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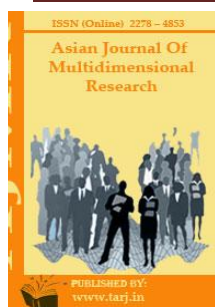
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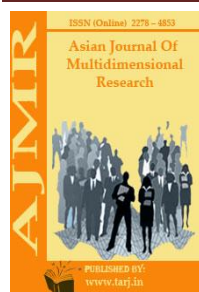


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SECURITY SERVICE IN THE CENTRAL ASIAN ROUTES OF THE GREAT SILK ROAD

Uktam Mavlanov*

*Doctor of historical sciences,
UZBEKISTAN

ABSTRACT

On the basis of the analysis of the information of ancient Chinese, medieval Arabic, Persian and Turkic sources, the works of famous medieval travelers highlighted the key aspects of security on the Central Asian routes of the Great Silk Road in this article. It was noted that ensuring the security of the ambassadorial missions, trade caravans and travelers was always in the center of attention of central and local dynasties who were interested in the development of international economic relations. The authorities interested in the development of trade paid special attention to the protection of caravan routes, information about which are reflected in the sources. The famous Spanish Ruy González de Clavijo, who visited Samarkand at the beginning of the 15th century in the ambassadorial mission of the King of Lyon and Andalusia, also left valuable information about the service system on the roads of the vast empire of Amir Timur. Trade and cultural ties along the routes of the Great Silk Road brought up an amazing tolerance among the peoples of Central Asia, which served as a guarantor of the prosperity of society. Hence, it could be said that roadside structures in Central Asian routes of Great Silk Road were primarily dictated by the need to ensure the safety of government officials, ambassadors and their companions, trade caravans and individual travelers.

KEYWORDS:*The Great Silk Road, Chinese Sources, Security Service, Roadside Facilities, Service System, Track Protection, Sarbaza, Ibn Battuta, Marco Polo, "The Code Of Temur".*

INTRODUCTION

Various ancient roads known in historical literature as Lazurite, Golden, Silk, Silver, Jade, Steppe, Tsar Road, Great Silk Road and others played a special role in economic and cultural relations of Central Asia and the Ancient East, as well as in the system of inter-civilization relations generally. Among them, the Great Silk Road was of great importance. Works dedicated to the history of the Great Silk Road are very extensive. They studied in detail the main direction and auxiliary roads, towns and major settlements, the significance of the Great Silk Road in the development of economic, cultural relations and political dialogue between different countries, peoples of the Asian continent [1]. However, issues related to the service system on the routes of this transcontinental road are not investigated deeply and remain unrevealed. One of the problems, associated with services on the caravan roads of Central Asia is the issue of ensuring security, which we briefly consider in this article.

The state level guard service emerged with the formation of early states. With the development of society and its political, economic and cultural relations, the protection of railways acquired great importance at the state level. The presence of regular economic and cultural ties between various regions of the ancient East necessitated the resolution of the issue of the provision of appropriate services, primarily ensuring the safety of trade caravans, members of the embassy missions, travelers, pilgrims and others on caravan roads. Having emerged in the early stages of governmental formation, the systems of services on the trade routes evolved gradually, according to growth and expansion of trade relations between individual regions and countries and due to the demand of the era.

THEORETICAL BACKGROUND

Interested in expanding economic relations and income from trade, government agencies were the first creators of a security system for trade routes. In particular, the presence of a security system for caravan trade was of current importance. Armed detachments stationed in roadside structures - in rabats [2], were responsible for the protection of certain routes. These roadside facilities were also places of rest for trade caravans, travelers, where they could get food, as well as with the development of a system of services on caravan roads, use the services of physicians, guides, cab drivers, translators, etc. [3]. After the conquest of Central Asia by Acheminids, fortified Rabat's appear along the caravan roads of the Central Asian region [4], particularly in ancient Bactria and Sogd. Hence, it could be said that roadside structures in Central Asian routes of Great Silk Road were primarily dictated by the need to ensure the safety of government officials, ambassadors and their companions, trade caravans and individual travelers.

Issues of ensuring the security of trade routes, the fight against robbery and pillage on trade routes, especially on roads passing through the steppes and deserts, were problems of national importance [5]. During periods of weakening of the central government and increasing civil strife on the roads, there was a threat to the safety of trade caravans. The authorities interested in the development of trade paid special attention to the protection of caravan routes, information about which are reflected in the sources. The earliest information about the service system on the Central Asian Great Silk Road routes is available in Chinese sources. In particular, the "Han-Shu" contains information about ensuring security for ambassadors and members of ambassadorial missions, various officials, government officials, messengers who had special labels and the source also gives information about provision of appropriate services to them in the roads of ancient Central Asia. These kind of services were used by the famous traveler Zhāng

Qiān, the envoy of the Chinese emperor Wu Di to the rulers of the “Western countries” to establish allied relations against the nomadic state of the Hunnu [6].

METHODOLOGY

The security of trade routes in the Turkic Kaganate which was spread over the vast territories of Central Asia and East Turkestan, was also an important task of national importance. For these purposes, were created equestrian guard detachments, which were entrusted with the protection of important routes, as well as roads in the most troubled areas. Particularly important was the protection of mail messages. In Khaganate was established the state postal service which was managed by a special department. Within the one-day road were built fortified post stations, which contained fast-footed horses and chopars — messengers. About functioning of the state mail - “Barid Turk”, is also mentioned in the early Arabic sources [7].

In the works of Arab geographers there is information about groups of sarbaz - guards responsible for the safety of caravans. In particular, Ibn Hawqal reports on the construction of numerous rabats in Djizak, where Samarkandians kept armed guards [8]. Ibn Fadlan, who visited Bukhara, Urgench (Kukhna Urgench - U.M.) as part of the ambassadorial mission of the Baghdad khalifa to the Bulgarian Khagan, also reports on security and other services on caravan routes of Central Asia [9].

Since the 13th century, due to the new political balance of power in Central Asia and Dasht-I-Kipchak, the importance of the northern branches of the Great Silk Road has increased. Security issues on the steppe roads have always been the most difficult problem for the authorities. For these purposes were built fortified rabats and caravanserais [10], which served as the bases for state and private armed groups guarding the caravan routes. The Moroccan traveler Ibn Battuta [11], who left from the capital of the Golden Horde to Khorezm and Movarounnahr in the 30s of XIV century also left valuable information about the roads, road stations and services provided to travelers, trade caravans and ambassadorial missions.

Important information about the Great Silk Road routes and issues related to the safety of trade routes is contained in the famous work of Marco Polo. He left valuable information about the system of services on the roads of Genghis Khan’s empire, in particular that special golden páizi with orders, issued by Great Khans provided the travelers with honor, safety, and food [12].

The sources also preserved data on the organization of security on the caravan routes in the era of Amir Timur and Timurids. According to the official chronicles of that period, not only in Movaraunnahr, but also in the most remote parts of a huge empire (from the borders of Khotan to Delhi and Kunbayit, from Babylon to Egypt and Byzantium) were created conditions for safe trade [13].

Main part

The famous “Timur's Code” also contains evidence of government policies aimed at the stable operation of the caravan routes of a huge empire, in particular the construction of roads, bridges, work stations and caravanserais, post stations, and the protection of trade routes [14]. Special managers were in charge of organizing the protection of trade routes. They were entrusted with the task of “monitoring the safety of passing merchants and wandering travelers, accompanying them from one station to another one with all their belongings. In case of the disappearance of anything or the death of someone on the way, the guards responded according to the law [15]. It

is written in the Code that, people thinking of any theft and robbery on the roads were punished everywhere according to the provisions of “Yasy” [16].

The famous Spanish Ruy González de Clavijo, who visited Samarkand at the beginning of the 15th century in the ambassadorial mission of the King of Lyon and Andalusia, also left valuable information about the service system on the roads of the vast empire of Amir Timur. According to him, as soon as the members of the embassy of the Spanish king entered the territory of the empire of Amir Timur, they were met by a special official and guards who accompanied them to their destination. The official who met them had a letter from the ruler, which allowed him to receive on the roads all that was necessary for foreign ambassadors and their servants, including the exchange of tired horses [17].

In general, the era of Amir Timur and Timurids was an important period in the history of the development of the service system on the Great Silk Road trade routes and large-scale international cultural and economic relations of Central Asia, in which the cities of Movarannahr and Khorasan played a leading role.

Thus, on the Central Asian routes of the Great Silk Road, the protection of caravan routes, management and control of the security service, construction of roads and roadside facilities were under state control. This system worked even in the late Middle Ages. However, despite the protection of trade routes and accompanying of large trade caravans by special armed detachments, small caravans were forced to provide security on their own [18]

Particularly dangerous were the steppe roads of the region, passing through the territory controlled by various nomadic tribes. The nomads of Central Asia often took on the role of intermediaries, guides, hired guards; they served trade caravans, were carriers of goods on the Great Silk Road and were generally interested in the development of interregional and international trade [19]. As a rule, there were no particular obstacles and threats of attack on the roads to beggars, single travelers and dervishes [20]. However, it could be said that in the region it was not possible to achieve complete security of trade routes.

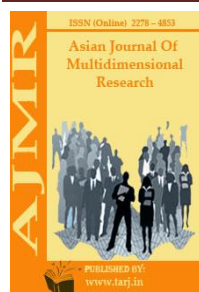
CONCLUSION

In general, the centralized security service on important routes of the Great Silk Road, as well as the system of rendering other services on the caravan routes of Central Asia, were sufficiently developed. Responsibility of central and local authorities for the condition of roads, construction and repair of roadside facilities, the use of state treasury funds to perform these tasks, as well as private individuals - major merchants, usurers, various officials served to develop the infrastructure of caravan communications. All of this as an interconnected system was formed from antiquity and was further developed in the middle Ages. Trade and cultural ties along the routes of the Great Silk Road brought up an amazing tolerance among the peoples of Central Asia, which served as a guarantor of the prosperity of society.

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TERMS AS A SPECIAL TYPE OF WORDS IN THE LANGUAGE SYSTEM

Musurmanova Shakhnoza*

*Chirchiq High Tank Command,
Engineering Academy,
UZBEKISTAN

ABSTRACT

In this article, the problem of classifying the lexical composition was considered as a multifunctional unit of language. It analyzes the aspect of the division of vocabulary, used primarily in science, technology, crafts and other spheres of communication. It summarizes the opinions of scientists who have drawn with considerable interest in describing the structure and main classes of special vocabulary in particular, terminology. Principal in the above discussion are questions about the coincidence or inconsistency of the class of professional vocabulary with a class of terms. In this connection, the term "professional vocabulary" acquires a number of socio-historical associations, caused by guild closeness and limited production under feudalism. So, the three main points of view on the ratio of "professional vocabulary - terminology" can be briefly described in the following way. The first of them identifies these two concepts. Meanwhile, it turns out that the allocation of the main classes of special vocabulary is fraught with considerable difficulties and, as a consequence, with a wide variety of points of view on this issue.

KEYWORDS: *Lexical Composition, the Role of Words, Lexical Class, Language Theory, General Language Vocabulary, Terminology, Vocabulary.*

INTRODUCTION

The problem of classifying the lexical composition of language has always occupied a prominent place in linguistic research. This is explained by the role of the word in the system of the language as a whole, the diversity and complexity of the word's connections with other linguistic units and the variety inside and outside the linguistic characteristics of the word itself. The poly-functionality of lexical units, the elusiveness of the transitions from one lexical class to another, and the deep connection of the classification of the word with the most important tasks of the theory of language, on the other, cause the existence of "eternal questions" in the classification of the vocabulary of the language: these are the problems of parts of speech, stylistic differentiation of words, etc.

Of considerable interest is the description of the structure and main classes of special vocabulary and, in particular, terminology.

At first glance, it is objectively more difficult to draw classification boundaries in the field of general language vocabulary used in the most diverse types of communication than to establish the most important classes of lexical units explicitly oriented toward one type of communication. From this point of view, the division of vocabulary, serving primarily professional spheres of communication (that is, vocabulary semantically and communicatively, certainly more homogeneous than general, non-special vocabulary), it would seem, should not cause big disagreements. Meanwhile, it turns out that the allocation of the main classes of special vocabulary is fraught with considerable difficulties and, as a consequence, with a wide variety of points of view on this issue.

In this article we consider only one aspect of the division of vocabulary, used primarily in science, technology, crafts, and other spheres of communication. Linguistic studies usually qualify it as special; in general explanatory dictionaries, it is supplied with a litter that directly calls the corresponding subject-matter sphere (compare, "juridic.", "bio", "chemical.", "polygraph.", "sport.", etc. .), or a more general "special" litter. Following this tradition, we will also call it special, and the main attention will be paid to the relation "professional vocabulary - terminology" existing within this large class of linguistic units. Principal in the above discussion are questions about the coincidence or inconsistency of the class of professional vocabulary with a class of terms. If this is the same language material, then how can one explain the stable tradition of differentiation of professional vocabulary, on the one hand, and terminology, with the other? If the classes of the corresponding words and phrases do not coincide, do they have a common part and what are its boundaries? In the case of non-coincidence of these classes, the question arises as to which units can only be referred to terminology, and which ones are exclusively to professional vocabulary.

THEORETICAL BACKGROUND

Trying to answer these questions, we will involve two types of materials for study. First, these are direct statements of the researchers on the relationship between professional vocabulary and terminology. Secondly, these are works that, without putting their direct purpose to describe the relationship between the analyzed classes of words, one way or another, illustrate the concepts of "professional vocabulary" and "terminology." The historiographical part of the article does not in any way pretend to be complete, but merely attempts to outline the main, most accepted points of view.

One of the common opinions is that professional vocabulary and terminology are the same classes of words and word-phrases. In the manual on lexicology N.M. Shansky, for example, notes: "Professionalism denotes special concepts, tools or production processes. Therefore, they are sometimes called special words or special terms. "Further, the author as an example of professionalism gives a few words that can rightly illustrate and the corresponding terminology, Wed: scalpel (from medicine), veneer (a thin metal plate that does not reach the font height, inserted between the rows of the set to increase the distance between (from the polygraph), the scants (part of the upper deck of the warship - from the naval affair), alibi (from jurisprudence), mezdra (from tannery production), etc. Undivided as a homogeneous lexical stratum, occupational vocabulary and terminology in a number of other works [2-4].

O.S. Akhmanova writes, "... the dictionary of individual sociologists groups of people usually includes ... a certain amount of special vocabulary, conditioned by the specific professional and other interests of a given social group. For example, a linguist ... non-preemptively uses such special words as a paradigm, a phoneme, a phrase, and so on; mathematician - words such as sector, differential, equation, gravitation, etc .; astronomer - such as perihelion, pro-Tuberans, solstice With a specific difference due to belonging to different fields of knowledge, the terms of different specialties have a common stylistic characteristic ... "[4, p. 275-276].

Main part

The tradition of combining terminological vocabulary into one category of special vocabulary has serious grounds. The specialization of meaning and the formation on this basis of special, distinct from the general language lexical and semantic systems, the restriction and the number of data units using the given meaning, and the spheres of their use are certainly common features of vocational and terminological vocabulary (for any natural language understanding). From this standpoint, the opposition of "professional vocabulary - terminology" seems to be not always understandable. It is interesting that in the extensive terminological literature, the question of delineation of these two concepts does not usually arise; on the contrary, in the linguistic literature that defends the term "professional vocabulary", authors always find it necessary to indicate the differential signs of this concept, its mismatch with the terminology concept. In any case, the above examples, which could easily be multiplied, indicate that vocabulary and terminology have a significant part of common units - words and phrases. Using the concepts of set theory, one could say that these two sets intersect and this intersection can number hundreds of thousands of elements. However, examples, even if very numerous, leave open the question of whether there are units specific only for terminology, on the one hand, and only for professional vocabulary, on the other. To solve it, let us turn to those studies in which these concepts are interpreted in different ways. This approach is presented, for example, in the work of M.D. Stepanova and I.I. Chernysheva, according to which the "professional vocabulary is related in its composition, mainly , with the archaic vocabulary of old crafts and special occupations that arose in different periods of the late Middle Ages "[5, p. 216].

Even more definitely V.N. Portyannikova says: "Terminology is a special vocabulary of modern science and technology. Professional vocabulary is a vocabulary that has evolved and reached its heyday in the period of handicraft production ... "[6].

Among the occupations calling to life professional vocabulary (in this sense of it) is called carpentry, marine business, mining; Hunting and fishing are often added here. A complete list of

areas of work with advanced vocabulary (but not terminology) cannot be established, but the common element in the work of this direction is the recognition of the ancient character of the relevant occupations. F. Kluge (1856-1926), who studied the special vocabulary of the German language during the period of the feudal fragmentation of Germany, played a large role in shaping the view of professional vocabulary as an archaic vocabulary of old recesses and special occupations.

In this connection, the term "professional vocabulary" acquires a number of socio-historical associations, caused by guild closeness and limited production under feudalism. In particular, it is noted that "the development of large-scale machine production, of new technology, naturally, should narrow down the scope of professional dialects" [5, p. 216], lead to the replacement of professional vocabulary with terminology. In the field of navigation and maritime affairs, this process was described figuratively by F. Kluge [7].

The communication of the vocational specialization of vocabulary with the laws of the socio-historical development of society was widely discussed in the domestic literature. Social characteristics of words, denoting professional concepts, in the period preceding the formation of national states and the formation of national languages, and the words of the same group in the period of developed national languages can not but be profoundly different.

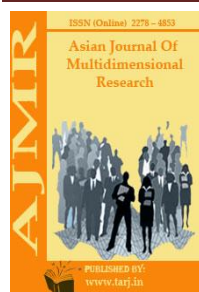
CONCLUSION

The study of the history of professional and terminological vocabulary, the degree of its prevalence, fixation in written sources, literary processing on the background of the history and working life of the people has rich traditions.

So, the three main points of view on the ratio of "professional vocabulary - terminology" can be briefly described in the following way. The first of them identifies these two concepts. The second - separates professional vocabulary and terminology with some historical and thematic trait. The third point of view, while observing the existence of a significant common part of these lexical strata, can explain the existence of the corresponding parts. In view of the comments made, we would like to join the last of them.

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COUNTRY-WISE ANALYSIS OF TRADE FLOWS IN THE INDIAN CONTEXT: AN EXPLORATORY STUDY

Dr. K. Shanmugan*

*Associate Professor,
Department of Business Economics,
Faculty of Commerce,
The Maharaja Sayajirao University of Baroda,
Vadodara, Gujarat, INDIA
Email id: researchshanmugan@gmail.com

ABSTRACT

The increasing trade association of India with rest of the world has lot of implications at both academic and policy levels. One such implication is the need to understand the changes in the importance of trading partners across time, among others. In other words, direction of trade with special reference to specific countries under consideration is more important than blocs at times and the modest attempt here is to bring out the nature of changing trade flows in the Indian context with special reference to major trading partners. The period of this study is from 1989-90 to 2016-17 and it is further classified into three broad sub-classifications namely 1991-92 to 1999-00, 2000-01 to 2008-09 and 2009-10 to 2016-17. The analysis conducted here is based on key open economy macroeconomic variables and therefore aggregate information regarding imports and exports are analyzed. The key findings suggest that most of the developed countries have gradually lost their shares in both imports and exports after liberalization in India's global trade. Surprisingly, China and most of the developing countries including emerging markets have gained increasing share in India's global trade. It is thus important to state that North-North trade has diminished in its importance while that of South-South trade not only increased but actually multiplied.

KEYWORDS: Balance of Payments, Bilateral Trade, Economic Groupings, Foreign Exchange Reserve, Open Economy Macroeconomics.

I. INTRODUCTORY REMARKS

The direction of trade is essentially determined by the ways in which individual countries interact, vis-a-vis the country under consideration, with the changing economic considerations and dynamics involved in international markets over time. Foreign trade is a well-articulated framework for any country owing to its importance and necessity for production and consumption. Foreign trade also, to a great extent, either restricted or globalized the economic groupings and significantly shaped government interventions and policies, when we analyze the exports and imports of commodities with specific reference to country-specific trade flows, various dimensions pertaining to how well the country is integrated across various trade blocs and to what extent a country managed to organize the trade independent of bloc decisions emerge that are critical in understanding the directions of trade. These dimensions can be traced back to various socio-political parameters or purely to economic criteria and they could be both. However, a detailed analysis of how exports and imports have behaved over a period of time with a special reference to each country as a trading partner is important. It is in this direction that country-wise analysis of trade flows can throw some light on various issues that could connect pattern of trade with consumption and production decisions.

