust** has rightly asserted that language arrangement is also diffusion of cultural and social values. It is an accepted fact that dominant language (andocentric stigmatized language) is spoken by socially powerful elite. A dominant language group gearshift the decisive authority in the areas of administration, politics and economy and policy forming and gives first choice in fermentation of new kinds of stigmatized language and to those who have sway of dominant language. This underprivileged of vulnerable group is been left with only two choices of accept it or resist it.

REVIEW OF LITERATURE:

Constructing subjective reality of HIV/AIDS stigma through the Language:

In the last hardly decades, social constructionism has been embraced in diverse areas of acquaintance in the international literature. Centering on the course of the social construction of reality (Gergen, 1994), social constructionist paradigm has been offered in numerous range of practices of education, health care, community work, but too in the field of sociology (Gergen & Gergen, 2012), enriched a assortment of research and specialized practices, allowing novel practices to emerge (Gergen, 2009). Being a postmodern paradigm (Hacking, 1999), the central foundation of this paper is to explore the ways of sympathetic the processes of language in the social life context, language being the bond between thought and action. The paper offers a brief review of social constructionism standpoint to create the context for the negotiations, and then the potential of language that can notify and constituted the HIV related stigma discourse is existing. The paper is based on the assumptions of this epistemological perspective (Gergen, 2009) emphasizing the budding new thoughts throughout the meanings constructed as a result of members' interactions, language being an important tool for considerate particular aspects of HIV positive people life (Deal & Kennedy, 1982; Ouchi & Wilkins, 1985). The focus is to discover how language influences originated and redesign stigmatized practices that may be ideologically enclosed (Hemetsberger & Reinhardt, 2006; Musson, Cohen, & Tietze, 2007). People put up knowledge as they act together to each other in a social, cultural, and past context. Knowledge constructed is relational, vibrant, and based on human action (Hosking & McNamee, 2006). The call of the outlook is to comprehend how aspects of the governmental surroundings taken-for-granted are socially constructed, breach space for dialoging, thereby new possibilities to act (Hosking, 2011; Cojocaru, 2012).

LANGUAGE AND SOCIAL LIFE:

The constructionist loom emphasizes the ability to produce realities through language, in its speckled forms of presentation, inspiring a process of continuous creation (Cojocaru, 2005; Cojocaru, 2013). Language is added than just a way of connecting people. People 'exist' in language. The type of knowledge generated from this point of view is knowledge about what

forms of reality language constructs (Cunliffe, 2008). In this sense ‘knowledge is seen not as a little that a person has or doesn’t have, but as something that people do together’ (Burr, 2003, p. 9). Consequently the spirit is not on the individual person but rather on the social interaction, in which language is generated, continual, and discarded (Gergen, 2005). Language and its varieties forms of representations are indispensable to the processes of building social interaction (Gergen, McNamee & Barrett, 2001; Gergen, Gergen & Barrett, 2004). Appreciative the process of language constructed can be useful to embrace the scenery of change, the challenges, by portrayal attention to the language roles which enables the participants to frame new shared meanings (Marshall & Heracleous, 2005).

Oppression through the Language:

Oppression is viewed as a *complex web* of structures and processes that are enveloping in daily life through our language (Bell, 1997, p. 4) and is later apparent at individual, institutional, and social/cultural levels (Young, 1990; Bell, 1997; Hardiman & Jackson, 1997; Rauscher & McClintock, 1997; Andersen & Collins, 2004). At the **individual level**, people are socialized to believe stereotypes and incorporate messages of inadequacy and superiority about their own and others’ social groups (Ortiz & Jani, 2010). At the **institutional level** the practices and policies of media, legal, health care, religion, and other institutions unenthusiastically influence members of oppressed groups while concurrently privileging members of more powerful groups. At the **social/cultural level**, *beliefs, symbols, and underlying cultural rules of behavior* produce and reproduce oppression (see Derman-Sparks & Phillips, 1997). For example, societal beliefs about the seriousness of certain groups and accepted practices regarding ways of interacting with – or avoiding – them may be imputes of social/cultural oppression. In each form groups are judged in relation to a defined norm, which is brace with institutional power (e.g., media, economic system). Groups who do not vigorous this norm are defined as ‘Others’. The behaviors of the Others (PLWH) may be either invisible or indistinct. This may occur through presentation of false information or accentuate group members’ failures (e.g., media sensationalizing information about HIV/AIDS related victimization without corresponding stories about their fight against the stigmatized discrimination). These practices add force to stereotyping, through which *people are denied their individual characteristics and behavior and are dehumanized* (Pharr, 1998, p. 59). When people accept stereotypes, they are apt to culpability the victim for her/his condition. Additional, members of oppressed groups may be secluded from larger society. Oppression frameworks be familiar with that oppression at all three levels may be mindful and overt (e.g., use of derogatory names, laws restricting voting or other civil rights) or comatose and stealthy (e.g., failing to include people affected when decisions are made).

LINGUISTIC OBJECTIFICATION:

The notion of linguistic objectification is that how language externalized the world and how it creates discriminatory categorizes individuals into groups and vice versa. Central vs. marginal-trying to show that some members are central (Non-infected) and others (HIV infected) are marginal. They have at least the budding to order the world to costume their own ends, the potential to construct a language, a reality, a body of knowledge in which they are middle figures, the potential to justifiable their own primacy, and to create a system of beliefs which is beyond challenge. Linguistic practices are used mainly to display how they fall of central

membership. We can investigate the ways to know how language is used in social construction of HIV related subjective reality and modes of life being a HIV positive. In this way, Dominant language (stigmatized language) has considerable control over the shaping of their routine experiences of the world and the way mainstream society objectified the world. Thus have power to promote exacting kinds of identities (HIV positive people seems to be morally polluted) to suit for used as a tool of social control on the ground of largest social purposes to remain society healthy and economically productive. In other words, HIV/AIDS related negative attribute solely understand in terms of social relationships that convert a simple characteristic into a full-fledge stigma. Where American sociologist Goffman variously defines HIV/AIDS related stigma need to be comprehend a "Language of relationships". Therefore, AIDS stigma is a major blockade to HIV/AIDS prevention and treatment. While AIDS stigma is recognized as a significant issue in the AIDS pandemic, there are relatively few empirical studies of AIDS-related stigma and to our knowledge there are no standardized, reliable and validated measures of introvert language and AIDS-related stigma developed for use in this study.

RESEARCH METHODS AND METHODOLOGY:

Qualitative research is an umbrella term under which a variety of research methods that use language data are clustered. The diverse qualitative approaches ask to answer different kinds of research questions and make use of different analytic tools. The kind of language data they collect and the manner in which it is collected varies according to their disciplines and positions regarding the philosophy of science.

The Study of Experience

The area to be studied should determine the inquiry methods. The experiential life of people is the area qualitative methods are designed to study. "Qualitative inquiry deals with human lived experience. It is the *life-world* as it is lived, felt, undergone, made sense of, and accomplished by human beings that is the object of study" (Schwandt, 2001, p. 84). A primary purpose of qualitative research is to describe and clarify experience as it is lived and constituted in awareness. Qualitative methods are specifically constructed to take account of the particular characteristics of human experience and to facilitate the investigation of experience. We have access to much of their own experiences being PLWH, but their experiences are not directly available to public view. Thus, the data source for study of experience need to accord of first-person or self-reports of participants' own social episodes.

Data as Evidence

The purpose of data gathering in qualitative research is to provide evidence for the experience it is investigating. The evidence is in the form of accounts people have given of the experience. The researcher analyzes the evidence to produce a core description of the experience. Most of the evidence in this study takes the form of oral version. Written evidence is gathered from documents, and data originally generated in oral form (e.g., through in-depth interviews) are transformed into written texts through transcription.

Limitations of Self-Reports as Evidence

Evidence about human experience has inherent limitations compared with data about human behavior. Because experience is not directly observable, data about it depend on the participants' ability to reflectively discern aspects of their own experience and to effectively communicate what they discern through the symbols of language. Evidence in the form of reports from participants' self-reflection has a long history in psychology. The capacity to be aware of or to reminisce one's experience is inherently limited. People do not have a clear window into their inner life. Any gaze is newly way filtered through the lens of language, gender, social class, race, and ethnicity.

Self-Report Data and Language

While people's stigma experiences are not flawlessly obvious to us, we have at least partly access to them. However, the translation of a reflective alertness of an experience into a language term might promote distance the field proof of an experience from the experience itself. The sorts of interaction that holds between experience and its description in language remain a contested philosophical issue (Devitt & Sterelny, 1987). Rather positions on this topic recline along a gamut from Husserl's phenomenological idea that experiences lead language to Derrida's postmodern notion that experience itself is a construction of the language one speaks. In this regards, Gendlin (1962) implicit that experience is more complex than language and that it informs and corrects the words people use to express it. Thus, we need to be sensitive to the significance of participants' use of metaphors regarding HIV and stories in their expressions. Therefore, we more thoughtful to the leeway that the meaning of expressions given by participants whose first language differs from that of the researchers may need to be clarified and essential to understand that translations of gathered data from one language to an added might disfigure meaning.

Use of Observational Data

"Observation is the modus operandi of crowded data through straightcontact with an object-usually a further human being. We carefullywatch the behaviors and mode of verbal expression during the interview and critically study all the documents, properties of theobject like their ART attendance card" (Potter, 1996, p. 98). Observations are the primary datasource in sociological studies particularly in this study. Observations are alsoworn to complement and elucidate data resultant from participantinterviews in this study. One font of observational data in tie withinterviewing is the participants' behaviors, facial expressions, gestures,bodily tone, clothing, and other nonverbal indications. To be integrated into the collection of textual data used inanalysis of the study, therefore, observations to be recorded in written form. Observationalremarks be recorded throughout an interview, but repeatedly,we were made instantly after its conclusion.

RESEARCH DESIGN:

The research design used for the study was phenomenological research design. First an ethical permission was obtained from University Institutional ethical committee and then a written permission was obtained from West Bengal NACO Office, Department of Health and Family welfare department. For the study, around 20 (10 males and 10 females) HIV positive patients who were between the age group of 18 years to 50 years, able to communicate in Bengali and

willing to participate in the study were included. Through purposive sampling technique with in-depth interview method were made separately for males and females. Then researcher facilitated the groups with her assistants. The tool consisted of two sections. Section-A had eight variables and section-B has six open-ended questions. The researcher collected data on 01 April 2018. First socio demographic variables followed by live experiences of HIV positive patient's data were collected.

Data collection process

Data were collected from 1st April to 30th June 2018 after the ethical clearance and permission from the West Bengal Government Ethical Committee. The questionnaires were hand delivered by the researcher. A general communication was sent to the hospital staff to inform them through the normal channel of communication about the study. Thereafter, the researcher hand delivered the questionnaire with a return envelope to the different units of the hospital. The respondents were requested to drop the completed questionnaires in a box which was made available at the unit. Respondents were given one month to return the completed questionnaire. To enhance the response rate, the researcher posted a reminder at the notice boards of the different units two days before the closing date and the District Health Officer urged the participants to return the questionnaires during the morning Handover meetings. This period was further extended to a further one month due to low response rate. The low response rate during the initial period was mainly due to a large number of the respondents who were on holiday.

Design and setting:

The study was conducted according to the principles expressed in Helsinki Declaration (1964), and was approved by the University Institutional Ethics Committee (IEC) and Clinical Research center (CRC), Ministry of Health and Welfare, Government of West Bengal. The study was also registered with National Medical Research Registry (NMRR) database. Little has been known about general perceptions of patients' with HIV/AIDS on subject matter; therefore, qualitative research was adopted to explore the issue. The study was conducted at Ghatal sub-divisional Hospital and Medinipur medical college and hospital, Paschim Medinipur, West Bengal, India, the largest referral centre for infectious diseases in the Paschim Medinipur district. All interviews were conducted in closed counselling room especially arranged for the study.

The participants:

Participants were selected from the ART clinics between April and June 2018 with the help of Purposive sampling method. HIV/AIDS patients, 18 years of age or older, diagnosed with HIV/AIDS attending ART clinics at Hospital Ghatal Sub-divisional Hospital and Medinipur Medical College and Hospital were approached personally by principal investigator to participate in this study. Consulting medical doctors and councilors also helped in briefly informing the patients about the objective of the study while patients were having their appointments; however, participation was entirely on voluntarily basis therefore no financial or other forms of incentives were given upon study participation. Study information sheets in Bengali and English languages were provided, and patients were also given verbal information on the research. Both written and verbal consents were obtained prior to data collection. A total of 35 patients were approached;

however, a saturation point was reached at 20th interview and no new information was obtained from the subsequent interviews.

Study tool:

A semi-structured interview guide was used for the purpose of data collection. The interview guide was developed after extensive literature review, where list of possible questions to assess the patients' perspective on HIV/AIDS and status disclosure were identified. Open-ended questions were created so that it can provide interviewees with a maximum opportunity to express their views. The initial version of draft interview guide was discussed among the resource person (Research supervisor, others social sciences professor, HIV/AIDS councilors and medical doctor) and was modified after a few rounds of discussion. Later this modified version of interview guide was subjected to review by Socio-medically (knowledge in Medical Sociology) qualified professionals, having experience in qualitative research. In addition to check whether particular given set of questions were useful in the retrieval of subjective as well as objective types of information, a pre-testing of the interview guide was carried out by conducting pilot interviews with patients with HIV/AIDS. Finally, specific probes identified during pilot interviews were added to the interview guide. However, these findings of pre-testing interviews were excluded from data presented.

The interviewers:

Interviews were conducted by research investigator (Research scholar) in the Bengali language as majority of participants were comfortable with it; however, Hindi language (national language of India) was also used for patients who preferred to communicate in it, for which a HIV/AIDS councilor's as a research assistant was appointed to help. The research assistant was briefed about the study objectives, scope and procedure and had attended (shadowed) interview sessions with principal investigator prior to the conduction of any interviews.

Interview process and procedure:

Each interview lasted for approximately 35–65 min. All interviews were audio-recorded and the principal investigator attended all interviews with the research assistant to take field notes and facilitate the interview process. The interviews were mainly focused on study objectives, and probing questions were also used where necessary to get a more thorough understanding of the issue involved. Each transcribed interview verbatim was then sent to the study participants for their approval. Patients' demographics along with relevant disease and treatment-related data were also obtained prior to interviews.

The Interviews in Bengali language were transcribed and translated into English by the research assistant, while the principal investigator transcribed and coded all interviews, and related themes were developed. All transcribed interviews were later subjected to thematic analysis, and the transcripts were analyzed for relevant content to identify the emerging categories. For validation purpose, all analyses were reviewed by a principal investigator and an experienced qualitative research expert.

Ethical consideration:



The present research procedures based on standardized and made out uniformity for all participants who are living with HIV/AIDS. Permission for enter into the field was obtained from University Institutional Ethical committee and written consent from Health and welfare Department , Government of west Bengal . Responded were informed about the research and objectives and their written consent was oblivious to indicate their willingness to participate in the present study. Respondent were assured that the collecting data to generated into information obtained would be treated as confidential. The result will be used for research purpose to develop new theory about health related stigma. They were enjoyed full freedom that they choose to stop interview at the anytime, any moment or any stage and exercised the power not to give answer some of the questions. They are also briefed about that the information collected will only be used for this research purpose. The transcriptions and records, in their entirety, were secured and coded in a protected file. Refusal to participate in the study had no interference with the service or treatment received at the centre.

Rights of the institution

The Research and Ethical Committee of the Department of Medical Science, Vidyasagar University approved this research proposal. This PhD work was also referred to the Institutional Ethical committee, Department of Health and Welfare, Government of West Bengal, Provincial Ethical Research Committee for consideration prior to data collection. Permission to conduct the research in the particular hospital was obtained. The researcher promised the responded not to publish the name of the institution and not to disseminate the research results to the authorities of the institution.

Protecting the rights of informants

Research involving humans requires a careful consideration of the procedures to be used in order to protect the rights of human subjects (Hicks 1999:74). The researcher considered three major Principles, namely beneficence, respect for human dignity and justice.

DATA ANALYSIS:

Data analysis was complete instantly, by semi-structure questionnaire after complete in-depth interview with each patients and by listening to the sound recording and verifying the data (taken by the researcher and assistants). The whole content of the interview was verified by reading line by line and paragraph by paragraph, looking for noteworthy statements and codes according to the topics addressed. We wore three levels of coding. In the level one coding researcher examine the data line by line and making codes which were taken from the language of the subjects who attended the focus group. In level two coding, comparing of coded data with other data and manufacture of categories were done. In level three coding, the categories that appear to cluster mutually were formed as themes. Then the documents were acceded to experts for justification. This action offered contingent an opportunity to determine the reliability of the coding.

Results:

Socio-demographic variables

A total of 20 HIV positive patients were studied in the present study. (Table 1) displays majority (90%) of HIV positive patients participated in the study were between 18 years to 50 years of

age group, 50% of them were males and 50% of them were females, most (90.7%) of them were Hindus, remain(10.00%) of them are Muslim, 85.7% of them were married, remain 15% were widow, in that 100% of them were having children, majority (30.3%) were illiterates and 45% of them were depending on their spouse for their source of income.

TABLE 1: SOCIO-DEMOGRAPHIC PROFILES OF HIV POSITIVE PATIENTS (N=20).

Variables	HIV positive patients
Age(Yrs)	90%(18-50 yrs)
Males	50%
Females	50%
Hindu	90%
Muslim	10%
Married	85%
Widow	15%
Having Children	100%

Quality of life among HIV positive patients:

Regarding quality of life, from analysis six themes were identified and presented as follows.

THEME-1: Inform of being HIV positive:

All participants expressed that they were inform their HIV positive status through the health care providers such as Laboratory staff or nurse and thereafter reconfirm by doctors. Majority of them confess that they have had a bad experience to know their positive status. Health care providers let's them informed with anguished words.

One female participant said that; "I have informed HIV from hospital medical staff. He had ready with bad words to convey my disease. Then I felt ashamed myself. Then I acknowledged I have got bad disease and how to inform my family .When I thought that moment it's shaken my soul".

Another male patient expressed that; "Medical doctors and hospital staff want to know how I caught the disease with rough tone. They assumed I am bad gay and used to visit prostitution or anything else. They were presumed my character and judge in front of general patients and I felt like to criminal".

THEME-2: Reaction to HIV diagnosis:

Most of HIV positive patients reported that they encompass experience a feeling of shock; fear of others is awake of their HIV status. One female patient said that; "When I heard that I got HIV, I was shocked, unable to express and felt how to face others. And how to convey the disease with words. I think there is yet no appropriate word in any language to express their HIV positive status with fearlessly".

Another female patient added to this; “When I heard, I got HIV, I felt very bad, felt like to die and also thought who will take care of my children?”

One male patient said that; “When I heard that I got HIV, I thought it’s my fate, what can I do? I felt I should learn to live with this.”

THEME-3: Impact of HIV on family members:

Majority (65%) of HIV positive patients uttered that their family members obtain of them and care very well with love and affection. One female patient said that, “My husband (who is also HIV positive) takes care of me very well with love and care than before.” Another male patient added to this; “As my wife also got HIV, there is no difference in love and care in the present compared to the past.” Remain 35% of them had a worst experience in family life and by their members. Even they forced to compel stay alone and often like to interact with abusive words or compare with insects.

THEME-4: Disclosure of HIV:

Some participants said that disclosure of the HIV positive status was a very sensitive issue and need to think about proper and value-free medical words, therefore, inform hesitation free. Some of them thought that disclosure to their children and parents might discriminate against them, the information would affect their studies and parents cannot move freely with the society. One patient said that; “I am 5 years married gay, I have not told my neighbors about my disease because they might feel bad to know that I am suffering with HIV and my family members may keep me away from home.” All HIV positive women patients showed their concern about children. One patient said that; “My children are studying in primary school if I say to them or any how school authority known my positive status they expel my child from school. What will be their reaction? If they accept me, it will be fine but if they not or reject me? So, I am very scared to inform them”.

THEME-5: Stigmatized behavior among health care workers: Most of the HIV patients uttered that, they are not minister to well in private hospitals. One patient said that; “When I had fever, and went to one private nursing home, they were not ready to examine me after known my HIV positive status rather than they gave me a medicine and send me away.” an added one patient supplementary to this; “Once I approached a private hospital with severe treatment, that time my condition was very bad, I couldn’t even speak. In spite of my sufferings, the healthcare workers were not ready to give me emergency treatment even after my request and I was enforced to come out of the hospital without treatment.”

THEME 6: Government Poster and Media Discourses: Mainstream media shaping and constructing the subjective realities of the HIV status. The commanding role and the effect of media language discourse in shaping, reshaping and constructing of our world images and viewpoint cannot be unnoticed. Since all discourses are produced with some interpreters in mind but media discourse for an ideal theme. Real spectators have to assemble a relationship with the ideal subject to interpret it. There is one-sidedness of media language discourses. But social media is aggressive because it is a medium of discourse and discourse is strongly related to a different type of violence, the symbolic violence. Žižek (2008) explains symbolic violence as an objective type of violence, which happens through language. While objective violence is easily

professed against a milieu of “normality,” it is accurately in this background that symbolic violence stands, supporting, through language, the current consequences. Bourdieu (1999) also projected a concept of symbolic violence as the one twisted through language. This concept comes from Foucault (1972), who avow that discourse is a form of representing the world in terms of relationships of power and dominance and its production is controlled through certain rules accepted by society.

In this regards, one patient said that:

” Before infected as HIV positive watching the information/knowledge regarding HIV/AIDS in national level T.V channel... it would be just a vulgar able .Never talk about that kinds of HIV related advertisement with guardians. Similarly, now mainstream newspaper just talked about failure HIV related stigma story .In this way media promotion made us very uncomfortable and frustrated being a HIV positive”.

Image:

2

Images: 3



Image: 4



Source:https://www.google.co.in/search?q=stigmatized+poster+on+HIV+/AIDS+campaign+in+india&source=lnms&tbn=isch&sa=X&ved=0ahUKEwuj-ZHxnNTeAhWBP48KHd_DDa4.

THEME 7: .Being HIV women:

Mainstream language (patriarchy language) as accountable for genesis being a women’s inferior social location and objectifies them another way as “other”, therefore, it came into facilitated as powerful weapons in case of women with HIV. Language can be used to create lop-sided relations between gropes and individual. Language conveys the way the individuals put themselves in relationship to others, they way they group themselves, they powers they claim for

themselves. Linguistic preference of a speaker, convey social information, speakers position, background, place of origin, social class, social intent, whether s/he wants to become visible friendly or distant, familiar or differential superior or inferior. Because of the relationship between language use and group membership, language can encourage deep group loyalties. It can serve symbolic violence as a symbol of merger on several levels. Even though it is sometimes instinctively done, its effects are devastating because it helps the accustoming of these ideas (as Bourdieu [1999] argues) about women. Not only is one person saying this, but rather hundreds of people are reinforcing this discourse, creating knowledge (Foucault, 1972) that this is how things are. It may be a chirp, it may be a portrait of women as 'bitch', 'nymph', source of infection, Human super bug. Each and every occasion, timelines of people are swamped by reinforced through the powerful stigmatized language.

THEME 8: Attitudes and deeds are stigmatizing.

People are often ignorant that their attitudes and behaviour are stigmatizing. A word, action or belief might be discriminate inadvertently against a person infected with HIV. People habitually display behaviours contradictory to their beliefs. For instance:

One female patient said that: "My close friends thought that rather I say may believe that people living with HIV is just spoil the moral behaviours, ought to have what they get, or are being penalized by God for their sins".

In this regards one female patients share her experience like that my family members glowing to know that HIV cannot be transmitted through casual contact but may rebuff to take my cocking food and try to keep away from my contact ".

THEME 9: Choice of language:

Language is innermost to how stigma is articulated. One mode of way that language can be stigmatizing is the use of offensive allusions to those with HIV such as "Oo to basi din bachbena" or " Oo kharap choritear manus tai rog ta hoeachea " in local languages, or expressions such as "a walking corpse" or "he/she is gone" or " He / She ready to journey for die".

DISCUSSION:

Knowledge and fear which convey with language that embraces in unexpected ways that allow stigma to continue and reinforce as powerful social control weapons. Most people have some understanding of HIV transmission, but many lack in-depth or accurate knowledge about HIV. For example, many of them inform us that their family members and neighbours have did not any ideas about the difference between HIV and AIDS, how the disease progresses, the life expectancy of people living with HIV, or that HIV-related opportunistic infections (such as tuberculosis) are treatable and curable. Others may think that a positive HIV test means they will die. The fear of death is so powerful statement that disseminated powerful mainstream media; therefore, society will avoid individuals suspected to have HIV—even though they know that HIV is not transmitted through casual contact. Sexuality, morality, shame, and blame are associated with HIV which are constituted though the language of morality. Fuel to Stigmatization and often revolves around that the sexual transmission disease like HIV. Numerous people suppose to that individuals who are HIV-infected have to been infected

through sexual activities reckon socially or religiously undesirable. People living HIV are frequently alleged to be licentious, sloppy, or not capable to control themselves, and therefore accountable for their infection. The present study has provided an opportunity to the researcher to know the life experiences of HIV positive patients through the stigma experience that often reinforce by existing gender related and value laden language. Majority of patients expressed that, to inform their HIV positive status through the health care providers and only are responsible for starting stigmatized language. This may be due to lack of knowledge and communication gap between patients and health care providers. Largely respondents have acted pessimistically to their HIV positive diagnosis by revenue of fear, shock and incapacity to convey. In addition to this few patients of them were feared to reveal their disease state with their parents, children and friends. This may be due to fear of rejection by the family and society. Further, patients of both gender uttered that their spouses caring of them with love and tend since they also are suffering with HIV positive. Another sore matter the researchers was observed is that, all HIV positive patients came from lower middle class nuclear family, amongst of them, had small children who were also HIV positive. All the study participants articulated that, to take care of them and their family, they entail to work but the society is not able to accept them as it is and provide job. Hence, they requested the researchers to communicate to the government the same, so that the Government can plan a project where these HIV positive patients expected better treatment and stigma free words and can work and earn for their own bread within their limitations.