II. Analytical Setting

India has been an open economy ever since its trade originated from ancient times with a few countries and predominantly restrictive with respect to other countries. This probably was motivated by geo-political scenario which compelled kingdoms to think of trade in a perspective that is other than profitability. But the modern trade is assumed to be placed more on the economic criteria with sound base on strong capital inflows. Therefore, it is not only the underlying economic facts that are important for success of the trade but also the changing policies that determine the course of exports and imports. The ancient historical evidences suggest, until British invaded India, that India enjoyed a good amount of trade surplus but invasion by Britishers in India started an era of complete extraction of resources and trade in their favour, while they managed to show some sort of a foreign trade growth in India. It is clear while analyzing the modern and independent India that there is a continuous and persistent trade and current account deficits that dominated development course of the trade. India's trade deficit was rupees 2 crores in 1950-51 which shot up to rupees 479 crores in 1960-61 and ultimately surged to rupees 10,640 crores in 1990-91 and further to rupees 6,26,533 crores in 2010-11. As of recently, i.e. 2016-17, it is rupees 7,54,452 crores. If one divides the trade deficit before and after 1990-91, a clear understanding of how liberalization and the subsequent opening of economy fuelled trade deficit is visible. Current Account Deficit (CAD) has also been growing steadily as a result of huge imports, but net positive invisibles managed to make some moderation. Net Capital Account (NCA) flows are alarmingly high, especially after liberalization policies. NCA flows are estimated to be rupees 9,509 crores for the year 1991-92 but they have increased manifold to rupees 2, 47,039 crores and it has leaped by approximately 26 times. This increasing trade association with rest of the world has lot of implications for India. One such implication is how well the importance of trading partners is changing across time, among others. In other words, direction of trade with special reference to specific countries under consideration is more important than blocs at times. The modest attempt here is to bring out the nature of changing trade of India with various countries in the world with special reference to major trading partners who occupy a major proportion of India's trade.

III. Empirical Setting

The analysis conducted here is based on the open economy macroeconomic variables and therefore aggregate information regarding imports and exports are analyzed. This does not go into the detail of commodity-specific direction of trade across various countries. India has considerable number of trade partners cutting across continents and sub-continents, economic groupings and trade blocs and developed and developing nations and, the classification made by the Reserve Bank of India (RBI) does group trading partners into various blocs called OECD (Organization of Economic Cooperation) bloc, OPEC (Oil and Petroleum Exporting Countries (OPEC) bloc, Eastern Europe and Developing Countries. Our emphasis here is to understand the trade flows by concentrating on individual countries under consideration rather than blocs. The countries that we have included from various blocs include the European Union, North America, Asia and Oceania, Other OECD countries, Iran, Iraq, Kuwait, Saudi Arabia, United Arab Emirates (UAE), Russia, South Asian Association for Regional Cooperation (SAARC), other Asian developing countries, Africa and Latin American countries. Some of the continents, instead of their constituent countries, are included in this classification as their proportion of trade with India is comparatively less and therefore to broadly understand the directions of India's trade with them, their inclusion in the form of continents is thought of. For example, South Africa constitutes a major trading partner with India within the African bloc. The same case is with Russia in Eastern European bloc.

The data pertaining to exports and imports are collected from various volumes of the Handbook of Statistics on Indian Economy, various issues of the Economic Surveys and Economic and Political Weekly research foundation time series data. We have selected the period of 1990-91 up to 2016-17 as time series information is available uniformly for this period and also the availability of latest annual data is up to 2016-17. Data are collected both for aggregates and country-wise exports and imports. Appropriate estimations of descriptive statistics such as mean, standard deviation and coefficient of variation have been utilized across the article and their statistical significances are discussed wherever required. The study period is sub-divided into three broad sub-classifications which are 1991-92 to 1999-00, 2000-01 to 2008-09 and 2009-10 to 2016-17. While analyzing the trends and behaviour the table numbers are not quite often quoted for want of space but otherwise for analysis, the quoting of data is self-explanatory from the discussion.

IV. Country-wise Direction of India's Exports

India has been a strong practitioner to promote equitable, fair and free trade world-wide and, has been a partner even in the various trade blocs for promoting global trade on judiciously made economic policies that promote free trade. The direction of trade with cross-country experience varies across time, making it quite different and dynamic, with special reference to policies that have been followed since last two decades. The idea of this paper is to analyze the trade pattern with important trading partners, both in terms of exports and imports, by looking at different countries that have dominant trade with India over time and to bring out certain important economic and trade policy issues that would explain the reasons for variations in the trade directions. The issues and reflections are organized as follows.

First, the traditional trading partners in the blocs of developed countries have diminished in terms of their importance in India's exports over time. Predominantly, these countries have been major trading partners and over time the policies that have been followed as trade blocs probably

diverted the trade that are experienced today in India. Countries such as Belgium, France, Germany, Italy and even United Kingdom (UK) and Canada have experienced declining exports from India. Percentage shares of India's exports to Belgium and Germany have declined from 4.35 percent and 6.4 percent respectively in 1989-90, to 2.2 percent and 2.6 percent in 2016-17. This can be considered to be a phenomenal fall. Similarly, our exports to UK have declined from 5.8 percent in 1989-90 to 3.1 percent in 2016-17. It can be seen from the table 1.1 that France, Italy, Netherlands and Canada also experienced declining exports from India. Their percentage shares have come down steadily.

Second, the descriptive statistics pertaining to the percentage share of India's exports to individual countries suggest that the mean value of the percentage shares have declined across all the three sub-periods for countries such as Belgium, France, Germany, Italy, Netherlands and UK. The declining trend in exports to various countries is significant as variance and standard deviation are very low across sub-periods along with very narrow variations in the estimates of excess kurtosis for most of the countries. This fact is reiterated also by low estimates Coefficient of Variation (CV) for most of the countries. Therefore, change in the direction of exports is not only significant, but also the trend is predominantly pronounced in statistical terms. This could be probably due to declining real incomes and growth rates for some of the phases in the sample period and also due to the trade creating and diverting activities on account of creation of the European Union (EU) and, of course the international competition. Surprisingly, the fall in the exports to France and UK adds to the already complicated process of trade-policy making as they were key trading partners. The steady decline in UK's share in India's exports has also pushed down the possibility of holding of pound sterling in India's reserves and unfavourable scenarios in country-wise trade balance for India. Incidentally, the share of Netherlands has not been continuously in declining trend but fluctuated across.

Third, the trade with United States of America (USA) and Canada have given mixed and fluctuating pattern of trend of their shares in India's exports. In 1989-90 India's exports to USA was 16.17 percent in total exports. This steadily increased up to 22.76 percent during 1998-99. This we can call it as the golden era of trade with USA after liberalization. But from there, till 2002-03, trade fluctuated at around 20 percent of the share. Surprisingly from 2005-06, India's share to USA has declined phenomenally and it reached to almost 10 percent during 2010-11. This is considered to be a fundamental shift in the exports in case of USA. In fact, trade is reduced from 20 percent to 10 percent in terms of percentage share in the total exports for USA. It can be noticed from the table 2.2 that from 2011-12 onwards, the percentage share of exports to USA is increasing. Therefore, we found a mixed package in the direction of trade with USA. Although, Canada is not a major trading partner with India, its share in India's exports remained around the range of 0.5 percent to 1.5 percent throughout the sample period. The mean value of percentage shares of India's exports to USA have increased from 17.74 percent in sub-period one to 19.08 in sub-period two, which subsequently declined to 12.5 percent during the third period. These fluctuations are meaningfully significant as CV is moderately low while estimates of excess kurtosis are very minimal. These fluctuations seem to be statistically well-pronounced as per the estimates of standard deviation and kurtosis. The pattern is also consistent (not in strict sense) as estimates of skewness are not very high. The story of Canada does not seem to be showing any direction of change except the fact that for the last sub-period, some marginal decline is noticed in its share in India's exports.

Fourth, the major Oil and Petroleum Exporting Countries (OPEC) countries such as Kuwait, Saudi Arabia and United Arab Emirates (UAE) remained major destinations in India's exports. In particular, UAE continued to attract major exports from India and in other words India managed to find good market for its goods and services. Same is the case with Saudi Arabia though there are fundamental differences in the percentage share of India's exports of goods and services. UAE's share in India's exports was around 2.5 percent during 1989-90 which steadily rose to 11.3 percent in 2016-17. Whereas, Saudi Arabia's share was 1.5 percent and it increased to around 2.5 percent for the same period. The estimates of descriptive statistics in table 2.2 show that the mean value of percentage shares of India's exports to UAE has steadily increased from 4.14 percent to 7.09 percent and subsequently went up to 11.66 percent across all sub-periods. Standard deviation and variance are very low, while, estimates of CV show moderately low values and this indicates a significant upward trend in the percentage share of India's exports to UAE. Especially after 1990-91, export-import policies have favoured special route and destination for UAE. Notwithstanding the undisturbed flow of portfolio and foreign direct investments through UAE route to India, trade remained very high as UAE also followed pro-global and favourable trade policies towards India. The increase in the real income of UAE and favourable exchange rate movement has also pushed India's exports. Despite negative excess kurtosis, standard deviations are low across all sub-periods and skewness has not crossed much from normal value. The case of other countries such as Iran, Kuwait and Saudi Arabia in the OPEC bloc is slightly different from UAE, at least in terms of export flow from India. This is because the mean value of percentage shares of exports has not crossed 3 percent but still considerable increasing trend is noticed. The trade with Saudi Arabia, Kuwait and Iran are also long-standing relationship and this can be traced from the maritime history of India but trade with these three countries remained almost unaffected across the sample period despite many developments pertaining to export policies. This will include country-specific commodity exports which are aimed at identifying and promoting export markets suitable to the economic and other environments prevailing in the region.

Fifth, surprisingly and interestingly, India's exports shares to Japan and Russia have declined significantly. Both these countries are strategically friendly in nature and have always had very different equation which could complement growth and development when it came to India. Russia had been a very strong partner of economic cooperation, socio-economic development, military and strategic alliance and engagement but trade with Russia has fallen very sharply. As it can be seen in table 1.2, the percentage share of India's exports to Russia has fallen from 16.14 percent in 1990-91 steadily to 0.7 percent in 2016-17, almost leading to very negligible export level. This fundamental steady fall has not happened with any country during the sample period despite lot of variations across the countries. Therefore, it is surprising that a country with a large market, less complexities in the area of exchange rate and, privatized and globalized set up could not arrest the sharp reduction in India's exports which can be attributed to the set back in the strategic and international economic cooperation. Partly, trade diversion could be one reason. Estimates of descriptive statistics shown in the table 2.3 narrate the same thing in terms of mean estimates of percentage shares of India's exports. As one can observe from the estimated values of descriptive statistics, fall in the percentage share is statistically significant. Percentage share of India's exports to Japan have fallen down from 9.87 percent to 1.39 percent over the same period. This has happened despite very good liberal geostrategic export policy with Japan. India's decline in the exports has happened despite very good favourable economic climate in

Japan including that of moderate growth and low inflation. This is a big strategic loss for India's trade.

Lastly, India's shares of exports have increased over the sample period with Hong Kong, Singapore and China including that of South Asian Association for Regional Cooperation (SAARC) nations. Descriptive statistical estimates show that the mean values of percentage shares for China, Hong Kong and Singapore have increased steadily and considerably and this shift in the mean value across all sub-periods seems to be statistically significant. Despite all odds in terms of regional economic cooperation, strategic alliance and globalization policies, India managed to push its exports to China although, the trade gap may be vast. Singapore is a noteworthy addition to the Indian market not only for trade, but also for financial and capital flows. It adds to the point that most of the shifts in terms of trade direction in favour of developing countries and emerging markets are observed by SAARC nations, China, Hong Kong and Singapore. The fall in the share of Japan is compensated by the rise in the share of China to a great extent. Other few nations that are classified into African and Latin American countries do not really have a great share in exports of India. Therefore, detailed information regarding this is not presented in tables 1.1 and 1.2 but the idea of export flow is presented in table 2.3 in terms of descriptive statistics. Most of the African and Latin American countries are clubbed into Africa and Latin America. This is to note that in case of Africa the percentage share has increased from 3.29 percent to 7.36 percent from sub-period one to sub-period 3 whereas that of Latin America has declined from 1.1 percent to -0.39 percent for the same period. The loss of Latin American markets for India's exports, despite India being a friendly nation to most of these countries including Brazil and others, can possibly be considered as policy lacuna.

V. Country-wise Direction of India's Imports

Import plays a predominant role in explaining the behaviour of external balance specifically for developing countries like India. Invariably, trade account shows that imports are higher than exports, thereby making external sector completely rely on capital and reserve flows for adjustments in the Balance of Payments (BOP). India's imports have increased phenomenally over a period of time as there is now a less room for import substitution and indigenous production of high-tech capital goods. Therefore, importing becomes critical for development and growth. It is this which motivates this study to analyze the directions of imports more closely for some meaningful understanding of issues and these are organized as follows.

First, European Union (EU), as a unit put together, constituted a very important partnership for India's imports and over a period of time its significance is diminishing. The major trading countries such as UK, France, Germany, Italy, Netherland and Belgium are not able to find a strong grip in India's markets over two decades now and India's imports from these countries are gradually diminishing. Percentage share of India's imports from UK and Germany was 8.4 and 7.9 percentages respectively during 1989-90 and the same have diminished to 0.97 and 3.00 percentages during 2016-17. This fall in the imports is significant from India's point of view as we managed to considerably reduce imports over a period of time and the question is to what extent the increase in the imports have reduced consumption vis-a-vis capital goods. In case of Belgium, India's imports share declined from 7.60 percent for the year 1989-90 to 1.74 percent in 2016-17. The downward decline is also noticed for France and Italy, almost making their shares getting cut down by seventy percent over a period of time. The descriptive statistics of percentage shares of India's imports are shown in the table 4.1, 4.2 and 4.3. Table 4.1 exemplifies the realities of imports scenario for India for countries in EU. Estimates of mean

values also show a continuous downward shift in the imports while the standard deviation for the same for various countries are very low indicating that the shifts in the mean values across three sub-periods are statistically significant. Most of the values of excess kurtosis are positive and thereby signifying the efficiency of standard deviation in explaining the significant shift in the mean values. Decline in the imports for countries examined for EU have taken place despite considerable increase in the growth rate and real incomes in India while a large market remained open globally.

Second, trade growth continued to fall and remained sluggish at least in terms of imports even for USA and Canada. Percentage share of India's imports from USA and Canada declined from 12.07 percent and 1.28 percent respectively during 1989-90 to 5.78 percent and 1.06 percent in 2016-17. Globalization, liberal market policies and improvements in the economic strategic relationship with USA and Canada have not made any significant progress in trade and India managed to cut down the imports meaningfully. Probably, this reveals a cut in the consumption goods pertaining to consumer durables, to some extent manufacturing and intermediate goods. The American trade policy of selectively restricting the goods and raising their exports has not worked substantially in case of India's imports. The percentage share of India's imports has reduced two times from USA over a period of two and a half decades and a significant fall is noticed after 2010-11. Canada's share in India's imports remained relatively low and the fall that is noticed is not significant. Estimates of descriptive statistics, shown for these two countries are shown in tables 4.1 and 4.2, suggest that the mean values have fallen phenomenally for sub-periods two and three. Excess kurtosis is very high and positive for America and variances being low have authenticated that the fall in the mean value is significant.

Third, Australia and Japan remained major trading partners for India and India's import share from Australia remained more or less the same with some fluctuations across some years during the sample period, while imports share for Japan has diminished significantly from 7.97 percent in 1989-90 to 2.55 percent in 2016-17. Japan's decrease in the share has been prominent from 2000-01 and it has never recovered to reach India's market to capture. According to the information furnished in table 4.2, the mean values of Japan's share have fallen from 6.69 percent to 3.69 percent and further to 2.43 percent across all three sub-periods. India's imports story with Japan is something that is quite similar to India's exports to Japan. Although both the countries prospered during our sample period, the considerable expansion in the market is not utilized by Japan. Japanese exports to India, which also implies India's imports from Japan, remained more or less stagnant after 2005-06. Growth momentum in the late nineties and early 21st century could not improve Japan's share. Australia remained, in terms of its descriptive statistical estimates, more or less constant with reference to India's imports share. In terms of estimates of variance, standard deviation and CV, the estimated mean values seem to be significant across all three sub-periods. Kurtosis and skewness values do support efficient mean for all three sub-periods.

Fourth, imports of petroleum products and associated minerals have strong implications for growth and inflation. Any kind of supply shock can come through stock variations in the petroleum product. Imports of the same, among other products, from Iran, Kuwait, Saudi Arabia and UAE have always occupied major debate in the issues concerning trade flows. Imports from Saudi Arabia, UAE and Iran have considerably increased over time and of course some fluctuations are observed for some years. Dollar depreciation, increase in the international crude oil prices, OPEC cartel decisions and stock adjustment behaviour of large companies have

pushed the value of imports of petroleum products for some years during the sample period. This can be noticed from 2006-07 to 2010-11. Imports flow from Saudi Arabia and UAE have dominated the trade relations with gulf countries especially after 1995-96. Table 4.2 of descriptive statistics suggests that the mean values of Iran, Saudi Arabia and UAE have increased across sub-periods. The shifts in the mean values also seem to be statistically significant. Increasing requirements for energy, transportation and infrastructural activities have pushed up the petroleum imports from these countries. Also, there are some other products that are mainly manufacturing and consumer durables and, have taken the route of UAE and Saudi Arabia. India's trade relations with gulf countries have improved significantly in terms of the policy coherence that has been followed for last two decades.

Fifth, Russia and China continue to be surprising and contradictory cases even for imports. Russia's share has fallen and while that of imports share of India from China has increased manifold. Russia's share in India's imports has declined from 5.7 percent to 1.4 percent over the sample period. This can be considered as fundamental fall especially after Russia was privatized and globalized. Russia's ability to push its commodity to Indian markets has also meaningfully come down considering its close trade relations with India, whereas China managed to push India's import share from 0.16 percent to 16.02 during the study period. This signifies unimaginable and unprecedented trade flows in terms of imports from China despite the fact that its strategic relevance is quite complex and uncomfortable within the framework of diplomatic and international relations. This increase in the imports stands at an unbelievable growth rate of hundred times. Chinese market capturing strategy has worked out comprehensively in case of India and they are able to push their products to India in almost all categories of imports. A broad observation on prevailing trade issue suggests that China's trade interventions and policy measures have proved healthy for China and a noteworthy point is that the consumption commodities have increased manifold while that of imports of capital goods remained relatively low. Descriptive statistics of percentage shares of China and Russia in India's imports give slightly elaborated and meaningful observations as the fall in mean values for Russia is observed across all three sub-periods while that of China has experienced an increase in the mean values. Mean values of imports share from China has increased from 1.3 percent to 4.9 percent and further to 12.4 percent across all the periods.

Lastly, Hong Kong and Singapore are two important Far East countries, among other nations, that have maintained their share of global trade with India. It is important to observe that Hong Kong managed to push its trade upwards while that of Singapore has diminished moderately. Descriptive statistical estimates also suggest that there is a marginal fall in the mean value for Singapore while that of Hong Kong registered moderate increase of trade flows. Their statistics seem to be significant. Finally, SAARC countries managed to trade among themselves much better as India's share of imports from SAARC countries increased from 2.5 percent 1989-90 to 6.8 percent in 2016-17. Trade with Latin American and African countries, which is not reported in concerned tables, has progressed significantly. African countries put together have managed to increase their trade flows to India from around 2 percent to 7.5 percent during the study period while Latin American countries have moved from 0.4 percent to 4.2 percent. This is surprising as most of the developed nations have lost their markets in India and these countries have improved their market shares. Table 4.3 suggests that mean values of Africa's shares have moved from 3.2 percent to 4.6 percent and further to 4.1 percent across the sample period. Similarly, Latin

American countries have registered 1.7 percent share during the first period and further the mean value is pushed to 3.02 percent in the last period.

VI. CONCLUDING OBSERVATIONS

This exercise is not exhaustive in analyzing the structural and fundamental determinants and issues governing direction of India's country-wise trade but brings out some of the important implications of India's direction of trade with most of the major trading partners, while analyzing the trends in trade flows. One can always build a model of trade direction to analyze the underlying economic factors responsible for changes in the direction and shift in the trade flows but the current attempt does unearth some meaningful evidences pertaining to the nature of India's trade relations with its major trading partners. Most of the developed countries have gradually lost their shares in both imports and exports after liberalization in India's global trade. Noteworthy loss is in terms of USA, Russia and EU. It is important to mention that China has gained abnormally in India's global trade, particularly pushing its commodities into Indian markets. If one goes by percentage shares in total exports, India's trade deficit with China is unsustainable and the gap between exports and imports have been widening year after year. Surprisingly, some of the Asian countries such as Singapore have not been able to push their trade with India. SAARC and some of the developing nations including OPEC countries managed to increase their trade volumes at least in terms of imports and exports. It is important to state that North-North trade has diminished in its importance while that of South-South trade not only increased but actually multiplied.

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Appendix

TABLE 1.1: PERCENTAGE SHARES OF COUNTRY-WISE INDIA'S EXPORTS TO TOTAL EXPORTS

Year	Belgium	France	Germany	Italy	Netherlands	U.K.	Canada	U.S.A	Australia	Iran
1989-90	4.35	2.31	6.40	2.75	1.92	5.79	0.95	16.17	1.21	0.48
1995-96	3.52	2.35	6.22	3.19	2.42	6.32	0.96	17.36	1.18	0.49
2000-01	3.30	2.29	4.28	2.94	1.98	5.16	1.47	20.88	0.91	0.47
2005-06	2.79	2.02	3.48	2.44	2.40	4.91	0.99	16.83	0.80	1.15
2010-11	2.31	2.07	2.69	1.81	3.06	2.91	0.54	10.08	0.68	0.99
2014-15	1.78	1.60	2.43	1.64	2.04	3.02	0.71	13.68	0.90	1.35
2015-16	1.92	1.77	2.71	1.61	1.80	3.38	0.77	15.37	1.24	1.06
2016-17	2.05	1.94	2.62	1.79	1.83	3.10	0.73	15.31	1.07	0.87

Source: Authors' calculations.

TABLE 1.2: PERCENTAGE SHARES OF COUNTRY-WISE INDIA'S EXPORTS TO TOTAL EXPORTS

Year	Japan	Kuwait	Saudi Arabia	U.A.E.	Russia	SAARC	China People's Republic of	Hong Kong	Singapore
1989-90	9.87	0.72	1.55	2.57	16.12	2.52	0.14	3.23	1.69
1995-96	6.97	0.43	1.52	4.49	3.29	5.41	1.05	5.73	2.84
2000-01	4.03	0.45	1.85	5.83	2.00	4.33	1.87	5.93	1.97
2005-06	2.41	0.50	1.76	8.33	0.71	5.38	6.56	4.34	5.26
2010-11	2.03	0.74	1.86	13.46	0.67	4.64	6.16	4.12	3.91
2014-15	1.73	0.39	3.59	10.64	0.68	6.61	3.86	4.38	3.16
2015-16	1.77	0.48	2.44	11.54	0.61	7.10	3.43	4.62	2.94
2016-17	1.39	0.54	1.86	11.30	0.70	6.87	3.69	5.12	3.46

Source: Authors' calculations.

TABLE 2.1: DESCRIPTIVE STATISTICS OF PERCENTAGE SHARES OF COUNTRY-WISE INDIA'S EXPORTS TO TOTAL EXPORTS

Period	Statistic	Belgium	France	Germany	Italy	Netherlands	U.K.	Canada
1989-90 to 1997-98	Mean	3.72	2.30	6.66	3.06	2.22	6.27	1.02
	Standard Deviation	0.30	0.12	0.82	0.25	0.20	0.24	0.10
	Variance	0.09	0.02	0.67	0.06	0.04	0.06	0.01
	Coefficient of Variation	8.16	5.38	12.26	8.01	9.10	3.86	9.95
	Skewness	0.85	0.61	0.02	-0.55	-0.07	-0.85	0.85
	Kurtosis	2.09	0.54	-0.98	-1.61	-0.52	0.67	2.59
1998-99 to 2006-07	Mean	3.18	2.12	4.07	2.80	2.12	4.94	1.25
	Standard Deviation	0.40	0.26	0.74	0.23	0.19	0.42	0.24
	Variance	0.16	0.07	0.55	0.05	0.04	0.18	0.06
	Coefficient of Variation	12.60	12.05	18.24	8.10	9.17	8.54	18.97
	Skewness	0.80	-0.15	0.92	0.15	0.71	0.44	-0.30
	Kurtosis	-0.43	0.15	1.02	-0.28	-1.46	-0.83	-1.22
2007-08 to 2016-17	Mean	2.14	1.75	2.75	1.79	2.80	3.24	0.69
	Standard Deviation	0.27	0.22	0.36	0.28	0.70	0.40	0.07
	Variance	0.07	0.05	0.13	0.08	0.49	0.16	0.01
	Coefficient of Variation	12.46	12.41	12.96	15.33	24.86	12.46	10.56
	Skewness	0.29	0.88	1.04	1.24	-0.50	1.14	-0.84
	Kurtosis	-1.02	-0.77	0.30	1.69	-1.51	1.01	0.76

Source: Authors' calculations.

TABLE 2.2: DESCRIPTIVE STATISTICS OF PERCENTAGE SHARES OF COUNTRY-WISE INDIA'S EXPORTS TO TOTAL EXPORTS

Period	Statistic	U.S.A	Australia	Japan	Iran	Kuwait	Saudi Arabia	U.A.E.
1989-90 to 1997-98	Mean	17.74	1.17	7.79	0.93	0.47	1.80	4.14
	Standard Deviation	1.70	0.09	1.51	0.60	0.15	0.33	0.99
	Variance	2.90	0.01	2.29	0.36	0.02	0.11	0.97
	Coefficient of Variation	9.60	8.03	19.43	64.12	31.20	18.64	23.79
	Skewness	-0.60	-0.57	-0.18	2.73	-0.16	0.12	-1.19
	Kurtosis	-0.85	1.13	-0.95	10.25	0.29	-0.97	0.17
1998-99 to 2006-07	Mean	19.08	0.93	1.08	3.38	0.48	1.90	7.09
	Standard Deviation	2.66	0.14	0.95	0.99	0.03	0.20	1.57
	Variance	7.08	0.02	0.91	0.97	0.00	0.04	2.45

	Coefficient of Variation	13.95	14.52	88.44	29.17	5.96	10.55	22.10
	Skewness	-0.19	0.41	2.16	0.45	-1.25	1.32	0.46
	Kurtosis	-1.25	-0.03	5.14	-1.24	0.96	1.63	-1.80
2007-08 to 2016-17	Mean	12.53	0.85	1.14	1.92	0.45	2.59	11.66
	Standard Deviation	1.79	0.18	0.24	0.29	0.12	0.74	1.41
	Variance	3.19	0.03	0.06	0.08	0.01	0.55	1.99
	Coefficient of Variation	14.25	20.92	21.44	14.83	25.99	28.72	12.09
	Skewness	0.58	1.54	0.41	-0.45	1.87	0.71	-0.17
	Kurtosis	-0.62	1.78	-0.32	-0.07	4.04	-0.94	-1.11

Source: Authors' calculations.

TABLE 2.3: DESCRIPTIVE STATISTICS OF PERCENTAGE SHARES OF COUNTRY-WISE INDIA'S EXPORTS TO TOTAL EXPORTS

Period	Statistic	Russia	SAARC	China	Hong Kong	Singapore	Africa	Latin America
1989-90 to 1997-98	Mean	6.57	4.07	0.94	4.70	2.60	3.29	1.10
	Standard Deviation	5.80	0.97	0.70	1.15	0.57	1.05	0.50
	Variance	33.61	0.93	0.50	1.31	0.33	1.10	0.25
	Coefficient of Variation	88.24	23.70	75.26	24.40	21.98	31.91	45.22
	Skewness	1.22	-0.30	0.35	-0.41	-0.25	0.31	0.39
	Kurtosis	-0.34	-0.85	-0.99	-2.20	-1.26	-1.44	-0.13
1998-99 to 2006-07	Mean	1.46	5.03	3.89	5.15	3.16	5.17	2.38
	Standard Deviation	0.69	0.76	2.31	0.94	1.44	0.77	0.49
	Variance	0.48	0.57	5.32	0.88	2.08	0.60	0.24
	Coefficient of Variation	47.50	15.05	59.31	18.22	45.66	14.91	20.48
	Skewness	0.31	0.33	0.21	0.26	0.48	1.23	0.76
	Kurtosis	-1.43	1.38	-1.99	0.03	-1.71	2.60	-0.39
2007-08 to 2016-17	Mean	0.64	5.53	5.06	4.25	4.07	7.36	4.07
	Standard Deviation	0.07	1.04	1.19	0.42	0.76	1.05	0.56

Variance	0.00	1.08	1.42	0.17	0.57	1.10	0.31
Coefficient of Variation	10.61	18.75	23.61	9.79	18.58	14.25	13.80
Skewness	0.43	0.43	0.02	0.72	0.22	0.09	-0.36
Kurtosis	-0.64	-1.54	-1.65	1.22	0.05	-1.19	-0.68

Source: Authors' calculations.

TABLE 3.1: PERCENTAGE SHARES OF COUNTRY-WISE INDIA'S IMPORTS TO TOTAL IMPORTS

Year	Belgium	France	Germany	Italy	Netherlands	U.K.	Canada	U.S.A	Australia	Japan	Iran
1989-90	7.63	4.56	7.89	2.19	1.56	8.40	1.28	12.07	2.54	7.97	1.10
1995-96	4.64	2.29	8.58	2.90	1.55	5.23	1.04	10.53	2.79	6.73	1.63
2000-01	5.68	1.27	3.48	1.43	0.87	6.27	0.79	5.97	2.10	3.65	0.52
2005-06	3.17	2.76	4.04	1.24	0.70	2.63	0.62	6.34	3.32	2.72	0.47
2010-11	2.33	1.00	3.22	1.15	0.50	1.46	0.55	5.43	2.92	2.34	2.95
2014-15	2.41	0.99	2.86	0.94	0.62	1.12	0.84	4.87	2.29	2.26	1.99
2015-16	2.17	0.98	3.18	1.07	0.49	1.36	1.12	5.73	2.34	2.59	1.64
2016-17	1.74	1.20	3.00	1.01	0.50	0.97	1.06	5.78	2.91	2.55	2.75

Source: Authors' calculations.

TABLE 3.2: PERCENTAGE SHARES OF COUNTRY-WISE INDIA'S IMPORTS TO TOTAL IMPORTS

Year	Kuwait	Saudi Arabia	U.A.E.	Russia	SAARC	People's Republic of China	Hong Kong	Singapore
1989-90	3.28	4.09	4.04	5.77	0.29	0.16	0.70	2.54
1995-96	5.37	5.52	4.38	2.33	0.70	2.21	1.06	2.98
2000-01	0.22	1.23	1.30	1.02	0.92	2.97	1.69	2.90
2005-06	0.31	1.09	2.92	1.36	0.95	7.29	1.48	2.25
2010-11	2.79	5.52	8.86	0.98	0.59	11.77	2.54	1.93
2014-15	2.98	6.26	5.83	0.95	0.66	13.50	1.25	1.59
2015-16	1.30	5.32	5.10	1.20	0.78	16.22	1.59	1.92
2016-17	1.16	5.21	5.61	1.45	0.69	16.02	2.14	1.85

Source: Authors' calculations.

TABLE 4.1: DESCRIPTIVE STATISTICS OF PERCENTAGE SHARES OF COUNTRY-WISE INDIA'S IMPORTS TO TOTAL IMPORTS

Period	Statistic	Belgium	France	Germany	Italy	Netherlands	U.K.	Canada
1989-90 to 1997-98	Mean	6.50	2.70	7.64	2.44	1.50	6.26	1.18
	Standard Deviation	1.45	0.82	0.69	0.22	0.24	0.97	0.32
	Variance	2.10	0.68	0.48	0.05	0.06	0.93	0.10
	Coefficient of Variation	22.30	30.42	9.03	9.14	16.15	15.41	27.18
	Skewness	-0.38	1.55	-1.36	1.04	-0.38	1.36	1.11
	Kurtosis	-1.00	2.84	3.15	1.18	-0.39	2.50	1.20
1998-99 to 2006-07	Mean	5.10	1.77	3.95	1.50	0.80	4.40	0.85
	Standard Deviation	1.67	0.47	0.46	0.41	0.16	1.47	0.14
	Variance	2.80	0.22	0.21	0.17	0.03	2.17	0.02
	Coefficient of Variation	32.84	26.36	11.60	27.48	20.65	33.49	16.08
	Skewness	-0.46	1.35	1.96	2.75	0.69	-0.19	-0.46
	Kurtosis	-0.47	1.59	4.81	7.94	-0.66	-1.34	-0.88
2007-08 to 2016-17	Mean	2.09	1.22	3.28	1.15	0.60	1.45	0.77
	Standard Deviation	0.25	0.51	0.42	0.22	0.11	0.32	0.20
	Variance	0.06	0.26	0.18	0.05	0.01	0.10	0.04
	Coefficient of Variation	11.73	41.77	12.82	19.32	18.07	22.08	26.26
	Skewness	-0.26	1.96	0.88	0.85	0.39	0.43	0.56
	Kurtosis	-1.09	4.22	-0.61	-0.66	-1.55	-0.23	-0.51

Source: Authors' calculations.

TABLE 4.2: DESCRIPTIVE STATISTICS OF PERCENTAGE SHARES OF COUNTRY-WISE INDIA'S IMPORTS TO TOTAL IMPORTS

Period	Statistic	U.S.A	Australia	Japan	Iran	Kuwait	Saudi Arabia	U.A.E.
1989-90 to 1997-98	Mean	10.57	3.17	6.69	1.91	4.12	6.20	4.75
	Standard Deviation	1.17	0.41	0.88	0.55	1.85	1.04	0.75
	Variance	1.36	0.17	0.78	0.31	3.41	1.08	0.57
	Coefficient of Variation	11.03	13.08	13.18	29.05	44.81	16.73	15.90
	Skewness	0.28	0.05	-0.48	0.76	-0.97	-1.03	1.63
	Kurtosis	-1.38	-0.80	-0.12	0.89	-0.35	0.90	2.46
1998-99 to 2006-07	Mean	6.72	2.92	3.69	1.26	1.34	2.64	3.09
	Standard Deviation	0.83	0.66	1.14	1.16	1.66	2.53	1.35
	Variance	0.68	0.44	1.30	1.35	2.75	6.40	1.83

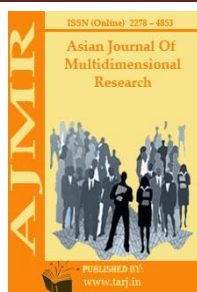
	Coefficient of Variation	12.30	22.68	30.82	92.50	123.99	95.84	43.82
	Skewness	1.68	-0.23	0.97	2.17	0.89	1.14	-0.08
	Kurtosis	2.82	-2.07	-0.09	5.42	-1.56	-0.49	-1.88
2007-08 to 2016-17	Mean	5.72	2.94	2.43	2.92	2.79	6.39	6.69
	Standard Deviation	1.04	0.66	0.16	0.93	0.87	0.98	1.25
	Variance	1.08	0.43	0.03	0.86	0.76	0.95	1.56
	Coefficient of Variation	18.22	22.33	6.73	31.74	31.26	15.29	18.67
	Skewness	2.04	0.95	-0.92	0.41	-1.26	0.62	0.39
	Kurtosis	5.05	0.79	-0.05	-1.14	0.65	-0.49	-0.96

Source: Authors' calculations.

TABLE 4.3: DESCRIPTIVE STATISTICS OF PERCENTAGE SHARES OF COUNTRY-WISE INDIA'S IMPORTS TO TOTAL IMPORTS

Period	Statistic	Russia	SAARC	China	Hong Kong	Singapore	Africa	Latin America
1989-90 to 1997-98	Mean	2.78	0.59	1.31	0.80	2.97	3.27	1.78
	Standard Deviation	1.90	0.15	1.10	0.16	0.33	0.74	0.48
	Variance	3.62	0.02	1.21	0.02	0.11	0.54	0.23
	Coefficient of Variation	68.42	24.81	84.01	19.63	10.97	22.55	26.71
	Skewness	1.04	-0.77	0.10	0.39	0.71	0.22	0.90
	Kurtosis	-0.59	1.57	-2.01	0.17	0.05	-1.25	0.04
1998-99 to 2006-07	Mean	1.18	0.91	4.99	1.52	2.71	4.67	1.85
	Standard Deviation	0.14	0.12	2.33	0.24	0.36	1.41	0.41
	Variance	0.02	0.01	5.44	0.06	0.13	2.00	0.17
	Coefficient of Variation	11.72	12.89	46.74	15.75	13.33	30.29	22.20
	Skewness	-0.52	1.01	0.81	-0.44	0.21	0.92	1.86
	Kurtosis	-1.32	-0.43	-0.09	1.16	-1.43	-0.18	4.72
2007-08 to 2016-17	Mean	1.09	0.63	12.36	1.78	2.01	4.09	3.02
	Standard Deviation	0.22	0.11	2.16	0.46	0.53	0.47	0.77
	Variance	0.05	0.01	4.67	0.21	0.29	0.22	0.59
	Coefficient of Variation	20.42	17.01	17.50	25.84	26.63	11.59	25.56
	Skewness	0.74	0.96	1.24	0.12	1.50	0.03	-0.04
	Kurtosis	-1.03	-0.02	0.02	-0.75	2.24	-0.72	-1.94

Source: Authors' calculations.



THE INTERLINKAGES BETWEEN AGRICULTURAL TRADE AND GROUNDWATER SUSTAINABILITY IN INDIA

Mohd. Adil*; Pragya Sharma**

*Research Scholar,
Dept. of Economics,
Aligarh Muslim University,
Aligarh, Uttar Pradesh, INDIA
Email id: adileco88@gmail.com

**Research Scholar,
Dept. of Economics,
Babasaheb Bhimrao Ambedkar University,
Uttar Pradesh, India
Email id: pragya.kabir@outlook.com

ABSTRACT

Agriculture trade pattern of India has witnessed major changes over the years. Focusing on agriculture trade composition and trade flow pattern, this paper found out that in the post WTO regime agriculture exports have grown but imports have a higher share. This scenario is different particularly with reference to trade of water-intensive crops wherein exports have an upper hand. The paper has been broadly divided into two sections. In the first section, using secondary level data we have made an assessment of trade performance, concentration or diversification of Indian agriculture since World Trade Organisation (WTO) formation i.e. 1995. In the next section, we have focused upon the trade pattern of selected high water consuming crops and explored the linkages between trade of such crops and groundwater exploitation in different states of the country. Data anatomisation reveals that the agriculture export has grown at a compound rate of 16.2 percent whereas import has grown at the rate of 18.1 percent during 1995-2015. Considering export-import of water consuming crops we find an opposite picture wherein the exports have surged while the imports have declined, sugar being the only exception. Study findings depict positive correlation between production of high water guzzling crops and groundwater use which exacerbates groundwater depletion. The paper suggests India to use water as a negotiating tool in trade related matters. In addition, farmer's crop choice decisions in different states to be based as per the hydrogeological conditions. Further, reduction in

subsidies which promote over-exploitation of groundwater, incentivizing farmers to shift from high water consuming to low water consuming crops, crop choice based on hydrogeological conditions, technology adoption and upgradation for promoting water efficiency in irrigation are few possible solutions

KEYWORDS: *Agricultural products, Trade, WTO, Water Intensive crops, Groundwater use, Groundwater development*

I INTRODUCTION

The world economy has been experiencing a progressive international economic integration since the last decade of the twentieth century. Certain events such as formation of WTO happened during early 90s which fostered the process of globalisation in all developing countries as well as in India. The basic aim of this Agreement was to liberalize agricultural trade by replacing physical controls with bound tariff rates while the overall objective was to provide a framework for the long-term reform of agricultural trade. It was expected that India's agriculture trade situation would improvise after such an agreement but not much significant changes have been witnessed so far. This vigorous process of globalisation has increased trade flow but has also affected the natural resource base of countries. Though, there are several natural resources, water needs special attention with reference to India wherein water stress is deepening day by day. Agricultural products consume most of the water and increased share of them in international trade is a matter of concern. India's current trade pattern may be a beneficial from economic growth perspective but can be termed unviable for sustainable development. Export of highly water intensive crops viz. cotton, coffee, rice, sugarcane is a threat to groundwater sustainability as there is loss of virtual water.

II REVIEW OF LITERATURE

According to Goswami (2015), virtual water trade is an issue which has recently gained attention and importance. Trade in exchange of goods and services results in exchange of water in virtual form. "In terms of agriculture and food, virtual water can be defined both in terms of water required for the production, and as water content embedded in the end products. According to Hubacek (2007) "importing water-intensive goods from one water-scarce region to another doesn't solve the problem of water scarcity, it just shifts the pressure to other regions".