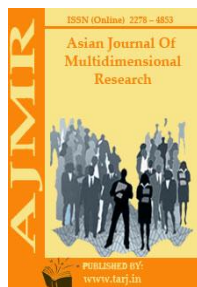
CONCLUSION:

We aimed to develop a model about stigma free language regarding HIV-related health care settings from the socio-linguistic perspectives. The emerging model revealed that stigma may be rooted in historically negative representations of HIV and PLWH, and perpetuated by inherent power inequalities between patients and providers through the stigmatized language. Moreover, stigmatizing and discriminatory behaviors may be attributed to fear of contracting an incurable disease, insufficient education and training, inadvertent behaviors, and limited contact with PLWH. Study participants conceptualized HIV related stigma as a harmful process that impacted both patients and providers in terms of health outcomes. Stigma reduction strategies are, therefore, imperative to improve patient and provider experiences in health care settings, stigma free language, clinical training and practice, patient empowerment, and health communication may be helpful for stigma reduction. As a matter of fact, arbitrariness of meaning system about HIV disease is also varies ideologically. There is a difference between meaning of words in medical books and meaning of words in public discourse. For the interpretation of meaning we should know Meaning of constituent parts, Connection between sequential parts of the community and connection between community and the larger part of society. We ought to appreciate the implication of language in manufacture of maintenance and modify of social relations of power. Increase consciousness of how language contributes to the dominance of some people by others (PLWH). Had language been simply a way of communication there would not have been stander and non-stander languages, stigmatized and non-stigmatize languages, gender bias and non- bias languages, language dialect differences etc. So it prove and permissible the intellectuals dispute that language is a form of social perform which makes and

shapes and pedals all social realities rather than simply a mode of communication and sign and an nonfigurative relation between sing and signifier.

REFERENCES:

1. Heise L, Ellsberg M, Gottemoeller M. 1999. "Ending violence against women." *Population Reports*. Series L, No. 11. Baltimore, Maryland: Population Information Program, Johns Hopkins University School of Public Health. Cited in WHO. 2002 World Report on Violence and Health. Geneva: WHO
2. Aggleton, P. 2001. *Comparative analysis: Research studies from India and Uganda. HIV and AIDS-related discrimination, stigmatization and denial*. UNAIDS: Geneva.
3. Bharat, S. 2001. *India: HIV and AIDS-related Discrimination, Stigmatization and Denial*. UNAIDS: Geneva.
4. Busza, J. 1999. *Literature Review: Challenging HIV-related Stigma and Discrimination in Southeast Asia: Past successes and future priorities*. Population Council: New York.
5. Gilbert, L and L Walker. 2002. Treading the path of least resistance: HIV/AIDS and social inequalities a South African case study. *Soc Sci Med* 54(7): 1093-110. http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=11999505
6. Gilmore, N and MA Somerville. 1994. Stigmatization, scapegoating and discrimination in sexually transmitted diseases: overcoming 'them' and 'us'. *Soc Sci Med* 39(9): 1339-58. http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=7801170
7. Moore, M. 2003. *A Behavior Change Perspective on Integrating PMTCT and Safe Motherhood Programs: A Discussion Paper*. The CHANGE Project / Academy for Educational Development: Washington, DC.
8. Ogden, J and L Nyblade. 2005. *Common at its Core: HIV-Related Stigma Across Contexts*. International Center for Research on Women
9. Parker, R and P Aggleton. 2002. *A conceptual framework and basis for action: HIV/AIDS stigma and discrimination*. UNAIDS, World AIDS Campaign 2002-2003: Geneva. Retrieved 22 February 2006 from http://pdf.dec.org/pdf_docs/PNACP852.pdf.
10. Rutenberg, N, ML Field-Nguer, et al. 2001. *Community Involvement in the Prevention of Mother-to-Child Transmission of HIV: Insights and Recommendations*. The Population Council and International Center on Research for Women.
11. Brandis, W. and Henderson, D. 1970. *Social Class Language and Communication*. London: Routledge
12. Kegan Paul. Brown, Gillian. 1995. *Speakers, Listeners and Communication: Explorations in Discourse Analysis*. London: Cambridge University Press.
13. Chaudhry, Nandita. 2004. *Listening to Culture: Constructing Reality from everyday talk*. New Delhi: Sage.
14. Cherry, Colin. 1971. *World Communication: Threat or Promise? A Sociotechnical Approach*. London: Wiley-Interscience.
15. Clark, H. Herbert. 1996. *Using Language*. Cambridge: Cambridge University Press.
16. Cooper, Robert L. 1989. *Language Planning and Social Change*. Cambridge University



Press.

16. 16. Crystal, David. 1997. English as a Global language. London: Cambridge University Press
- Duncan, High Dalziel. 1962. Communication and Social Order. Oxford: Oxford University Press.
17. 17. Edwards, A.D. 1976. Language in Culture and Class: The Sociology of Language and Education. London: Heinemann.
18. 18. Fairclough, Norman. 1989. Language and Power. London and New York: Logman.
- Fowler, Roger. 1991.
19. 19. Language in the News: Discourse and Identity in the Press. London: Routledge.
20. 20. Fowler, Roger and Hodge, Bob. 1979. Language and Control. London: Routledge & Kegan Paul.
- Hecht, Michael M. 1998.
21. 21. Communicating Prejudice. (ed.). New Delhi: Sege.
- Holborow, Marine. 1999.
22. 22. Pride, J.B. 1997. The Social Meaning of Language. London: Oxford University Press.
- Sara. 2003.
23. 23. Verma, Mahendra K. 1998. Sociolinguistics, Language and Society. (ed.). New Delhi: Sege.



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**PLANNING THE MOVEMENT OF MOVING MOBILE ROBOTS IN A
CHANGING ENVIRONMENT**

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ABSTRACT

The article discusses the methods used by the robot engine pathway planning, clairvoyance-graph method and possible road mapping. Potential features include the potential effects of two potential forces. These forces are: the force of gravity and the force of the barrier to push. The circular-graph method has been studied in the form of circles representing problematic environments with flexible logic and the corresponding graphs in the course of the rotation of known barriers. Compared to classical potential functions and clairvoyance methods, the method of the Modern Probable Roadmap (PRM - Probabilistic Road Map) examines its advantages and benefits. At the start of the planning phase, a roadmap is created using repetitive algorithms of random configurations and free, ie non-intrusive barriers, configurations are selected as the "nodes" of the road map. In advanced production systems, IR performs auxiliary and basic functions relative to the technological process. Changes in the complexity of complex IR operations in these systems make it difficult to calculate dynamic coefficients. Last but not the least, compared to classical potential functions and clairvoyance methods, the method of the Modern Probable Roadmap (PRM - Probabilistic Road Map) examines its advantages and benefits

KEYWORDS: Movement of Industrial Robots, Sensor, Adaptive And Programmable Robots Management, Potential Function, Cache-Graph Method,

INTRODUCTION

There are various methods and algorithms for building a trajectory of movement for moving and base rocket robots. However, there is no single universal approach to building a trajectory of traffic, taking into account the obstacles so far.

There are three ways to plan IR action paths:

1. Potential Functions Method.
2. Cache (grid) - graph method.
3. Possible pathway cards.

At the given point, the potential behavior of the SR route pathway is taken into account in terms of the potential of two potential forces. These forces are: forces of gravity and the forces to push the barriers.

The complexity of potential functions for local extremes and their unequivocal representation in multidimensional space is one of the greatest disadvantages of the potential functionality.

Theoretically, the clair-graphic method is used in the form of circles representing problematic environments with flexible logic and in the form of corresponding graphs in the rotation of known barriers. When searching for the optimal route on the graphs, they can be complex if they are of a large size [13].

METHODOLOGY

The method of the Probableistic Road Map (PRM - Probabilistic Road Map) has shown its efficacy and advantage when comparing classical potential functions and clairvoyance-graphs methods [105,106].

At the start of the planning phase, a roadmap is created using repetitive algorithms of random configurations and free, ie non-intrusive barriers, configurations are selected as the "nodes" of the road map. Then there are trajectories, which are called local scheduler and link the selected nodes with a simple and fast algorithm based on PRM path planning. In this way, the configuration consists of a gray node, the paths that are calculated by using the local planner - the arc.

Before calculating the arcs, a suboptimal trajectory over time should be constructed, taking into account the dynamic limitations in the system of coordinate coefficients in the IR activity. The length of the arc between the optional two points taken from the linear space is equal to:

$$q(s) = q^0 + \frac{q^T - q^0}{\|\Delta q\|} s = q^0 + \frac{\Delta q}{\|\Delta q\|} s, \quad s \in [0, S],$$

$$\|\Delta q\| = S = \sqrt{\sum_{i=1}^n (q_i^T - q_i^0)^2},$$

Here $q^0, q^T \in Q^n$ - linear space, s - arc.

At the stage of implementation, the problem of finding similar cards to the cache-graph methods is resolved between the two free configurations of the robot. The final path is removed by adding the trajectories from the starting point and the target point to the graph tile.

MAIN PART

It should be noted that the event of a predetermined barrier is brought to (or equal to) the static barrier barriers at which time the quasistatic card of these obstacles is present.

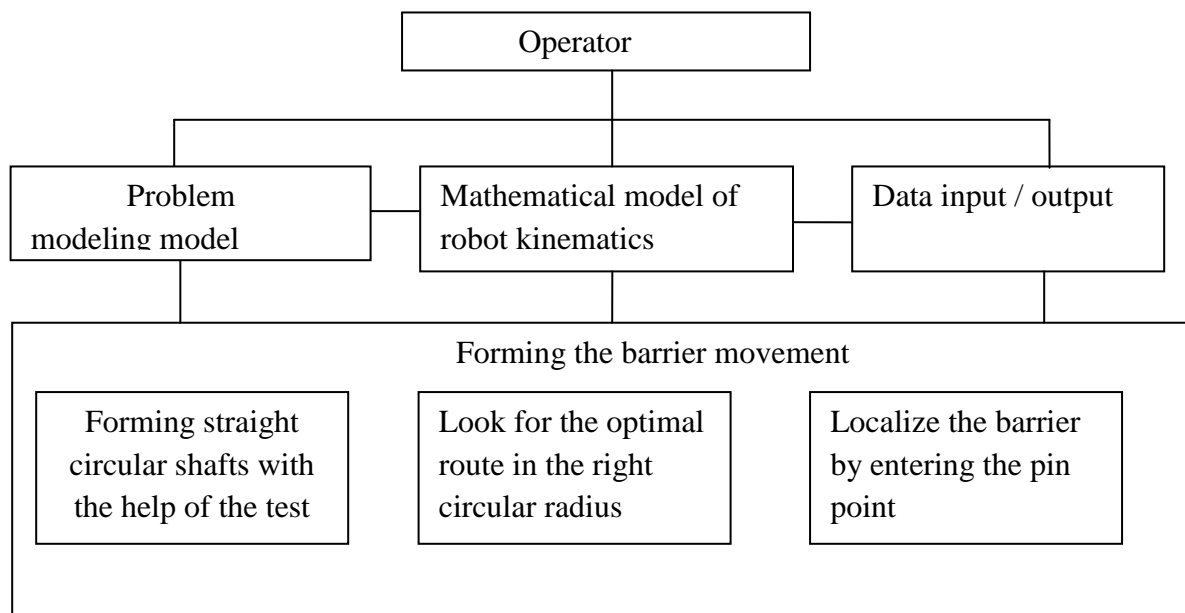
In contrast to the above methods [51], a new approach called "changing strategy method", based on the following components, is proposed:

- constructing a suboptimal trajectory over time in the robot's mobility area, taking into account kinematic and dynamic distinctions without taking into account obstacles;
- table of free or known safety circuits that do not intersect with obstacles;
- a local straight line trajectory with an intersecting trajectory with a trajectory and barrier that does not exist in the safe circular chart.

Figure 1 shows the "changing strategy method".

The process of planning the movement is different in the control systems inherent in the ranks of modern robots. For example, when analyzing the functionality of a robotic software and adaptive management system, it may be possible to notice that there is a difference in data receiving environment. This is evident in adaptive and programmed robots (Figure 2) [18].

The difference between the adaptive and robotized robot management systems can be found on the robot conveyor detailing equipment assembly. If given in the given case, the moments of details transfer in the conveyor belt are exact, the task that the robots can perform is strictly for the management of the program.

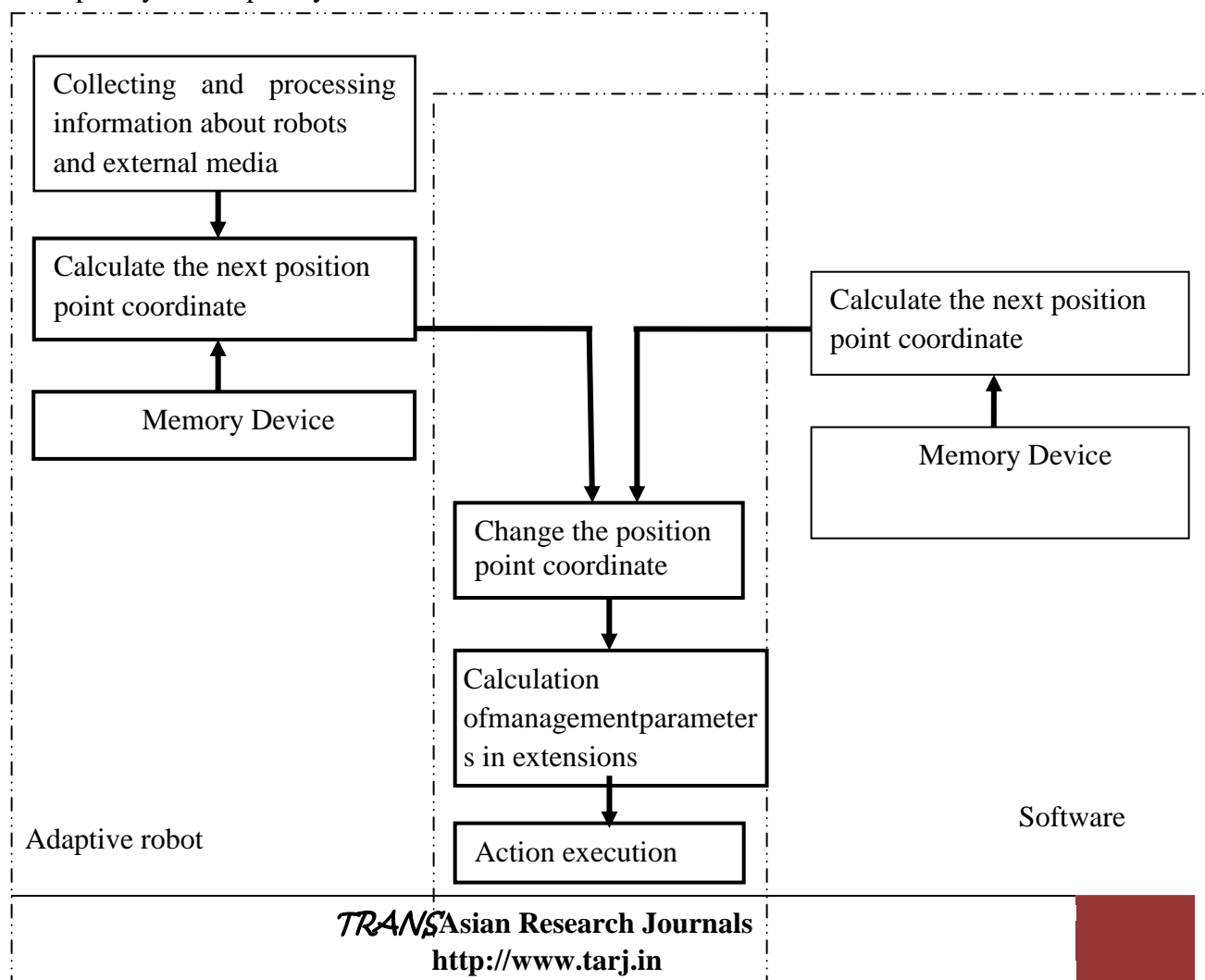


Picture 1 The Structure of the "Variable Strategy Method".

The algorithm of the robot motion program:

- 1-Coordinate of 1 position point coordinates;
2. Moving the robot handler to catch the detail;
- 3 - Switch to detention mode;
- Connecting the pneumatic hold device;
- 5-go to the initial state;
6. Removing the robot handler to the assembly device by touching the detail;
- closing the pneumatic holding device;
- Periodic repetition of process from step 8- 2.

However, the fact that the conveyor's speed is not uniform or the jump in the tracks creates a deviation in the robotic management system. In such cases, the robot can not detain the details completely or completely.



Picture 2 Adaptive and programmable robot management scheme.

Naturally, the robot does not notice this error, and the operator works in this mode until it is mixed.

It is possible to detect that the conveyor movement velocity is not uniform. However, it is not possible to determine details of the jump on the conveyor belt. Only one adaptive management system can solve the issue. For this purpose, the robotics module must be equipped not only with the sensor, but also with the equipment that can reflect the coordinates of the point and the point of change of the point of catchment.

The above algorithm should be in the following sequence:

Coordinate position 1: Position and initialization;

2 - initialization of capture device;

3 - Determination of the point of intent and measurement of the point of the point of detection, the detection of the contact details on the conveyor on the sensor;

4. Switching to catch mode, obtaining a target for reading the detachable device;

5. Connecting the pneumatic hold device;

6 - transition to the initial state;

7-Take away the detachable device with the detachable unit;

8- removing the pneumatic locking device;

Periodic repetition of process from step 9 through 2.

Adaptive robots' software function - Operator, Robot Transmissions, Information Systems, Technological Equipment and High Level Controls

(Figure 3).

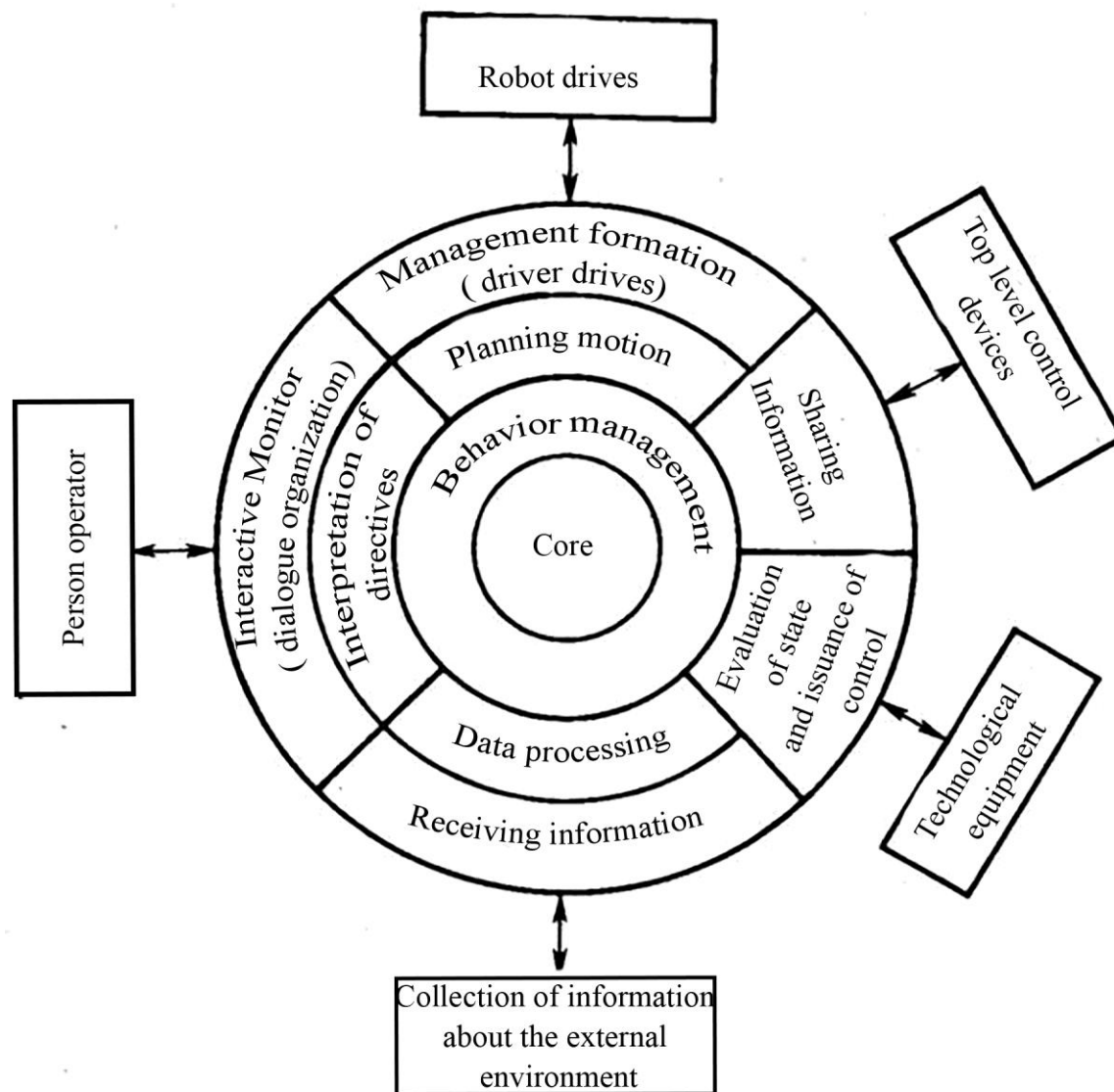


Photo 3 Adaptive robot software structure.

Adaptive Robot Programming System:

- Operator's order;
- work assignment;
- Robot problem-oriented programming languages;
- Performance of external devices;
- Ensuring high level management change.

Real Time Operating System:

- Monitor command;

- file system;
- programming languages;
- control input-output signals;
- Support for network sharing.

The use of adaptive robots in advanced manufacturing systems will significantly improve the quality of the products produced.

RESULTS

In advanced production systems, IR performs auxiliary and basic functions relative to the technological process. Changes in the complexity of complex IR operations in these systems make it difficult to calculate dynamic coefficients. If the IR motion is adapted to the adaptive management tactile management system and is represented by the Newton-Eos equation, then the number of operations for calculation of dynamic coefficients with regard to adaptive management devices is shown in Table 1 [87].

The number of these calculations depends on whether the IR is moving in a semi-loaded, maximum load. These IRs, at the same time, are parallel and sequential movements of the crankcase, while the other one is linear and rotatable, ie there are errors in the mixed IR space movement.

TABLE 1ADAPTIVE MANAGEMENT DEVICE ACCOUNT

Motion equation and adaptive management devices	Number of multiplication operations	Number of Insert Operations.
Newton-Euler movement equation	$117n - 24$	$103n - 21$
Small squares algorithm for adaptive methods	$30n^2 + 5n + 1$	$30n^2 + 3n - 1$
Management algorithm	$8n^3 + 2n^2 + 39$	$8n^3 - n^2 - n + 18$
Total	$8n^3 + 32n^2 + 5n + 40$	$8n^3 + 29n^2 + 2n + 17$

2-table 6 shows the error in the mode of the last three tracks of the robot Puma-560.

**TABLE 2THE SPACESHIPS OF THE LAST THREE PAIRS OF PUMA-560 ROBOTS
ERROR MESSAGES**

Types of loading	Rows	Formation of the trajectory	
		maximum error	final position error, degrees
High free status	4	0,34	0,000
	5	0,36	0,004

	6	0,28	0,002
Half loaded	4	0,78	0,0014
	5	1,14	0,050
	6	0,83	0,077
Top load status	4	1,20	0,023
	5	1,22	0,041
	6	0,58	0,019

CONCLUSION

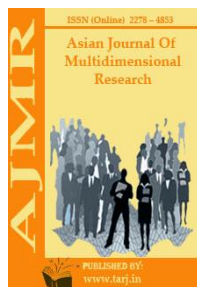
In conclusions the methods used by the robot engine pathway planning, clairvoyance-graph method and possible road mapping were analyzed and pointed out better solutions of the issue. Potential features include the potential effects of two potential forces. These forces are concluded as : the force of gravity and the force of the barrier to push.

Finally, the circular-graph method has been studied in the form of circles representing problematic environments with flexible logic and the corresponding graphs in the course of the rotation of known barriers.

Last but not the least, compared to classical potential functions and clairvoyance methods, the method of the Modern Probable Roadmap (PRM - Probabilistic Road Map) examines its advantages and benefits

REFERENCE

1. Wirth N. Algorithms and data structures. - M.: Nevsky Dialect, 2006. - p. 352.
2. Dobrynin D.A., Karpov V.E. Modeling of some forms of adaptive behavior of intelligent robots // Information technologies and computing systems No. 2, 2006. p.45-56.
3. Makarychev V.P. The method of variable strategies for constructing the trajectories of the movement of robots in an environment with obstacles // "Artificial Intelligence". - 2008. - № 3. - p. 451-461.
4. Fu K., Gonzalez R., Lee K. Robotics. Per. from English -M.: Peace. 1989. - 624 s.
5. Kavraki L. E., Latombe J.C. Probabilistic Roadmaps for Robot Path Planning, Robotics Laboratory, Department of Computer Science Stanford University. – Stanford, California CA 94305. – 1998. – 21 p.
6. Kavraki L. and Latombe J.-C. Randomized preprocessing of configuration space for fast path planning // In Proc. IEEE Int. Conf. Robotics and Automation. – San Diego, CA. – 1994. – P. 2138-2145.



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IMPACT OF INFRASTRUCTURE IN URBAN DEVELOPMENT: A COMPARATIVE ANALYSIS OF INDIA AND CHINA

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ABSTRACT:

This paper seeks to briefly explain the impact of infrastructure in urban development of two countries like India and China using secondary data for the time period from 1980 to 2016. 'F' test is used to test the relationship between the level of development and infrastructure facilities in both countries. The study resulted that both countries spend more money to provide the infrastructure facilities for high growth rate. But, the position of China in case of infrastructure facilities is superior to India. So the study suggested that India will adopt new techniques to improve their infrastructure so that it can achieve high growth rate.

KEYWORDS: China, Development, India, Infrastructure.

INTRODUCTION

Infrastructure plays an important role in urban development of developed and developing countries because infrastructure development provides employment opportunities, reduces the cost of trade and encourages the economic growth. India and China are the two largest populated developing countries in the World. Both countries want to improve their living conditions of the people, develop industries and infrastructural facilities. High growth rate are achieved by trade, investment and infrastructure. India gave more attention to the redistribution of wealth rather than development of infrastructure. But, China has followed the path of development with building impressive infrastructure and poverty reduction. In developing countries like India and China, Infrastructure facilities are run by Government department and State owned enterprises. Both countries India and China had met each other in 2014 regarding the more investment in infrastructure development in India by the Chinese government

REVIEW OF LITERATURE

World Development Report (1994) pointed out that productivity growth is high in those countries which have efficient stock of infrastructure facilities. Good quality infrastructure is an important determinant of FDI.¹ Sahoo, Dash and Netraj (2010) examined the role of infrastructure in economic development of China from the period of 1975-2007. They found that there is a positive contribution from infrastructure to economic development. They suggested new economic policies which can improve physical and human infrastructure for economic development.² Pucher et al. (2006) analysed the urban transport crisis in India and China. The main reasons of this crisis are high population growth, rapid urbanisation, more use of vehicles, and rising income.³ Bedi (2013) explained the situation of water supply in India after the independence. He analysed that the rate of growth of urban population was increased much faster than the water supply services. The majority of the people are living in slum areas and their conditions are very worse.⁴

NEED OF THE STUDY

The comparative analysis of India and China provides an opportunity for accelerating the process of economic development through infrastructural facilities.

OBJECTIVE AND HYPOTHESIS

The main objective of this research paper is to examine the role of infrastructure in urban development of India and China. The level of development is directly related to change in urban infrastructure is the tested hypothesis in this study.

RESEARCH METHODOLOGY

The research paper is based on secondary data which is collected from World Bank, Economic and Statistical organisation, Economic Survey, China Statistical Yearbooks, Asian Development Bank and UN-Habitat etc. Research paper is related to infrastructure facilities in India and China so data related to infrastructure like railways, road, airport, energy, electricity, mobile, internet, water and sanitation facilities are used which covered the time period from 1980 to 2016. 'F' test is used to test the relationship between level of development and infrastructure facilities in India and China.

RESULTS AND DISCUSSION

In research paper, to study the impact of infrastructure on urban development, we include two infrastructures i.e. economic and financial which are explained below briefly.

1. Economic Infrastructure:

In order to study, the role of infrastructure in urban development, we have considered transportation services, power, communications and information development, water and sanitation facilities which promote economic activity.

(A) Transportation services

- (1) Roads
- (2) Railways
- (3) Airports

(B) Power ,communications and Information development

- (1) Electricity
- (2) Fixed telephone, mobile subscription and internet users

(C) Improved water and sanitation facilities

2. Financial Infrastructure: These are explained one by one.

(A) TRANSPORT SERVICES

Transport services in India and China are one of the largest infrastructure developments in the World. In transport services, we include roads, railways and airport in the context of India and China.

(1) ROADS:

Quality of roads plays an important role for development of any economy. At the time of independence, India had a large network of roads. But the quality of roads in the form of planning, maintaining and designing the highway network was not good because of inefficient institutional structures.

TABLE1. ROAD INFRASTRUCTURE IN INDIA AND CHINA

Year	Rail lines (total route-km)		Railways passengers carried (million passenger-km)		Railways goods transported (million ton-km)	
	India	China	India	China	India	China
1980	61240	49940	208558	138037	158474	570732
1990	62367	53378	295644	263530	235785	1060100
2000	62759	58656	430666	441468	305201	1333606
2010	63974	66239	903465	791158	600548	2451185
2015	66030	67212	1147190	723006	681696	1980061

Source: World Development Indicators 2017

Paved road and road density have been increasing over the period in both countries. In case of paved roads, only 53.1 per cent roads are paved in India which is lower than in China (60.9). Table shows that in terms of road density by land area (km of road per 100 sq.km) India is doing well because in 2010, road density for India was 139.39 which compares well with 41.75 for China. Road density is very high in India comparative to China.

RAILWAYS:

People prefer railways as a prime mover than any other transportation facility. Railways are one of the lowest cost systems of the transportation which integrates people and goods transported across the countries.

Table2. Indicators of Railways in India and China

Year	Rail lines (total route-km)		Railways passengers carried (million passenger-km)		Railways goods transported (million ton-km)	
	India	China	India	China	India	China
1980	61240	49940	208558	138037	158474	570732
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2015	66030	67212	1147190	723006	681696	1980061

Source: World Development Indicators (22-12-17)

Table shows that railways have been viewed as a significant sphere of India and China. It impacts on development of growth as well as political and economy status of the country. In 1980's, China had 49940 km of rail lines and India had 61240 km of tracks but in 2015, Chinese railways has 67212 route km overtaking India (66030 route km). Indian railways have been able to add only 4790 km of route but China attained 17272 km of route over a period of 36 years. From 1980 to 2015, number of passengers carried by Indian railways is 1147190 indicating that

majority of population prefer railways as an important source of transportation. Passenger traffic and freight traffic are the main components of railways. Passenger traffic in India and China grew from a level of 208558 and 138037 million km in 1980 to a level of 1147190 and 723006 million km in 2015, an increase of 938632 in India and 524969 million km Goods transported by Chinese railways are highest in comparative to India. Goods transported by Chinese railways are highest in comparative to India.

AIRPORT:

Airpower industry in India and China is the fastest growing industry in the world because of rapid transformation.

TABLE3.INDICATORS OF AIR TRANSPORT IN INDIA AND CHINA

Year	Air transport, passengers carried		Air transport, freight (million ton-km)		Air transport, registered carrier departures worldwide	
	India	China	India	China	India	China
1980	6603100	2568000	366	120.90	100000	51000
1990	10862200	27345000	662.90	818.30	125800	196000
2000	17299483	61891807	547.65	3900.08	198426	572921
2010	64374253.8	266293020	1630.96	17193.88	623196.77	2377789
2015	98927860	436183969	1833.84	19805.63	787998	3616026

Source: World Development Indicators (22-12-17)

Table shows that the number of passengers carried by airways in India and China was 119.57 million and 487.96 million in 2016. Freight traffic of airways in India and China increased to 1893.88 and 21304.58 million ton-km in 2016 as compared to only 366 and 120.90 million ton-km in 1980. In registered carrier departure worldwide, the rank of India is below than China. It indicates that China has a better freight million ton-km in comparison to India. Air services in China are more popular than in India (passengers, freight and registered carrier departures).

(B) Power ,communications and Information development

Power, communication and information development include electricity, telephone, mobile services and internet users.

Electricity:

The word 'Electricity' was derived from the Greek word 'Amber'. No one sector like primary, secondary and tertiary can run with electricity because it provides that things which are necessary for our needs.

Year	Access of Electricity (% of population)					
	Total		Rural		Urban	
	India	China	India	China	India	China

1990	43.3	92.2	29.7	89.6	82.7	99.2
2000	59.3	96.2	48.2	94.1	88.7	100
2010	76.3	99.7	65.7	98.0	94.0	100
2015	88	100	83.2	100	97.5	100

TABLE4. ACCESS OF ELECTRICITY IN INDIA AND CHINA**Source: World Development Indicators (20-4-18)**

Table shows that urban people are using more electricity than in rural people. China has accessed 100 per cent electricity in total population, rural population and urban population but in India, only 88 per cent of total population in which 83.2 per cent share of rural population and 97.5 per cent of urban population in India have accessed electricity that share is less than China. India has to do a lot of work regarding electricity facilities because it seriously affects productivity, infrastructure and economic development.

TABLE5. FIXED TELEPHONE, MOBILE SUBSCRIPTIONS AND INTERNET USERS IN INDIA AND CHINA

Year	Fixed telephone sub- scriptions (per 100 people)		Mobile cellular subscription (per 100 people)		Individuals using the internet (% of population)	
	India	China	India	China	India	China
1980	0.30	0.21	0	0	---	- --
1990	0.58	0.58	0	0	---	----
2000	3.11	11.31	0.34	6.66	0.527	1.775
2010	2.91	21.65	62.39	63.17	7.5	34.3
2015	1.99	16.48	78.06	92.18	26.0	50.3
2016	1.88	14.66	85.95	96.88	29.54	53.2

Source: World Development Indicators (22-12-17)

In 1980's 0.30 per 100 people in India and 0.21 per 100 people in China used telephone. Mobile phone subscription has crossed the fixed telephone subscription from 2010 in both countries. The increased number of mobile subscription depends upon growing disposable income, urbanisation, literacy level, technology and changing demographic profile in India and China. In 2016, 86 per cent of Indian population and 97 per cent Chinese population are covered under mobile phone subscription. Table indicated the rising trend of internet user in India and China. In 2000, only 0.53 per cent of Indians and 1.78 per cent of Chinese used internet facilities but, in 2016, 30 per cent in India and 57 per cent in China are able to use internet facilities. The position of China is the highest (double) internet using country (53.2). Chinese population are using more internet than Indian population.

IMPROVED WATER AND SANITATION FACILITIES:

Water and sanitation facilities are the indicators of Economic development because water and sanitation are necessary for each human being. In this context, we explain the improved condition of water and sanitation facilities in rural and urban areas of India and China.

TABLE6.IMPROVED SANITATION FACILITIES IN INDIA AND CHINA

Year	Improved water facilities (% of population with access)				Improved Sanitation facilities (% of population with access)			
	Rural		Urban		Rural		Urban	
	India	China	India	China	India	China	India	China
1990	64.2	56.1	88.9	97.0	5.6	40.2	49.3	67.8
2000	76.1	70.8	92.3	97.2	14.5	49.6	54.4	75.3
2010	87.9	85.6	95.7	97.4	24.5	59.0	60.3	82.9
2015	92.6	93.0	97.1	97.5	28.5	63.7	62.6	86.6

Source: World Development Indicators (22-12-17)

Table represents that water facilities have increased in both countries from 1990 to 2015. In India, 64.2 per cent of rural population and 88.9 per cent of urban population have accessed water facilities in 1990. This percentage has increased in 2015 (92.6 per cent rural population and 97.1 per cent of urban population). Water facilities in India and China have reached more than 90 per cent. Half in India and more than half of the urban population in China have improved sanitation facilities in 1990. In 2015, 62.6 per cent of urban population in India have accessed sanitation facilities whereas 86.6 per cent comes from China. Sanitation facilities have increased in both countries of rural as well as urban areas but rural areas has still worse condition in India, only 28.5 per cent of people have benefitted from sanitation facilities.

FINANCIAL INFRASTRUCTURE:

It represents the financial condition of a country. Infrastructure development is an important determinant to attract FDI. Investors invest in other countries on the behalf of availability of infrastructure and developed banking sector. Financial sector promotes saving and investment activities.

TABLE 7 DOMESTIC CREDIT PROVIDED BY FINANCIAL SECTOR (% OF GDP)

Year	Domestic credit provided by financial sector (% of GDP)	
	India	China
1980	38.18	52.80
1990	51.53	88.42
2000	52.78	118.40
2010	74.25	142.19
2015	76.10	193.40

2016	75.37	215.02
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Source: World Development Indicators (22-12-17)

Table shows that domestic credit provided by financial sector as a percentage of GDP in India was increased from 38.18 per cent to 75.37 per cent in 1980 to 2016. China's domestic credit was 52.80 per cent in 1980 which increased to 215.02 per cent in 2016 provided by financial sector. The change in Chinese financial sector credit is about 162 per cent whereas in India only 37 per cent which is less than China.

EFFECT OF URBAN INFRASTRUCTURE ON THE LEVEL OF DEVELOPMENT:

TABLE 8 RELATIONSHIPS BETWEEN GDP AND INFRASTRUCTURE INDICATORS IN INDIA

	GDP	Electricity	Water	Sanitation	Telephone	Mobile	Internet
Mean	6.60	63.90	82.91	55.95	1.89	30.54	7.75
Variance	4.83	161.17	55.41	18.78	1.78	1105.90	82.06
No.	27	27	26	26	37	21	19
F		0.029943	0.090391	0.266654	2.541312	0.003855	0.051259

Source: author's calculation on World development indicators

Table represents relationship between GDP and infrastructure indicators in India. The highest mean value of infrastructure indicator is water facilities (82.91) followed by electricity (63.90), sanitation facilities (55.95), mobile subscribers (30.54), internet users (7.75) and telephone (1.89). The variance of mobile subscriber is the highest value of other than indicators.

TABLE 9 RELATIONSHIP BETWEEN GDP AND INFRASTRUCTURE INDICATORS IN CHINA

	GDP	Electricity	Water	Sanitation	Telephone	Mobile	Internet
Mean	9.62	96.92	82.63	77.22	10.40	35.29	22.21
Variance	6.20	6.47	79.02	33.15	101.63	1228.71	373.32
No.	27	27	26	26	37	25	19
F		0.958177	0.077107	0.183782	0.073015	0.004303	0.010544

Source: author's calculation on World development indicators

Table represents relationship between GDP and infrastructure indicators in China. The highest mean value of infrastructure indicator is electricity (96.92) followed by water facilities (82.63), sanitation facilities (77.22), mobile subscribers (35.29), internet users (22.21) and telephone (10.40). The variance of mobile subscriber is the highest value of other than indicators.

FINDINGS:

Earning capacity of railways in China is more than Indian railways because of its high speed and electrified tracts etc. Chinese railways give more employment opportunities to people than Indian railways.

The position of China is superior as compared to India because China has invested more money on infrastructure as a percentage of GDP as comparative to India.

There is a wide gap between the infrastructure demand and supply for high growth rate in India. So, government should take more attention on infrastructure.

Railways in India are more popular than airways because of poor and lower middle class population prefers it.

In overall, India lags behind than China in providing all infrastructure facilities such as air, ports, mobile subscription, internet users, improved water and sanitation. In case of roads transformation, India has a better position in road density comparative to China but India is far behind China in paved roads. The performance in road and railways of India is better than China because China makes much greater use of air transport.

POLICY IMPLICATIONS:

To design an economic policy which improve the human as well as physical infrastructure for urban development and to develop new economic infrastructure services in India and China. If Indian railways adopt more technology than it can improve its position comparative to China. India is fast growing country with an average annual growth rate of 8 per cent in 2015. To increase this growth rate, India needs to improve its infrastructure such as railways, air, internet and water and sanitation etc.

CONCLUSION:

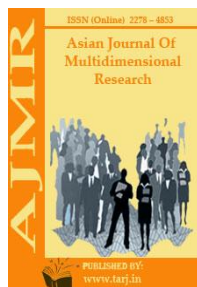
Infrastructure in India and China have significantly positive role in urban development. China has achieved better performance in the case of infrastructure because of its ability to get profits, returns and policy implementations. The infrastructure facilities in China is much high than India because China invested more money on maintenance of existing and new infrastructure.

REFERENCES:

- Canning, D. and P. Pedroni. (2004) the Effect of Infrastructure on Long-Run Economic Growth' Mimeo: Harvard University.
- Dash, R.K., and P. Sahoo. (2010). Economic Growth in India: Role of Physical and Human Infrastructure. *Journal of Economic Policy Reforms*, 13(4), 409-420.
- Demurger, S. (2001). Infrastructure Development and Economic Growth: An Explanation for Regional Disparities in China? *Journal of Comparative Economics*, Elsevier, 29(1), 95-117.
- Ding, L. and K. E. Haynes. (2006). The Role of Infrastructure in Regional Economic Growth: The Case of Telecommunications in China'. *Australasian Journal of Regional Studies*, 12(3), 165-187.
- Kessides, C. (1993). The Contributions of Infrastructure to Economic Development: A Review of Experience and Policy Implications. Washington, DC: The World Bank, Discussion Paper no. 213.
- Sahoo, P and Dash, R.K. (2008). Infrastructure Development and Economic Growth in India. *Journal of the Asia Pacific Economy*, Routledge, 14(4), 351-365.
- World Bank. (1994). Infrastructure for development. New York: Oxford University Press.

Wu,W. (2007). Urban infrastructure and financing in China. In Y. Song and C. Ding, editors, Urbanisation in China: Critical Issue in Era of Rapid Growth. Cambridge, MA: Lincoln Institute of Land Policy, 251-269.

Zhang, Y., and Wu, Q. (2005). Urban Infrastructure Provision and Management. Beijing, China: Economic Science Press.



WOMEN EMPOWERMENT AND GENDER JUSTICE: A STUDY OF NGUGI WA THIONG'O' DEVILS ON THE CROSS AND PETALS OF BLOOD

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ABSTRACT

Ngugi presents philosophical concern for women upliftment in his socio-cultural, philosophical and political vistas as his novels become a power critique for the exposition and exploration of pent up feelings and repressed emotions of women in oppressive and domineering patriarchal society which has left no stone unturned for their cultural and racial exploitation, sexual harassment and prostitution ignoring their upliftment, equality, status and respect in the society. A sex which is FAIR can never be meant and made for exploitation. As the name of fair sex itself envisages fairness, then there is no possibility of happening unfair with this godly creature. When she doesn't get justice, she starts snatching it for natural justice for humanity. But it is Ngugi wa Thiong'o who never lets African woman in lurch. The force with which man uses to let her down, she stands up with double whim and vigor, decides not to present herself as a sugar girl, as a lady of easy thighs, and never to yield.

KEYWORDS: *Fair sex, Woman in Lurch... Revolutionary Figure... Inhuman New Imperialism... Stubborn and Adamant, Economic Exploitation... Capitalist Betrayer... National Bourgeoisie:*

INTRODUCTION

Like Simone de Beauvoir's The Second Sex, Betty Freidan's The Feminine Mystique and Virginia Woolf's A Room of One's Own, the novels of Ngugi become a power critique for the exposition and exploration of pent up feelings and repressed emotions of women in oppressive and domineering patriarchal society which has left no stone unturned for their cultural and racial exploitation, sexual harassment and prostitution ignoring their upliftment, equality, status and respect in the society. A sex which is FAIR can never be meant and made for exploitation. As

the name of fair sex itself envisages fairness, then there is no possibility of happening unfair with this godly creature. When she doesn't get justice, she starts snatching it for natural justice for humanity. But it is Ngugi wa Thiong'o who never lets African woman in lurch. The force with which man uses to let her down, she stands up with double wits and vigor, decides not to present herself as a sugar girl, as a lady of easy thighs, and never to yield. The novelist presents philosophical concern for women upliftment in his socio-cultural, philosophical and political vistas. As Wariinga decides in *Devils on the Cross*:...that she'll never again allow herself to be a mere flower, whose purpose is to decorate the doors and windows and tables of other people's lives, waiting to be thrown on to a rubbish heap the moment the splendour of her body withers. The Wariinga of today has decided to be self-reliant all the time, to plunge into the middle of the arena of life's struggles in order to discover her real strength and to realize her true humanity.

Cleanliness is bathing. A hero is known only on the battlefield. A good dancer is known only in the dance arena. (DOC: 216)

But she rejects the biased attitude and mentality of patriarchal society. She is determined and confident in her self-reliance when she thinks:...her thighs are hers, her brain is hers, her hands are hers, and her body is hers, she must accord all her faculties their proper role and proper time and place and not let any one part be the sole ruler of her life. (DOC: 218)

During the first year of her Mechanical Engineering she did not take rest. After coming from the polytechnic, she did odd jobs, to earn money, like hairdressing in a Beauty Saloon, typing research papers and dissertations and also attended Judo and Karate classes.

Like Wariinga, Wangari is a revolutionary figure in the novel and was an active member of the Mau Mau army that was meant for the liberty of Kenya. Being a member of Kenya Land Freedom Army, Wangari got nothing in return for her sacrifice. In the independent Kenya she was exploited economically and culturally. Her small piece of land was auctioned by Kenya Economic Progress Bank, she was taken to police custody when she searched job in free Kenya, she was declared a thief by the foreigners at her home, she fought for the betterment of new generations so that they may take breath in the fresh air but these generations choked her, and the last but not the least she became unwanted and foreigner in her country. She was badly treated by her own country police at the order of a European judge, as she narrates her story to the co-passengers while going to Ilmorog in a taxi:

I was then pushed into a police vehicle and taken to a cell. But was it a cell, or rather a lair for mosquitoes, lice, fleas and bedbugs? I slept in that cell for three nights. I, Wangari, who have never stolen so much as a single potato from anybody! I, Wangari, who offered my life for my country! I, the Wangari you now see before you dressed in a kitenge garment and carrying a basket, spent three nights suffocated by the stench of shit and urine! (DOC : 43)

The taxi driver asks her to get down from his taxi when she expresses her helplessness for having no money for taxi fare. Mwaura, the taxi driver shows no humanity towards her :

"Woman, you must get out and continue to Ilmorog on foot. I repeat, this car does not run on urine." (DOC: 37)

She requests and implores the driver that she: "...fought for this country's independence with these hands. Am I now supposed to spend the night here, sharing the dark forest with wild beasts?" (DOC: 37)

But she forgets that it is inhuman new imperialism of modern Kenya where:

... the land rewards not those who clear it but those who come after it has been cleared.... Independence is not tales about the past but the sound of money in one's pocket. (DOC : 37)

As a bold lady of resolution and firm determination she spoils the competition that was held in Ilmorog cave about modern thefts and robbery. She enters the cave with police and silenced the whole cave with the power of her eyes. She denounces the thieves and calls them imperialists watchdogs, the children of the Devil as these are the men who oppress the peasants, rape the women, steal the heritage and deprive the people of their clothes, foods, and families. Gaturia calls Wangari the real the heroine of the nation.

Wariinga stares at the Rich Old Man, Gaturia's father. She loses all respect for him for his betrayal years ago. She now sees him as the father of her daughter Wambui. Anger goes on brewing in her heart as the Old Man pleads her to desert Gaturia and become his sugar girl again. He talks in varying tones. He pleads, requests, threatens and again stoops. He talks of the designs of the Devil's Agents in liquidating the opponents, suggesting that as his last resort. She is unmoved stubborn and adamant. Finally she assumes the role of a judge and pronounces judgement:

You snatcher of other people's lives! Do you remember the game you and I used to play, the game of the hunter and the hunted? Did you imagine that a day might come when the hunted would become the hunter? What's done, cannot be undone. I'm not going to save you? But I shall save many other people, whose lives will not be ruined by words of honey and perfume. (DOC : 253)

Wariinga and Wangari appear almost like twins and like the two faces of the same coin. Both share similar experiences and both have developed a revolutionary ideology. Both crave for female revenge and retribution against the society which has mercilessly pushed down their social ladder. May be one can add that the example of Wangari offers a clue to Wariinga to kill the Rich Old Man.

The most significant feature of Petals of Blood is that Ngugi's protagonists Abdullah, Munira, Karega and Wanja represent three generations of colonial, neo-colonial and the era of liberation struggle. This novel has a secular side to it with representation for the indigenous Gikuyu leadership; Abdullah, a Muslim and his orphan brother named by him Joseph, and Munira who hails from an orthodox christian background while Wanja is a prostitute. She is exploited by the patriarch Kenyan society as Munira internalizes his resentment converting it to a fantasy of rape as she :

"... had the same alluring power as the beckoning coquetry of a virgin : he could touch her only by deflowering her by force and so himself flowering in blood." (POB : 91)

Yet Abdullah, a maimed former Mau Mau soldier and proprietor of the village shop, acknowledges her pain and need for support :

“I know what it is to carry a live wound. And I am not talking of this leg stump. Stay in Ilmorog. Let us face what you call this hole together.” (POB : 92)

This spiritual and economic exploitation compel Wanja to leave Ilmorog. Later Wanja and her grandmother formed the Nderi-Nyakinyua Group to work for the land communally. As a perfect idealistic heroine in the socio-political and philosophical vistas of Ngugi she becomes an interlude of cooperation and community integration. For Wanja it was new opportunity to both forget the pain of a personal betrayal and to re-associate herself with the land :

The waiting earth: its readiness powered Wanja's wings of expectation and numerous desires. Feverishly, she looked out for tomorrow, waiting, like the other women, for earth to crack, earth to be thrust open by the naked shoots of life. (POB : 234)

But Ngugi here tries to show that life is not smooth going as it sometimes seems to be. Wanja and Abdullah provide the initiative to construct a New Ilmorog, it is Nderi wa Riera, the MP of Ilmorog, and his henchman 'Fat Stomach' and 'Insect' who organize the transformation by using New Ilmorog as a ploy to get re-elected. Land taken from the people would be compensated; loans would be given; title deeds acquired. The road was only a beginning.