Scholars have attempted to account water footprints and trade flows of agrarian products as they are comparatively more water intensive and account for around 70% of global freshwater withdrawal (UNESCO, 2014). The largest share (76%) of the virtual water flows between countries is related to international trade in crops and derived crop products. It has also been estimated that 15% of the world's agricultural water use is for export products (Chapagain and Hoekstra, 2008). Specifically, water-intensive cereal grains like wheat, rice and corn account for 27 percent; meat production 22 percent; and dairy 7 percent. Focusing on the linkage between agriculture trade and its impact on water resources, literature suggests that unsustainable trade patterns have exacerbated water stress. Several examples of such relationship have been showcased by Hoekstra and Chapagain (2008) in their study on international trade dynamics and affect on water resources. They mentioned that in Morocco, water abstraction for irrigating export crops has increased foreign exchange but it is being done at the cost of lowering the water table of the Souss Aquifer. A similar problem is reported in the Rufiji-Ruvuma sub-system in East Africa. Kehl (2013) gave few more examples of such linkage wherein he concluded that

arid parts of Egypt, Turkey and Eastern Europe, including the Aral Sea region produced large quantities of water-intensive cotton and exported it to Asia and Europe. Such inefficient trade is a function of short-term economic planning for rapid growth, perverse water and energy subsidies, and myopic use of methods exceeding ecological limits. Subsidized water in Uzbekistan is being over exploited to produce cotton for export, water depletion and degradation has been witnessed in Thailand with rise in irrigation of rice for export. Similar studies in Indian context by Goswami and Nishad (2015) reveal that India is poised to lose its entire available water supply within 500 years if the current food export policy continues. Jha & Rabindran (2011) indicate that trade liberalization has resulted in an increase in exports from industries that are more water and air pollution intensive relative to less pollution-intensive ones. Landefeld & Sekhri (2013) carried out a study on trade in agricultural commodities during 1999-2005 and found out that trade promotion led to increased abstraction of water. According to an estimate of the International Water Management Institute, the current patterns of extraction in India could lead to a 25 percent decline in food production by 2025 (Seckler et al, 1998). Such findings are of great concern as India extracts the largest amount of groundwater in the world, almost twice as much as the United States. Around 60 percent of Indian agriculture is sustained by groundwater. Between 1980 and 2010, water tables declined by more than 12 meters in many parts of India, and the depletion rates have been accelerating since 2000 (Rodell et al., 2009; Sekhri, 2012). According to the satellite-data-based study conducted by NASA, the rate at which aquifers are being mined in India is unsustainable (ibid). Decline in water tables would threaten food/ water security and would also affect the ability to mitigate droughts. Concerns about changing precipitation patterns due to global warming have made sustaining groundwater reserves even more critical. Thus, from a policy perspective, understanding how groundwater can be used in a sustainable manner for various agricultural purposes is necessary. Within any country the overuse of groundwater by one set of users can undermine the resource base for all.

III OBJECTIVES AND METHODOLOGY

This paper primarily tries to address three objectives. Firstly, it presents an overview of the export-import composition of India and focuses upon the trade flow aspect. Secondly, an assessment of trade balances, trade performance of Indian agriculture during post WTO period has been made. Thirdly, it establishes a link between productions of crops viz. rice, cotton, sugarcane, wheat, tobacco and coffee (water intensive crops), groundwater use and development in their highest producing states respectively.

Secondary level data from sources viz. APEDA, Ministry of Agriculture, Ministry of Water Resources, Central Ground Water Board and State Ground Water Board for the period 1995-2016 has been utilised. This period has been considered as significant changes like economic reforms in India and formation of World Trade Organisation (WTO) which affected trade patterns took place. A trend analysis of the trade flow pattern of all agriculture commodities and specifically with reference to selected high water use crops of India has been done so as to understand whether their share has increased or declined in exports and imports over the years. In order to check the export pattern and level of diversification in trade of India, we have used Herfindahl and Gini-Hirschman Index. Further, simple regression model and correlation has been used to assess the relationship between crop production and groundwater use. This analysis has been performed using three crops namely rice, wheat and sugarcane. Other crops have to be neglected during the regression and correlation analysis due to data limitations. Statistical techniques viz. regression or correlation when performed on insufficient data gives statistically

insignificant results, thus, cotton, tobacco and coffee have not been considered during this analytical procedure.

IV TRADE SCENARIO OF INDIAN AGRICULTURE

Kour & Bhau (2013) in their research paper entitled “Impact of WTO on Indian agriculture during 1990-2004” discussed about the negative and positive impact of WTO on Indian agriculture. They observed that WTO has made both positive and negative effect on Indian agriculture. Empirical evidences show that India’s share in global agricultural export before WTO has increased but it has declined during post WTO period. They also observed that growth of India’s agricultural import was more than export during WTO period. Overall, agriculture trade has witnessed rapid changes and increase in India since 1995. Data and literature both suggest that Indian agriculture trade improvised after formation of WTO but our trade balances have remained negative, suggesting greater rise in imports.

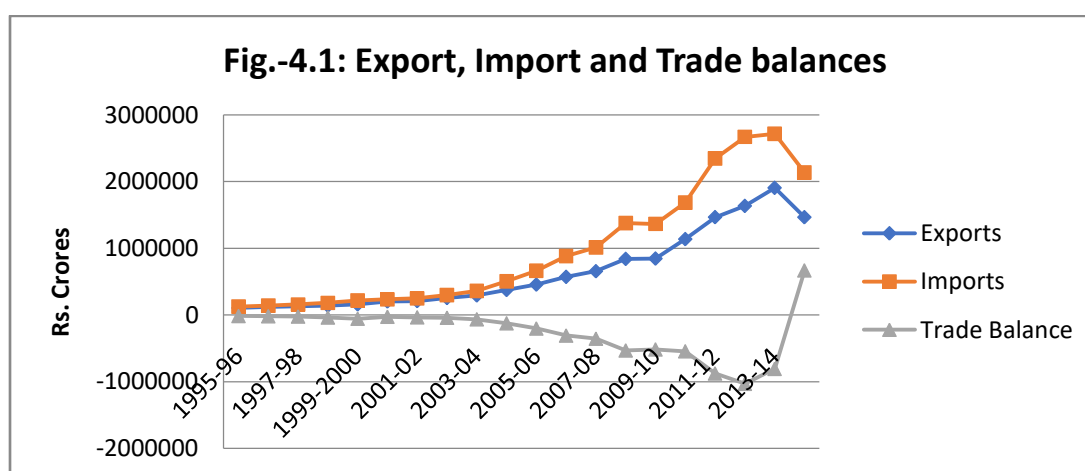
TABLE 4.1: IMPORTS AND EXPORTS OF AGRICULTURE COMMODITIES AND TRADE BALANCES OF INDIA (1995-2015)

<i>Year</i>	<i>Exports (in Crores)</i>	<i>Imports (in Crores)</i>	<i>Trade Balance</i>	<i>Exports (%)</i>	<i>Imports (%)</i>
1995-96	106353	122678	-16325	28.6	39.4
1996-97	118817	138920	-20103	11.7	13.2
1997-98	130100	154176	-24076	9.5	11
1998-99	139752	178332	-38580	7.4	15.7
1999-00	159095	215529	-56433	13.8	20.9
2000-01	203571	230873	-27302	28	7.1
2001-02	209018	245200	-36182	2.7	6.2
2002-03	254913	296360	-41446	22	20.9
2003-04	293367	359108	-65741	15.1	21.2
2004-05	375340	501065	-125725	27.9	39.5
2005-06	456418	660409	-203991	21.6	31.8
2006-07	571779	881515	-309736	25.3	33.5
2007-08	655864	1012312	-356448	14.7	14.8
2008-09	840755	1374436	-533680	28.2	35.8
2009-10	845534	1363736	-518101	0.6	-0.8
2010-11	1136964	1683467	-546503	34.5	23.4
2011-12	1465959	2345463	-879503	28.9	39.3
2012-13	1634318	2669162	1034844	11.5	13.8
2013-14	1905011	2715434	-810423	16.6	1.7
2014-15	1465171	2134283	-669111	5	5.2
Mean	648404.9	964122.9	-248802	17.68	19.68
SD	577261.4	903276.4	387788.3	9.99	13.11
CV	89.03	93.69	-155.86	56.52	66.63

Source: I) Hand Book of Statistics on Indian Economy, RBI, 2014-15.

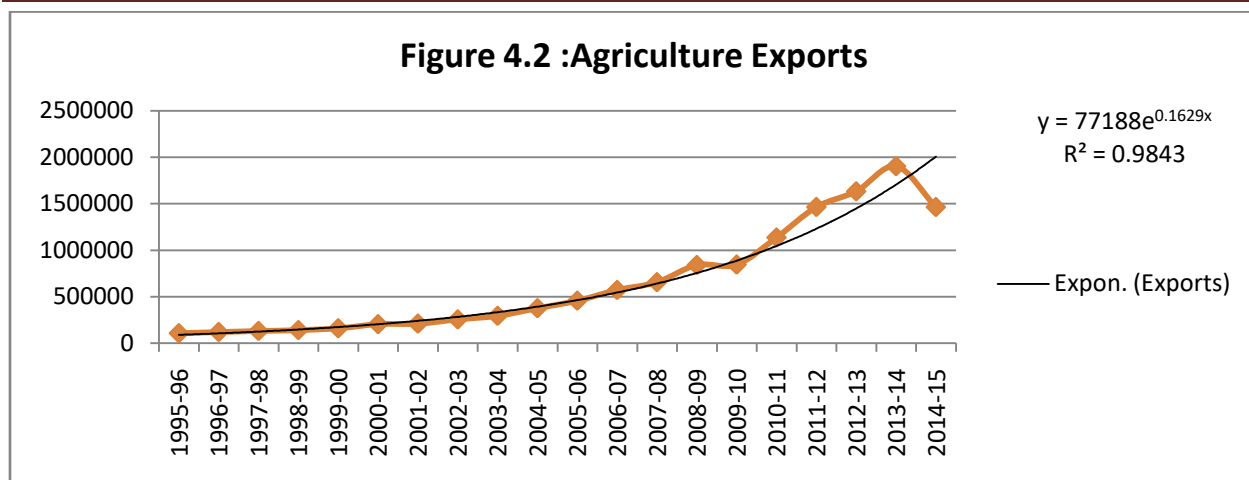
II) Economic Survey 2014-15.

Table 4.1 shows values of export-import, their respective percentage share and trade balances of India. From the above table, we may decipher that export and imports have constantly risen but the share of imports has been higher. In 1995-96 exports were 28.6 percent while imports stood at 39.4 percent and in the years to follow, the situation has been same. Overall, the percentage agricultural export to total national exports has decreased from 28.6 percent in 1995-96 to 2.7 percent in 2001-02 due to larger increase in exports of non-agriculture commodities in the economy. This ratio has further come down to 0.6 percent in 2009-10 owing to the global economic crisis. There were signs of slight improvement in 2013-14 wherein it increased to 16.6 percent. Checking out the fluctuations in imports and exports, one may conclude it is higher in case of exports; this is clear from the larger values of co-efficient of variation (C.V.). For agriculture export C.V. value is 89.03 percent whereas for imports it is 93.69 percent. The trade balance on agriculture account has shown continuous deficit in the post WTO era. This is definitely a matter of worry for India as India considered primarily being an agriculture dominant economy was supposed to reap the benefits of trade liberalization but has not been in a position to do so. The Indian agriculture sector has not been in a position to compete the international prices of agricultural commodities. As a result, the trade deficit due to agriculture has increased by 41 times (from Rs.16325 Cr. to Rs. 669111Cr.) in a span of 20 years.

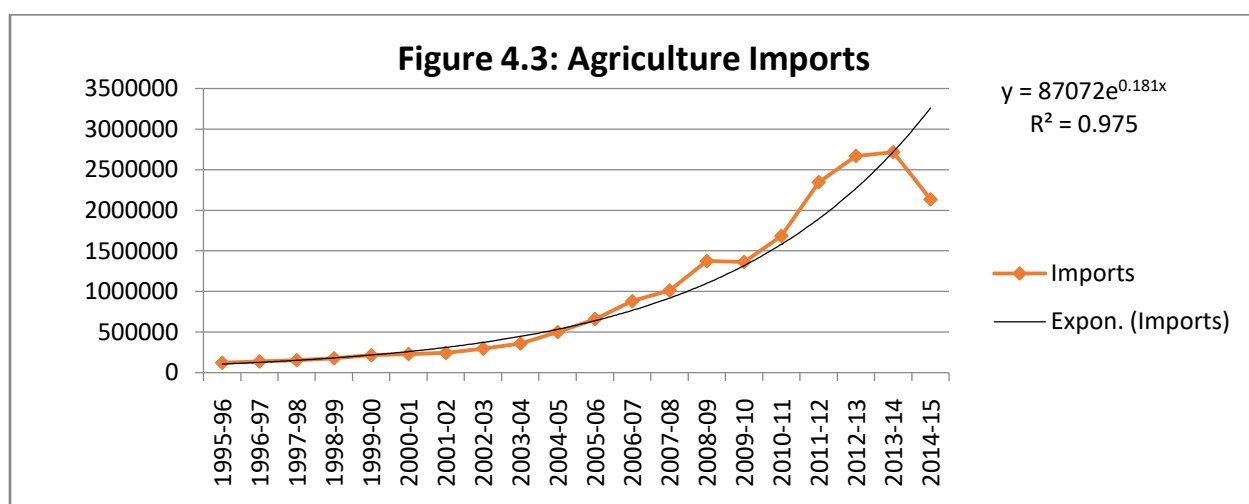


Source: Computed from data in Table 4.1

A graphical representation of data in table 4.1 has been depicted in Fig.4.1 which shows a clear picture of export-imports trends in Indian agriculture trade. Rising trade and declining trade balances is clearly portrayed through the graph.



Source: Computed from data in table 4.1



Source: Computed from data in table 4.1

From Fig. 4.2 and Fig. 4.3, we may decipher the trade pattern over the period of twenty years during 1995-2015. The agriculture export has grown at a compound rate of 16.2 percent whereas import has grown at the rate of 18.1 percent over the same period. A larger growth rate for agriculture import is definitely a sign of concern. Both agricultural exports and imports growth have shown exponential growth rate over the year which is clear from the fitted curve. The goodness of fit R^2 is very high (more than 0.95) in case of both exports as well as imports. Both exports and imports have shown large fluctuations over a period of 20 years in the post WTO period. Using Cuddy-Della Valle Index* for variability measurement, we estimate that instability is 12.59 for agriculture exports whereas it is 16.23 for agricultural imports. This shows higher stability for exports in India.

TABLE 4.2: AGRICULTURE EXPORT PATTERN OF INDIA AND HERFINDAHL, GINI-HIRSCHMAN INDEX

Year	Agriculture Exports	Total National Exports	Percentage of Agri.Exports to total Exports	H-Index ³	G-H Index ⁴
1995-96	20397.74	106353	19.18	0.192	0.037
1996-97	24161.29	118817	20.33	0.203	0.041
1997-98	24843.45	130100	19.09	0.191	0.036
1998-99	25510.64	139752	18.25	0.183	0.033
1999-00	25313.66	159095	15.91	0.159	0.025
2000-01	28657.37	203571	14.23	0.142	0.02
2001-02	29728.61	209018	14.22	0.142	0.02
2002-03	34653.94	254913	13.38	0.136	0.018
2003-04	37266.52	293367	12.7	0.127	0.016
2004-05	41602.65	375340	11.08	0.111	0.012
2005-06	49216.96	456418	10.78	0.108	0.012
2006-07	62411.42	571779	10.92	0.109	0.012
2007-08	79039.72	655864	12.05	0.121	0.015
2008-09	85951.67	840755	10.22	0.102	0.01
2009-10	89341.33	845534	10.57	0.106	0.011
2010-11	117483.6	1136964	10.28	0.103	0.011
2011-12	187609.3	1465959	12.8	0.128	0.016
2012-13	232041.1	1634318	14.2	0.142	0.02
2013-14	268469.1	1894182	14.17	0.142	0.02
				0.139	0.020

Source: I) Hand Book of Statistics on Indian Economy, RBI, 2014-15.

II) Economic Survey 2014-15.

³ Herfindahl Index- It is the sum of squared shares of each product in total export. A country with a perfectly diversified export portfolio will have an index close to zero, whereas a country which exports only one export will have a value of 1 (least diversified).

⁴ Gini-Hirschman Index- A countries with a perfectly diversified export portfolio will have an index close to zero, whereas a country which exports only one export will have a value of 1.

Table 4.2 reveals that the level of diversification is high in Indian agriculture as the average values of Herfindahl index and Gini-Hirschman is 0.13 and 0.020 respectively. The range of these indexes is 0 to 1, wherein values near 0 represents diversification in exports while a value near to 1 shows low diversification. This clearly depicts that agrarian exports are not much focused upon and neither has their export increased over the stated time period. Therefore, the above findings prove that there has been a net loss to Indian agriculture in the post liberalisation era and under the WTO regime as the trade balances due to agriculture has shown a continuous deficit, a net burden to further widen the gap of an overall trade deficit. The adverse impact on Indian agriculture, which was feared by many in the country, seems to be well founded. The only

matter of solace, though of very low degree, is that exports have shown lower degree of instability as compared to imports.

V Trade Composition and Trade Flow of Water-Intensive Agricultural Commodities

This section of the paper is entirely based on the trade scenario of water-intensive crops. Scholars have a varied opinion as far as virtual water trade by India is considered. Few suggest India is a net exporter of virtual water while some assert it is just the opposite (Katyaini, 2017). Focusing on these discussions, we have attempted to assess the export-import composition and trade flow of water intensive crops/ agricultural products. Considering the export-import pattern of India since 1995, we see that India exports a huge amount of rice, sugarcane, wheat, cotton, coffee and tobacco. These products are highly water consuming and by exporting them in large quantities we are depleting our natural resource base and exacerbating water stress. Checking out the top exports of India, we found that currently, India is world's largest exporter of rice, second largest exporter of cotton and third largest of sugar. It is also third largest exporter of coffee among Asian countries.

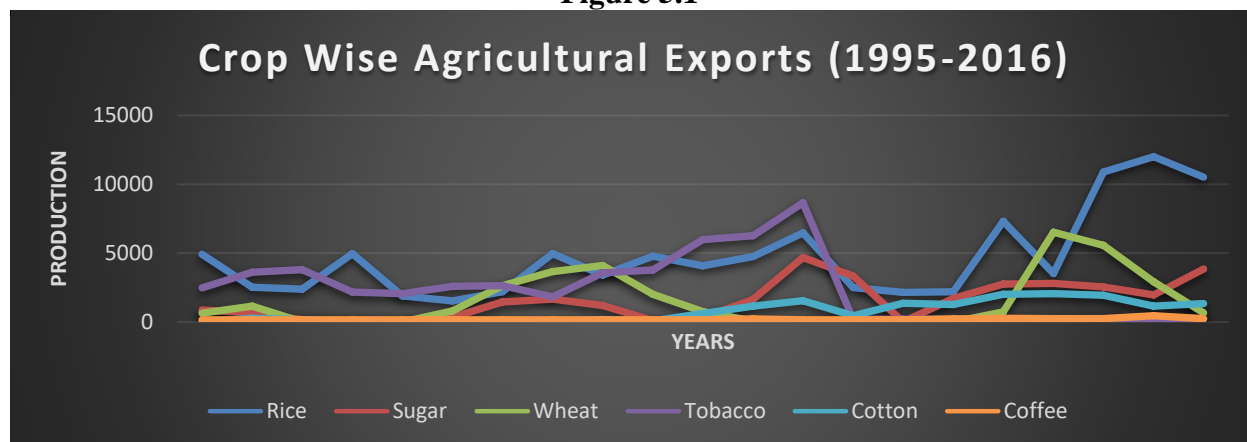
TABLE 5.1: SELECTED CROP WISE QUANTITY EXPORTED FROM INDIA (1995-2016)

Product	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.
Rice	4914.0 1	2512.2 2	2392.0 6	4963.6 8	1896.1 7	1531.2 9	2208.5 6	4967.87	3412.06	4778.1
Sugar	863.72	667.27	173.28	12.74	13	338.69	1456.4 5	1662.37	1200.6	108.69
Wheat	632.47	1145.9	1.52	1.79	Neg.	813.27	2649.3 8	3671.25	4093.08	2009.35
Tobacco	2480.5 2	3626.9 2	3796.1 2	2164.7 2	2057.4 2	2581.7 7	2632.0 6	1832.37	3578.49	3780.17
Cotton	33.28	269.58	157.53	41.96	15.91	29.7	8.23	11.75	179.61	86.64
Coffee	156.09	163.03	160.27	193.61	190.11	184.9	176.26	184.87	188.44	167.55
2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.
4088.17	4747.9 5	6469.4 4	2488.3	2156.4 1	2186.4 5	7311	3527	10890.2 3	12001.1 4	10510.4 2
321.2	1643.4	4684.5 5	3332.0 8	44.74	1714.3 7	2747	2794.3 7	2535.31	1955.19	3844.45
746.18	46.64	0.24	1.12	0.03	0.4	740.75	6515	5572.01	2924.05	666.68
5990.22	6277.6 6	8666.9 6	208.31	230.8	207.55	197.17	230.34	237.11	219.57	215.32
614.8	1162.2 2	1557.5 9	457.56	1357.9 9	1258.0 9	2013	2057	1947.68	1142.53	1347.07
177.68	213.65	178.3	174.08	157.41	222.86	278.87	253.95	253.9	463.55	255.74

N.B- Quantity in thousand ton

Source: Ministry of Agriculture

Figure 5.1



Source: Computed from table 5.1

Through table and figure 5.1, it is depicted that India's export of these commodities is significant and it has risen over the time. In case of Rice, it is seen that quantity exported has risen from 4914.01 to 10510 thousand tons in 2015-16. Sugar has also seen uplift with mere 863.72 being exported in 1995-96 to 3844.45 recently. Export of wheat has witnessed a fluctuating trend wherein in 1995-96, India exported 632.47 thousand tons, and in 2012-13 it rose to 6515 thousand tons. In 2015-16, its export has fallen to 666.68 thousand tons. Tobacco exports were 2480.52 in 1995, which increased to 8666.96 in 2007-08 and have reduced to 215.32 in 2015-16. Exports of cotton have witnessed a huge rise from 33.28 thousand tons in 1995-6 to 1347.07 thousand tons in 2015-16. Similarly, coffee exports have surged from 156.09 thousand tons in 1995-96 to 463.55 thousand tons in 2014-15 and 255.74 tons in 2015-16.