Transformation of the landscape was matched by changes in character. While Abdullah remained the same committed although reticent individual, both Wanja and Munira were further corrupted by the betrayal of the new capitalist Ilmorog. As a bold lady, Wanja summons enough courage and energy after her exploitation at the hands of Karega. As a corollary, she : “was seized by the devil spirit of brewing and selling and counting and hatching out more plans for the progress of her trade/business partnership with Abdullah.” (POB : 320)

Wanja's obsession with the profits of Theng'eta is a new betrayal and contradictory to her communal spirit. It is caused by three factors: firstly, the personal loss of Karega, secondly, the lapse into self-hatred caused by the guilt of having destroyed her only child and thirdly, the influence of broken family background compounded by her father's own betrayal of the Mau Mau Revolution. Wanja is not merely a victim. Her role as capitalist betrayer is later expanded to include her whore houses, The Sunshine Lodge. Karega critiques her choice to join the national bourgeoisie:

‘Whatever you are, you have chosen sides. I don't hate you, I don't judge you... but I know that we cannot fight Kimerias by being them... by joining them... we can't beat them at that game....’ (POB : 389)

Wanja has been transformed once again. Her survival skills honed earlier, when she was abused by Kimeria, have taken over. Her treatment of Munira only reflects her acceptance of the cash nexus in a neo-colonial state:

No, Mwalimu. No free things in Kenya. A hundred shillings on the table if you want high-class treatment.... This is New Kenya. You want it, you pay for it.... Nothing was free. (POB : 331-32)

Seeking revenge for her victimization, Wanja attempts to become as successful as any of the national bourgeoisie, equivalent to any Kimeria, Chui, or Mzigo. As Munira's description of Wanja to Karega indicates:

She is the most powerful woman in all Ilmorog. She owns houses between here and Nairobi. She owns a fleet of matatus. She owns a fleet of big transport lorries. She is that bird periodically born out of the ashes and dust. (POB: 334)

In a meeting Wanja warns Karega of plans to break the brewery union strike, Karega is able to help her in facing the death of her grandparents, who both acted alone to defend the land. Karega's meeting with Wanja seems to sow a new seed of resistance in her, not that she wasn't capable of organizing in a co-operative sense. Her commitment on the journey and her organizational abilities in forming the Nderi-Nyakingua Group were ample proof of her previous commitment to the community above individual interests. She would take revenge on the three men who exploited her most: Chui, Kimeria, and Mzigo. The emotional will to kill Kimeria comes earlier in the novel when Wanja is raped by him: "He must die, a voice thudded within, he must die". (POB: 188) The political will comes only when Wanja is politically committed to vengeance. Francoise Albrecht sees her killing of Kimeria as:

... An instinctive act of liberation. (While Munira's torching of the whorehouse) ... is premeditated, ordained by what he called the Law... he feels he has been entrusted with a mission : to root out the evil in the world, the evil incarnate in Wanja, who has become in his eyes both Jezebel and Babylon.¹

Wanja's unborn child is a new inspiration for continuing the struggle. When asked who the father is Wanja draws a portrait that combines the best features of the lawyers and the Mau Mau leader, Dedan Kimathi without one limb. It is in fact, Abdullah. Her child will be not just the result of her union with Abdullah, but also a revolutionary inspiration for a future Kenya, one that is liberated from the tyranny of a neo-colonial state. Wanja's portrait is an important symbolic reference to her renewal as "...she felt a tremendous calm, a kind of inner assurance of the possibilities of a new power." (POB : 402)

Wanja is invested with a fiercely feminine and aggressively individualistic personality. She belongs to the remarkable species of Ngugi women – Mwihaki, Nyambura, Muthoni, Mumbi, Wambuku –all of them are brave, resilient, resourceful and determined. According to Chidi Amuta, "Wanja is a typical Ngugi woman, *elan vital* combining great adaptive skills with dynamism, enterprise and forbearance."¹¹ In Ngugi's novels women are shown to have a fundamental role in the struggle against oppression and exploitation, and often courage and hope are ultimately found in their hands. Wanja, thus, belongs to the brave breed of Ngugi women's in the throes of a social change.

Significant in Ngugi's portrait of Wanja is the amount of heroic energy packed into her tortured body, for in spite of the numerous violent experiences that have seared her psyche, she still emerges as an admirable character who exudes the most telling traits of selfless humanism. And with her aborted relationship, with Karega in Ilmorog, and the changing tempo of capitalist, intrusion into the lives of Ilmorogians after the plane crash, Wanja throws her body and soul into capitalism and emerges as one of its few reigning queens in New Ilmorog. Wanja, despised as a fallen woman, is a veritable source of solace and strength to the other characters at crucial stage. She gathers all strength and valour to murder the wicked tycoon, Kimeria. By marrying Abdulla,

the cripple, she buries her past displaying rare nobility and courage. She is proud to be the mother of Abdulla's child– the representative of the new progeny of a brave new world.

In this article, it has been tried to explore the reaction of women to patriarchal power, and the impact of this reaction on gender relation in socio-cultural, philosophical and political vistas in the novels of Ngugi during pre-colonial, colonial and post-colonial Kenya. Further, women's dynamism and resilience to survive colonial African patriarchy before and during the Mau Mau struggle are acknowledged. Even further, betrayal and women's resistance to their exploitation regarding gender inequality is studied. Most women in Africa live in poverty because of the cultural exploitation/biases that limit their access to education, employment, credit, health service, and even more so to ownership of the land, the more important economic resource.

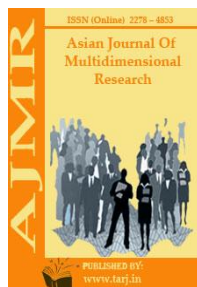
REFERENCES

- Francoise Albrecht, "Blood and Fire in Petals of Blood," Echos du Commonwealth 6 (1980-81) : 45.
- Ngugi wa Thiong'o, Devils on the Cross (Harlow, Essex: Heinemann, 1987) 19.

(All the subsequent textual citations are from this edition and page numbers are given in the parentheses following the quotes with DOC)

- Ngugi wa Thiong'o, Petals of Blood (London: Penguin Books, 2002) 155.

(All the subsequent textual citations are from this edition and page numbers are given in the parentheses following the quotes with POB)



IMPACT OF TERRORISM ON HUMAN RIGHTS

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ABSTRACT

Terrorism has introduced a new concept of "asymmetric Wars" for which there are no rules. This problem is challenging the traditional State Sovereignty while nations are helpless to control it singularly and it is also churning the very fabric of human civilization and pouring headaches on state Governments and International Organizations.¹ Terrorism is a nightmare which has deeply disturbed the conscience of mankind contrary to common belief, however, this nightmare is of old vintage. Starting with the ancient era to the modern times, history is full of multi dimensional manifestations of terrorism. What is new however is the exponential growth of terrorism, proliferation of terrorist groups, alarming magnitude of the terror and an unprecedented and growing concern of the mankind? The National and International dimensions of terrorism are two facets of the same terrorism know no geographical constraints. Terrorism is a dangerous phenomenon not only because of its immediate trans-boundary effects but also because of the fact that states take stern measures to combat it which usually affect adversely human rights and fundamental freedoms.

KEYWORDS: Terrorism, Perpetrators, Inherent Dignity, Inalienable, Humanitarian.

INTRODUCTION

Human Rights are relevant to terrorism as concerns both its "victims and its perpetrators. The concept of human rights was first expressed in the 1948 universal declaration of Human Rights, which established "recognition of the inherent dignity and inalienable rights of all members of the human family." The innocent victims of terrorism suffer an attack on their most basic right to live in peace and security.³ there is a close link between human rights and terrorism. Terrorism obviously abuses the fundamental human rights of its victims, whether it is individual terrorism or State terrorism. The victims of terrorism are arbitrarily deprived of the fundamental human rights of life and

liberty. Acts commonly covered under 'terrorism' whether committed by states, or by individuals are, in fact, violations of fundamental human rights of those against whom they are perpetrated.⁴

Terrorist acts whether committed by States or non-state actors, may effect the right to life, the right to freedom from torture and arbitrary detention, women's rights children's rights, health, subsistence (food), democratic order, peace and security, the right to non-discrimination and any number of other protected human rights norms.⁵

Terrorist hostage taking, kidnapping and extortion carried out by terrorist groups, are mostly carried out by known groups who predominate in only a few areas. The political issues involved in these areas are also well known. There have been few new instances of new groups engaging in them. This does not mean that such acts may not be committed in the future in other areas by new groups but it is difficult if not impossible to predict where they might occur. Criminal liability for these acts remains a concern T5F national and existing international law, including the requirement of international cooperation in apprehending persons alleged to have engaged in such acts. States have an affirmative duty to promote and protect the human rights of all persons under their jurisdictions. While this is a basic tenet of human rights law, it is important to recall that both the commission and the subcommission have stressed this point in the context also of terrorism.⁶ States that resort to state terrorism, whether international or internal grossly violate the basic concepts of human rights. Such states should be subjected to both international condemnation and international action in the light of instruments and mechanisms of human rights and, where applicable,

Humanitarian Law: Such action if effective would greatly diminish incidence of terrorism today.

When terrorist acts or threats of terrorist's acts by non-state actors threaten the lives and safety of persons under a state's jurisdiction, it is the responsibility and the duty of the state to protect those persons. A state's minimum response should not be limited to proscribing terrorist acts in its criminal law system or in the training of local and national law enforcement or military personnel. A state must also undertake a thorough study of all aspects of terrorism including causal factors and the implications of its foreign and domestic policies in the light of international law especially in terms of human rights that have generated a risk of terrorist acts being committed against its citizens or persons under its jurisdiction⁷ were all states to do this in an unbiased way, and then adopt meaningful responses which may or may not require changes in policies the incidence of terrorist acts by non-state actors would also dramatically decline.

Unfortunately, some states consider that to focus any attention on the causes of terrorism has the undesired effect of generating sympathy for, if not the terrorist acts, at least the context in which they arise. Public opinion may then be rallied to pressure a state to change a policy that it does not want to change even at the cost of increased fear of terrorism. Additionally, some one of the opinion that focus on the causes that might result in changes of policy could be viewed as

giving into terrorist demands. Even so, states are sometimes obliged to change policies that contravene international law. Yet this is not viewed as giving in to terrorist demands, in spite of the fact that a terrorist group may seek those very changes. Sometimes, a state may utterly fail to protect its people in an effective way from acts of terrorism. In these situations, one could say that the state is either uncible (incapable) or unwilling or both to control those acts. The state, then, has effectively reneged on its affirmative duty to protect its own people. Such a state, in these situations, can itself be liable out by non-state response to terrorism can also effect human rights. Thus, the commission has repeatedly expressed concern over counter terrorist measures as evinced in its latest resolutions on human rights and terrorism that state yet again that measures to terrorism must be in strict conformity with international human rights law.⁹

In this context, the rights to freedom of speech association, belief, religion and

Movement and the rights of refugees are particularly vulnerable to under suspension in the guise of antiterrorist measures. This may some times occur when individuals or groups in a state express support for a political position that is in other hand, opposition to the Government's position but conforms to that espoused by a group labeled as terrorist. It should finally, be noted that a number of states either have or are in the process of enacting anti-terrorism legislative which is frequently criticized by legal scholars and human rights defenders.¹⁰

In some states, detained persons considered as terrorists may be denied visitation rights.¹³ This can include the denial of access to a defendant's own attorney, or such severe restriction of access to counsel, including the content presence of State officials in attorney client sessions as to reduce the right to counsel to a nullity. The defendant is held, essentially Incommunicado states may have special procedures that allow identity checks house to house searches and other acts that have implications for both privacy rights and fair trial example or eliminate the need for a warrant at all. Not only a defendant but also large numbers of uninvolved persons may be subjected to serious encroachment on their rights, especially with house to house searches and other intrusions into privacy.

Some states have provisions that affect the actual judicial proceedings. For example persons accused of terrorist acts may be limited in the number of witness at all. This can seriously impair any attempt by a defendant to prove he or she has no association with a particular group considered to be terrorist or had nothing to do with a particular act. This could be of great importance if the person is charged not with a terrorist act directly but under group liability statutes. A defendant may also seek to prove that a group to which he or she is ascribed is not by law a terrorist group curtailment of witness such as expends in international or national law relating to the analysis of terrorism could seriously hinder the defence.

Further, in many states the judiciary might be reluctant to countermand the state in these matters. Even in States with a relatively impartial, independent judiciary there are few lawyers and judges with sufficient education in international human rights and humanitarian law standards they rule fairly especially if a defendant is not allowed experts or other witness.

Judicial process rights may be especially at risk when a state uses group liability or conspiracy laws against alleged members of groups labeled as terrorist. For example, a person who may have once distributed literature relating to the same goal as an alleged terrorist group could be charged with aiding and abetting terrorism and could be charged with any acts proved to have been carried out by the group act of which a defendant has no involvement or even awareness. Conspiracy laws can be especially harmful to rights in situations of internal or international armed conflict that a state has labeled as "terrorist". Such situations can dramatically impair rights under humanitarian law in cases where there is no group liability and where both legitimate military acts and acts in support of humanitarians' relief cannot be criminalized.

Either State or non-state actors may intentionally for the fear of terrorist act against a population fear out of proportion to actual risk can generate for example, attitudes of generalized fear of a particular race or religion. Clearly, in a orchestrated denouncing of certain groups has generalized racism and religious intolerance. Under fear lead to weakened resistance to overly harsh anti-terrorism measures. The desire of a state to have such measures may lie behind fear campaigns. Some states may consider that the resulting racism and religious intolerance is useful to its political agenda and therefore worth the price. However, from a human rights perspective such cynicism is offensive and has had a serious negative effect on human rights where these policies occur.¹⁵ In any case there may be a serious risk of curtailment of basic civil liberties.

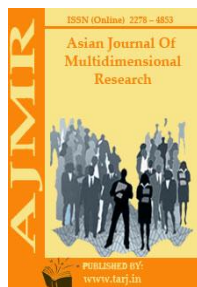
There are two related sub-issues to the under fear situation, which although highly political have a direct relationship to human rights. A state's people may be motivated into an irrational fear of other states and of their leaders and people for out of proportion to any risk actually posed. This of course, has a negative impact on the idea of international solid unity. The imposition of unilateral sanctions or other penalties by States sometimes in an attempt to extend these sanctions and penalties to third party states is a policy that the General Assembly has repeatedly and forcefully rejected as being in violation of the charter. While having an impact on civil and political rights, this also has and can continue to have a serious impact on economic, social and cultural rights, both in obvious and not so obvious ways. In any case, the practice of unilateral action can be viewed as violating the spirit of the international organization's appeals for international cooperation in addressing terrorism and terrorist acts. The second of the sub issues relating to undue fear of terrorism arises in the context of the my freedom fighter is your terrorist debate. Indeed, there may be a number of reasons why some states would purposefully mislabel armed conflict situations as terrorism.

In reviewing contemporary terrorism, one might roughly observe that those states with the best human rights records are the states with the least likelihood of problems with domestic terrorism. Similarly, those states with international relationships that most conform to the goals and principles of the charter are likely to be the States least affected by international terrorism is the full realization of human rights and the practice of genuine democratic process throughout the world among states and in every state. All efforts must be made to address better the realization of human rights, in particular in relation to self-determination, racism internal ethnic and political representation and class-based economic or cultural divisions in society.

The full realization of human rights also involves achievement of economic balance among States, including the right to development. In similar fashion better efforts should be made to achieve improved relations between states not only because this is mandated in the charter, but also because it is viewed as essential to the global realization of human rights as indicated in article 26 of the universal declaration: quite clearly an international order that is generating terrorist acts hardly qualifies as a "Social and international order in which the rights and freedoms set forth in , ytiie declaration can be fully realized.

REFERENCES

1. Ajit Pal Singh, International Terrorism: Changing Dimensions of Security, 2008, p.5.
2. Ibid, no. 1. p.31.
3. Amy Zalma, Ph.D. (formes Gude of About. Coml, Human Rights and Terrorism; AnOverview:
4. Kushner Harvey W. Encyclopedia of Terrorism, New Delhi: Sage,2003.
5. UNI, "US Report Blasts J & K Militants", DC 27 Feb2001.
6. FIT,"IndiaisaPartnerofUSinspreadingHumanRights",FPI,9March2001.
7. Dr. K.M. Chenoy, "Human Rights Violations in J & K - A Report -1 K.T. 9 March2001.
8. Dr. K.M. Chenoy, "Human Rights and Human Wrongs", Tri, 1 July,2001.
9. Shelley Walla, "Of Human Rights and Human Wrongs", Tri 1 July,2001.
10. Soli. J. Sorabjee, "Judicial Protection of Human Rights" in India",2001.



AN ASSESSMENT OF FARMERS PERCEPTION ON THE AGRICULTURAL INITIATIVES AND PROGRAMMES OF PUNJAB

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ABSTRACT

The state of Punjab has contributed significantly towards the economy of the state and the country as well. The state popularly known as granary of the nation is the lifeline of the economy. The agriculture is the major sector of the state and thus has contributed immensely to the economy of the state by generating livelihood and employment. The special traits of farmers in the state have been eulogized by one and all in all the times reflecting their distinct culture. However, over the decade's situation has witnessed changes as the farmers, in general and the farmers of Punjab particular, have been affected by the materialistic and modern life. In the present study, the effort has been made to access the perception of farmers towards the role of select state agriculture agencies of the select district of Punjab state.

Agriculture sector is important sector in the Indian economy as it contributes about 17% to the total GDP. The agriculture sector assumed significance in the backdrop of two wars (1962 and 1965) the country had to face and its resolve to be 'self-sufficient' on all the parts especially on the front of food. Since the mid-sixties the Indian agriculture had registered impressive growth and has touched new heights of food grain production. Not only the country has become 'self-sufficient' in food needs of the country but has marked its presence at global level.

The state of Punjab has contributed significantly towards the economy of the state and the country as well. The state popularly known as granary of the nation is the lifeline of the economy. The agriculture is the major sector of the state and thus has contributed immensely to the economy of the state by generating livelihood and employment. The state of Punjab has taken to the agricultural development for sustainable growth and rural prosperity. The state through its agricultural related department and agencies is making consistent and constant efforts to ensure sustainable increase in productivity and production of crops to ensure 'National food Security' as well as social and economic upliftment of the rural masses.

The Farmer of Punjab has been the pride of the state and has so many stories around him relating to the generosity, kindness, large heartedness and commitment to the land. The special traits of farmers in the state have been eulogized by one and all in all the times reflecting their distinct culture. However, over the decade's situation has witnessed changes as the farmers, in general and the farmers of Punjab particular, have been affected by the materialistic and modern life. No longer the farmer is doing all the hard work; tiling the land, manually harvesting the crop, grazing the cattle, personally irrigating the lands rather the farmers are heavily depending on the farm labor from the neighboring states of UP, Bihar, Uttarakhand and Rajasthan. Despite all these changes, a farmer has role to play in the society and economy. In the present study, the effort has been made to access the perception of farmers towards the role of select state agriculture agencies of the select district of Punjab state.

For the purpose of the study, a sample of farmers, based on convenient sampling technique, from the three select districts namely Amritsar, Sangrur and Jalandhar have been drawn. The respondents were put across some posers and the responses have been analysed to reach the findings in ensuing discussion (table wise)

TABLE 1.1: STATE GOVERNMENT PROMOTES DAIRY FARMING TO BENEFIT THE FARMERS

Attributes											P
	Variable s	Amritsar			Sangrur			Jalandhar			
		Yes	No	Not Sure	Yes	No	Not Sure	Yes	No	Not Sure	
Academic Qualificatio n	Under Graduate	9 (52.9)	7 (41.2)	1 (5.9)	19 (90.5)	1 (4.8)	1 (4.8)	7 (41.2)	6 (35.3)	4 (23.5)	0.12 6
	Graduate	17 (70.8)	5 (20.8)	2 (8.3)	17 (100.0)	0 (0.0)	0 (0.0)	22 (78.6)	3 (10.7)	3 (10.7)	
	PG Degree	6 (85.7)	1 (14.3)	0 (0.0)	8 (72.7)	1 (9.1)	2 (18.2)	8 (88.9)	0 (0.0)	1 (11.1)	
Per Capita Income	Less than 1 Lakh	6 (54.5)	3 (27.3)	2 (18.2)	3 (75.0)	1 (25.0)	0 (0.0)	8 (80.0)	1 (10.0)	1 (10.0)	0.46 1
	1-5 Lakh	10 (52.6)	9 (47.4)	0 (0.0)	20 (95.2)	1 (4.8)	0 (0.0)	17 (60.7)	4 (14.3)	7 (25.0)	
	5-10 Lakh	8	1 (10.0)	1 (10.0)	13	0	2 (13.3)	8 (88.9)	1 (11.1)	0	

		(80.0))))	(86.7))	(0.0)))))	(0.0))	
	Above 10 Lakh	8 (100.0)	0 (0.0)	0 (0.0)	8 (88.9))	0 (0.0)	1 (11.1)	4 (57.1)	3 (42.9)	0 (0.0)	
Land Ownership	Below 5 Acres	9 (75.0))	3 (25.0)	0 (0.0)	13 (100.0)	0 (0.0)	0 (0.0)	19 (63.3)	6 (20.0)	5 (16.7)	0.88 1
	6-15 Acres	7 (58.3))	4 (33.3)	1 (8.3)	13 (92.9))	1 (7.1)	0 (0.0)	6 (75.0)	0 (0.0)	2 (25.0)	
	16-25 Acres	6 (54.5))	4 (36.4)	1 (9.1)	3 (75.0))	0 (0.0)	1 (25.0)	7 (77.8)	2 (22.2)	0 (0.0)	
	Above 25 Acres	10 (76.9))	2 (15.4)	1 (7.7)	15 (83.3))	1 (5.6)	2 (11.1)	5 (71.4)	1 (14.3)	1 (14.3)	
Total		32 (66.7))	13 (27.0)	3 (6.3)	44 (89.8))	2 (4.1)	3 (6.1)	37 (68.5)	9 (16.7)	8 (14.8)	

Source: Computed from Primary Data. Figures in parentheses are percentages. $p < 0.05$

On analyzing the data presented in the Table 1.1 it was found that majority of respondents in Amritsar and Jalandhar district and high majority of respondents from Sangrur district agreed that State Government promoted Dairy farming to benefit the farmers.

Academic Qualification:

Amritsar: Positive responses to the query increased with the increase in the academic qualifications of the respondents as majority of under graduate respondents (52.90 per cent), high majority of Graduate respondents (70.80 per cent) and significant majority of Post Graduate respondents (85.70 per cent) agreed with the poser.

Sangrur: All the Graduate respondents and highly significant majority of Under Graduate respondents (90.50 per cent) as compared to the high majority of Post Graduate respondents (72.70 per cent) agreed with the view point.

Jalandhar: Positive responses to the issue increased with the increase in academic qualifications of the respondents as high proportion of Under Graduate respondents (41.20 per cent), high majority of Graduate respondents (78.60 per cent) and significant majority of Post Graduate respondents (88.90 per cent) agreed with the view point.

No association was found between the variable and the statement.

Per Capita Income

Amritsar: Significant majority of respondents (80.00 per cent) with per capita income Rs. 5-10 lakhs and all the respondents with above Rs. 10 lakhs of per capita income as compared to the majority of respondents (Above 50.00 per cent) in the remaining categories of this variable agreed with the statement.

Sangrur: Highly significant majority of respondents (95.20 per cent) with Rs. 1-5 lakhs of per capita income and significant majority of respondents (above 80.00 per cent) with per capita income above Rs. 5 lakhs as against the high majority of respondents (75.00 per cent) with per capita income less than Rs. 1 lakh agreed with the facet.

Jalandhar: Significant majority of respondents with Rs. 5-10 lakhs of per capita income (88.90 per cent) and respondents with per capita income less than Rs. 1 lakh as compared to the fair majority of respondents (60.70 per cent) with per capita income Rs. 1-5 lakhs and majority of respondents (57.10 per cent) with per capita income above Rs. 10 lakhs agreed with the view point.

No association was found between the variable and the statement.

Land Ownership

Amritsar: High majority of respondents (75.00 per cent) with ownership of below 5 acres and above 25 acres of land (76.90 per cent) as compared to the majority of respondents (above 50.00 per cent) in the remaining categories of this variable agreed with the statement.

Sangrur: All the respondents with ownership of below 5 acres of land and highly significant majority of respondents (92.90 per cent) with ownership of 6-15 acres of land in comparison to significant majority of respondents (83.30 per cent) with ownership of above 25 acres of land and high majority of respondents (75.00 per cent) with ownership of 16-25 acres of land provided positive responses to the issue.

Jalandhar: Fair majority of respondents (63.30 per cent) with ownership of below 5 acres of land and high majority of respondents (above 70.00 per cent) in the remaining categories of this variable agreed with the view point.

No association was found between the variable and the statement.

Finding: Varying majority of the respondents of select districts agreed that state promoted Dairy farming.

Sangrur- 89.8

Jalandhar- 68.5

Amritsar- 66.7

TABLE 1.2: FARMERS ARE SATISFIED WITH HORTICULTURE INITIATIVES OF THE STATE

Attributes										P
	Variable s	Amritsar			Sangrur			Jalandhar		
		Yes	No	Not	Yes	No	Not	Yes	No	Not

				Sure			Sure			Sure	
Academic Qualification	Under Graduate	2 (11.8)	11 (64.7)	4 (23.5)	8 (38.1)	12 (57.1)	1 (4.8)	11 (64.7)	4 (23.5)	2 (11.8)	0.03 ²
	Graduate	4 (16.7)	8 (33.3)	12 (50.0)	10 (58.8)	5 (29.4)	2 (11.8)	21 (75.0)	5 (17.9)	2 (7.1)	
	PG Degree	3 (42.9)	2 (28.6)	2 (28.6)	7 (63.6)	2 (18.2)	2 (18.2)	7 (77.8)	2 (22.2)	0 (0.0)	
Per Capita Income	Less than 1 Lakh	0 (0.0)	6 (54.5)	5 (45.5)	0 (0.0)	4 (100.0)	0 (0.0)	7 (70.0)	3 (30.0)	0 (0.0)	0.20 ⁶
	1-5 Lakh	3 (15.8)	8 (42.1)	8 (42.1)	13 (61.9)	7 (33.3)	1 (4.8)	20 (71.4)	5 (17.9)	3 (10.7)	
	5-10 Lakh	3 (30.0)	3 (30.0)	4 (40.0)	6 (40.0)	6 (40.0)	3 (20.0)	6 (66.7)	2 (22.2)	1 (11.1)	
	Above 10 Lakh	3 (37.5)	4 (50.0)	1 (12.5)	6 (66.7)	2 (22.2)	1 (11.1)	6 (85.7)	1 (14.3)	0 (0.0)	
Land Ownership	Below 5 Acres	4 (33.3)	4 (33.3)	4 (33.3)	6 (46.2)	7 (53.8)	0 (0.0)	22 (73.3)	7 (23.3)	1 (3.3)	0.26 ⁴
	6-15 Acres	0 (0.0)	6 (50.0)	6 (50.0)	6 (42.9)	7 (50.0)	1 (7.1)	6 (75.0)	0 (0.0)	2 (25.0)	
	16-25 Acres	3 (27.3)	5 (45.5)	3 (27.3)	2 (50.0)	1 (25.0)	1 (25.0)	8 (88.9)	1 (11.1)	0 (0.0)	
	Above 25 Acres	2 (15.4)	6 (46.2)	5 (38.5)	11 (61.1)	4 (22.2)	3 (16.7)	3 (42.9)	3 (42.9)	1 (14.3)	
Total		9	21	18	25	19	5	39	11	4	

	(18.8)	(43.8)	(37.5)	(51.0)	(38.8)	(10.2)	(72.2)	(20.4)	(7.4)	
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Source: Computed from Primary Data. Figures in parentheses are percentages. $p < 0.05$

The data highlighted in the Table 1.2 assessed the statement that whether Farmers are satisfied with Horticulture initiatives of the State. It was ascertained that high proportion of respondents in Amritsar district disagreed with the issue but majority of respondents from Sangrur district were satisfied with Horticulture initiatives of the state.

Academic Qualification:

Amritsar: Fair majority of Under Graduate respondents (64.70 per cent) and high proportion of Graduate respondents (33.30 per cent) disagreed with the statement whereas high proportion of Post graduate respondents (42.90 per cent) agreed with the view point.

Sangrur: Majority of Graduate respondents (58.80 per cent) and fair majority of post graduate respondents (63.60 per cent) agreed with the issue but majority of Under Graduate respondents (57.10 per cent) disagreed with the statement.

Jalandhar: Fair majority of Under Graduate respondents (64.70 per cent) and high majority of Graduate respondents (75.00 per cent) and Post Graduate respondents (75.00 per cent) agreed with the statement.

Significant association was found between the variable qualification and the statement.

Per Capita Income

Amritsar: Majority of respondents (54.50 per cent) with less than Rs. 1 lakh of per capita income and respondents (50.00 per cent) with above Rs. 10 lakhs of per capita income as against high proportion of respondents (42.10 per cent) with per capita income Rs. 1-5 lakhs disagreed with the poser. Also the high proportion of respondents (40.00 per cent) with per capita income Rs. 5-10 lakhs remained silent on the issue.

Sangrur: Fair majority of respondents (61.90 per cent) with per capita income Rs. 1-5 lakhs and above Rs. 10 lakhs (66.70 per cent) as compared to high proportion of respondents (40.00 per cent) with per capita income Rs. 5-10 lakhs agreed with the statement. On the other hand all the respondents with less than Rs. 1 lakh of per capita income disagreed with the statement.

Jalandhar: Significant majority of respondents (85.70 per cent) with per capita income above Rs. 10 lakhs and high majority of respondents (Above 70.00 per cent) with per capita income less than Rs. 5 lakhs in comparison to the fair majority of respondents (66.70 per cent) with per capita income Rs. 6-10 lakhs agreed with the poser.

No association was found between the variable per capita income and the statement.

Land Ownership

Amritsar: Majority of respondents (50.00 per cent) with ownership of 6-15 acres of land and high proportion of respondents (Above 40.00 per cent) in remaining categories of the variable disagreed with the point of view.

Sangrur: Fair majority of respondents (61.10 per cent) with ownership of above 25 acres of land and majority of respondents (50.00 per cent) with ownership of 16-25 acres of land as against high proportion of respondents (above 40.00 per cent) in remaining categories of the variable agreed with the statement.

Jalandhar: Significant majority of respondents (88.90 per cent) with ownership of 16-25 acres of land and high majority of respondents (above 70.00 per cent) with ownership of below 15 acres of land as against the high proportion of respondents (42.90 per cent) with ownership of above 25 acres of land agreed with the point of view.

No association was found between the variable land and ownership and the statement.

Finding: Varying majority of respondents of Jalandhar and Sangrur district were satisfied with the Horticulture initiatives whereas no clear trend of responses was found in district Amritsar.

Jalandhar- 72.2

Sangrur-51.00

Amritsar-18.8

TABLE 1.3: FARMERS ARE SATISFIED WITH FLORICULTURE INITIATIVES OF THE STATE

Attributes											P
	Variable s	Amritsar			Sangrur			Jalandhar			
		Yes	No	Not Sure	Yes	No	Not Sure	Yes	No	Not Sure	
Academic Qualificatio n	Under Graduate	0 (0.0)	11 (64.7)	6 (35.3)	5 (23.8)	14 (66.7)	2 (9.5)	1 (5.9)	9 (52.9)	7 (41.2)	0.02 7
	Graduate	3 (12.5)	11 (45.8)	10 (41.7)	9 (52.9)	6 (35.3)	2 (11.8)	4 (14.3)	17 (60.7)	7 (25.0)	
	PG Degree	3 (42.9)	4 (57.1)	0 (0.0)	5 (45.5)	4 (36.4)	2 (18.2)	3 (33.3)	5 (55.6)	1 (11.1)	
Per Capita Income	Less than 1 Lakh	0 (0.0)	6 (54.5)	5 (45.5)	0 (0.0)	4 (100.0)	0 (0.0)	0 (0.0)	7 (70.0)	3 (30.0)	0.04 4
	1-5 Lakh	1 (5.3)	11 (57.9)	7 (36.8)	9 (42.9)	10 (47.6)	2 (9.5)	3 (10.7)	16 (57.1)	9 (32.1)	
	5-10	2	6	2	6	7	2	4	3	2	

	Lakh	(20.0)	(60.0)	(20.0)	(40.0)	(46.7)	(13.3)	(44.4)	(33.3)	(22.2)	
	Above 10 Lakh	3 (37.5)	3 (37.5)	2 (25.0)	4 (44.4)	3 (33.3)	2 (22.2)	1 (14.3)	5 (71.4)	1 (14.3)	
Land Ownership	Below 5 Acres	2 (16.7)	7 (58.3)	3 (25.0)	6 (46.2)	6 (46.2)	1 (7.7)	3 (10.0)	20 (66.7)	7 (23.3)	0.77 3
	6-15 Acres	0 (0.0)	7 (58.3)	5 (41.7)	4 (28.6)	9 (64.3)	1 (7.1)	3 (37.5)	1 (12.5)	4 (50.0)	
	16-25 Acres	2 (18.2)	6 (54.5)	3 (27.3)	2 (50.0)	1 (25.0)	1 (25.0)	0 (0.0)	7 (77.8)	2 (22.2)	
	Above 25 Acres	2 (15.4)	6 (46.2)	5 (38.5)	7 (38.9)	8 (44.4)	3 (16.7)	2 (28.6)	3 (42.9)	2 (28.6)	
Total		6 (12.5)	26 (54.2)	16 (33.3)	19 (38.8)	24 (49.0)	6 (12.2)	8 (14.8)	31 (57.4)	15 (27.8)	

Source: Computed from Primary Data. Figures in parentheses are percentages. $p < 0.05$

The data presented in the Table 1.3 reflected that whether Farmers are satisfied with Floriculture initiatives of the State, it was ascertained through the responses that majority of respondents of Amritsar and Jalandhar opined that state did not promote floriculture whereas high proportion of respondents in Sangrur also opined so.

Academic Qualification:

Amritsar: Fair majority of Under Graduate respondents (64.70 per cent) and majority of Post Graduate respondents as compared to high proportion (45.80 per cent) of Graduate respondents disagreed with the point of view.

Sangrur: Majority of Graduate respondents (52.90 per cent) and high proportion of (45.50 per cent) of post graduate respondents agreed with the view point but the fair majority of Under Graduate respondents (66.70 per cent) disagreed with the statement.

Jalandhar: Fair majority of Graduate respondents (60.70 per cent) and majority of respondents (above 50.00 per cent) in the remaining categories of this variable disagreed with the issue.

Significant association was found between the variable qualification and the statement.

Per Capita Income

Amritsar: Fair majority of respondents (60.00 per cent) with per capita income Rs. 5-10 lakhs and majority of respondents (above 50.00 per cent) with per capita income less than Rs. 5 lakhs as against high proportion of respondents (37.50 per cent) with above Rs. 10 lakhs of per capita income disagreed with the facet.

Sangrur: All the respondents with per capita income less than Rs. 1 lakhs and high proportion of respondents in the remaining categories of this variable opposed the poser.

Jalandhar: High majority of respondents (70.00 per cent) with per capita income less than Rs. 1 lakhs and respondents with per capita income above Rs. 10 lakhs (71.40 per cent) in comparison to the majority of respondents (57.10 per cent) with per capita income Rs. 1-5 lakhs and high proportion of respondents (33.30 per cent) with per capita income Rs. 5-10 lakhs disagreed with the point of view.

Significant association was found between the variable per capita income and the statement.

Land Ownership

Amritsar: High proportion of respondents (46.20 per cent) with ownership of above 25 acres of land and majority of respondents (above 50.00 per cent) in remaining categories of this variable disagreed with the poser.

Sangrur: Fair majority of respondents (64.30 per cent) with ownership of 6-15 acres of land in comparison to the high proportion of respondents (46.20 per cent) with ownership of below 5 acres of land and above 25 acres of land (44.40 per cent) disagreed with the issue. On the other hand, majority of respondents (50.00 per cent) with ownership of 16-25 acres of land agreed with the poser.

Jalandhar: High majority of respondents (77.80 per cent) with ownership of 16-25 acres of land as against the fair majority of respondents (66.70 per cent) with ownership of below 5 acres and high proportion of respondents (42.90 per cent) with ownership of above 25 acres of land disagreed with the point of view. On the other hand majority of respondents (50.00 per cent) with ownership of 6-15 acres of land remained silent on the poser.

No association was found between the variable land and ownership and the statement.

Finding- Varying majority of respondents in Amritsar and Jalandhar were not satisfied with floriculture initiatives of the state whereas high proportion of respondents in sangrur district was of the same opinion.

Jalandhar- 57.4

Amritsar- 54.2

Sangrur- 49.0

TABLE 1.4: FARMERS ARE SATISFIED WITH THE BEE-KEEPING INITIATIVES OF THE STATE

Attributes					P
	Variable	Amritsar	Sangrur	Jalandhar	

	s	Yes	No	Not Sure	Yes	No	Not Sure	Yes	No	Not Sure	
Academic Qualification	Under Graduate	6 (35.3)	7 (41.2)	4 (23.5)	10 (47.6)	10 (47.6)	1 (4.8)	6 (35.3)	9 (52.9)	2 (11.8)	0.231
	Graduate	8 (33.3)	12 (50.0)	4 (16.7)	13 (76.5)	3 (17.6)	1 (5.9)	12 (42.9)	13 (46.4)	3 (10.7)	
	PG Degree	6 (85.7)	0 (0.0)	1 (14.3)	8 (72.7)	1 (9.1)	2 (18.2)	4 (44.4)	5 (55.6)	0 (0.0)	
Per Capita Income	Less than 1 Lakh	4 (36.4)	4 (36.4)	3 (27.3)	2 (50.0)	2 (50.0)	0 (0.0)	3 (30.0)	6 (60.0)	1 (10.0)	0.015
	1-5 Lakh	5 (26.3)	11 (57.9)	3 (15.8)	13 (61.9)	7 (33.3)	1 (4.8)	9 (32.1)	16 (57.1)	3 (10.7)	
	5-10 Lakh	3 (30.0)	4 (40.0)	3 (30.0)	8 (53.3)	5 (33.3)	2 (13.3)	7 (77.8)	1 (11.1)	1 (11.1)	
	Above 10 Lakh	8 (100.0)	0 (0.0)	0 (0.0)	8 (88.9)	0 (0.0)	1 (11.1)	3 (42.9)	4 (57.1)	0 (0.0)	
Land Ownership	Below 5 Acres	4 (33.3)	6 (50.0)	2 (16.7)	10 (76.9)	3 (23.1)	0 (0.0)	14 (46.7)	15 (50.0)	1 (3.3)	0.199
	6-15 Acres	3 (25.0)	7 (58.3)	2 (16.7)	8 (57.1)	5 (35.7)	1 (7.1)	2 (25.0)	3 (37.5)	3 (37.5)	
	16-25 Acres	4 (36.4)	3 (27.3)	4 (36.4)	2 (50.0)	1 (25.0)	1 (25.0)	3 (33.3)	6 (66.7)	0 (0.0)	
	Above 25 Acres	9 (69.2)	3 (23.1)	1 (7.7)	11 (61.1)	5 (27.8)	2 (11.1)	3 (42.9)	3 (42.9)	1 (14.3)	

Total	20 (41.7)	19 (39.6)	9 (18.7)	31 (63.3)	14 (28.6)	4 (8.1)	22 (40.7)	27 (50.0)	5 (9.3)	
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Source: Computed from Primary Data. Figures in parentheses are percentages. $p < 0.05$

The data highlighted in the Table 1.4 assessed the issue that whether Farmers are satisfied with the Bee-Keeping initiatives of the State. The analysis indicated that majority respondents of Sangrur district were satisfied with the initiatives whereas majority of respondents in Jalandhar disagreed and high proportion of respondents in Jalandhar were satisfied.

Academic Qualification:

Amritsar: Majority of Graduate respondents (50.00 per cent) and high proportion of Under Graduate respondents (41.20 per cent) disagreed with the point of view but significant majority of Post Graduate respondents (85.70 per cent) agreed with the poser.

Sangrur: High proportion of Under Graduate respondents (47.60 per cent) and high majority of Graduate respondents (76.50 per cent) and Post Graduate respondents (55.60 per cent) disagreed with the assertion.

Jalandhar: High proportion of Graduate respondents (46.40 per cent) and majority of Under Graduate respondents (52.90 per cent) and Post Graduate respondents (55.60 per cent)

No association was found between the variable qualification and the statement.

Per Capita Income

Amritsar: All the respondents with above Rs. 10 lakhs of per capita income agreed with. On the other hand majority of respondents (57.90 per cent) with per capita income Rs. 1-5 lakhs and high proportion of respondents in the remaining categories of this variable disagreed with the point of view.

Sangrur: Significant majority of respondents (88.90 per cent) with above Rs. 10 lakhs of per capita income and fair majority of respondents (61.90 per cent) with income of Rs. 1-5 lakhs in comparison to the majority of respondents in the remaining categories of this variable agreed with the point of view.

Jalandhar: High majority of respondents (77.80 per cent) with per capita income Rs. 5-10 lakhs agreed with the poser but fair majority of respondents (60.00 per cent) with per capita income less than Rs. 1 lakh and majority of respondents (above 50.00 per cent) in remaining categories of this variable disagreed with the issue.

Significant association was found between the variable per capita income and the statement.

Land Ownership

Amritsar: Fair majority of respondents (69.20 per cent) with ownership of above 25 acres of land and high proportion of respondents (33.30 per cent) with ownership of 16-25 acres of land agreed with the point of view but majority of respondents (above 50.00 per cent) in the remaining categories of the variable opposed the view point.

Sangrur: High majority of respondents (76.90 per cent) with ownership of below 5 acres of land and fair majority of respondents (61.10 per cent) with ownership of above 25 acres of land as against majority of respondents (above 50.00 per cent) in the remaining categories of the variable provided the positive responses to the statement.

Jalandhar: Fair majority of respondents (66.70 per cent) with ownership of 16-25 acres of land and majority of respondents (50.00 per cent) with ownership of below 5 acres of land in comparison to the high proportion of respondents in remaining categories of the variable provided the negative responses to the statement.

No association was found between the variable land ownership and the statement.

Finding: *Majority of the respondents of Sangrur district were satisfied with the Bee-keeping initiatives whereas the majority respondents of Jalandhar were dissatisfied. However, higher proportion of respondents of Amritsar was satisfied though no clear trend of responses could be seen.*

Sangrur- 63.3

Amritsar- 41.7

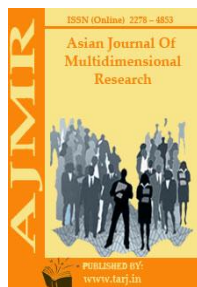
Jalandhar-40.7

FINDINGS

- *Majority of the respondents of Sangrur and Jalandhar district and high proportion of respondents of Amritsar district disagreed with the statement indicating their dissatisfaction with state initiatives and programmes.*
- *Majority of the respondents of Amritsar and Jalandhar district and high proportion of respondents of Sangrur district opined that state Agriculture extension services effectively contributed to the increase in farm production*
- *Respondents of all three districts in highly significant majority opined that state government provided Agriculture loans to the farmers through cooperative societies.*
- *Fair majority of the respondents in select districts opined that state facilitated Agriculture loans through agriculture Banks to the farmers.*

REFERENCES:

- Singh, H.P, "Technological Interventions in Indian horticulture- A way ahead", Indian Horticulture, 52(4), July 2007.
- Singh, Jitendra, "Present Agriculture Scenarios", Kurukshetra, 55 (9), July 2007
- Singh, Ranbir., "The Post Green Revolution society", Kurukshetra, 55(12), October 2007.



DOMESTIC VIOLENCE AGAINST WOMEN: SOME LEGAL PROVISIONS

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ABSTRACT

To encourage the Constitutional mandate, the state has enacted various legislative measures planned to compose certain equal rights, to answer social inequity and diverse kinds of cruelty and violence and to suggest leading services principally to working ladies. Women are suffering from various crimes like slaughter, robbery, untruthfulness and so forth. The crimes, which strength be focussed purposely towards women, are featured as 'Crime in opposition to girls'. These are largely categorized below classes.

KEYWORDS: *Focussed Purposely, Untruthfulness, Constitutional Mandate, And Legislative Measures.*

INTRODUCTION

1. The Crimes accepted under the Indian Penal Code (IPC)

- Kidnapping & Abduction for one-of-a-kind purposes (Sec. 363-373)
- Importation of ladies (as much as 21 years of age)
- Molestation (Sec. 354 IPC)
- Homicide for Dowry, Dowry Deaths or their tries (Sec. 302/304-B IPC)
- Rape (Sec. 376 IPC)

- Sexual Harassment (Sec. 509 IPC)
- Torture (mental and bodily) (Sec. 498-A IPC)

2. The Crimes accepted under the Particular Lawful Procedure

All laws are not made specifically for a gender. Those provisions, which are specifically made for females, reviewed from time to time and they had been amended according to the changing circumstances and rising demands.

Some of the unique steps undertaken for the protection of girls are given below:

- The employees kingdom coverage Act, 1948
- The Plantation Labour Act, 1951
- The own family Courts Act, 1954
- The special Marriage Act, 1954
- The Hindu Marriage Act, 1955
- The Hindu Succession Act, 1956 with modification in 2005
- Immoral visitors (Prevention) Act, 1956
- The Maternity advantage Act, 1961 (Amended in 1995)
- Dowry Prohibition Act, 1961
- The clinical Termination of pregnancy Act, 1971
- The contract Labour (regulation and Abolition) Act, 1976
- The same Remuneration Act, 1976
- The criminal regulation (change) Act, 1983
- The Factories (change) Act, 1986
- Indecent illustration of girls (Prohibition) Act, 1986
- commission of Sati (Prevention) Act, 1987
- The Prohibition of baby Marriage Act, 2006
- The safety of women from domestic Violence Act, 2005

3. Special Tasks for Women

- The fee for girls all over the country: - The government set-up this statutory body in January 1992 with a specific authorization to examine and supervise all subjects related to the constitutional and criminal safeguards which have been provided for girls. It was also concerned with evaluating the existing laws to suggest amendments wherever required.

- Reservation for girls in nearby Self –authorities:- The 73rd Constitutional Amendment Act exceeded in 1992 by Parliament that had make certain 1/3 of the entire seats reserved for women in all elected workplaces in neighbourhood bodies whether in rural areas or city regions.
- The National course of Action for the girl child (1991-2000):- The course of action is to ensure survival and protection of the girl child with the ultimate goal of building up a elevated future for the girl child.
- Countrywide policy for the Empowerment of women, 2001:- The division of ladies & child development within the Ministry of Human support improvement has planned” country wide treatment for the Empowerment of women” in the year 2001. The idea of this coverage is to result in the progress, development and empowerment of girls.

4. DOMESTIC VIOLENCE ACT 2005:

The Act curved into expanded with the aid of the Parliament in August 2005. The president gave his assent on 13 September 2005. As of November 2007, it have be justify by four of twenty-nine state governments in India; namely Tamil Nadu, Andhra Pradesh, Odisha, Uttar Pradesh. Around 8,000criminal cases were registered during India below this act, Rajasthan had 3420 cases; Kerala had 1,128 cases, while Punjab had registered 272 cases.

The protection of girls from domestic Violence Act 2005 is different from the laws passed earlier to this act like segment 498A of the Indian Penal Code, in that it clearly defines domestic violence in adding to dowry-related to meanness. Domestic violence is defined as follows:

For the aim of this Act, any performance of the respondent shall comprise Domestic violence if he,—

- Usually makes the lifestyles of the distressed person depressed with the aid of brutality of behaviour. Although such behaviour does no longer amount to physical ill-remedy; or
- Forces the distressed character to direct an morally wrong life; or
- Otherwise injures or harms the distressed human being.

Not anything restricted in clause (c) of sub-phase (1) shall quantity to domestic violence if the chase of route of ways through the respondent twisted into logical for his own safety or for the defence of his or any other's property.

Broadly speaking proposed to offer safety to the wife live-in partner from domestic violence at the fingers of the husband or male live-in relate or his relatives, the guidelines also extends its protection to women residing in a family along with sisters, widows Domestic violence under this act includes real violence or the warning of exploitation whether bodily, emotionally, verbally, sexually or financially.

The most important Functions of the Protection from Domestic Violence Act, 2005 are as following:

The Act aims at **cowl** the ones girls who are or had been in a court with the one who abused in which both events have lived jointly in a joint family and are connected by marriage or a dating within the nature of marriage, similarly courting with circle of relatives participants residing collectively as a joint circle of relatives also are protected.

"Domestic violence" includes real spite or the chance of abuse. Harassment through criminal dowry demands children and the femaleprotected underneath this definition.

One of the maximum vital functions of the Act is the women's right to be sheltered. The Act provides for the girl's right to live in the marital or joint family, whether or not or now not she has any title or rights inside the family. This right is protected by a house order, which is handed during a court docket. Those house instructions cannot be surpassed beside anybody who's a woman.

The contradictory answer envisaged under the Act is that of the power of the court to skip protection instructions that put a stop to the abuser from supporting or committing an act of domestic violence. The draft Act also suggests for appointment of protection officials and NGOs to propose support to the women medical test, official resource, secure refuge, etc.

The Act suggests for break of protection order or prevailing time safety order through the respondent as a cognizable and non-bail able crime punished by detention for a time period which might also increase to 365 days or with high-quality which may increase to 20 thousand rupees or with each. Similarly, clear of obligations by means of the safety Officer is equally required to be made a crime under the Act with punishment.