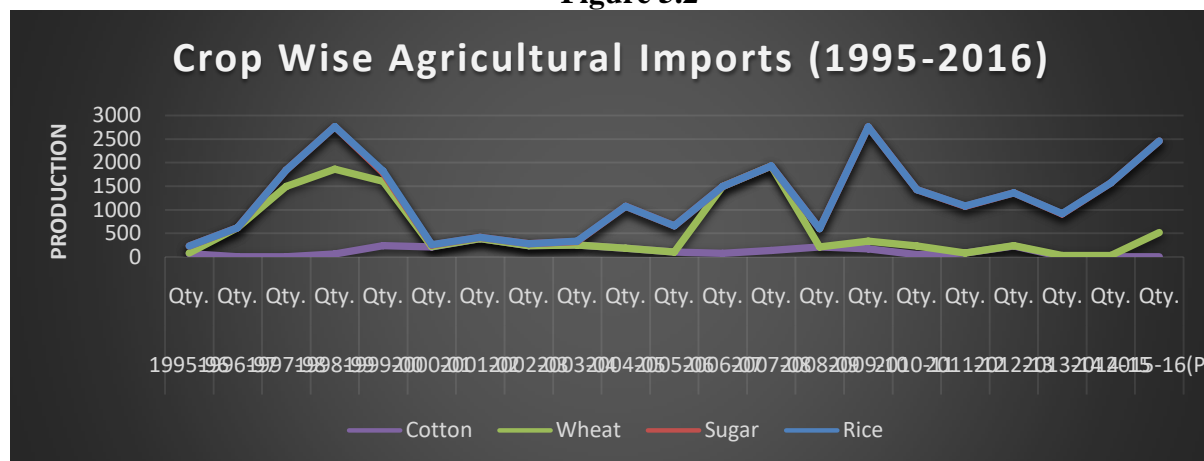
TABLE 5.2: SELECTED CROP WISE QUANTITY OF IMPORTS OF INDIA (1995-2016)

Products	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.
Rice	0.08	Neg	0.05	6.65	34.99	13.19	0.06	0.87	0.54	NA
Sugar	150.63	2.13	346.91	900.47	181.18	30.4	26.58	41.43	74.4	889.04
Wheat	8.24	612.68	1485.78	1803.7	1365.97	4.22	1.35	NA	0.46	0.22
Cotton	69.62	2.92	9.97	57.4	237.4	212.36	387.04	233.85	252.9	183.06
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.	Qty.
NA	0.16	0.15	0.09	0.06	0.22	1.06	0.72	8.29	1.96	1.02
558.77	1.01	0.73	386.1	2424.05	1198.39	997	1122.26	880.96	1538.64	1943.13
NA	1424.17	1793.21	0.01	160.08	185.28	0.02	2.94	26.92	29.49	517.67
98.24	71.16	136.49	211.69	171.6	44.99	78	232	NA	NA	NA

N.B- Quantity in thousand ton

Source: Ministry of Agriculture

Figure 5.2



Source: Computed from table 5.2

In table 5.2, import quantity of these commodities has been presented which shows that imports are very less in comparison to exports. Import of rice was 0.08 in 1995-96 and has increased only to 1.02 in 2015-16. Similar situation is there in case of Wheat and Cotton wherein imports were 8.24 and 69.62 in 1995-96 respectively which rose to just 517.67 in the year 2015-16. Sugar is only exception with imports increased from 150.63 to 1943 in 2015-16. Therefore, from the above data analysis, one may state that India is more inclined on becoming a mere exporter of virtual water and thereby reducing its blue reserves.

VI THE LINKAGES BETWEEN GROUNDWATER SUSTAINABILITY AND AGRICULTURAL TRADE IN INDIA

Export of water intensive crops/ agricultural commodities have a negative impact on the water resources of the country. High export of rice, wheat, sugarcane etc. means higher production of these crops which would affect the water scenario in the states producing them. In such a situation, groundwater is highly affected as after the green revolution groundwater use has increased substantially and now almost 80 percent of the irrigation is dependent on it. With ease of access to groundwater through submersibles/pump-sets water abstraction has risen in all parts of the country. Though, hydrogeological conditions of the state also play a role in groundwater usage and development but crop choice also has an impact on groundwater resource base. Groundwater use in irrigation is high in almost all the regions and but is particularly high in the areas which produce crops with high water requirements. The study connotes that states viz. Punjab, Rajasthan, Madhya Pradesh, Maharashtra, Karnataka, Tamil Nadu and Uttar Pradesh which produce higher quantity of water-guzzling crops consume more groundwater and have groundwater development of more than 50 percent which is definitely not a positive sign. State wise assessment of production of crops i.e. rice, wheat, cotton, sugarcane, coffee and tobacco (which are exported in huge amount) reveal that states which are water stressed or are in a position to face the heat of water crisis are the leading producers. Crop-wise table has been made so as to give a clear picture of this scenario.

TABLE 6.1: HIGHEST RICE PRODUCING STATES IN INDIA

RICE											
States	1995		2000		2005		2010		2015		Average Prod
	Area	Prod	Area	Prod	Area	Prod	Area	Prod	Area	Prod	
West Bengal	5953	11887	5435.2	12428.0	5783.0	14511.0	4944.10	13045.90	5524	15954	13565
Uttar Pradesh	5565	10363	5907.1	11679.0	5578.2	11134.0	5657.00	11992.00	5862	12501	11534
Andhra Pradesh	3692	9014	4243.0	12458.0	3982.0	11704.0	2772.50	7882.40	2161	7489	9709
Punjab	2161	6768	2611.0	9154.0	2642.0	10193.0	2831.00	10837.00	2975	11823	9755
Bihar	5037	6640	3656.3	5442.6	3252.4	3495.5	2832.50	3102.10	3232	6802	5096
Odisha	4529	6226	4434.0	4614.0	4479.0	6859.0	4225.70	6827.70	3942	5875	6080

N.B- Area in 000 hectare, Production in 000 ton

Source: Ministry of Agriculture and Farmers' Welfare

Table 6.1 presents the data of area and production of rice of major producer states. West Bengal is the largest producer (average production of 13565 thousand tons, followed by Uttar Pradesh (11534 thousand tons), Andhra Pradesh (9709 thousand tons), Punjab (9755 thousand tons) and Odisha (6080 thousand tons).

TABLE 6.2: HIGHEST WHEAT PRODUCING STATES IN INDIA

WHEAT											
States	1995		2000		2005		2010		2015		Average Prod
	Area	Prod	Area	Prod	Area	Prod	Area	Prod	Area	Prod	
Uttar Pradesh	8924.1	21815.6	9239.3	25168.3	9163.9	2407.9	9637.0	30001.0	9645.0	25425.2	20530.2
MP	4019.8	6666.6	3311.2	4869.4	3692.8	59.6	4341.0	7627.1	5911.0	17688.7	7382.3
Punjab	3223.0	12518.0	3408.0	15551.0	3468.0	144.9	3510.0	16472.0	3508.0	16077.0	12152.6
Rajasthan	2196.2	5493.3	2309.6	5547.1	2123.9	58.7	2479.2	7214.5	3109.0	9871.0	5636.9
Bihar	2134.3	4238.9	2067.8	4438.0	2003.7	32.4	2103.5	4097.6	2110.8	4736.4	3508.7
Haryana	1972.0	7291.0	2355.0	9669.0	2304.0	88.6	2515.0	11630.0	2576.0	11352.0	8006.1

N.B- Area in 000 hectare, Production in 000 ton

Source: Ministry of Agriculture and Farmers' Welfare

Table 6.2 presents the major producer states of wheat. Uttar Pradesh leads with average production of 20530.2 thousand tons. It is followed by Madhya Pradesh producing 7382.3

thousand tons, Punjab producing 12152.6 thousand tons, Haryana (8006.1 thousand tons), Rajasthan (3508.7 thousand tons) and Bihar (3508.7 thousand tons).

TABLE 6.3: HIGHEST SUGARCANE PRODUCING STATES IN INDIA

States	1995		2000		2005		2010		2015		Average Prod
	Area	Prod	Area	Prod	Area	Prod	Area	Prod	Area	Prod	
Uttar Pradesh	1974.4	11983.0	1938.4	10606.7.5	2155.8	12546.9.9	2162.0	12881.9.0	2169.0	14538.5.0	12511.4.4
Maharashtra	580	46656.1	595.0	49592.8	501	38853	965.0	81895.7	987.0	73679.6	58135.4
Tamil Nadu	326.2	32944.2	315.3	33188.0	335.4	35106.5	316.0	34251.8	252.3	25494.1	32196.9
Karnataka	313.2	24917.9	417.1	42923.5	219	18267	423.0	39657.0	450.0	37833.8	32719.8
Andhra Pradesh	213.8	15179.5	217.4	17690.1	230	17656	152.0	11893.5	122.0	9353.0	14354.4

N.B- Area in 000 hectare, Production in 000 ton

Source: Ministry of Agriculture and Farmers' Welfare

Focusing on production of another water-intensive crop i.e. Sugarcane, data (see table 6.3) reveals that Uttar Pradesh is the leader with an average production of 125114.4 thousand tons followed by Maharashtra (58135.4 thousand tons), Karnataka (32196.9 thousand tons), Tamil Nadu (32196.9 thousand tons) and Andhra Pradesh (14354.4 thousand tons).

TABLE 6.4: HIGHEST TOBACCO PRODUCING STATES IN INDIA

TOBACCO											
States	1995		2000		2005		2010		2015		Average Prod
	Area	Prod	Area	Prod	Area	Prod	Area	Prod	Area	Prod	
Andhra Pradesh	163.0	184.2	52.0	88	134.00	198.00	157.00	281.00	143.00	276.00	205.4
Gujarat	112.6	211.5	87.8	148.6	71.30	113.90	148.00	281.00	137.00	240.00	199.0
Tamil Nadu	11.8	17.6	8.3	12.6	5.10	7.80	5.37	8.12	3.73	5.69	10.4
Uttar Pradesh	17.1	105.5	1.1	4.6	20.20	121.50	25.10	50.86	26.00	57.20	67.9
West Bengal	11.8	9.1	10.5	5.7	13.90	19.90	14.31	21.28	18.00	28.00	16.8

N.B- Area in 000 hectare, Production in 000 ton

Source: Ministry of Agriculture and Farmers' Welfare

In case of tobacco production, Andhra Pradesh is largest producer with average production of 205.4 '000 tons as presented in table 5.4. Gujarat stands second with 199 thousand tons, it is followed by Uttar Pradesh (67.9) and West Bengal (16.8).

TABLE 6.5: HIGHEST COTTON PRODUCING STATES IN INDIA

COTTON											
	1995		2000		2005		2010		2015		
States	Area	Prod	Area	Prod	Area	Prod	Area	Prod	Area	Prod	Average Prod
Gujarat	1410	2202	1615.3	1161.4	1906.0	6772.0	2633.0	10400.0	2722	9400	5987.1
Andhra Pradesh	1059	1610	1021.7	1662.7	1033.0	2108.0	403.1	5300.0	666	1888	2513.7
Maharashtra	3065	2796	3076.9	1798.8	2875.0	3160.0	3942.0	8500.0	4207	7500	4751.0
Punjab	750	1950	474.0	1199.0	557.0	2395.0	530.0	2100.0	339	750	1678.8
Haryana	646	1283	555.0	1383.0	583.0	1499.0	492.0	1750.0	615	993	1381.6

N.B- Area in 000 hectare, Production in 000 bales of 170 kg each

Source: Ministry of Agriculture and Farmers' Welfare

As depicted from table 6.5, Cotton, one of the most water intensive crop is grown in highest quantity (average production 5987.1 bales of 170 kg each) in country's arid state Gujarat. Maharashtra, another water stressed region is the second largest producer with average production of 4751.0 bales. Andhra Pradesh, Punjab and Haryana are few other leading states.

TABLE 6.6: HIGHEST COFFEE PRODUCING STATES IN INDIA

COFFEE											
	1995		2000		2005		2010		2015		
States	Area	Prod	Area	Prod	Area	Prod	Area	Prod	Area	Prod	Average Prod
Karnataka	169081	158900	199550	210950	222017	196275	227750	213780	235438	251520	206285
Kerala	82348	45000	84735	70550	84571	56825	84931	84931	85501	69230	65307.2
Tamil Nadu	32778	17500	30681	16450	30664	18825	31344	16650	34932	17295	17344
Andhra Pradesh	NA	NA	17492	2400	32041	1825	52081	5490	67356	9200	4728.75

N.B- Area in hectares, Production in Metric ton

Source: Ministry of Agriculture and Farmers' Welfare

Table 6.6 shows that Karnataka is the biggest producer of coffee with an average production of 206285 Metric ton (MT) followed by Kerala (65307.2 MT), Tamil Nadu (17344 MT) and Andhra Pradesh (4728.75 MT).

From all the above tables, we may decipher that production of water-guzzling crops is high in states viz. Uttar Pradesh, Punjab, Gujarat, Maharashtra, Haryana, Tamil Nadu, Andhra Pradesh etc. Setting up a linkage between groundwater use, development and production pattern we refer

to Table 5.7 which presents the state wise groundwater availability, use and development as per year 2015.

TABLE 6.7: STATE-WISE GROUNDWATER AVAILABILITY, UTILIZATION AND DEVELOPMENT (AS OF 2015)

S.No	States	Annual Groundwater Availability (in billion cubic metre- bcm)	Use in irrigation (in bcm)	Use in other sectors (in bcm)	Annual Groundwater Draft (in bcm)	Groundwater Development (in %)
1	Andhra Pradesh	32.57	13.18	1.33	14.51	45
2	Arunachal Pradesh	4.06	0.002	0.001	0.003	0.08
3	Assam	25.79	2.86	0.64	3.49	14
4	Bihar	26.86	10.25	1.7	11.95	44
5	Chhattisgarh	11.63	3.43	0.62	4.05	35
6	Delhi	0.29	0.14	0.25	0.39	137
7	Goa	0.145	0.01	0.03	0.04	28
8	Gujarat	17.59	10.75	1.11	11.86	67
9	Haryana	9.79	12.35	0.71	13.06	133
10	Himachal Pradesh	0.53	0.25	0.13	0.38	71
11	Jammu & Kashmir	3.83	0.2	0.61	0.81	21
12	Jharkhand	5.76	1.31	0.55	1.86	32
13	Karnataka	14.81	8.59	0.82	9.41	64
14	Kerala	6.07	1.3	1.53	2.84	47
15	Madhya Pradesh	33.29	17.48	1.35	18.83	57
16	Maharashtra	32.15	16.15	1.03	17.18	53
17	Manipur	0.4	0.0033	0	0.004	1.02
18	Meghalaya	1.6	0.0015	0	0.0017	0.08
19	Mizoram	0.027	0	0.001	0.001	3.52
20	Nagaland	0.55	0	0.03	0.03	6.13
21	Orissa	16.69	3.81	0.92	4.73	28
22	Punjab	20.32	34.17	0.71	34.88	172
23	Rajasthan	10.83	13.13	1.71	14.84	137
24	Sikkim	0.044	0.003	0.009	0.011	26
25	Tamil Nadu	19.38	13.17	1.76	14.93	77
26	Tripura	2.358	0.093	0.069	0.163	7
27	Uttar Pradesh	71.66	48.74	4.04	52.78	74
28	Uttaranchal	2	1.1	0.03	1.13	57
29	West Bengal	26.58	9.72	0.97	10.69	40

	Total States	397.6	222.21	22.66	244.86	62
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Source: Ground Water Year Book (2015)

Analyzing it, one may state that states i.e. Uttar Pradesh, Gujarat, Haryana, Karnataka, Maharashtra, Punjab, Rajasthan, Tamil Nadu etc. wherein these water consuming crops viz. rice, wheat, sugarcane, tobacco, cotton and coffee is grown more, use of groundwater in irrigation is high and it also has a higher level of groundwater development. Highest amount of groundwater is utilised by Uttar Pradesh i.e. 48.72 bcm out of the total availability in the state which is followed by Punjab (34.17), Madhya Pradesh (17.48), Maharashtra (16.15), Andhra Pradesh (13.18), Tamil Nadu (13.17), Haryana (12.35), Gujarat (10.75) and so on. Groundwater development is also high in these states with Punjab leading at a percentage of 172 ensued by Rajasthan (137 percent), Haryana (133 percent), Tamil Nadu (77 percent), Uttar Pradesh (74 percent), Gujarat (67 percent), Karnataka (64 percent), Madhya Pradesh (57) and Maharashtra (53 percent).

Focusing more on the linkage between groundwater use and crop production we have done a regression analysis. Using simple regression, taking groundwater use in irrigation sector as dependent variable and rice, wheat, sugarcane production as independent variables we found that as production of these crops lead to increased use of groundwater in irrigation.

$$Y (\text{Groundwater use in irrigation}) = 2.24 + .0016 u_i \dots\dots\dots \text{equation (1)}$$

$$Y (\text{Groundwater use in irrigation}) = 4.77 + .0011 u_i \dots\dots\dots \text{equation (2)}$$

$$Y (\text{Groundwater use in irrigation}) = 6.01 + .0002 u_i \dots\dots\dots \text{equation (3)}$$

Equation 1 shows the regression result for rice. It depicts that groundwater use escalate by .0016 units when there is a unit increase in production of rice. Similar case persists in case of wheat and sugarcane, wherein, groundwater use increases by .0011 units (eq.2) and .0002 units (eq.3) respectively with one unit rise in production. In order to further substantiate our argument, correlation has been performed.

TABLE 6.8: CORRELATION MATRIX

	GW Irrigation use	Rice	Wheat	Sugarcane
GW Irrigation use	1*			
	0.00			
Rice	0.63540*	1		
	0.00	0.00		
Wheat	0.8170*		1	
	0.00		0.00	
Sugarcane	0.7532*			1
	0.00			0.00

*Correlation is statistically significant

Source: -Author’s calculation based on State wise Fourth Advance Estimates of Production of Principal Crops during 2015-16, Directorate of Economics and Statistics, Ministry of Agriculture

Table 6.8 presents the correlation matrix. The correlation results reveal that there is positive correlation among production of rice, wheat, sugarcane and groundwater use for irrigation in agriculture sector. A strong positive linear correlation with value of 0.81 is seen in case of wheat which is followed by sugarcane (0.75) and rice (0.63). Both regression and correlation results highlight that groundwater use rises when such water consuming crops are grown. The problem is not mere production of such crops but their production in water stressed regions of the country. When high water requirement crops are grown in water stressed states it will hamper groundwater sustainability.

Viewing it from the perspective of groundwater development, data assessment shows that in Uttar Pradesh, wheat, rice and sugarcane are the principal crops and groundwater development is more than 70 percent. Sugarcane had the highest irrigated area in Uttar Pradesh having its share as more than 40 percent in the total irrigated area under this crop in the country. Punjab which produces large amount of rice, wheat and cotton accounts for 167 percent groundwater development. According to IDFC report, 2013, out of 137 blocks, mere 25 fall in safe category while 103 are over-exploited, 5 are critical and 4 are in semi critical category. Pandey (2014) in her paper mentions that adoption of water-intensive commercial crops by farmers caused surge in water use which is now having negative implication on water resource base especially in Central Punjab. Tamil Nadu, which has majority of the area under irrigation of coffee, rice, sugarcane and tobacco, suffers from groundwater development of 77 percent. Gujarat, highly groundwater stressed region (67 percent) is engaged in cotton production with an area of 3010 mha under its irrigation. Rajasthan, another severely water stressed region is engaged in production of wheat. West Bengal, which is the highest producer of rice, is witnessing signs of groundwater depletion. In groundwater assessment carried out by government in 269 blocks (out of total 341 blocks leaving aside 13 hilly blocks in the north and 59 Saline blocks of coastal region), 231 blocks were found to be safe while 28 blocks were assessed to be Semi-Critical and 10 blocks as Critical (Mukherjee, 2016). In addition to this, arsenic contamination in groundwater is also a burning issue in Indo-Bangladesh delta (Dey et.al, 2014). Reports suggest that about 20 percent population in West Bengal is highly affected from this problem. In West Bengal alone, 26 million people are potentially at risk from drinking Arsenic-contaminated water above 10 µg/L (Chakraborti, 2018). Andhra Pradesh, state with high production of rice, tobacco, cotton and coffee is also not aloof from rising groundwater scarcity. Though, at present, groundwater development is low (45 percent) but it does not suggest that the state may continue with business-as-usual approach (BAU). Current estimates of groundwater depletion reveal that 9 percent of the blocks in the state are over-exploited. Six per cent are in 'critical stage' with the average annual abstraction in the range of 90-100 per cent of the average annual recharge. Nearly 15 per cent of the blocks are in 'semi critical' category. Hence, as per the estimates, nearly 30 per cent of the assessment blocks are facing overdevelopment problems (Kumar et.al, 2011).