While "financial abuse consists of removal of any or all fiscal or monetary property to which the victim is entitled under any law or tradition whether or not allocated under an order of a court or in any other case or which the sufferer requires out of requirement mutually with, yet no longer restricted to, family requirements for the distressed man or woman and her kids, if any belongings, jointly or one by one owned with the aid of her connected with the joint family and preservation and removal of family possessions, any isolation of belongings whether movable or immovable, securities, valuables, stocks, bonds and so on or other possessions wherein the sufferer has a hobby or is permitted to apply by way of unique characteristic of the domestic courting or which may be logically mandatory with the aid of the victim or her adolescents or some other assets jointly or one at a time held by means of the victim and prevention or limitation to maintain access to property or centres which the sufferer is permitted to apply or experience via unique characteristic of the domestic rapport consisting of contact to the joint family, "physical abuse" method any act.

Renuka Chowdhury, The Indian Minister for Ladies and Baby Development, agreed in a Hindustan instances article that "an identical gender regulation could be superlative. However there's definitely too much physical proof to prove that it is especially the woman who suffers on the arms of man".

Soli Sorabjee Former Attorney of India had also criticized the broad definition of unwritten cruelty in the act. At times girls have played an unpleasant, catalytic reason in committed cruelty whether or not against the daughter-in-law, the mother-in-law or woman dwelling allows. Instances exist wherein defensive criminal requirements for the benefit of girls have been subjected to alteration and exploitation to cause minor revenge and to settle ratings. A few surveys have over that 6 to 10 entitlement of dowry lawsuits are fake and have been registered usually to resolve ratings. It is far adverse if laws projected to protect women get harmed as contraptions of domination. The foundation- line accordingly, is the honest invocation of criminal provisions and their goal and sincere implementation."

5. Girls-particular legislation

- The Dowry Prohibition Act, 1961 (28 of 1961) (Amended in 1986)
- The fee of Sati (Prevention) Act, 1987 (three of 1988)
- The Sexual Harassment of women at place of work (PREVENTION, PROHIBITION and REDRESSAL) Act, 2013
- The Immoral site visitors (Prevention) Act, 1956
- The Indecent representation of girls (Prohibition) Act, 1986
- Safety of ladies from home Violence Act, 2005

6. Girls-related legislation

- The Indian proof Act, 1872
- The Indian Penal Code, 1860
- The Married girls's belongings Act, 1874 (3 of 1874)
- The Guardians and Wards Act, 1890
- The exchange Unions Act 1926
- The kid Marriage Restraint Act, 1929 (19 of 1929)
- The Workmen's repayment Act, 1923
- The Indian Christian Marriage Act, 1872 (15 of 1872)
- The bills of Wages (process) Act, 1937
- Employers Liabilities Act 1938

- The bills of Wages Act, 1936
- Juvenile Justice Act, 2000The child Labour (Prohibition & law) Act
- The Pre-Natal Diagnostic strategies (law and Prevention of misuse) Act 19

7. THE IMMORAL traffic (PREVENTION) ACT, 1956:

The Immoral traffic (Prevention) Act is a 1986 modify of directive exceeded in 1956 as of the signing with the aid of India of the United Nations' declaration in 1950 in the large apple on the repression of trafficking. The proceed and then identified as the All India repression of depraved site visitors Act, was amended to the contemporary rule. The legal strategies have been planned as a way of preventive and ultimately abolishing prostitution in India via increasingly criminalising various components of sex vocation.

The chief points of the Act are as follows:

- **Intercourse people:**

A prostitute who seduces or solicits shall be prosecuted. In adding, call ladies can't put up cell phone numbers to the universal public. Interaction employee besides punished for prostitution close to any civic region or notified area. (Imprisonment of up to three months with first-rate, point7)

- **Customers:**

A supporter is responsible of consorting with prostitutes and can be emotional if he engages in sex acts with a sex worker inside 2 hundred yards of community vicinity. Worker is beneath 18 years of age.

- **Pimps and Babus:**

Babes or pimps or live-in fans that exist off a prostitute's pay are accountable of beside the law. Any developed male livelihood with a prostitute is supposed to be responsible until he can establish in any previous case.

- **Brothel:**

Brothel-keepers and Landlords may be prosecuted, custody a brothel is illegal. Detaining an important person at a brothel for the cause of sexual utilization can effect in prosecution.

- **Procuring and trafficking:**

Someone attempts you get anyone are responsible to be punished. Moreover someone who performance someone from one place to one more, can be prosecuted in adding.

- **Rescued ladies:**

The authorities are lawfully obligated to make available rescue and analysis in a "protecting home" for any contact employee asking for assist. Public place in circumstance of this rule

consists of places of public spiritual worship, learning institutions, hospitals and lots of others. A "notified place" is a place which is supposed to be "prostitution-loose" with the assist of the state government underneath the PITA. Brothel in circumstance of this law is a place which has or more sex employees (2a). Prostitution itself isn't eternally a fault under this ruling, but soliciting, madams and brothels, pimps are unlawful.

- **THE DOWRY PROHIBITION ACT, 1961**

The dowry proscription act 1961 becomes enacted by with Parliament in India on 20/05/1961 in total United States of America excluding Jammu & Kashmir. As according to this act gives and attractive of dowry is unlawful.

The dowry is called the possessions or any belonging that may be esteemed is given arranged to be given at several stages in the wedding by one party to previous celebration or by with one person to diverse character. This doesn't contain Dower within the case of folks to whom the Muslim individual law applies. That is applicable at or ahead of or any time behind the wedding.

After the performance of this law, dowry contributor and recipient both will be punished for custody with the intention to now not be less than 5 years and a first-rate of Rs 15,000/- or the same to the amount of such dowry either is extra. Other than, if court unearths that custody for the period less than five years is warranted in unique instance then same may be measured.

But, if provides to the bride and bridegroom in the course of the marriage are excluded from the above dowry situation supplied list of the equal is prepared as it's miles stated inside the Dowry Act 1961.

- **The incident representation of ladies (PROHIBITION) ACT, 1986:**

The Act punishes the offensive depiction of ladies, as of this "the description in any manner of the distinguish of a woman; her form in such way as to have the crash of being crude, or critical to, or condescending women, or is feasible to corrupt, the general public ethics. It states that no quality shall cause to put up to be available or set up to participate within the pamphlet or showing of any industrial which incorporates offensive depiction of girls in any form. 'Within the Act, announcement includes any word, wrapper or diverse report and also consists of any observable representation complete by way of any sound or gas.

It states that no person shall make or purpose to be shaped, sell, authorize to lease, deal out, flow into or transport by with post any pamphlet, slide, paper, film, representation which contains offensive picture of ladies in any. The fee has as well counselled adding of the expression "Derogatory in combination with offensive.

In stage 6 on punishment, the phrases 'and with first-rate which strength also expand to 2000 rupees' shall be substituted with the language 'and with superiority which may as well intensify to 10 thousand rupees' and the words 'in the juncture of a 2nd or following conviction with captivity for a word of not less than six months though which could also amplify to five years and moreover with a exceptional no longer less than 10000 rupees but which may as well intensify to one lakh rupees' will be substituted with the words within the occasion of second or following conviction with custody for a expression of now not less than six months however which may also enlarge to five years and additionally with a great no longer less than fifty thousand rupees but which may also make bigger to 5 lakh rupees'.

- **The Commission of sati (PREVENTION) ACT, 1987 (3 OF 1988):**

Maja Daruwala lines the records of sati rules in India and analyses the crucial Sati Prevention Act on this context. 4 months after the Roop Kanwar incident at Deorala, the focus of interest shifted to the need for primary legislation to stamp out the oppressive exercise of Sati. Two rallies in Delhi, Rajasthan girls activists, MP's inside the nation and at the Centre all referred to as for stringent regulation towards Sati. By way of the brand new year, the fee of Sati (Prevention), Act had exceeded via each homes with a minimal of discussion or change.

The regulation turned into clear, concise and unequivocal in its condemnation of Sati, maintaining it illegal and punishable by means of the crook courts. It made zamindars, petty land owners, local retailers and officials in charge of sales series in particular responsible for instantaneous conversation to the officers of their nearest police station of any intended sacrifice of the nature defined. In case of will complete neglect the responsible officer changed into prone to a high-quality of Rs.200 or 6 months in prison for default.

At once on receiving intelligence that a sacrifice was to take area, the police daroga followed by way of others become to go to the spot and claim the gathering unlawful, prevail upon the crowd to disperse, provide an explanation for that any persistence changed into likely to make them all prone to a crime and if necessary prevent the Sati from taking vicinity or cross and tell the closest magistrate of the names and addresses of all the ones present.

Most significantly the law eschewed any debate approximately voluntariness which has a lot in the leading edge of the Sati debate in 1987. Helping and abetting a sacrifice whether voluntary or not became to deemed culpable homicide. Punishment become at the discretion of the courtroom in step with the character and situations of the case. No justification become to be made that the victim preferred to sacrifice. The demise penalty turned into particularly spelled out for any violence or compulsion or helping or helping in burning of a widow whilst she laboured under a nation of intoxication or stupefaction or due to the fact any other cause impeded her loose will. In such instances the court became informed to expose no mercy.

- **Safety OF ladies FROM home VIOLENCE ACT, 2005:**

This 12 months's monsoon consultation of Parliament changed into marked with the aid of the passage of the protection of ladies from domestic Violence Act 2005 hailed as the first big attempt to realize domestic abuse as a punish in a position offence, to extend its provisions to those in stay-in relationships, and to provide for emergency comfort for the sufferers, similarly to criminal recourse. In perhaps the primary case underneath the Act, the Tamil Nadu police closing week arrested a man following complaints of harassment from his spouse.

Who're the primary beneficiaries of this Act?

Ladies and children. Segment 2(a) of the Act will assist any lady who is or has been in a domestic dating with the 'respondent' inside the case.

It empowers ladies to report a case against someone with whom she is having a 'home dating' in a 'shared family', and who has subjected her to 'domestic violence'.

Kids are also protected the act; they too can document a case against a parent or mother and father who're tormenting or torturing them, bodily, mentally, or economically. Any person can record a criticism on behalf of a infant.

Who's described as 'respondent' by way of this regulation?

Segment 2 (q) says that any person male member who has been in a domestic relationship with the aggrieved person is the 'respondent'. The respondent also can be a relative of the husband or male partner – for that reason, a father-in-law, mom-in-regulation, or maybe siblings of the husband and other loved ones can be proceeded in opposition to.

Do you have to be married to take recourse to this regulation?

Significantly, the regulation recognises live-in relationships. Accordingly, if a female is residing with a man who abuses her, she will take recourse to the provisions of this law even though she isn't married to him.

In line with section 2(g), any courting among two men and women who stay, or have at any factor of time lived collectively inside the shared household, is considered a 'home courting'.

This includes relations of consanguinity, marriage, or thru relationships in the nature of marriage, adoption, or joint own family – thus, 'domestic relationships' aren't restricted to the marital context alone.

Domestic relationships' also cowl sisters, widows, mothers, daughters, ladies in relationships of cohabitation, single women etc. Any widow or unmarried sister or daughter who is careworn in the home can also hotel to the brand new regulation.

The law also protects girls in fraudulent or bigamous marriages, or in marriages deemed invalid in law.

How does the new regulation define home abuse?

Section three of the regulation says any act/conduct/omission/fee that harms or injures or has the potential to damage or injure can be considered 'home violence'.

Below this, the regulation considers bodily, sexual, emotional, verbal, mental, and financial abuse or threats of the equal.

Even a unmarried act of fee or omission can also constitute home violence -- in different words, girls do now not must go through a prolonged length of abuse earlier than taking recourse to the regulation.

The regulation says any definition of home violence must detail the truth that it's miles a human rights violation. Similarly, the law info the exceptional types of violence confronted with the aid of ladies, and ensures that such interpretations are not left completely to the discretion of the judges.

How does the law outline the diverse styles of abuse, to forestall such man or woman interpretation?

Physical Abuse is described as any act or conduct which is of any such nature as to motive bodily pain, damage, or chance to existence, limb, or health, or an act that impairs the health or improvement of the individual aggrieved, or that includes attack, crook intimidation and crook pressure.

Sexual Abuse is any behavior of a sexual nature that abuses, humiliates, degrades, or in any other case violates the distinction of the man or woman. The regulation additionally covers times in which a female is compelled to have sexual sex with her husband against her will.

Verbal and Emotional Abuse has been described as any insult, ridicule, humiliation, call-calling and such acts. A lady who's insulted and ridiculed for, say, no longer being able to conceive, or for now not having produced a male baby, can now take recourse to this law. Any repeated threats cause physical ache to any individual in whom the man or woman aggrieved is fascinated – in other phrases, if say the abuser were to threaten the youngsters, or spouse and children, of the aggrieved party – will also be blanketed beneath this head.

Monetary Abuse is a completely forward-thinking, critical part of this definition. The deprivation of economic or financial sources to which the aggrieved girl or toddler is entitled under regulation or custom, or which the man or woman aggrieved requires out of necessity, may be claimed underneath the provisions of this regulation; withholding such resources now falls below the category of monetary abuse.

This provision comes into play in instances of marital disputes, in which the husband has a tendency to deprive the wife of essential cash as a weapon. The law additionally sees a husband who sells off his spouse's jewelry and property as being responsible of financial abuse.

A husband, under this provision, can not cast off household effects, can't alienate her from her assets or any other belongings in which the aggrieved character has an hobby or entitlement via virtue of the home courting. A husband may not promote or use stridhan (dowry) and/or every other belongings together or one by one held with the aid of the wife.

How does the regulation make certain that a wife who takes felony recourse inside the event is not intimidated or stressed?

An important addition to the law ensures that an aggrieved spouse, who takes recourse to the regulation, can not be confused for doing so. Consequently, if a husband is accused of any of the above varieties of violence, he can't all through the pending disposal of the case prohibit/restriction the wife's persevered get entry to to resources/ facilities to which she is entitled via distinctive feature of the domestic dating, along with get right of entry to to the shared household. In quick, a husband can not cast off her jewellery or cash, or throw her out of the house even as they're having a dispute.

What are the primary rights of a female as recognized by this regulation?

The regulation is so liberal and forward-searching that it recognises a woman's right to reside inside the shared family along with her husband or a associate even when a dispute is on accordingly; it legislates towards husbands who throw their better halves out of the house whilst there's a dispute. Such an motion with the aid of a husband will now be deemed illegal, not simply unethical.

Even supposing she is a victim of home violence, she keeps right to live in 'shared houses' – that is, a domestic or houses she stocks with the abusive accomplice. Phase 17 of the regulation, which offers all married girls or woman companions in a home relationship the proper to reside in a domestic that is recognized in felony terms because the shared household, applies whether or not or now not she has any proper, identify or beneficial hobby in the same.

The law provides that if an abused lady requires, she has to be provided exchange accommodation – and in such conditions, the accommodation and her protection has to be paid for via her husband or associate.

The law, drastically, recognises the need of the abused girl for emergency relief, if you want to need to be provided by means of the husband. A female can not be stopped from making a complaint/utility alleging domestic violence. She has the proper to the services and help of the protection Officer and provider providers, organized below the provisions of the law.

A female who's the victim of home violence may have the right to the offerings of the police, safe haven homes and medical institutions. She also has the proper to concurrently report her very own grievance under section 498A of the Indian Penal Code.

Sections 18-23 offer a massive range of avenues for an abused woman to get comfort. She will get, thru the courts, safety Orders, residence Orders, monetary alleviation, Custody Order for her children, compensation Order and meantime/ Ex parte Orders.

If a husband violates any of the above rights of the aggrieved girl, it will be deemed a punishable offence. Expenses under phase 498A may be framed by using the Justice of the Peace, similarly to the prices underneath this Act.

Consequently, an accused person may be liable to have prices framed below both the old regulation and the brand new one. Further, the offences are cognisable and non-bailable. Punishment for violation of the rights enumerated above ought to extend to one year's imprisonment and/or a most nice of Rs 20,000.

How does the regulation define 'shared family'?

Consistent with section 2(s), a family where the aggrieved individual lives/lived in a home courting, both singly and along side the respondent, is a shared family.

This applies whether or not the household is owned or tenanted, both together by the man or woman aggrieved and the respondent, or via either of them, in which both the character aggrieved or the respondent or each mutually or singly have any right, name, interest or equity.

However, the possession sample of the family can't be affected by the Act In different phrases, the reality that a female lives in a home legally owned by way of her husband does no longer beneath the Act modify the legality of ownership; it does no longer for example switch that possession in whole or element to the spouse.

These officers, to be appointed by means of state governments, might be beneath the jurisdiction and control of the court docket, and will be accountable to the courtroom for monitoring the cases of domestic abuse.

The PO will assist the court in making a domestic Incident record or an application for a safety order on behalf of the aggrieved woman and/or child. POs will ensure that aggrieved human beings are provided criminal resource, medical services, safe refuge and different required assistance.

Importantly, the PO can be penalised for failing/refusing to discharge his obligation, with the proviso that prior sanction of the kingdom government is needed.

Provider vendors are a important device within the implementation of this act. Carrier carriers, as defined by the law, are private firms acknowledged below the corporations Act/Societies Registration Act.

They may need to sign up with the nation authorities as a carrier company to document the home Incident record and to get the aggrieved man or woman medically examined.

The provider companies will among different matters make certain that the aggrieved man or woman is furnished accommodation in a safe haven domestic, if she so calls for. A provider issuer is covered for all movements performed in excellent religion, inside the workout of the powers under this Act, toward the prevention of commission of domestic violence they may be, hence, covered by means of law and can not be sued for the proper exercising of their features.

The new law, thus, recognises the position of voluntary companies in addressing the problem of domestic violence. NGOs working for ladies's rights can now sign up as service carriers under the Act.

What happens subsequent?

The authorities has handed the law; it now desires to install region the mechanism of implementation. To this give up, the government has to provide funding to encourage the registration of provider providers who will want the protections of this new regulation.

The government may also need to provoke a considerable campaign for public attention. It's going to also want to enforce training packages to sensitise the police, media and judiciary to the size, scope and functioning of this new law.

- **THE safety OF girls in disagreement to SEXUAL HARASSMENT AT paintings section report, 2010:**

The bill lays down the explanation of sexual harassment with seeks to give a mechanism for redressing measures. It provides for the establishment of an 'inner complaints Committee' on the paintings section and a 'local proceedings agency' at the district and block area. A District Officer will be responsible for monitoring the actions below the Act.

Highlights of the invoice

The statement defines sexual harassment on the paintings place and creates device for redressal of complaints. It also gives safeguards beside malicious fees.

Each agency is necessary to signify an internal complaints Committee at every department with 10 or more workers. The District Officer is necessary to constitute a local measures Committee at every district, and if required at the block period. The complaints Committees have the powers of civil courts for assembly proof.

The lawsuits Committees are essential to afford for conciliation before initiating an investigation, if asked by resources of the complainant. Consequences were arranged for employers. Non-compliance with the desires of the Act shall be punishable with an agreeable of as much as Rs 50,000.

Repetitive violations may result in improved causes and registration to behaviour enterprise.

Key troubles and analysis

There may be possibility problems in set up an inside court cases commission at every branch with 10 or further employees.

The internal complaints agency has been given the powers of a civil court docket. But, it does now not necessitate members with a legal inheritance nor are there any provisions for legal education.

India in the closing stages enacted its rule on obstacle of sexual harassment in resistance to female employees at the place of job. The Sexual Harassment of girls at agency Act, 2013 has been made effectual on April 23, 2013 by with way of book in the Gazette of India.

The act has been enacted approximately sixteen years behind the supreme court of India, in its sight judgment in State of Rajasthan, laid down tips creation it obligatory for each agency to offer a device to redress grievances recital workplace sexual harassment and put in force the appropriate to gender fairness of effective ladies. Codification of the requirements is a miles-awaited growth and is an extensive step closer to creating appreciation on the complexity of administrative centre sexual persecution and ensuring girls a safe and healthy labour environment.

The ultimate court relied on the conference at the removal of All forms Discrimination towards girls, adopted by way of the overall assembly of the United international locations, in 1979, which India has both signed and ratified. In its judgment, the ideally suited court outlined the suggestions making it mandatory for employers to offer for sympathetic and non-retributive mechanisms to put in force the right to gender equality of working women.

As in step with the Mishawka Judgment, the suggestions, till such time a legislative frame work on the challenge is drawn-up and enacted, have the impact of regulation and the hints are to be mandatory accompanied with the aid of companies, each within the private and authorities area.

Sexual Harassment - objective of the law, that means and prohibition

The Sexual Harassment Act has been enacted with the goal of offering women protection towards sexual harassment on the workplace and for the prevention and redressal of court cases of sexual harassment. Sexual harassment is taken into consideration as a violation of the essential right of a female to equality as guaranteed below Articles 14 and 15 of the charter of India ("charter") and her proper to lifestyles and to stay with dignity as in line with Article 21 of the charter. It has also been taken into consideration as a contravention of a proper to practice or to perform any career, change or enterprise below Article 19(1)(g) of the constitution, which incorporates a proper to a safe surroundings free from harassment.

The definition of sexual harassment inside the Sexual Harassment Act is in keeping with the very best court docket's definition inside the Mishawka Judgment and consists of any unwelcome sexually determined behaviour (whether without delay or by means of implication) which includes bodily contact and advances, call for or request for sexual favours, sexually coloured feedback, showing pornography, or every other unwelcome bodily verbal or non- verbal conduct of sexual nature.

The Sexual Harassment Act stipulates that a female shall at the present not be subjected to sexual harassment at any position of job. As in custody with the decree, presence or occurrence of occasions of implicit or express promise of special remedy in employment; chance of unenthusiastic treatment in employment; danger about gift or fortune employment; intrusion with

work or creating an threatening or humiliating action likely to influence the lady worker's health or security can also measure to sexual harassment.

Most important capabilities of the Sexual Harassment Act

Scope :

The compass of the Sexual Harassment Act is very extensive and is applicable to the planned section as well as the unorganized area. In analysis of the extensive explanation of 'place of business', the act, inter alia, uses to authorities bodies, special and communal region corporations, businesses carrying on industrial, non- governmental establishments vocational, academic, industrial, hospitals, nursing homes and monetary activities.

And stadiums old for schooling persons. As reliable with the Sexual Harassment Act, a place of business moreover covers inside its extent places visited by means of workers at some point of the way of employment together with moving supplied by the company for the reason of commuting to and from the environs of employment.

The explanation of 'worker' beneath the Sexual Harassment Act in every equality huge and, transient, people working on daily wage basis, agreement labour, co-employees, advert hoc employees, probationers, trainees, and apprentices, both at once or an agent, covers regular, her for payment or not, successful on a voluntary base or in any erstwhile case, whether the conditions of employment are implied.

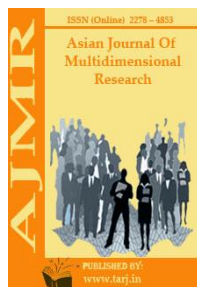
Internal lawsuits agency and nearby court cases agency:

The Sexual Harassment Act gives an organization to setting up an 'inner lawsuits Committee' at each department or workplace, of an enterprise with at least 10 employees. The establishment is in flip essential to set up a 'nearby court cases Committees' on the region level to investigate complaints about sexual harassment from establishments where the ICC has not been constituted ensuing from the status quo having take away than 10 employees or if the disapproval is in opposition to the endeavour. The Sexual Harassment Act besides sets out the constitution of the agency, manner to be observed for creating a criticism and inquiring into the grievance in a time sure manner.

Period among Reliefs: The Sexual Harassment Act empowers the ICC and the LCC to advise to the company, on the appeal of the wounded employee, interim method together with (i) transfer of the distressed woman or the respondent to each other workplace; or (ii) conceding go away to the distressed woman as greatly as a length of 3 months supplementary to her regular statutory.

Procedure for Inquiry and complaint: Please talk over with the subsequent flowchart which affords, in speedy, the system to be experimental by using the distressed worker to formulate the complaint and via the business endeavour to inquire into the grievance. The guideline lets in lady employees to appeal for conciliation so that it will settle the difficulty although a financial conformity should not be made as a source of conciliation.

Movement towards playful complaints: In an endeavour to make certain that the protections contemplated under the Sexual Harassment Act do no longer get changed, provisions for motion beside "false or spiteful" complainants have been made.



INDO-US RELATIONS: SECURITY DIMENSION DURING TRUMP REGIME

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ABSTRACT

The dynamics of the India-US relationship under the Trump administration bore significantly on the two countries' security partnership. As witnessed in the case of the United States' relations with its allies and partners across Europe and Asia, Trump had often linked US defence commitments and partner nations' security dependencies with trade imbalances and immigration issues. In exacting "fair" deals, this transactional approach risks hampering the otherwise positive dynamic of the Indo-US relationship.

KEYWORDS: Anxiety, Traditionally Exercised, Security Cooperation, Defence Interoperability.

INTRODUCTION

The election of President Donald Trump in 2016 had caused anxiety amongst US foreign- and security-policy elites. The real-estate-mogul-turned-president's penchant for isolationist tendencies has given rise to commentaries on an American decline, not by defeat by a peer competitor, but by wilful abdication.¹ The Trump administration's approach has been to link American security commitments and partner nations' defence requirements with inconsistencies in trade and immigration. Many consider this transactional approach to be an existential threat to the US' credibility as a global partner, which in turn endangers its primacy in the world order.

In the past year, this anxiety has informed a change in the American political system with respect to the division of power and responsibilities on the conduct of US foreign and security policy. Although the executive branch has traditionally exercised broad control over foreign-policy matters—by both constitutional design and post-9/11 consolidation of powers in the hands of the

US President—the Trump era has witnessed a shift in decision-making away from the Oval Office.