VII CONCLUSION AND POLICY RECOMMENDATIONS

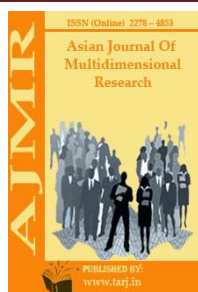
We may conclude that there has been insignificant benefit to Indian agriculture in the post liberalization era specifically under the WTO regime as the trade balances in agriculture depict continuous deficit. Though, it was expected that WTO formation would be extremely profitable for developing countries as it would increase income of farmers and lower production prices but however the situation turned to be different. As far as environmental implications are concerned we conclude that the present Indian agriculture trade pattern is causing a stress on environmental resources viz. groundwater. As the country exports huge amount of water-intensive, commercial

agro products, the production of such commodities has been increasing. Farmers earn better incomes in producing these high return crops so they lack incentive for abstaining from their production. Apart from it, high subsidies in power and other agriculture setup also promote excessive use of groundwater in agriculture posing a threat towards groundwater management. For a country like India which has a huge population to cater, has the pressure of gaining economic growth viz a viz maintaining sustainable development, the management of natural resources is not an easy task. Within the geopolitical framework, water has become a good whose possession means power. Therefore, India may also use water as a bargaining tool for trade with other countries and protect its blue reserves from exploitation of developed countries. Trade negotiations must be made keeping in mind the environmental sustainability. Apart from this, there is a need to shift from monoculture cropping pattern and make crop choice decisions according to the hydrogeological conditions. States which are under extreme water stress must be advised to grow less water guzzling crops and produce other crops without compromising food security and livelihood of farmers. Technology adoption and upgradation is also necessary for enhancing water efficiency in irrigation and thereby conserving our blue reserve.

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MAIN RISK FACTORS AND PREVENTION ROUTES FOR CHRONIC NONINFECTIOUS DISEASES (REVIEW)

N.S. Mamasaliyev Andijan*; **N.X. Mavlonov****; **D.B. Rakhmatova*****;
G.H. Radjabova****; **G.M. Manasova*******; **I.S. Manasova*******
U.D. Jalilova*****

*State Medical Institute,
Bukhara State Medical Institute
UZBEKISTAN

ABSTRACT

The current rate of chronic non-infectious diseases has reached the epidemic level. CND mortality rates are worldwide and most of them are associated with patients' lifestyle. Changing and irreversible risk factors causing CND in patients can be facilitated by the prevention of diseases, treatment and rehabilitation measures by effectively influencing most of these risk factors. The article examines the findings of several large-scale scientific studies conducted globally and provides conclusions based on them. From this fact, it can be concluded that the prophylaxis approach can be based on the same principle throughout the world, and as a result, many can prevent early infarction. Studies in Russian clinics have shown that smoking is a risk of death from cardiovascular diseases, and it should be emphasized that the proportion of cigarette deaths in mortality is higher. Also in the Chinese province of Shanghai, 21.11.2016y. promoting the consensus "Healthy City" and implementing similar programs across the country is possible to improve the prevention of chronic noninfectious diseases. Therefore, such measures require systematic and long-term implementation. Nevertheless, doctors and healthcare personnel have a significant role in implementing this strategy. It is possible to conclude that the rise in alcohol consumption during socio-economic reforms is one of the causes of death from PCT.

KEYWORDS:*Chronic Noninfectious Diseases, Variable Risk Factors, Unchanging Risk Factors, Arterial Hypertension, Cardiac Diarrhea.*

INTRODUCTION

According to WHO data 56.4 mln. deaths of 39.5 million people or 70% are due to noninfectious diseases. Four of the major non-infectious diseases were cardiovascular, oncological diseases, diabetes, and chronic lung diseases. In the low and middle income countries in 2015, three-quarters of the mortality rate is estimated at \$ 30.7 million of these diseases. Another important aspect is that in 48% of deaths, deaths were observed in people aged 70 years. In the study of causes of death from noninfectious diseases, respiratory diseases including cardiovascular (17.7 million or 45%), cancer (8.8 million or 22%) and chronic obstructive asthma and lung disease (3.9 million). There were 1.6 million deaths from diabetes mellitus.

Currently, chronic non-infectious diseases (CND) are prevalent, which are largely related to lifestyle and risk factors. Modification of a lifestyle, that is, modification can slow down or prevent progression of diseases. Modification can also occur after the period and symptoms occur before clinical symptoms appear. Risk factors and their prevention are the scientific basis of CND prevention. The primary causes of CNDs have been identified and they have been proven to be multidirectional, but as a result of epidemiological studies, many factors have been identified that lead to the appearance of diseases and their advances.

PURPOSE OF THE STUDY

Study of the main risk factors of chronic noninfectious diseases are based on the results of large-scale clinical trials and analysis of the risk factors of these risk factors.

RESULT AND ANALYSIS

The main risk factors that because chronic non-infectious diseases have been identified in many large scale scientific research studies. Eight of the risk factors are most prevalent as a result of these risk factors, 75% of the reported diseases cause death. These risk factors include: high blood pressure (ejaculation), dyslipidemia, smoking, improper diet (low consumption of fruits and vegetables, an excess of salt content in the food ration, high content of animal fats and foods), low physical activity, high sugar content in the blood, excessive body weight and excessive consumption of alcohol, obesity products. According to the recommendations of the World Health Organization (WHO), it was established to identify the leading risk factors that caused the CND for each state, to implement the targeted correlation, as well as to control the dynamics of risk factors, which were given the name for the prevention of risk factors. Taking into account the fact that the main risk factors among the population are spread a lot, attention is paid to the assessment of the risk factor in the development of the disease and the prevention of CND development on the basis of their elimination.

Risk factors can be adjusted (harmful habits such as improper diet, tobacco, alcohol consumption, excess weight and obesity, and so on.) and non-modifiable (age, gender, genetic predisposition) are divided into risk factors. Non-modifiable IE irreplaceable risk factors are used for the purpose of stratification of diseases. For example, the risk of CND also increases as the age increases.

When carrying out preventive measures, risk factors are more important, since as a result of their correction, CND can occur and reduce the risk of complications. A lot of research has been done with the aim of examining the risk factors that can be changed. In one of such scientific researches (INTERHEART), 52 participants took part in the state and conducted a large-scale study. During the examinations, nine risk factors related to the origin of myocardial infarction were studied: high Ab, smoking, diabetes, abdominal obesity, inadequate consumption of fruits and vegetables, low physical activity, alcohol consumption, high cholesterol content in the blood, social and psychological factors.

Myocardial infarction (INTERHEART examination)

The research which has been done in 52 countries shows that (INTERHEART studies) (standardized studies of acute myocardial infarction, 15152 case and 14820 control) all studied risk / anti-risk factors were closely related to the development of myocardial infarction $<0,0001$ for risk factors, $r = 0.03$ for alcohol. In all of the study, a link between risk factors and diseases was observed in men and women, in the elderly and in the youth.

During the study, it was revealed that the myocardial infarction and the associated risk factors were common to all geographical regions and ethnic groups. In addition, nine cardiac injuries resulted in 90% of myocardial infarction, and 94% for females. From this fact, it can be concluded that the prophylaxis approach can be based on the same principle throughout the world, and as a result, many can prevent early infarction. The main conclusion of INTERHEART research is that the prevention of risk factors should be effective in preventing these diseases despite the spread of cardiovascular disease for men and women of all ages, geographical regions and ethnic groups.

High arterial blood pressure is one of the major risk factors, with 13% of all deaths worldwide being caused by this risk factor. Smoking (9%), high blood glucose levels (6%) and low physical activity (6%) is the next. Excessive body weight and obesity result in 5% of global deaths. Dyslipidemia results in 5% mortality (high blood common cholesterol).

The risk factors listed by the Russian Federation are among the most common areas. According to the findings of the Russian State Medical Research Center for Preventive Medicine (DITM), the spread of arterial hypertension is 40.8%. At the same time, the presence of systolic or diastolic pressure indicates an association with increased CND. Among Russian population, 40% of deaths from PCT are associated with increased blood pressure.

Smoking problem in Russia is common among males - 63.1%, which is 42% higher in Europe and 21.1% in Europe. In females, this indicator is 9.1% in the Russian Federation, whereas 18.9% of the Russian Federation women have 28% of European women. Although in many European countries there is a trend towards a reduction among males, the problem of smoking among women is increasing. This situation is also observed in Russia.

Studies in Russian clinics have shown that smoking is a risk of death from cardiovascular diseases, and it should be emphasized that the proportion of cigarette deaths in mortality is higher. There are more complications compared to men when women are smoking, and 3 cigarettes a day is enough for a life span of only 1 year, whereas for women it is equal to 2 cigarettes.

Data from five African countries (Ghana, Malawi, Nigeria, South Africa and Zimbabwe) show that most of the 13 to 15-year-olds smoked. During the study, it was discovered that more than

10% of young people were smokers as a result of the tobacco industry's propaganda, about 40% of respondents thought they were smokers by their friends. In spite of traditional measures against women's smoking, it is about 20% (Global Tobacco Survey Collaborative Group 2002).

The problem of obesity is observed in one of every five women in Russia, whereas in men, this ratio is about ten. One can conclude that obesity is caused by the appearance or development of diseases such as diabetes, dyslipidemia, metabolic syndrome, acute respiratory diseases, gall bladder disorders, osteoarthritis and respiratory problems, endometrial dysfunction, cause.

There is a correlation between body weight gain and death with various reasons in appearance of different diseases. The results of the 1,6002 women's surveys in the Health Project in Peru state that the HDI (TVI) ratios increased by 2 units in rural areas, while urban residents increased by 4 units.

The sharp change in the causes of death in Russia has been proven to be the cause of psychosocial stress and alcoholism in the last century.

Researchers conducted by the Russian Preventive Medicine Research Institute showed that the psychosocial stress levels of 25-64 year old men and women living in Moscow in the 80s and 90s of the XX century have increased dramatically. The results of these studies and the dynamics of mortality rates since 1985 can be seen as a cause of sudden change in the morbidity and mortality caused by psychosocial problems.

During the antialcoholic campaign in Russia (1984-1988), a decrease in mortality from PCT is associated with alcohol-related activities. There are contradictions in the Russian population about the indicators of alcohol consumption: official statistical data, epidemiological studies, and experts' conclusions have different indicators. At the same time, it can be clearly stated that excessive alcohol consumption can increase the risk of death from cardiovascular disease. The analysis of the results shows that every 10 g of pure ethanol increases the risk of death from the 40-59-year-old by 1%. Based on these facts, it is possible to conclude that the rise in alcohol consumption during socio-economic reforms is one of the causes of death from PCT.

DISCUSSIONS

Industrialization, urbanization, and transport have restricted physical activity not only in developed countries, but also in developing countries and, as a result, most of the population has a low level of physical activity. According to WHO estimates, PO's physical inertness causes 21 to 25% of the causes of mammary gland and colon cancer, 27% of cases have diabetes, and about 30% of the patients with ovarian cancer. In Russia, 60% of patients with cardiologist have low physical activity. At the same time, studies have shown that individuals who have been physically active for seven hours a week have an early mortality rate of less than 30 minutes per week, 40% less than those who are physically active.

According to epidemiological data "RESONANCE", 88% of deaths from PCT are related. When combined, the average mortality rate in Europe and North America is 50.3%.

The main way to reduce the incidence of non-hospital outbreaks is to prepare patients with high and very high risk of CND disease, especially for those with high risk and not only on healthy lifestyle, but also on life-threatening symptoms and pre-hospital emergency care.

In summary, the majority of countries covered and, based on the results of scientific research in various social groups and age categories, are currently the most common risk factors for people

with chronic non-infectious diseases, and their mortality rates are almost identical in those surveyed possible. At the same time, the cause of these diseases is that there are many risk factors that can be modified to cope with these diseases.

Chronic prevention strategies for noninfectious diseases.

Currently, three strategic directions are used to prevent chronic noninfectious diseases:

1. The Population Strategy involves the whole population through mass media, i.e the attempt to influence the factors and lifestyle that increases the risk of CND at the population level. This strategy has a number of advantages:

- Cover all population groups, affected by CND and those having risk factors for these diseases;
- In doing so, relatively low costs will be spent on the implementation of measures;
- There is no need for extensive strengthening of the healthcare system and strengthening the valuable material and technical basis.

However, the implementation of this strategic plan is largely done beyond the competence of the healthcare system, and its effectiveness is only apparent when it adheres to the applied measures and lifestyle. Therefore, such measures require systematic and long-term implementation. Nevertheless, doctors and healthcare personnel have a significant role in implementing this strategy. Physicians should be the inventor, creator, propagandist of the idea of creating materials for the prevention of CND among the population through the media.

2. A high risk strategy is to identify patients with a high risk of CND, i.e. to identify patients with high risk factors and to organize activities aimed at removing existing risk factors. The implementation of this strategic program will largely depend on the healthcare system, particularly on primary health care. In the implementation of this strategy, medical and prophylactic costs are estimated at approximately 30% of the total amount of CND financing, based on accurate assessment of the work and constitutes 20% of CND expenditures for the reduction of mortality rates.

3. Secondary prevention strategy - prevention of early diagnosis and modification of life, prevention of risk factors by means of modern high-tech interventions and modern methods of treatment. Unlike the Population Strategy, there is the possibility of reducing morbidity and mortality by removing or reducing the risk factors that can be modified on the basis of high risk and secondary prevention strategies. But at the same time it is necessary to distinguish between these strategic programs and to make sure that they do not dominate one another, but all of them complement each other. Simple and fast methods are used to identify patients with risk factors.

Opportunistic Screening - Anyone applying to a medical institution.

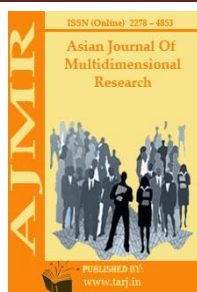
SUMMARY

In summary, it is clear that, based on the results of scientific studies in various social strata and population categories, many of the most common threats to society in the present-day world are countries that are associated with chronic non-infectious diseases. It can be seen that these mortality rates are almost identical in those surveyed. At the same time, the cause of these diseases is that there are many risk factors that can be modified to cope with these diseases. According to WHO data, 70% mortality rates are likely to be prevented by the age group of 60 years. To do so, effective risk prevention measures are required early in the life of the

modification risk factors. Also in the Chinese province of Shanghai, 21.11.2016y. promoting the consensus "Healthy City" and implementing similar programs across the country is possible to improve the prevention of chronic noninfectious diseases.

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FEATURES OF THE SOCIALIZATION OF YOUNG PEOPLE WITH DISABILITIES: CRITERIA AND LEVELS OF SOCIALIZATION

Uzakova Z.F.*

*Senior Lecturer,
Department of Social Sciences and Humanities,
A branch of the Gubkin Russian,
State University of Oil and Gas in Tashkent,
Tashkent, UZBEKISTAN,
Email id: uzf-dba@mail.ru

ABSTRACT

In this article, based on the concepts of scientists who have studied the socialization of the individual, criteria and levels are developed for assessing the process of socialization of persons with disabilities. The author of the study presents the results of in-depth interviews with young people with disabilities, in which they analyzed their socialization on the basis of the developed criteria and allow to determine the position and process of their integration into modern society.

KEYWORDS: *Socialization, Social Unsuitability, Youth With Disabilities, Levels Of Socialization*

INTRODUCTION

The socialization process was studied by various scientists, so G.Tard [1] sought to identify the relationship of socialization with imitation, through the influence of society on the mental state of the individual, but E. Durkheim [2] argued that the imitation is social in nature, that is, social coercion is the driving force of socialization. G. Spencer [3] linked socialization with upbringing, according to T. Parsons [4], socialization is associated with social control with the “interiorization of generally accepted norms, when an individual “absorbs” common values in the process of communicating with “significant others, who sought to study the processes occurring in an individual under impact of society. “Based on the teachings of M. Weber, Habermas Y.[5] develops a “critical theory of socialization”, and other modern representatives of scientific schools have extensively embraced the process of socialization and considered using different approaches.

The largest Polish sociologist, academician Ian Shchepansky[6] defined socialization as “the influence of the environment as a whole, which encourages an individual to participate in public life, teaches him to understand culture, behavior in groups, to assert himself and to fulfill various social roles”, this concept is interwoven with the concept of T. Parsons on the assimilation of roles in the process of interaction with society and is widely covered by Russian sociologists in the context of sociocultural disability. Russian sociologists Y.R. Yarskaya-Smirnova, D.Zaitsev [22] believe that successful socialization of atypical children requires studying the family through an ecosystem approach that, “understands the problems of the individual, group, family in the context of relations with the social environment.” Studying the problems of a particular group should be studied comprehensively from the standpoint of the social environment, since the influence of social stereotypes on the socialization of children with disabilities is great.

Ganieva M.Kh., Latipova N.M.,[26] who studied the influence of family upbringing and national traditions, made a great contribution to the study of the process of socialization of children from and young people into society, social work with children with disabilities, Otamuratov S.S. [8] paid attention to the national identity of young people. The process of socialization of pupils of orphanages, correctional and pedagogical work with children with intellectual disabilities, the works of Muminova L.R., Chicherina Ya.E., Nurkeldieva D., Alimova V.S., Barker O. M., and etc .

The study of various theories and approaches to the process of human socialization showed that the concept of socialization has a fairly well-developed theoretical base, but to this day scientific knowledge is not generally accepted, shared by all scholars in the definition of this concept. Socialization of the individual is carried out under the influence of many conditions and is not limited only to education and upbringing, although it is included in these processes.

Touching on the socialization of people with disabilities, it should be noted that they spend most of their lives in a confined space, in particular in specialized institutions or at home. So P. Berger, T. Lukman [32] believed that unsuccessful socialization takes place only as a result of biographical accidents, be they biological or social. For example, the primary socialization of a child can be broken due to his physical illness, which is socially stigmatized (or stigmatization is

based on social definitions). Biological disturbances in general can eliminate the possibility of socialization, as is the case with extreme mental disorders. All these cases have the character of an individual unfortunate fate.

Research Shipitsina L.S. [10] confirm that “socialization of young people with severe mental retardation is extremely difficult due to their lack of interpersonal skills among normal people, lack of needs in such a community, inadequate self-esteem, negative perceptions of other people, hypertrophied egocentrism, a propensity for social dependency - quality ... In life, these young people do not have extensive contacts with peers. If they are kept in residential institutions, they are surrounded by people with similar socio-psychological and communicative problems. Their communication skills, social and educational skills are very limited. Most of them live in isolation from society at home or in boarding schools. They have no opportunity for independent living and working.” Researches of Shipitsina L.S. testifies to the complex interaction of people with disabilities with society, in particular, people with mental retardation, which cause people to fear and communication.

A. Maslow, [11] studying the psychological unhealthiness of a person, notes that “Disability is always a deficiency, weakening or loss of the ability to work and self-fulfillment.” However, considering the socialization from the position of various concepts, V.N. Yarskaya comes to the conclusion that “a person cannot but be flawed, existing in a society organized as a supportive environment for a partial personality”. And the most effective way of educating a socially active person is to include a person in social activities, during which he not only reveals his best abilities, but also acquires new valuable qualities, i.e. improved and fully developed.

Today, the social group of people with disabilities in society is viewed from the perspective of various groups and degrees of disability. People with the third group of disability have more opportunities and success in socialization due to the fact that the degree of their disability does not affect the entire cerebral cortex, unlike other groups of disability. However, it is not always easy degree of disability is a factor for the successful educational and labor integration into society. The author agrees with the theory of social construction of reality of P. Berger, T. Lukman, when the success of socialization is also connected with the awareness of an individual significant other, that is, when a person with a disability realizes that he is healthy in general and his possibilities are endless, the transition from one reality to another.

M.Suslova [30] is of the same opinion, studying the socialization of people with disabilities, comes to the conclusion that “active activities help young people with disabilities to overcome the awareness of their “inferiority” and consider themselves to be full-fledged members of society. Unfortunately, not all people with disabilities agree with this, many do not want to change the stereotypes of their consciousness, but prefer to “suffer in silence”. However, it should be noted that not all opportunities and needs of persons with disabilities are related to their stereotypes, for example, for persons of the first group of disability cerebral palsy with paralysis of limbs, with the ability to understand everything, but not the ability to express their needs through verbal communication, the socialization process is more complicated. “With cerebral palsy, in view of the diverse localization of brain damage, as well as impaired maturation, there is a systematic underdevelopment of speech, of various forms.”

One of the main factors affecting the socialization of young people with disabilities is the family. The formation of an active life position of the individual begins at an early age in the family, and then in the team. According to T.Parsons, the motivational attitudes of a person are laid in the

family. The family, unlike other institutions of socialization, retains its value throughout the life of a person. Primary socialization of persons with disabilities affects their further achievements and the ability to adapt to society. D. Kasimova, in her work, notes that “families raising children with disabilities fall into the category of high social risk,” this is due to the influence of social, medical and psychological factors.”

Sommers V.S. (1944) identified 5 categories of parental attitudes towards their child with disabilities:

1. Adoption of the child and his defect
2. The reaction of denial (denied that the child has a defect)
3. The reaction of over custody and protection
4. Hidden denial, rejection of the child
5. Open denial, rejection of the child.

The most serious consequences for a child are emotional rejection and indifference. Children brought up without parental love are lagging behind in intellectual development, they are distinguished by emotional immaturity, heightened aggressiveness, and the appearance of a “learned helplessness” feeling. Open renunciation of a child with a disability contributes to the fact that parents define it in the child’s home.

As noted by prof. Ganieva M.Kh., “Disability of a child for parents is a strong stressful factor. And the disintegration of families with children with disabilities occurs much more often: it is known that the number of mental disorders in families with children with disabilities is higher than in families with no children with disabilities 2.5 times. ” Traditionally, it is a woman engaged in the upbringing, education and treatment of the child.

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Thus, the family allows you to restore the right of a child with a disability to an independent life, strengthen, in addition to health, other internal resources, and reduce social inequality. But at the same time, the family itself is able to deprive a child with a disability of all possibilities, by means of hyper-care, or by isolating from society, thereby only increasing social inequality. All these factors are not conducive to the successful socialization of children with disabilities, but rather form a “eternal infant”. Successful passage of all the above factors contributes to further integration into society through secondary socialization. However, I. Kon notes, “the family no longer plays that, and this is the self-satisfied role it claimed in the previous era,” the process of socialization has changed, and this is due to an increase in the institutions of socialization.

J. Chicherina, D. Nurkeldieva studying the causes of the appearance of children with disabilities in orphanages revealed that “many families transfer children with disabilities to orphanages, one of the reasons for which respondents note public opinion and the opinion of specialists (doctors). Some families conceal that there is a child with a severe disability in the family in order not to complicate the creation of their own family for other children. Thus, rejecting special children from the family, other family members continue to follow the rules adopted in society, since,

according to some experts, the family cannot cope with the developmental characteristics of a particular child and the state can take better care of it, creating all the necessary conditions to maintain its health. After all, historically, families with a person with disabilities are considered to be the lowest, marginal layer along the stratification ladder.

According to studies conducted by L.Muminova and J.Chericherina who tried to highlight the intellectual sphere of adolescents left without parental care, compared with adolescents from wealthy children and adolescents with mental retardation, they note that “children from an orphanage have a low educational level and poor social experience and only 2% of children have a high level of intelligence. ” It follows that the family contributes not only to the formation of certain skills for interaction with society, but also contributes to the enhancement of the child’s intellectual potential.

I. Kon notes that in the process of socialization, the role of not only the family “family upbringing could never provide adequate preparation for the more complex forms of life activity”, but also its entire institutional system, carried out through education, training and enlightenment. The concept of functional illiteracy can be applied to the analysis of the situation of children with disabilities, which manifests itself "in the inability to use changing situations and manage life circumstances." However, according to P. Bourdieu, education is an instrument of symbolic violence, taking the form of classification conflicts, in which warring groups try to impose their own world view, their qualification schemes, their idea of "who is to be considered as" as the only legitimate. L. Miftakhova believes that “school and other educational institutions do not socialize a person, but prepare an additional element for the mechanism of the social machine”.

So the issue of education was paid a great attention in his work T. Parsons: “In an ever increasing degree socialization in the aspect related to the success in extra-familial roles, is carried out in educational institutions that are separated from the family. More and more, the education system, and not the family, serves as a direct supplier of labor resources to the economy. In the same way, the educational system more and more determines the place of individuals in the stratification system. ” Teaching children with disabilities is carried out mainly in specialized educational institutions.

M. Reynolds writes the history of special education as a gradual progress in the inclusion of students with disabilities in the mainstream school system - with regard to the location of schools, the principles of selection. This researcher argues that the improvement of education in a mass school will lead to a decrease in the number of children sent to special classes and special schools, as well as the fact that in many respects the programs provided for students with different types of disabilities do not differ from those in which the so-called children in a risk situation.

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It follows that the socialization of people with disabilities is a very complicated process, and its success depends on various factors, including the characteristics of the development of the individual:

- From the psychological readiness of parents to raise a special child;
- From the material possibilities of parents, as in modern conditions the treatment and rehabilitation of a person requires significant financial costs;
- From the physical and mental state of a person with disabilities.
- Training not in specialized, but in inclusive or integrated educational institutions. Getting an education in a regular school with physically healthy children will start in a confident interaction with other people.

Along with the above factors, it is necessary to consider the types of socialization, which give a complete picture of the possibilities of socialization. In particular, the following types of socialization, full socialization, incomplete or partial socialization, unilateral socialization, de-socialization and re-socialization are distinguished.

TABLE №1 TYPES OF SOCIALIZATION

Full socialization	Partial socialization	Unilateral socialization	Desocialization	Resocialization
full compliance of an individual with a selected social group, as well as the effective performance of specified functions	The correspondence of the acquired skills and abilities necessary for belonging to the selected social group.	when a person has received the full amount of knowledge and skills in only one of the spheres of his life	rejection of developed skills, roles and behaviors	Obtaining new concepts, norms and rules of behavior in exchange for the rejected old ones necessary to achieve the goals set.

In most cases, when health is rejected, deformed socialization is identified, which does not always meet certain criteria and characteristics; here you can agree with the point of view of S.Ivanenkov that "there are no non-socialized people at all; ". A young person with disabilities cannot always be socialized in the profession, but has a certain level of socialization. Scientists have developed criteria for the effectiveness of socialization, in particular, M.K. Karpova identifies "an accomplished, unfulfilled, unstable professional socialization". These criteria in most cases reflect the professional activities of persons with disabilities, but this is not always associated with the peculiarities of the body's health, as it is influenced by social factors, in particular, an imperfect legislative base, stereotypes, inaccessibility of the environment, etc. identified the main five types and levels of socialization in relation to persons with disabilities, which we think should differ slightly from the general criteria that are given in the definition of socialism personality.

In particular, irrespective of the diagnosis and disability group, we attribute to high socialization a high level of education and culture, a normal financial situation, the creation of our own family, we also divided this type into the following levels (high, medium, lower). Partial

socialization implies a certain level of knowledge and skills, financial status fluctuates, there is no family of its own, and we also divide this type into high, middle, and lower. Unilateral socialization focuses only on one aspect of socialization. In the re-socialization, we identify those persons with disabilities who have received new concepts, norms and rules of behavior in the process of acquired disability. To the last desocialization, we include persons who have not mastered the skills, roles and behaviors to interact with society. Types and levels of socialization are presented in (see table number 1).

TABLE №2 CRITERIA FOR ASSESSING THE LEVEL OF SOCIALIZATION OF PERSONS WITH DISABILITIES

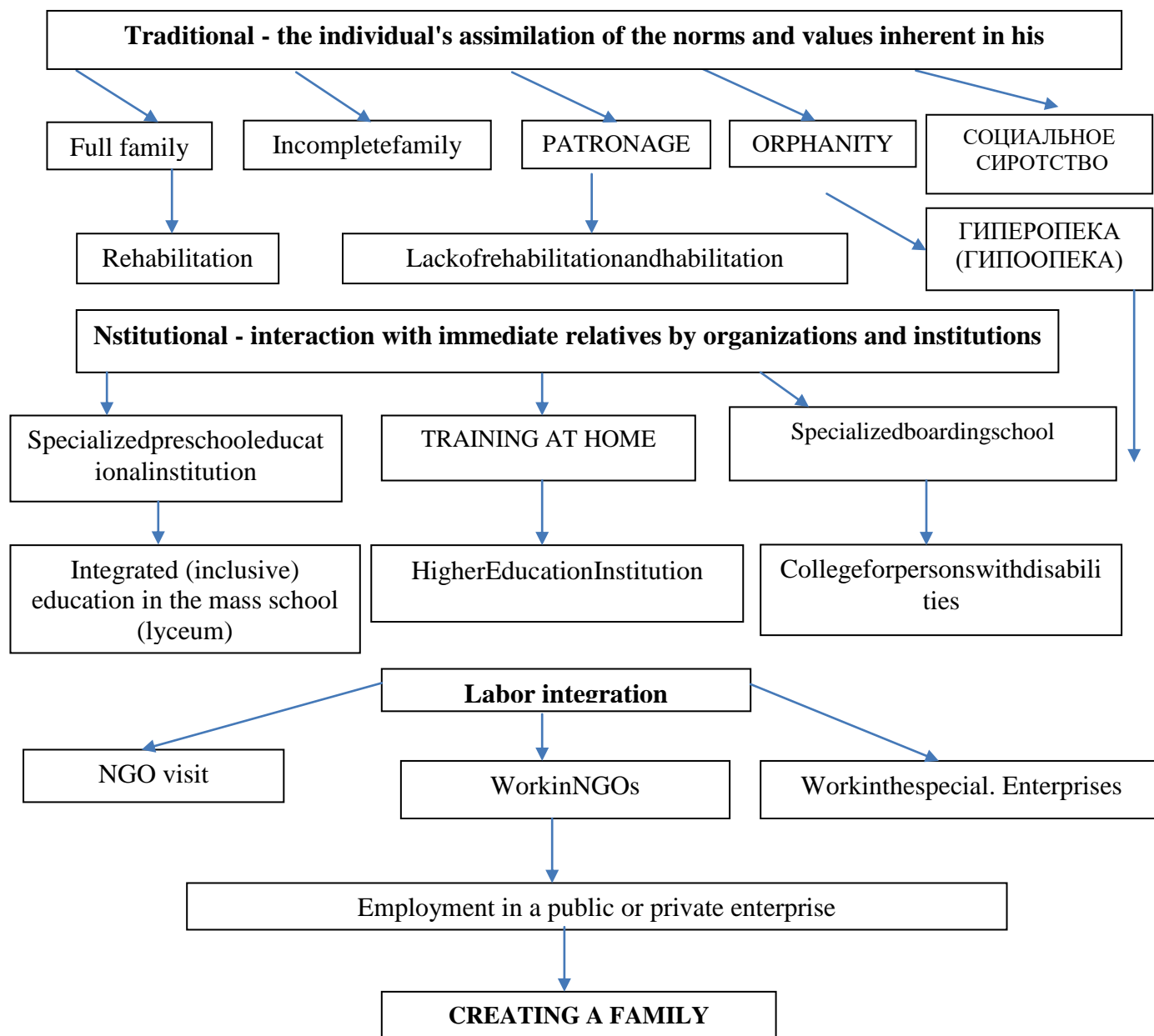
Levels of socialization	Full socialization	Partial socialization	Unilateral socialization	Desocialization	Resocialization
High	higher education; - high level of culture; - material income (employed); - the presence of handicrafts and additional sales; - creating your own family (wife, children); - increasing knowledge through workshops; trainings (or trips abroad); - a wide circle of communication; visiting NGOs; - Independently makes decisions,	- secondary special education; - visiting NGOs; - learning craft; - average social circle; - search for additional earnings; - employed part-time / works on a grant; - dialogue, sociable / closed; - seeks independence.	home-based training / boarding school; - social circle with NGOs, neighbors and family; - visiting NGOs and training in NGOs; - possession of a craft; - sociable and able to communicate on simple topics; - does not tolerate stressful situations.	- higher education; - high level of culture; - material income (employed); - the presence of handicrafts and additional sales; independently makes decisions, moves; - creating your own family (wife, children); - a wide circle of communication; visiting NGO	He lives in the family, home-based training, but does not have the skills to communicate in society. Inadequate in behavior in a public place. At the time of the attack is able to inflict physical beatings

	moves.				
Average level	<p>secondary special / higher education;</p> <ul style="list-style-type: none"> - increasing knowledge through workshops; trainings (or trips abroad); - wide circle of communication - high level of culture; - material income (employed); - The availability of handicrafts and additional sales. - a wide circle of communication; - visiting NGOs; <p>Independently makes decisions, moves.</p>	<ul style="list-style-type: none"> - secondary education; - social circle members of NGOs, neighbors and family; - obtaining one skill (knitting or learning a language, etc.); - communicative; - it is necessary in the help at movement; - able to engage in dialogue; - In search of additional earnings. 	<ul style="list-style-type: none"> - home-based training / boarding school; - social circle with NGOs, neighbors and family; - visiting NGOs and training in NGOs; - possession of a craft; - communicates with those whom he knows; - needs constant help. 	<p>Secondary special / higher education;</p> <ul style="list-style-type: none"> - increasing knowledge through workshops; trainings (or trips abroad); - wide circle of communication - high level of culture; - material income (employed); - the availability of handicrafts and additional sales. - a wide circle of communication; - independently makes decisions, moves. 	<p>He lives in the family, home-based training, but does not have the skills to communicate in society. Inadequate in behavior in a public place.</p>
Lower level	<p>secondary education / secondary special;</p> <ul style="list-style-type: none"> - increasing knowledge through workshops; 	<p>training in a boarding school (incomplete secondary education);</p> <ul style="list-style-type: none"> - social circle is limited to 	<p>home-based training / boarding school;</p> <ul style="list-style-type: none"> - social circle members of NGOs and 	<p>secondary education / secondary special;</p> <ul style="list-style-type: none"> - high level of culture; - the presence of handicrafts and additional sales; 	<p>He lives in the family, home-based training, has communication skills, but mostly he does not</p>

	trainings (or trips abroad); - high level of culture; - the presence of handicrafts and additional sales; - a wide circle of communication; - unstable work; - visiting NGOs; - moves independently.	family and members of NGOs; - answers simple questions, inability to conduct a dialogue; - inactive in search of work; - communicative; - requires constant assistance	family; - visiting NGOs and learning the craft in NGOs; - not able to make decisions independently; - needs constant help.	- a wide circle of communication; - unstable work; - visiting NGOs; - moves independently.	conduct dialogue with the interlocutor, but on various topics at random; - in public transport is calm, but not independent.
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In order to analyze the types and levels of socialization, we also developed a model of socialization based on the five mechanisms of socialization of young people with disabilities presented by M.Vorontsova: traditional, institutional, interpersonal, stylized, reflexive (see model 2). We believe that, in symbiosis, the two developed applications will help the researcher to analyze the process of socialization of persons with disabilities.

Model №1



In order to practically apply the developed criteria for Table 1, we conducted a study based on qualitative methods with 100 young people with disabilities. Among respondents, mostly young people from 18-30 years old are diagnosed with cerebral palsy and mental disorders, but among young people with disabilities, there are also people who combine two psycho-physiological disorders. Members of non-profit non-governmental organizations “Umidvorlik”, “Milenium”, “Mehribonlik”, Association of Business Women with Disabilities”, “Opa-Singular” and others were selected as respondents.

Of the three officially accepted disability groups, respondents with the second disability group prevail 57.5%. (Table number 3).

TABLE №3 PERCENTAGE (%) OF THE DISTRIBUTION OF RESPONDENTS BY TYPE OF DISABILITY

cerebral palsy	2 form of disabilities (cerebral palsy and oligofreniya, F-70)	Mental disabilities Ф-70	Blind	Down syndrome	Other disabilities	Of which disability in the context of groups		
						I	II	III
50%	10 %	12,5 %	5%	2,5%	20%	20%	57,5	22,5

The respondents were trained mainly in specialized educational institutions or at home, some young people with disabilities who graduated from boarding school were trying to attend mass school, but people with mental disabilities say that after elementary classes children began to be mocked and harassed for the blind, the mass school was not suitable for movement or education, and the majority of respondents noted that parents did not want their children to be hurt in a regular school.

The majority of respondents 25% attended a pre-school educational institution, and if they did, they were short-lived, 25% of the respondents received homeschooling, mostly having problems in independent movement, and 18% in special boarding schools, and only 30% graduated from mass school (Table No. 3). Only one of the respondents after homeworking enrolled in HEU and works at the NGO "Teachers came home 2-3 times a week, but this knowledge was not enough and I visited tutors" (D. polio II group).

TABLE 4 EDUCATIONAL SOCIALIZATION OF RESPONDENTS WITH DISABILITIES IN%

Visit to preschool educational institution	Home schooling	Education in the mass school	Study in specials. Boarding school or auxiliary школы	Study in college lyceum	Study in special college	Education in higher education institutions
25 %	25 %	30 %	45%	37,5 %	10%	12,5

One respondent's mother gave a positive assessment of the work of the auxiliary school in which her son studied "in the auxiliary school with children after classes engaged in the development of fine motor skills, together with the teacher performed creative work, but today this school has been closed, but I think she gave a lot my son".

The author's observations over several years in the lives of several families with children with disabilities has shown that parenting in the family and the perception of parents on the capabilities of their child play a big role in self-realization. Parents, in particular mothers who carry out hyper-care of a child with a disability, subsequently lead to the fact that society eventually receives an unadapted person for independent life.

In the course of the study, we talked with parents of people with disabilities who are concerned about the future of their children, who are not adapted to independent living and not adapted to this life by the parents themselves, and in some cases, society clearly pushes them out of the process of adaptation and independence. A fragment of an interview with a girl N. with disabilities demonstrates this circumstance (Cerebral Palsy Group II, 26 years old): age and asked to leave, since I allegedly can not look after such a small child. I left the frustrated and came with my mother, who asked to call the administrator. A male administrator after listening to my mother said, you know, and I also have a daughter with a disability, and seeing this attitude, I myself worry about whom I will leave my child tomorrow. My mother talked with the employees of the playground and, together with the administrator, solved my question. ” This narrative from the life of N. clearly demonstrates the stereotype of young people without disabilities about people with disabilities, about their inability to not be responsible and useful to society. However, it should be noted here that the support of N.'s family, as not every family apparently trusts the care of children to people with disabilities and the lack of frequent examples confuses society.

We conducted a general analysis of the process of the influence of education on further employment. Respondents have different diagnoses, disability groups, and respondents who have been educated are employed, and also the next category is occupied by people who have completed public school. Thus, the degree of self-realization of young people with disabilities directly depends on the education they receive.

Thus, 25% of all respondents as a whole have full socialization, 42.5% are partially socialized in any sphere, do not have permanent earnings, 22.5% are unilaterally socialized and 5% have undergone the process of resocialization due to acquired disability, but 5% are de-socialized due to obvious mental disorders, however, one respondent has a high degree of de-socialization, since in most cases it is isolated from society and, accordingly, inadequate behavior in society.

TABLE № 5 YOUNG PEOPLE WITH DISABILITIES

Levels of socialization	Full socialization	Partial socialization	Unilateral socialization	Resocialization	Desocialization
High	2 (5%)	7 (17,5%)	5 (12,5%)	-	1 (2,5%)
Average	6 (15%)	6 (15%)	3 (7,5%)	2 (5%)	-
Lower	2 (5%)	4 (10%)	1 (2,5%)	-	1 (2,5%)
	25%	42,5 %	22,5 %	5%	5%

The results of the research show that young people with disabilities, as a special socio-demographic group that has limited capabilities due to not only physical, mental, sensory and mental disorders, are socially unsuitable for interaction with the environment and society. By “social unsuitability” we understand not only the physical barriers leading to the segregation of persons with disabilities, but also the unreadiness of society to communicate with particular people, formed on the basis of conservative stereotypes leading to unconscious discrimination of people with disabilities.

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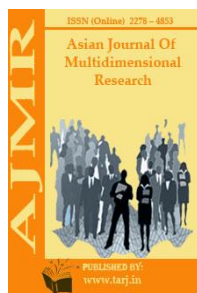
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ROLE OF HARDINESS AND MEANING IN LIFE AMONG ELDERLY LIVING IN OLD AGE HOME AND LIVING IN FAMILY

Shaista Parveen*; Syed Zafar Sultan Rizvi**

* Research Scholar,
Department of Psychology,
Aligarh Muslim University,
Aligarh, INDIA
Email id: Shaistaalig0@gmail.com

** Research Scholar,
Department of Psychology,
Aligarh Muslim University,
Aligarh, INDIA
Email id: zafarrizviphd@gmail.com

ABSTRACT

The last century has witnessed a rapid increase in the population of the elderly people in the developed and developing countries. The country is not adequately equipped to look after their special health needs and the changing traditional value system. Younger generations' attitude towards the elderly people is not up to their expectations. In the above context, a study was conducted to understand the feeling of hardiness and meaning in life among the elderly residing in the old age homes and within the family environment. Total 60 samples of elderly people were selected for old age home and living in family. The data was collected through house- to-house survey for those residing in the families while those other half data were collected from old age home. Inclusion criteria are non-working status of elderly people above < 60 years of age for sample selection. After tabulation of data t-test was used to see the differences between groups with regard to hardiness, meaning in life and its dimensions. Result of the study revealed that the hardiness among elderly living in old age home is higher than the elderly living in families while meaning in life is higher among elderly living in families than the elderly living in old age home. Elderly living in the families had a positive attitude towards old age. On the other hand, better

social relations were maintained by the family dwellers because they had regular interaction, expressions of feelings and support from the family.