The Trump administration bears continuity with respect to India, especially on matters pertaining to increasing defence interoperability and security cooperation in the Indo-Pacific. India has crucial position in the US security calculus in the Indo-Pacific region.

The Indo-US Convergence: Continuity under Trump

The post-Cold War world has been characterised by what analysts call the “rise of the rest”,² or the transition away from American unipolarity and towards a multipolar world. From a realpolitik standpoint, the resultant zero-sum balances of power—wherein the rise of a nation’s influence implies the relative decline of another—produces anxiety about the stability of the international order. The 21st century, in particular, is considered crucial to the future of American power. At the core of such a hypothesis stands Washington’s relations with rising peer competitor powers such as China. A natural corollary is the country’s dynamics with like-minded nations in the proximity of possible competitor powers. In the post-Cold War world, this corollary has, in large parts, influenced the development of the Indo-US relationship.

The Indo-US trajectory has been one of immense promise—as articulated for instance by former Indian Prime Minister Atal B. Vajpayee calling India and the US “natural allies,”³ and former US President Barack Obama labelling the Indo-US partnership as “one of the defining partnerships of the 21st century.”⁴ The Trump era ensures continuity by building on the momentum of the past decades for greater convergence of Indo-American interests, especially on issues of defence interoperability and security cooperation. The Trump administration’s maiden National Security Strategy deemed India to be “a leading global power,”⁵ and notably, Trump’s first Secretary of State, Rex Tillerson, described India and the US as the “two bookends of stability” in the region.⁶

Indeed, it is the Trump administration that encouraged the adoption of the ‘Indo-Pacific’ moniker, which links the fate of the Western Pacific to the Indian Ocean region. The Trump administration also rechristened the US Pacific Command (PACOM) in Hawaii to the ‘US Indo-Pacific Command’. Although PACOM has had jurisdiction over India since the conception of US Combatant Commands in the immediate aftermath of World War II, the renaming of the command, albeit largely symbolic, signifies India’s elevated role in the US security calculus.

At the renaming ceremony, Secretary of Defence James Mattis notably defined the geopolitical expanse of the Indo-Pacific region. He said, “For U.S. Pacific Command, it is our primary combatant command, its standing watch and intimately engaged with over half of the earth’s surface and its diverse populations, from Hollywood to Bollywood, from polar bears to penguins.”⁷ In response, some reports suggest that New Delhi is now considering posting an Indian Military Liaison Officer at the Command in Hawaii. Further, on matters of defence interoperability, New Delhi and Washington inked the Communications Compatibility and Security Agreement (COMCASA), the third of four defence interoperability agreements. It is an India-specific version of the Communication & Information on Security Memorandum of Agreement (CISMOA), meant to “facilitate the use of high-end secured communication

equipment to be installed on military platforms being sold to India, and fully exploit their potential.”⁸

On defence acquisition, a report by the Stockholm International Peace Research Institute (SIPRI) noted that the US had recorded “a blazing growth in its arms exports to India, recording over 550% growth in 2013–17 compared with the previous five years. As a result, the U.S. has become India’s second largest supplier.”⁹ On the diplomatic front, the Indo-US synergy at the Financial Action Task Force (FATF) to grey-list Pakistan was notable.¹⁰

With respect to India, the Trump administration may link security and defence interoperability matters with the inconsistencies in the countries’ bilateral relationship vis-à-vis trade and immigration matters. Although India does not have an overt dependency on the American security architecture, the growing Indo-US security partnership is vital to India’s strategic calculus. The evolving partnership—on matters pertaining to defence acquisition, armed forces’ interoperability, and joint development of defence technology—are crucial for India’s emergence as a military power in the region and beyond.

In the past, under both Republican and Democrat administrations, an understated dictum informed the development of the Indo-US bilateral relationship. Named after former Secretary of Defence Ashton Carter, it required Washington to be “patient as the Indian system works through its responses to U.S. templates, and be flexible.”¹¹ The Carter mantra thus focused on harnessing economic and defence ties beyond differences—on trade, diplomatic and strategic fronts—crowding out minimal-yet-positive developments. Thus, over the past decade, India and the US have developed a closer partnership, wherein India has gradually shifted from its historic dependence on Russia as its primary defence-import destination and now conducts more exercises with the US forces than with any other country.

India adopted a tempered approach to prevent defence matters from being linked with inconsistencies on trade and immigration fronts. Such an approach substantially involved the US legislative branch.

As discussed earlier, the Trump administration’s transactional worldview often linked the US’ security commitments and defence relations with its bilateral imbalances with countries, on matters such as trade and immigration. Across the American media, academia and policymaking corridors, many have deemed this Trumpian approach an existential challenge to the US’ stewardship of the world order, and by extension, the sustenance of US primacy.¹² Spurred by the resultant anxiety over Trump possibly dismantling the US-led world order, the American political system experienced an unprecedented change with respect to the conduct of American foreign and security policy.

While the US Constitution allows equitable division of power and responsibilities between the legislative and executive branches over matters of US domestic policy, traditionally, the executive branch has had more say on matters of foreign policy.¹³ This is due to the inherent design of the country’s political system as well as precedents that led to the executive’s consolidation of power over foreign-policy decision-making. Although the legislature oversees crucial matters pertaining to the ratification of international agreements, funding of the US

military, and authorisation of the use of force, Article II of the Constitution gives the executive branch the power over foreign policy. The Article bestows broad “implied” powers to the executive, stemming from the president’s role as the Commander-in-Chief of the armed forces. It also upholds the idea of “executive power,” which grants authority to the executive, headed by the president elected by the American people, to “recognize foreign governments and conduct diplomacy with other countries generally” on behalf of the US.¹⁴ Moreover, in the post-9/11 era, due to the protracted nature of non-traditional security threats, the executive consolidated its hold on foreign- and security-policy matters by purporting expansive conceptions of US interests to employ US force (as in case of the “War on Terror”) and conducting electronic surveillance under the oft-ambiguous mandate of ‘national security’.

Although a general power tussle between the legislative and the executive branches has been the norm, the Trump era had witnessed the Congress assuming a greater role in foreign and security policy. Examples include bipartisan legislations aimed at guarding against Trump’s transactionalism, and by extension also curbing the White House’s sway on foreign policy. For instance, the 2019 National Defence Authorisation Act’s (NDAA) conference report included a provision to hem Trump’s transactionalism vis-à-vis allied nations such as South Korea. In declaring the 28,500-strong US Forces Korea (USFOR-K) on the Korean peninsula as a “non-negotiable” item in talks with Pyongyang, the NDAA, 2019 barred reduction of troop presence below 22,000, unless the Secretary of Defence certifies a cut in the national security interest of the US.¹⁵

The long-term ramifications of these legislations chipping away at the executive’s powers warrant a separate discussion on the nature of the American political system of checks and balances. From Western Europe to East Asia, American allies’ abandonment concerns stemming from President Trump’s transactional worldview stood assuaged by such legislations that aimed to conserve the enduring tenets of US foreign policy, rendering a sense of relative continuity in its otherwise idiosyncratic conduct under Trump.

The heightened role of the US legislature has been apparent in keeping the developing Indo-US dynamic on track. A case in point here would be the discord over the Countering America’s Adversaries through Sanctions Act (CAATSA) sanctions. Due to the Russophobia surrounding the 2016 election, the US Congress introduced CAATSA. With respect to India’s historical ties with Russia as a major source of weapons imports, CAATSA momentarily raised the spectre of hampering the trajectory of Indo-US relations. The CAATSA legislation not only put forward intrusive sanctions against Russia, Iran and North Korea, but also sought to “punish” other countries dealing with them.¹⁶ In light of this, New Delhi’s plan to purchase Russian S-400 air defence systems was set to trigger sanctions under CAATSA’s provisions. Eventually, New Delhi managed to keep the prospects of capitulation to a minimum with the Defence Acquisitions Council (DAC), chaired by Defence Minister Nirmala Sitharaman, clearing “the decks” towards acquiring five advanced S-400 Triumf air defence missile systems from Russia “despite the looming threat of US sanctions.”¹⁷ In addition, senior Trump administration officials, such as Secretary of State Mike Pompeo and Secretary of Defence James Mattis, in their testimonies to Congressional committees like the Senate Foreign Relations Committee, urged for waivers to partner nations such as India. Eventually, the US Senate and House Armed

Services Committee did provide provisions for waivers to India, Vietnam and Indonesia under Section 231 of the US law.¹⁸

Trump's transactional worldview with respect to acquiring "fair" deals on the economic front threatened the trajectory of the Indo-US strategic partnership. To avoid the same from becoming a bargaining chip in the hands of President Trump, India pursued the US legislative branch or senior administration officials, e.g. Secretary of Defence James Mattis, who enjoy strong bipartisan support on the Capitol Hill, to ensure greater institutionalisation of the Indo-US relationship. Increased coordination with on whom members of the Cabinet—whom the US Congress depends heavily on to hem President Trump—went a long way in institutionalising the Indo-US partnership beyond the Trump era.

Finally, in guarding against President Trump's inclination to leverage security partnerships and dependencies, New Delhi increasingly tapped into the strong bipartisan optimism regarding India at the Capitol Hill. A collection of legislators from these caucuses tabled the US–India Enhanced Co-operation Act in the House of Representatives, including another amendment to the Arms Export Control Act, to designate India as a 'Major Defence Partner' and brought New Delhi on par with major US allies on defence-acquisition matters. This happened despite the two countries not having a formal alliance.¹⁹

Similarly, on matters of raising defence interoperability and active communication channels, India continued to seek greater institutionalisation of the evolving dynamic at a bureaucratic level. Thus, the initiation of a hotline between Defence Minister Sitharaman and Defence Secretary Mattis,²⁰ and the inaugural 2+2 meetings between Indian and US defence and foreign ministers, which sought to institutionalise the relationship at the Cabinet level were welcome developments. These contributed significantly to the development of the Indo-US security dynamic.

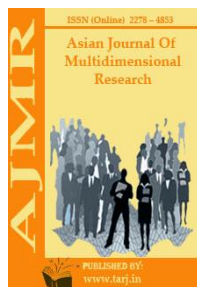
Despite India's crucial position in the US-security calculus in the Indo-Pacific region and its relatively small trade imbalance with the US, India was not spared from the adverse effects of the Trumpian transactional approach.

On the whole, Trump era saw increased security cooperation between USA and India. But Trump era also saw India bashing for a small trade imbalance and other issues. The bipartisan support to India in US Congress was key in ensuring continuity in defence collaboration between the two largest democracies of the world.

REFERENCES

1. David Wright, "Haass says US engaged in 'abdication' of global leadership", CNN, 3 January 2018
2. Fareed Zakaria, *The Post-American World: And the Rise of the Rest* (Penguin Books, 2009)
3. Malini Parthasarathy, "India, U.S. natural allies: Vajpayee", *The Hindu*, 9 September 2000.
4. Quoted in TOI Report, "Text of President Barack Obama's address to India's Parliament", *The Times of India*, 8 November 2010

5. NSS 2017, “National Security Strategy of the United States of America”, The White House – The Donald J. Trump Administration, 44, December 2017,
6. Rex Tillerson, “Defining Our Relationship with India for the Next Century: An Address by U.S. Secretary of State Rex Tillerson”, Center for Strategic and International Studies, 18 October 2017
7. James N. Mattis, “Remarks at U.S. Indo-Pacific Command Change of Command Ceremony”, US Department of Defense, 30 May 2018,
8. Sushant Singh, “COMCASA: Why US, India can’t connect”, The Indian Express, 27 June 2018
9. Special Correspondent, “India’s arms imports from U.S. up by 550%: report”, The Hindu, 13 March 2018
10. TOI Report, “India, US are one in saying Pakistan deserved to be demoted to anti-terror funding group’s ‘grey list’”, The Times of India, 30 June 2018
11. Alyssa Ayres, “US Relations with India – Prepared statement by Alyssa Ayres – Before the Committee on Foreign Relations – Hearing on ‘US–India Relations: Balancing Progress and Managing Expectations’”, Council on Foreign Relations, 24 May 2015,
12. Walliam J. Burn, “The risks of the Trump administration hollowing out American leadership”, The Washington Post, 19 April 2017
13. Jonathan Masters, “US Foreign Policy Powers: Congress and the President”, CFR, 2 March 2017
14. Jonathan Masters, “US Foreign Policy Powers: Congress and the President”, CFR, 2 March 2017
15. Yonhap News Agency Report, “Trump signs defense bill restricting drawdown of troops in S. Korea”, Yonhap News Agency 14 August 2018
16. Marco Rubio, “Rubio, Van Hollen Introduce Legislation to Deter Foreign Interference in American Elections”, Marco Rubio – US Senator for Florida, 16 January 2018
17. Rajat Pandit, “India moves towards acquiring Russian S-400 missile systems despite US opposition”, The Times of India, 1 July 2018
18. TNN Report, “India set to get US waiver on missile deal with Russia”, The Times of India, 25 July 2018
19. PTI Report, “Bill to enhance strategic partnership with India tables in US Congress” NDTV, 26 July 2018,
20. Shishir Gupta, “Nirmala Sitharaman to get a hotline with James Mattis as India, US scale up ties”, The Hindustan Times, 11 August 2018



ROHINTON MISTRY: A VOICE OF MINORITY AND DOWNTRODDEN IN INDIA

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ABSTRACT

Rohinton Mistry seems to emphasize the fact that the poor can understand the feelings and the problems of the poor irrespective of community differences. They help each other and cooperate with whatever possible for them in difficult situations. A rounded development of man's various powers, physical and mental, artistic and moral is opposed to merely technical or specialized training. Mistry's literary works deal with the question of man in the universe. The rich and the powerful exploit the poor and minorities in the society. The unfortune, the catastrophe, the crisis, the divisions, the oppression, the pitiable conditions seem to be the second names of Gustad, Nariman, Dina and Dukhi Mochi. Mistry has globalised the theme by painting a cosmos of minority and poor human characters.

KEYWORDS: Specialised training, Minorities, Catastrophe.

INTRODUCTION

'Behind every book is a man; behind man is the race; and behind race are the natural and social environments whose influences unconsciously reflected'

William J. Long

A noted post-independence Parsi writer, Rohinton Mistry talks about the insecurity and helplessness of the minority and poor residents of India. With the arrival of the British east India company Parsis left rural areas for employment and educational opportunities offered by the British and found themselves playing a key role in the development of colonial and modern India

especially significant role in the development of Bombay as a grand city and became an influential character of the city for generations

In *Such a Long Journey*, Mistry shows us the life of Gustad Noble an ordinary parsi man living in Bombay. He suffers throughout his life for bright future of his children, specially Sohrab, his elder son;

Sohrab will make name for himself, you see if he does not Gustad had said with a father's first pride. At last our sacrifices will prove worthwhile. I

Gustad is god fearing and innocent soul, always recalls his past. In struggle to save his son Sohrab, he got his hip slapped in an accident. Instead of joining IIT as per father's advice, his apathy towards father's dream gives a severe blow to him. Now Gustad wishes death for his son.

In such a way a novel reaffirms or devalue ideas, goals and values of people, it touches the day to day life structure without escaping it.

Mistry's literary world deals with various types of classes, gender, castes, races and religions but the aspirations and hopes, anxieties and frustration, strength and weaknesses of his own people of minority class and downtrodden is highlighted the most. Different communities– Hindus, Muslims, Christians, Parsi, upper caste brahmins, Dalits- all come together in their struggle for survival. 'A Fine Balance' explores the divisions of the caste, class and gender in the society full of many crisis. Dukhi Mochi is a low caste Hindu and is not well treated by the upper caste Hindus of his village. He wants his sons to learn tailoring and to leave their ancestor profession. At that time Mistry emphasizes that the poor can understand the feelings and problems of the poor irrespective of the community differences. Ishwar and Narayan (sons of Dukhi) also paid for Ashraf and his wife's good deeds and behaviour towards them since last so many years. Ishwar said –

'Chachi, you are like our mother, we have shared your food and home for seven years.'

*"Inshallah, you will stay and eat with us for seventy more."*131

Later Ashraf cleared his throat. Tears were rolling down his cheeks; he paused to wipe them.

*"The day I met your father- the day I told Dukhi to send me his two sons for tailor training. That day was the luckiest of my life."*131

A fine balance is a touching story about the lives of ordinary poor people who are trapped in a vicious circle of poverty. The writer here tries to explore contemporary India, highlighting the plights of outcasts and innocents who are trying there hard to survive in a cruel and unfriendly society. They are confused and grapped in dilemma of living life in death like situation the society never changes for the minorities and downtrodden people. Only the corrupt, rich, cruel and horrible people rule the society. Such people flourish and the poor one are always exploited, tortured and hated by these so called powerful people. There is a very delicate balance between hope and despair and the constantly tried to maintain there survival. Every body has to maintain a balance in his life between individuality and social values, between traditional and modern world. Every person who has come in the world wants to find out and prove his existence or

identity. And this is the most difficult or impossible work for the downtrodden in the society. Upper class people embarrass low class people and bully them in inhuman ways.

Ishwar and Narayan tried their best but they became beggars in the end and lost their identities in this cruel world. Maneck has to leave the beautiful hilly area of his birth place. The economic development made him to sacrifice the peace and beauty of his natural surroundings. The concrete roads show the modernity and arrival of global companies ensure the profit. But this brings set backs in the life of middle class Maneck. In the end of the novel the terrible death of Maneck expresses the loss of morality, hopes and desires of such aspiring people. Both Dina and Maneck failed in their continuous efforts to survive in this cruel world.

In Family Matters parsi community is miniature of India and it is full of sadness and conflict but a finely woven tale of grace and humanity. A 79 years old parsi widower, Nariman Vakeel is the central character in the novel. A former Professor of English, Parkinson patient, lives in a 7 room apartment with his two step daughters. Lucy and Nariman realise that their families will never permit them to marry and live in peace. So they decided to end their hopeless relationship. Nariman became the martyr to his own wishes. He married a parsi women having two children. He was ill treated by them. His ankle break made him confined to bed. Coomy found it hard to look after a bed-ridden father. Ultimately Nariman was shifted to Roxana, saying Coomy to Jal-

I don't owe papa anything. He did not change my diaper or wash my bum, and I don't have to clear his shit either. 82

Also the orthodox parsi views about marriage are clarified when the father of Murad advised him-

You can have any friends you like, any race or religion but a serious relationship, for marriage the rules are different.

Parsi people disapprove inter-community marriage. Lucy and Yasmin met the tragic death. Yezad thinks that Persian race is pure race and the mix marriage will pollute the purity.... The life and death of this community is not a joking matter. Recognisable slippage between open and private world can be seen in this novel.

The inhabitants of the Khodadad Building are the representatives of a cross section of poor parsis who express the anxieties of a minority class in multi racial India. Their superstitions and customs are age old, hence making them alien from the main stream.

The nationalisation of banks by Indra Gandhi raised the anger of Dinshawji. *There is no future for minorities. It is almost seem like the black people in America- twice as good as the white man to get half as much.*

People in Mistry's Bombay follow their own religious beliefs but communal harmony or religious tolerance show that the religion is a matter of convenience.

"That we are minorities in a nation of hindus. Let them eat pulses and grains and beans, spiced with their stinky as asafoetida-what they call hing. Let them part their lives away. The modernized Hindus eat mutton or chicken, if they want to be more fashionable but we will get our protein from their sacred cow."

Dilnavaz had to get up early in the morning to store the required quantity of water for the whole day for her family. This shows the sufferings of the common man in day to day life in Bombay.

She went to the bathroom and connected the transparent plastic hose to fill the water drums, even though today there was time enough to brush her teeth first and make her tea. It was only 5 o'clock- two whole hours before the taps went dry.

In Such a Long Journey, Gustad's daughter Roshan, suffers from chronic diarrhoea. Gustad has to sell his camera, and his wife Dilnavaz has to part with her gold wedding bangles to cure her. They also approach a Miss Kutpitia who practices magic. She also tries to kill Tehmul, a mentally retarded boy in the vicinity. In this society gross selfishness and inhumanity come to override one's dictates of conscience.

Mistry gives a very realistic description of poor Indian people suffering at the time of Indo-China war. The Refugee Relief Tax is killing middle class. More and more people had to draw out their savings. Year after year floods are washing away poor people's huts.

A Fine Balance depicts ironically how the minorities and the powerless are forced to maintain a fine balance between life and death-in-life existence while passing through the impossible order of life. Hussain, a peon of Bombay sporting is a living tragic character of Babri Masjid incident. His wife and children were killed in the riot.

In those rights the police were behaving like gangsters. In Muslim mohallas, they were shooting their guns at innocent people. Houses were burning; neighbours came out to throw water and police? Firing bullets like target practice. These guardians or law were murdering everybody. And my poor wife and children.... I couldn't even recognise them.

Mistry's strong opposition to social and class differences have extended the spectrum of contemporary reality through novel. In a fine Balance, Mistry portrays atrocities committed on two untouchables from a village and suffering of the poor characters from parsi community. Mistry uses four main characters a woman and three men, and a handful of extraordinary minor ones In A Fine Balance. Mistry always lived heartily in India even while living in Canada. He tries to find out his identity through these characters of minority class. He raises his voice against corruption and exploitation through his characters in his literary works.

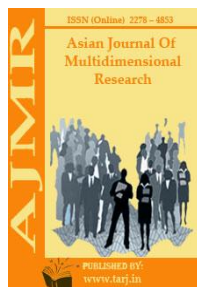
CONCLUSION

Rohinton Mistry utilises his literary skills to hold the mirror up to the ordinary people. The law and order in society are organised time to time but prove useless to bring equality among various classes of the society. The so called divisions in the society of classes religion and language degrade a particular section of the society and develops the isolation of the general population. The disappointments and dejections became the regular part of the weaker sections of the society. The human identities are lost and broken and suppressed by the separate, developed section of the society. The untouchables are treated in inhuman and savage ways in the name of religion. Mistry has authenticated his stories with the depiction of city names, historical wars and other remarkable past incidents and events happened in India. Mistry finds it very difficult to escape from his minority personality and any harmony with Indian religions and social ethos.

These minorities and downtrodden break the blockade attitude of the prevalent society and connect with different networks in trying to fulfil the desire of soul and to prove their 'Self' in this cruel world.

REFERENCES

1. Rohinton Mistry, Such a Long Journey (New Delhi: Rupa 1991) the textual citations are from this edition.
2. Rohinton Mistry, A Fine Balance (London: Faber and Faber 1996) the textual citations are from this edition.
3. Rohinton Mistry, Family Matters (London: Faber and Faber 2002) the textual citations are from this edition.
4. Belliappa, K. C. (2007) Rohinton Mistry's A Fine Balance: A Prototypical Realistic Novel.



RELATION BETWEEN COMPONENTS OF JOB SATISFACTION IN POWER SECTOR IN HARYANA

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ABSTRACT

Components of job satisfaction are discussed in this paper regarding power sector. All components are extracted from the various factors studied in the previous researches. These are quite significant and affect the efficiency of worker.

KEYWORDS: *Components, extracted, transmission, promoted.*

INTRODUCTION

Energy is very important for every economy. All economies run through it. Satisfactory power supply plays important role for business houses, household's agriculture and other areas of economy. Upto 1948 private players used to supply electricity in urban areas of the economy. After India became independent state electricity boards were promoted to supply electricity among different states. All state electricity boards were given responsibility in all sectors of electricity supply, inclusive generation and transmission. To provide electricity to rural sector was also an important aspect of development in the economy. It took years to spread the network in rural areas. Central government also participated in this sector. So government installed grids for transmission and generation of electricity. Garcia, Gutierrez and Trillas (2011) examined the deregulation procedure of energy sector the study was related to European countries the study evaluated mergers and acquisitions in this sector. Soham Ghosh (2012) evaluated the thinking that power sector is upgrading and additional the efficiency of it. Jamasb and Pollit (2001) studied the effectiveness of transmission and distribution of power sector and concluded effective benchmarking process. Gulati and Sudha (2000) studied the loss of transmission and distribution. He also evaluated the cost of electricity supply.

Government of India started arranging funds for reforms in this sector. This work started in 1990s. the fund was arranged from world bank and Asian development bank. This fund was released in 1994. Due to association of world level organizations the recommendations regarding unbundling of all state electricity boards was suggested. The components of electricity generation and transmission were started. Retail distribution was also given important place. For doing all this privatization of electricity sector needed. Government needs to regulate the electricity sector at all levels.

Human resource is a significant constituent in any sector. One of the significant behavioural outcomes of human resource is employee satisfaction. Satisfaction of employees is an outcome of certain institutional and personal variables. But in general, it is taken as an outcome and this is considered as a dependent variable. It is perceived that employees are more innovative and more productive when they achieve their level of satisfaction. Satisfaction has no boundaries and everybody has its own understanding regarding satisfaction. But in broad forms, satisfaction is taken as dependent variable and bifurcations of power sectors are taken as independent variables. Among the Five components of job satisfaction the first one is general working conditions. Working condition plays important role efficiency. Another component is salary and promotion potential. Without sufficient pay it's difficult to maintain the proficiency. Work activities and work relationships are also quite important because without good environment at work place proficiency affects. Use of skill and abilities are also not possible with it. So all these components are taken for investigation. The study is aimed to examine overall satisfaction and satisfaction across different divisions of power sector in Haryana

OBJECTIVE

To assess employee satisfaction regarding power sector Haryana.

METHODOLOGY

Primary data is collected from the employees of power sector Haryana. 240 respondents was the total number. Out of it 60 were included from each nigram. Among these nigrams Dakshin Haryana Bijli Vitran Nigam Limited supply retail electricity. It is responsible for power distribution in southern areas. Uttar Haryana Bijli Vitran Nigam Limited supply retail electricity to all areas of northern Haryana state. Haryana Vidyut Parsaran Nigam Limited distributes all power supply. Haryana Power Generation Corporation Limited is responsible for power generation. The aim is fulfilled through primary data.

EXPLANATION

TABLE 1 CORRELATION TABLE FOR COMPONENTS OF JOB SATISFACTION IN POWER SECTOR OF HARYANA

Factor Description		General working conditions (a)	Pay and promotion potential (b)	Use of skill and abilities I	Work activities (d)	Work relationship (e)
General working conditions (a)	Pearson Correlation	1	.497**	.581**	.350**	.417**
	P-value		0	0	0	0
	N	240	240	240	240	240
Pay and promotion potential (b)	Pearson Correlation	.497**	1	.513**	.307**	.252**
	P-value	0		0	0	0
	N	240	240	240	240	240
Use of skill and abilities I	Pearson Correlation	.581**	.513**	1	.430**	.435**
	P-value	0	0		0	0
	N	240	240	240	240	240
Work activities (d)	Pearson Correlation	.350**	.307**	.430**	1	.418**
	P-value	0	0	0		0
	N	240	240	240	240	240

Work relationship (e)	Pearson Correlation	.417**	.252**	.435**	.418**	1
	P-value	0	0	0	0	
	N	240	240	240	240	240
**.0.01 level (2-tailed).						

Source: Calculated by the researcher

In the present table, five factors responsible for employee satisfaction are taken into account. Among these factors the first factor is general working conditions. Next two factors are work activities and work relationship. Pay and promotion potential is also one of the significant factor. Use of skill and abilities factor should also be considered important. Researchers want to see the degree of relationship between five factors. From above table, we observed that all pairs are significant at 0.01 level of significance. There is significant relationship found among all factors. Thus we conclude that all variables of employee satisfaction are correlated in population.. General working conditions, pay and promotion potential, use of skill and abilities, work activities and work relationship of job satisfaction of employees of Power Sector of Haryana All these factors have good degree of relationship to each other. From the above results we can say that all factors are correlated to each

CONCLUSION

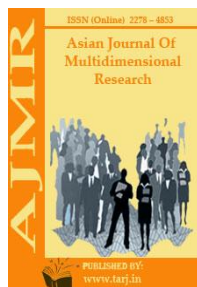
Power divisions differ significantly with regard to overall job satisfaction. In case of overall job satisfaction HPGCL and HVPNL, HVPNL and DHBVNL are the sources of overall significant. In case of power sector in Haryana, all variables are significantly correlated with each other. If the employees participate in work it shapes its thinking and self-esteem. Due to this output of a worker increase. So we can say productivity and efficiency increase. So a worker is a partner in an institution.

REFERENCES

- García, J., Gutiérrez, L., & Trillas, F. (2012). Regulatory reform in European energy industry: Impact of changes in corporate control on firm value. *Desarrollo y Sociedad*, (70), 7-49.
- Ghosh, S. (2012). Loss reduction and efficiency improvement: a critical appraisal of power distribution sector in India. *International Journal of Modern Engineering Research*, 2(5), 3292-3297.
- Ghosh, S. (n.d.). Loss Reduction and Efficiency Improvement: A Critical Appraisal of Power Distribution Sector in India .www.ijmer.com. Retrieved October 12, 2013
- Jamasb, T., & Pollitt, M. (2000). Benchmarking and regulation: international electricity experience. *Utilities policy*, 9(3), 107-130.

Narayanan, S., & Gulati, A. (2002). Globalization and the smallholders: A review of issues, approaches, and implications.

T.Jamasb, M. Pollit, Utilities Policy 9 (2001) 107–130 Benchmarking and regulation: international electricity experience.



EXPLORING WELLNESS INITIATIVES FOR EMPLOYEES IN NIACL

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ABSTRACT

Primary objective of any company is to employ an engaging and productive workforce. Towards this objective companies take many initiatives, major among these are various wellness programmes designed by the companies. Employee engagement has become top priority of today's management. An engaged employee is one who is fully absorbed by and enthusiastic about their work and so takes positive action to further the organisation's reputation and interests. Employee wellness initiatives are programmes designed by any management for physical, mental and financial upliftment of employees. Investment in employee wellness programmes helps organisations improve productivity, reduce healthcare costs and create a more engaged workforce. The objective of present paper is to study various employee wellness initiatives taken by New India Assurance Company Limited (NIACL). Both primary and secondary data has been used for the purpose of the study. Primary data was collected from the employees of the Company from the Branch Offices, Divisional Offices and the Regional Offices. The sample size was 235 employees. The sample of the employees was drawn on the basis of stratified random sampling technique and the strata being the level of employees i.e. Class I, II and III. The primary data was collected by administering an Interview Schedule which included different questions relating to the different aspects of employee wellness initiatives. The primary data so collected was analysed using cross tabulation with the help of the statistical package SPSS (Statistical Package for Social Sciences) using statistical techniques like Chi-square test and Karl Pearson's coefficient of correlation.

INTRODUCTION

With the changing work environments, rising competitions, innovative work techniques, work places are becoming more demanding and stressful. Therefore, to deal with such type of situations HR managers have been bringing programmes for physical and mental well being of employees to optimally utilise the human resources. It means creating conditions in which employees contribute most of their potential and capability. Employee wellness programmes are a secret recipe for keeping employees happy and healthy. David Macleod says, this is about how we create the conditions in which, employees offer more of their capability and potential.

REVIEW OF LITERATURE

Peter (2002) noticed that performance management includes the practices through which the manager defines employees' goals and work, develops the employees' capabilities and evaluates and rewards the person's effort all within the framework of how the employees' performance should be contributing to achieving the Company's goals.¹

Parkash Singh (2004) dealt with bancassurance, its strengths, weaknesses, opportunities and threats with reference to India. It was emphasized in the paper that it was beneficial for banks to go into insurance business because it had number of advantages like increased interest on assets, lower cost per sales, insurers also had a number of advantages.²

Amit K.Chakraborty (2004) in the study aimed to explore the relationship that job satisfaction of teachers held with job nature, institutional scenario (infrastructure, work culture, welfare amenities and standard of institution) library and transport facility, salaries and standard of students. There were a number of factors which influenced job satisfaction like job contents, occupational level, pay and promotions, work group supervision, age, sex, education level, marital status and experience³.

Gurpreet Randhawa (2005) examined the relationship between work performance and work attitudes (job satisfaction turnover intentions and job specific self-efficiency). The participants were 150 scientists from Agriculture Extension Centers in Haryana. The findings of the study indicated that job satisfaction and job specific self-efficiency were significantly and positively related with work performance, which means the employees with high job satisfaction and high self-efficiency beliefs produced more than the employees with low status function⁴.

Kunal K.Majee (2006) evaluated various welfare schemes being run by the NTPC management. Attempt had also been made to find out the level of implementation of various welfare schemes for the employees of the NTPC Kahalgaon, like housing, medical health, educational, sports and games, social cultural recreation facility, cooperative store, canteen, transportation and other facilities provided by the management. It was found that the management was taking every step to make and control all those just to make them easily available⁵.

Pavan Kumar and Vijai N.Giri (2007) analyzed the relationship between job performance and organizational commitment of employees in the organization. Organizational climate had been used as a mediating, variables finding were in the hypothesized direction as job performance was

related to organizational commitment. The results also indicated that organizational climate mediated the relationship between job performance and organizational commitment⁶.

Timothy Gubler, Ian Larkin, Lamar Pierce (2017) studied the impact of corporate wellness programme on worker productivity from 111 workers in five laundry plants and found improvements in productivity.⁷

With the globalization of economies of world, every sector is growing and to find a competitive edge NIACL has also to search for its strengths and concentrate on improving engagement level of employees so that they may become more effective resources for the organization. For this purpose various employee wellness initiatives have to be taken for better results for the company.

OBJECTIVES OF THE STUDY

The objective of the paper is to study perceptions of employees regarding various employee wellness initiatives taken by New India Assurance Company Limited. Aim is also to provide suitable suggestions for keeping the employees engaged in the company.

SCOPE OF STUDY

The locale of the study is Punjab and Chandigarh, Regional Offices and their divisional offices and branch offices of the company.

RESEARCH METHODOLOGY

Both primary and secondary data has been used. Primary data was collected from the employees of the Company from the Branch Offices, Divisional Offices and the Regional Offices. The sample size was 235 employees. The sample of the employees was drawn on the basis of stratified random sampling technique and the strata being the level of employees i.e. Class I, II and III. The primary data so collected was analysed using cross tabulation with the help of the statistical package SPSS (Statistical Package for Social Sciences) using statistical technique like Chi-square test and Karl Pearson's coefficient of correlation.

The secondary data was collected from the Annual Reports and other documents of the Company. Various Books, Journals, Articles, Newspapers and websites were consulted and used wherever required.

Results

A few queries had been put to gauge into the initiatives taken by the company for employee wellness.

To get the maximum output from employees, an organisation requires to take many wellness initiatives, so that employees remain contented and put in their maximum effort. With the help of following wellness initiatives taken by NIACL have been tried to be found.

Welfare measures of company

Employee wellness is directly related to management policies towards the welfare of employees and the way these policies are administered. There should be a proper incentive system in the

organization to ensure monetary and non monetary rewards to the employees including advancement, job scheduling, allowances, reimbursements, congenial working environment and job security. In this context the employees were put with the following query.

TABLE-1 Responses of employees regarding various welfare policies in the company

Attributes/ Responses	Ranks	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	P
Work Experience in NIAC	0-10 years	07 (38.8)	08 (44.4)	01 (05.6)	01 (05.6)	01 (05.6)	0.339
	11-20 years	22 (21.0)	71 (57.5)	04 (03.8)	08 (07.5)	0 (0.00)	
	21-30 years	27 (28.1)	59 (61.6)	06 (06.2)	03 (03.1)	01 (01.0)	
	31-40 years	02 (12.6)	12 (75.0)	01 (06.2)	01 (06.2)	0 (0.00)	
Total years of service	0-10 years	09 (28.1)	20 (62.5)	01 (03.1)	01 (03.1)	01 (03.1)	0.579
	11-20 years	22 (26.8)	53 (64.6)	04 (04.9)	03 (03.7)	0 (0.00)	
	21-30 years	22 (23.9)	58 (63.6)	06 (05.6)	06 (05.6)	01 (01.2)	
	31-40 years	05 (17.9)	18 (64.3)	01 (03.5)	04 (14.3)	0 (0.00)	
No. of years in the present position	0-5 years	25 (44.6)	31 (55.4)	0 (0.00)	0 (0.00)	0 (0.00)	0.112
	5-10 years	37 (45.1)	43 (52.4)	02 (02.5)	0 (0.00)	0 (0.00)	
	11-15 years	07 (26.9)	16 (61.5)	02 (07.7)	01 (03.8)	0 (0.00)	
	16-20 years	32 (45.1)	37 (52.1)	02 (02.8)	0 (0.00)	0 (0.00)	

Source: Computed from primary data.

Table 1 (a): Pearson's correlation between the variables

Interval	by	Pearson's R	Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Interval Interval			(-)0.018	0.071	(-)0.282	0.779
			0.095	0.070	1.455	0.147
			0.099	0.070	1.520	0.130

The data presented in the Table 1 is clearly indicating that on the basis of work experience variable, significant majority of respondents (83.2 per cent) with work experience less than 10 years were in agreement with the viewpoint that company had various policies for the welfare of employees. Maximum favourable response came from the respondents (89.7 per cent) with 21-30 years of work experience.

However, in the context of number of years in present position variable, all the respondents (100.00 per cent) with less than 5 years in present position were in agreement with the aspect, out of which 44.6 per cent strongly agreed, whereas, 55.6 per cent agreed with the poser, followed by respondents (97.5 per cent) with 5-10 years in present position and respondents (97.2 per cent) with 15-20 number of years in present position, who favoured the poser. Interestingly, no negative response was registered in these three categories.

Overall, irrespective of any variable, high majority of respondents in all the categories of variables supported the poser.

Statistically, no significant association was found between the variables and the statement.

The coefficient of correlation between the variables has been presented in the Table 1 (a), which indicates that correlation between the variables and the responses of the employees was positive. A closer look demonstrates moderate relationship between the variable works experiences, the remaining variables were lowly related with the responses of the employees.

Job satisfaction

Job satisfaction is another indicator of employee wellness measures taken by the organisation. It had often been said that ‘a happy employee is a productive employee.’ A happy employee is, generally, that employee who is satisfied with his job. In simple words job satisfaction can be defined as the extent of positive feelings or attitudes that individuals have towards their jobs. Job satisfaction is the positive mental feeling, which an individual has about his job. In this regard query was posed to the employees about their level of satisfaction and the responses are presented below

Table 2 Responses of employees regarding job satisfaction in the organisation

Attributes/ Responses	Ranks	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	P
Work Experience in NIACL	0-10 years	06 (33.3)	06 (33.3)	01 (06.6)	02 (11.1)	03 (15.7)	0.127
	11-20 years	16 (15.2)	47 (44.8)	16 (15.2)	14 (13.4)	12 (11.4)	
	21-30 years	16 (16.7)	48 (50.0)	08 (08.3)	06 (06.2)	18 (18.8)	
	31-40 years	04 (25.0)	11 (68.8)	0 (0.00)	0 (0.00)	01 (06.2)	
Total years of service	0-10 years	08 (25.0)	08 (25.0)	01 (03.1)	03 (09.4)	12 (37.5)	0.000
	11-20 years	15 (18.3)	43 (52.5)	11 (13.3)	10 (12.2)	03 (03.7)	
	21-30 years	12 (12.9)	46 (49.5)	08 (08.5)	09 (09.7)	18 (19.4)	
	31-40 years	07 (25.0)	15 (53.6)	05 (17.9)	0 (0.0)	01 (03.5)	
No. of	0-5 years	06 (10.7)	34 (60.7)	07 (12.5)	06 (10.7)	03 (05.4)	0.017
	5-10 years	19	28	10	08	17	

years in the present position		(23.2)	(34.1)	(12.2)	(09.8)	(20.7)	
	11-15 years	01	16	05	02	02	
		(03.8)	(61.5)	(19.3)	(07.7)	(07.7)	
	16-20 years	16	34	03	06	12	
		(22.5)	(47.9)	(04.2)	(08.5)	(16.9)	

Source: Computed from primary data.

Table 2 (a): Pearson's correlation between the variables

Interval Interval	by	Pearson's R	Value	Asymp. Std. Error	Approx. T	Approx. Sig.
			(-)0.055	0.055	(-)0.852	0.395
			(-)0.111	0.059	(-)1.700	0.091
			0.001	0.053	0.023	0.982

The data highlighted in the Table 2 examines the aspect whether job gives full satisfaction to the employees. On the basis of the work experience variable, fair majority of respondents in first three categories (above 60.00 per cent) and highly significant majority of respondents (93.8 per cent) with work experience 31-40 years expressed their favour for the statement. With the increase in work experience there was increase in proportion of both agreed and strongly agreed responses.

Again, more than majority of respondents in all the categories of the number of years in present position variable, consented to the statement..As the employees spent more years on the same position the proportion of strongly agreed responses went up and proportion of agreed responses slightly came down.

Overall, with the increase in work experience and total years of service there was increase in proportion of favourable responses.

Statistically, highly significant association was found between the variable total years of service and the number of years in present position and the job satisfaction of the respondents.

The Pearson's coefficient of correlation as presented in the Table 2 (a) indicated that the correlation between the variables and the responses of the employees was positive. On a closer analysis it could be seen that the variable number of years in present position demonstrated significantly high relationship whereas the variables work experience and total years of service were lowly related with the responses of the employees.

Incentives

Various types of incentives provided to employees in any organisation are a part of wellness measures. An incentive is something which stimulates a person towards some goal. Increase in incentives leads to better performance and vice versa. Whether in the form of wages, piecework or any other incentive, pay, bonuses, company paid insurance or any other things that may be given to people for performance. In this context the following issue was analyzed.

Table 3 Responses of employees regarding The Company using medical reimbursement and paid insurance as wellness measures

Attributes/ Responses	Ranks	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	P
Work Experience in NIAC	0-10 years	05 (27.8)	09 (50.0)	01 (06.5)	03 (15.7)	0 (0.00)	0.237
	11-20 years	10 (09.5)	60 (57.1)	06 (05.7)	28 (26.7)	01 (01.0)	
	21-30 years	10 (10.4)	56 (58.3)	11 (11.5)	18 (18.8)	01 (01.0)	
	31-40 years	04 (25.0)	11 (68.8)	01 (06.2)	0 (0.00)	0 (0.00)	
Total years of service	0-10 years	05 (15.6)	12 (37.6)	02 (06.2)	13 (40.6)	0 (0.00)	0.012
	11-20 years	08 (09.8)	52 (63.4)	03 (03.7)	18 (22.0)	01 (01.2)	
	21-30 years	08 (08.6)	56 (60.2)	11 (11.8)	17 (18.3)	01 (01.1)	
	31-40 years	08 (28.6)	16 (57.1)	03 (10.7)	01 (03.6)	0 (0.00)	
No. of years in the present position	0-5 years	05 (08.9)	33 (58.9)	04 (07.1)	13 (23.2)	01 (01.8)	0.545
	5-10 years	11 (13.4)	43 (52.4)	08 (09.8)	20 (24.4)	0 (0.00)	
	11-15 years	02 (07.7)	18 (69.2)	02 (07.7)	03 (11.5)	01 (03.8)	
	16-20 years	11 (15.4)	42 (59.2)	05 (07.0)	13 (18.3)	0 (0.00)	

Source: Computed from primary data.

Table 3(a): Pearson's correlation between the variables

Interval Interval	by	Pearson's R	Value	Asymp. Std. Error	Approx. T	Approx. Sig.
			(-)0.071	0.052	(-)1.090	0.277
			(-)0.179	0.055	(-)2.773	0.005
			(-)0.090	0.054	(-)1.377	0.170

The data presented in the table 3 explicitly indicated that On the basis of the work experience variable, significant majority of respondents (93.8 per cent) with work experience 31-40 years were in agreement with the viewpoint, followed by high majority (above 70.00 per cent) and fair majority of respondents (above 60.00 per cent) in other categories who were in favour of the statement. Maximum of respondents (25.7 per cent) who negated the aspect belonged to those with work experience 11-20 years. Thus more of senior employees were in support of the query.

As employees spent more years in the same position there was a slight improvement in proportion of both agreed and strongly agreed responses.

Overall, irrespective of any variable an overwhelming majority of respondents supported the issue that company used insurance and medical reimbursement as wellness measures.

Statistically, highly significant association was found between the variable total years of service and the statement.

The data pertaining to the Pearson's coefficient of correlation as represented by R is highlighted in the Table 3(a) which reveals that the relationship between all the three variables and responses of the employees was positive and of low intensity.

Working conditions

Healthy working conditions in an organisation always contribute towards wellness of employees. People desire that there should be clean and healthy working environment, which include temperature, humidity, ventilation, lighting and noise, hours of work cleanliness of the work place. According to Nadler and Lawler, "quality of work life is concerned about the impact of work on people as well as on organization effectiveness, and the idea of employee participation in organizational problem solving and decision making."¹ The following table analyzes the responses of the employees regarding working conditions in the NIACL.

Table 4 Responses of employees regarding good working conditions in the company

Attributes/ Responses	Ranks	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	P
Work Experience in NIAC	0-10 years	04 (22.2)	09 (50.0)	02 (11.1)	0 (0.00)	03 (16.7)	0.605
	11-20 years	30 (28.6)	44 (41.9)	11 (10.5)	07 (06.7)	13 (12.4)	
	21-30 years	21 (21.9)	40 (41.7)	10 (10.4)	07 (07.3)	18 (18.8)	
	31-40 years	04 (25.0)	11 (68.8)	01 (06.2)	0 (0.00)	0 (0.00)	
Total years of service	0-10 years	04 (12.5)	10 (31.3)	02 (06.2)	02 (06.2)	14 (43.8)	0.000
	11-20 years	15 (18.3)	51 (62.2)	05 (06.1)	10 (12.2)	01 (01.2)	
	21-30 years	11 (11.9)	46 (49.7)	13 (14.0)	06 (05.7)	17 (18.6)	
	31-40 years	06 (21.4)	12 (42.9)	03 (10.7)	05 (17.9)	02 (07.1)	
No. of years in the present position	0-5 years	07 (12.5)	33 (58.9)	05 (08.9)	07 (12.5)	04 (07.1)	0.124
	5-10 years	17 (20.6)	34 (41.5)	08 (09.8)	04 (04.9)	19 (23.2)	
	11-15 years	01 (03.8)	16 (61.5)	03 (11.5)	04 (15.4)	02 (07.7)	
	16-20 years	11 (15.5)	36 (50.6)	07 (09.9)	08 (11.3)	09 (12.7)	

Source: Computed from primary data.

Table 4 (a) Pearson's correlation between the variables

Interval Interval	by	Pearson's R	Value	Asymp. Std. Error	Approx. T	Approx. Sig.
			(-)0.055	0.057	(-)0.851	0.395
			(-)0.078	0.073	(-)1.188	0.235
			0.015	0.051	0.251	0.802

The data presented in the Table 4 clearly indicates that analyzing on the basis of work experience variable, it was found that significant majority of respondents (70.5 per cent) with work experience 11-20 and the respondents (93.8 per cent) with work experience 31-40 were in agreement with the query and only three respondents (16.7 per cent) negated the aspect. However, with increase in work experience the proportion of both agreed and strongly agreed responses increased.

Irrespective of any variable, majority of respondents were in favour of the query.

Statistically, highly significant association was found between the variable total years of service and the good working conditions in the organization.

The coefficient of correlation between the variables has been presented in the Table 4 (a) which reveals a positive relationship between the variables and the responses of the employees. On closer analysis it can be seen that the variable number of years in present position established high relationship whereas the other two variables elicited low relationship.

CONCLUSION

Above discussion reveals that though many measures have been initiated by the company for wellness of employees, but there is still scope for improvement.

- Stress-bursting tools have not been provided by the management; no game rooms, no yoga sessions or lectures are in vogue in the Company, whereas all modern management have given importance to these tools.
- Compassionate ground appointment be restored particularly for the needy.
- There are many employees in the BOs who do not find adequate opportunities for promotion which is major demotivator.
- Performance linked financial incentives should be provided in the organization.
- Comfortable place of posting vis-à-vis family requirements through soft transfer mobility policy should be introduced.

REFERENCES

1. Peter Glendinning, Performance Management: Pariah or Messiah, Public Personnel Management, 31, summer 2002, p. 161.
2. Parkash Singh, Bancassurance: The New Mantra, Synthesis, 1(2), Jan- June 2004, pp. 67-72

- Amit K.Chakraborty, “Job Satisfaction Does not solely depend on the Nature of Job- A Case Study,” Management Accountant, 39(1) January, 2004, pp.51-55.
4. Gurpreet Randhawa, “The Relationship between Work Attitudes and Work Performance”, Management and Labour Studies, 30(4) Nov.2005, pp.315-321.
5. Kunal K.Majee, “Welfare Policies and its Implementation”, The Management Scientist, 5(1), Jan-March 2006, pp. 23-30.
6. B.Pavan Kumar and Vijai N.Giri, “Examining the Effect of Job Performance on Organisational Commitment”, Management and Labour Studies, 32(1) Feb 2007, pp.123-132.
7. .Timothi Gubler, IanLarkin, LamarPierce, “Doing Well by Making Well: The Impact of Corporate Wellness Programmes on employee Productivity” Management Science, Vol 64 No. 11, Dec 2017.

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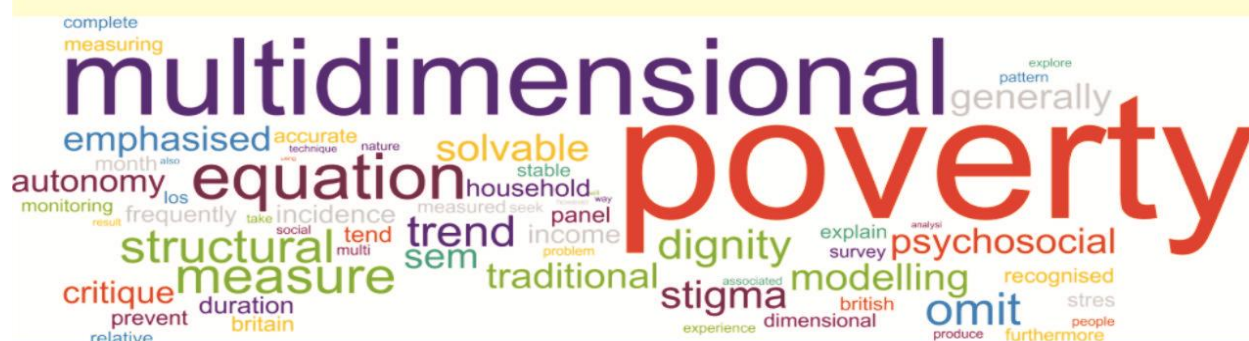
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