KEYWORDS:*Age, Elderly, Hardiness, Meaning in Life, Old Age Home.*

INTRODUCTION

India is a developing country and its urbanization and modernization impacts shows on the persons living style and there behaviors as well. Due to lack of resources, financial crisis or personal reason people prefer living in nuclear family, in which either they prefer living separately from their parents or force their parents to live in other places like old age residences. A person of age 60 or above is considered as ‘Senior citizen’ (National policy on older Persons; 1999). According to UN estimates, the elderly population in the world is supposed to touch 22 percent by 2050. In 2006, the elderly constituted 11 percent of the world population. It is estimated around 81 million elderly people live in Indian while 11 lakhs resides in Delhi itself and only four government running old age homes and thirty one by NGO’s/private agencies/charitable trusts in Delhi (Azad India Foundation). Data shows among 250 million households in India, 31.3% have at least one elderly person in a family While Tamil Nadu has the highest (9.2%) elderly living alone in state where as Assam is the lowest (3.0%) elderly living alone followed by second lowest Delhi(2.5%).(The times of India, 2014). Following the western culture, Indian youths lacks theirs responsibilities towards elderly members in household. The younger generation is trying to re-define their social roles and identities within as well as outside the family and due to which the old age homes are now-a-days almost fully occupied by the elderly residents. They prefer the elderly to live outside their personal space, or if, they allow them to live in household then they don’t fulfill their need for living. Most of the cases younger ones abandoned their elder family members (Parents/ Grandparents/Uncle /Aunt) and don’t even come to visit them anymore. The facilities are lacking in charitable and government run homes. The folk duty and conscience of children or young adult towards their parents or elderly person is being crumbled and their negligence and abuse has caused elders to get under the net of old age homes.

LITERATURE RIVIEW

The elderly are in need of urgent attentions, love and affection from their younger’s. They do not need their sympathy, but the understanding love and care of their younger’s. Study on elderly people 60 and above (N=185) shows that 93% have health issue, including depression were found to be 57.8% (Chalise, 2012). In other study negative correlation -6.70 between depression and psychological well-being among old age people were found (Dhara & Jogsan, 2013). On the other Study on elderly people (N=150) shows that 47.33% of population had depression, among which 70.42% had mild depression and 29.58% had severe depression (Ranjan & Bhattarai,2014). Furthermore, (Totuka & Verma ,2015) examined 60 elders (N=60, n1=30 living in old age home and n2=30 living within family) and the study conclude the older people living within family has better psycho-social factors than who living in old age home. Conclusively we can hypothesize that old age living residence have greater depressive, stressful and ill environment in which some of them cope with it while others can’t. Some use the stressful as there opportunities and challenge which is called hardiness and some find their way towards meaning in life under these circumstances. Hardiness is a Integration of attitudes of commitment, control and challenges get together comprise a personality of hardiness in which person converts

the life stress's in to a new opportunities and growth. (see, Maddi, 1986, 1997, 1998, 2002, 2004, 2008; Maddi, Harvey, et al., 2006; Maddi, Harvey, Khoshaba, Fazel, & Resurreccion, 2009a; Maddi & Khoshaba, 1994). Furthermore, hardy person has control over life problems and able to convert those problems in to a positive challenges (Allred & Smith,1989). As forecasted by Kobasa's (1982) Model, findings show that hardiness person has lower illness level under the stressful constructs. (Kobasa, 1979; Kobasa, Maddi, & Courington, 1981; Kobasa, Maddi, & Kahn, 1982; Kobasa, Maddi, & Puccetti, 1982; Kobasa, Maddi, & Zola, 1983; Kobasa & Puccetti, 1983). However, some studies didn't find the similar results (Funk & Houston, 1987; Schmied & Lawler, 1986). Moreover, hardiness and compliance has been found moderately correlated in elderly people and those who have adhere to follow diabetic regimen have characteristics of hardiness (Ross,1991). Furthermore, under stress hardiness is a pathway towards resilience ((Bonanno 2004; Maddi 2005). Other studies shows probably, social support to be a mediator of daily stresses and may have indirectly link with hardiness (Ganellen & Blaney ,1984). Hardiness and social support were found related, and both together improve the stress related symptoms (hardness directly related with health (Wiebe & McCallum,1986)

Hardiness seems to a specific form of coping strategies, cognitive frame through which it provide resistance towards illness. Like hardiness, meaning in life play a crucial role for healthy and prosperous life. Lack of these traits cause frustration, stress, illness, depression and other psychopathologies. As we grow older and older meaning in life gradually starts blurring but still many mediating factors have an effect on meaning n life. It also depends upon the environment and circumstances and traits person has adhere. Frankl(1959,1967), believes that meaning in life exists in all extreme circumstances and restriction in meaning in life leads to 'noogenic neurosis'. According to Maddi (1967), absence of selectivity in actions, lack of interest and boredom is a symptom of absence of meaning in life. (p313). Furthermore kobasa (1979) describe that out of three components of hardiness– control, challenge and commitment; commitment were found to be most related with meaning in life. Moreover, purpose of life and perceived meaning may play a crucial role in coping with developmental crisis, while having a sense of personal meaning gives the aspiration to achieve a goal and purpose of life. It is found that perceived mental and physical discomfort were significantly associated with lack of meaning and purpose in life (Reker, Peacock & Wong ,1987). Conclusively, meaning in life has a well define role in life, its gives the purpose and path towards better living. As the person become older the perspective to see the world and things changes drastically. In one study on elderly people by Herman and Jeffers found that one of three were moderately worried about their future outcomes, while 50% shows absolutely no worries about their future . It may be because they accept death or due to less worry less than young people (Feld, Veroff & Gurin ,1960). These studies show the different type of perspective elderly pose related with their life and future , these define their view towards life as a whole, meaning in life solely concern in old age. In a study on elderly on two dimensions of meaning in life 'self-suitability measure' and 'external validation', external validation shows lower score while self-suitability measure shows higher than younger adults (Ebersole & DePaola , 1989). Another study were found greater meaning in life in elder as compare with younger (Ranst & Marcoen, 1996).

SIGNIFICANCE OF THE STUDY

The significance of the study is to understand the difference between hardiness and meaning in life among the elderly residing in the old age homes and within the family. Elderly people living in old age home have significant increase in hardiness due to which they cope better during

stressful environment. While elderly people living in family have higher meaning in life. This will give insight about the people living in different environment and resources they poses. It substantially enlightens various factors of people living in different circumstances. This study helps researchers to identify the various domains of human attachment, environment, belongingness, meanings and stressors among different population.

OBJECTIVES

Hence, the present study was conducted to compare the general feelings, hardiness and meaning in life among the elderly living with families and in old age homes with the following objectives in view:

- To examine difference between hardiness among elderly living in old age home and within family.
- To examine the difference between meanings in life among elderly living in old age home and within family.
- To examine the difference between the meanings in life's dimension among elderly living in old age home and within family.

RESEARCH METHODOLOGY

Sample

The present study was conducted on the sample of 60 individuals of 60 years older or above. The sample were divided into two groups, 30 were residing in Bhagwat Dham Old Age home located in Mayur Vihar phase1, New Delhi and other 30 were living within the family set-up in different cities like New delhi, Lucknow and Aligarh.

Method

The elderly were explained the purpose of the study and oral informed consent was obtained from all participants before data collection. The data was collected using two questionnaires of hardiness and meaning in life and through house to house survey for those residing in the family. The elderly were non-working, retired and some were quite educated. The data were collected during 3 months period thereafter collected data were analyzed through SPSS 21 version.

Instruments

The Meaning in Life Questionnaire (MLQ) is a 10-item self-report inventory designed to measure life meaning having two dimensions of meaning in life: (1) Presence of Meaning (how much respondents feel their lives have meaning), and (2) Search for Meaning (how much respondents strive to find meaning and understanding in their lives). Respondents answer each item on a 7-point Likert-type scale ranging from 1 (Absolutely True) to 7 (Absolutely Untrue).The MLQ has good internal consistency, with coefficient alphas ranging in the low to high .80s for the Presence subscale and mid .80s to low .90s for the Search subscale.

The hardiness questionnaire consists of 30-items scale and was developed by (Bartone-et al1989). Respondent has to respond on 4 point scale ranging from 0 (Not at all true) to 4 (Completely true).

RESULT & DISCUSSION**TABLE 1: SHOWS THE MEAN, S.D, MEAN DIFFERENCES, T-VALUE OF HARDINESS BETWEEN THE GROUPS OF ELDERLY LIVING IN OLD AGE HOME AND WITHIN FAMILY.**

Variable	Group	N	SD	Mean	MD	T	df	Sig	Cohen'sd
Hardiness	OAH	30	4.00	49.57	7.80	5.36	58	0.01	1.34
	Residence	30	6.88	41.77					

*Short forms we used: OAH (Old age home), Residence (Living elder in home), POM (Presence of Meaning) ,SFM(Search for meaning) .

The above results on hardiness variable in group Old age home and Living in family ($TS = t_{58} = 5.63$; p value = $0.01 < 0.05$). The P value is less than 0.05 level it is considered as a significant in mean difference. Therefore, the groups of old age home residence and living with family elderly people have a significant difference on variable hardiness. Mean and Standard Deviation of Group Old age home is 49.57 and 4.00 respectively. While, mean and Standard Deviation of elderly living in family is 41.77 and 6.88 respectively. Increase in Mean on hardiness scale of people living in old age home may be due to their adaptation in stressful and hopeless environment in which they encounters a lot of daily Stresses . In these kinds of situations they are more prone towards depression, anxiety, Degenerative disorders and other form of Psychopathologies. Furthermore, there have very less resources to cope with these stressors; they need to adjust themselves in that constrain environment. These may be possible when they have higher level of hardiness for overcome those stresses. The effect Size (Cohen'sd) on hardiness variable between Groups is 1.34 which is very large in magnitude (Sawilowsky, 2009) .Very large effect size represents the stronger effect in group.

TABLE 2: SHOWS THE MEAN, S.D, MEAN DIFFERENCES AND T-VALUE OF PRESENCE OF MEANING IN LIFE BETWEEN THE GROUPS OF ELDERLY LIVING IN OLD AGE HOME AND WITHIN FAMILY.

Variable	Group	N	S.D	Mean	MD	t	df	sig	Cohen'sd
POM	OAH	30	4.47	15.50	-8.66	-9.06	58	0.02	2.34
	Residence	30	2.73	24.17					

Presence of meaning (POM) is the dimension of meaning in life scale which shows the results ($TS = t_{58} = -9.06$; p value = $0.02 < 0.05$). The mean and standard deviation of the group on dimension POM is 15.50 and 4.47 elderly living in old age home respectively. While, the mean differences and Standard deviation of elderly living with family are 24.17 and 2.73 respectively. The mean of group (living with family) that is 24.17 which is higher than other group and a significant difference. This difference in group may be because of their different way of living style and Resources they poses. That Elderly Living with family may experience the joyfulness, commitment, affection and Belongingness towards their children and grand children's While Living with family gives them immense pleasure of life, and Purpose for living. That may cause the higher in level of Presence in meaning dimension in elderly living in family. On the other hand, Elderly living in old age home have a very less chance for joy with family or relatives they feels isolated, discarded from their love

ones this may cause the lack of purpose and meaning in the present life. They are lack behind in terms of the affection, love and sympathy by their relatives and family. Furthermore, The effect size of Presence of meaning dimension (Cohen's $d = 2.34$) which is approximate greater than 2.0 that is considered as a huge effect size (sawilowsky, 2009).

TABLE 3: SHOWS THE MEAN, S.D, MEAN DIFFERENCE AND T-VALUE FOR SEARCH FOR MEANING IN LIFE AMONG ELDERLY LIVING IN OLD AGE HOME AND WITHIN FAMILY.

variable	Groups	N	S.D	Mean	MD	t	df	sig	Cohen'sd
SFM	OAH	30	4.23	21.40	-2.66	-2.85	58	0.04	0.73
	Residence	30	2.87	24.07					

Furthermore, In Search for meaning dimension the result show that (TS= $t_{58} = -2.85$; P value = 0.04 < 0.05) Hence, there is a significant difference in group on dimension search for meaning. As same as there is also explain by their (mean difference = -2-85). The mean and Standard deviation of for group living in old age home is 21.40 and 4.23 respectively .While the mean and Standard Deviation of elderly group living with family is 24.07 and 2.87 respectively. Effect Size on this dimension (Cohen's $d = 0.73$) which is greater than medium (0.50) and lesser than large (0.80) that is explain great variance in group as well (Cohen,1988).Higher mean on dimension (Search for meaning) is indicates that they have willingness towards life. They are open towards new experiences and like to explore new things as well. Searching the purpose and self actualization may be their primary concern, they start living for family, society and for own well being.

TABLE 4: SHOWS THE MEAN, S.D, MEAN DIFFERENCE AND T-VALUE OF MEANING IN LIFE AMONG THE ELDERLY LIVING IN OLD AGE HOME AND WITHIN FAMILY.

Variable	Groups	N	S.D	Mean	MD	t	df	sig	Cohen'sd
Meaning in Life	OAH	30	6.77	36.90	-11.33	-7.81	58	0.03	2.01
	Residence	30	4.14	48.23					

Similarly, on the scale of meaning in life overall results (TS= $t_{58} = -7.81$; p value = 0.03 < 0.05) indicates that the significant difference in group. The mean and Standard deviation of group Elderly living in old age home on variable meaning in life is 36.90 and 6.77 respectively. While, on group of elderly living in family is 48.23 and 4.14 respectively. There effect size (Cohen's $d = 2.01$) which is again huge (equal to 2.0) that is considered as a great magnitude (Sawilowsky ,2009). These higher mean on elderly living in family on meaning in life scale due to they have over all privileges and affection from their love ones. They are less likely to form any psychopathologies and more open towards their present and future life.

CONCLUSION

It has been identified that Indian people living in old age home and the way they have been treated is no differ with the western culture. This may be due to similarity we acquire from western world due to globalization and through multi-cultural approaches. Societies become more modernized and lacked the credential of belongingness and connectedness with our parents or grandparents. People are more deviated towards the nuclear families and lack behind our

culture of joint families. These may be the causation of differences in attitude towards their parents or grandparents. During the period of retirement elderly people have expectations from their children which remain unsatisfied. These may be the cause of their change in perception, attitude and feelings towards themselves and other. They may feel insecure and exponentially increase in level of stress and anxiety in everyday life. These drastically changes may cause them to use the strategies which overcome their proneness to certain disorders. Eventually, hardiness has been increased and they have better grasp of the situation under stressors. While meaning in life declined due to their inability to find the pleasure from the things present in their life, or will come afterwards. Furthermore, elderly living within families find themselves more connected with their loved one specially their grand children and children they have access to the diverse events like marriage, parties and get together with relatives. These may increase their overall pleasure and happiness in their life and they think more optimistically towards their future. While they have stressors but they are very unlikely to have major stresses or detachments. These gives them dependency towards their loved ones to uplift them in hardest times of their life and they no longer feel the coping strategies to overcome stress in their life. Therefore our study is substantially justified with the people living in different environment and there effects on there well being.

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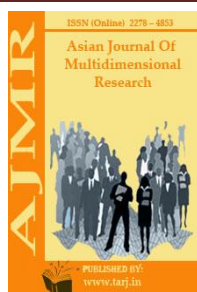
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**SOCIO-ECONOMIC NATURE AND DIMENSIONS OF POVERTY IN
INDIA**

Dr. K. Shanmugan*; Baria Bhagirath Prakash; Gaurav Sharma*****

*Associate Professor,
Department of Business Economics,
Faculty of Commerce,
The Maharaja Sayajirao University of Baroda,
Vadodara, Gujarat, INDIA
Email: researchshanmugan@gmail.com,

**Research Scholar,
Department of Business Economics,
Faculty of Commerce,
The Maharaja Sayajirao University of Baroda,
Vadodara, Gujarat, INDIA

***Part-time Assistant,
The Indian Econometric Society,
INDIA

ABSTRACT

Poverty has been one of the most important policy concerns since India's independence. While we have managed to reduce the levels of poverty to some extent, India's economic growth has not sufficiently trickled down to reduce poverty to a great degree. Poverty continues to persist across the states and regions in India. It is possible to study the analysis of poverty in terms of its nature and dimensions from purely an economic angle but the emphasis made here is to throw some light on the socio-economic aspects of poverty behaviour by purely analyzing income and demographic variables including literacy. The primary aim of this elementary undertaking is to investigate the dynamics in socio-economic implications of the nexus between demographic features and the distribution of poverty while taking into account social sector expenditure. We find that the inter-group variations in poverty across states are highly unequal while, poverty levels have actually escalated for a few states off-lately. This study also points out that the improvements in growth rate of sex ratio and literacy rate have can go a long way in positively

contributing to the problems of poverty and population densities. Some of the states in India have managed to overcome key problems pertaining to both poverty levels and incidences but these problems still need to be addressed throughout many other states. It is precisely because of this that a comprehensive national policy on poverty eradication needs to be formulated while taking into consideration the well-known success stories.

KEYWORDS: *Gender Equality, Literacy, Population Density, Poverty, Socio-Economic Links.*

JEL Codes: *I32, H75, I25, Q5.*

INTRODUCTION

1. GROWTH, DEVELOPMENT AND POVERTY IN INDIA

India has grown remarkably since the reforms on major macroeconomic fronts. Not only has it expanded in terms of its national income, but it has also shown noteworthy performance in terms of the momentum of growth in national income. The behaviour of the Indian economy in recent time periods shows that economic growth, as measured by the growth rate of real Gross Domestic Product (GDP), has consistently been positive at a noteworthy rate of 6.87 percent for the period 2012-13 to 2017-18. However, during the same period, India's performance on the development front, approximately captured by the growth in Human Development Index (HDI) among others, has not been equally remarkable. The annual growth rate of India's HDI since 2012 has actually fallen from 1.52 percent in 2012 to a mere 0.63 percent in 2017. Even on the literacy front, as per the latest official data available, the decadal growth rate of literacy rate in India since 1961 has been losing its momentum from around 54.4 percent per decade in 1961 to 12.56 percent per decade in 2011, inspite of the fact that there is a larger room to reduce the illiteracy. Such a trend is also visible in the behaviour of annual growth rate of life expectancy at birth which has shown a fall from around 0.6 percent per annum in 2012 to 2.29 percent per annum in 2017. Even with reference to income inequality, India has witnessed a continuous divergence in the national income share of top 1 percent and bottom 50 percent populations since 2004-05, with the share of top 1 percent population continuously rising both in terms of absolute income level and its growth rate and, while bottom 50 percent is witnessing a falling share.

The narrative above exemplifies the divergences in the growth and development paths of the Indian economy, particularly in the recent periods, and it calls for an urgent attention on the socio-economic implications of these divergences. An important outcome of this growing gap in the growth versus development experiences of India is the existence and persistence of poverty and rising inequality. Poverty has been one of the most important policy concerns since India's independence. While we have managed to reduce the levels of poverty to some extent, the economic growth has not sufficiently trickled down to reduce poverty to a great extent. Poverty continues to persist across the states and regions in India and the minimalistic¹ definition of poverty as adopted in India probably does not fully reflect the intensity of the problem on the ground levels. The divergences between growth and development and, the persistence of poverty, have primarily motivated us to undertake a modest attempt of analyzing the distribution of poverty levels across various states and the behaviour of socio-economic parameters such as population density, literacy rate, sex ratio, etc. The primary aim of this elementary undertaking is to investigate the dynamics in socio-economic implications of the nexus between demographic features and the distribution of poverty while taking into account social sector expenditure.

2. Insights from empirical evidences

The analytical and policy concerns of poverty have a long history in India. A considerable amount of debate has been carried out with reference to socio-economic, cultural, political and institutional dimensions of poverty in India. A common concern of analysts in the pre-reforms era was the analysis of poverty across urban and rural regions and in particular Dandekar and Rath (1971) and Alamgir (1975), among others, analyzed poverty in detail in terms of its level and incidence. Further, Lipton and Ravallion (1993) and Government of India (1993), among some others, focused on the poverty-growth nexus. Another significant concern was that of locating the sources of poverty and remedies for the same, especially with reference to rural development and with reference to the backdrop of implications of green and white revolutions.

Post-reforms periods witnessed more rigorous works on constructing uniform and continuous data on poverty estimates for detailed understanding of cross-sectional and time-series dimensions of poverty. The operational definition of poverty line, the intensity of incidence of poverty and the building of methodology for measuring holistic poverty were considered in detail with works such as Ozler, Datt and Ravallion (1996), Datt (1998), Deaton and Dreze (2002), Deaton (2003), Government of India (2009) and Rangarajan (2014) having contributed immensely towards this end. Another concern has been that of locating the impact of reforms on variations in the poverty levels across states and regions. Some important studies on this line include Datt (1999), Ravallion and Datt (2002), Mehta and Shah (2003), Sundaram and Tendulkar (2003), Dev and Ravi (2007), Sundaram (2007), Topalova (2010), and Radhakrishnan (2015). These works analyzed the extent of poverty while taking into consideration key growth and developmental aspects with special reference to liberalization and structural adjustments. While the findings of these studies are not directly comparable due to difference in their conceptual, data and methodological issues including that of underlying theoretical frameworks, the broad findings across these works suggest that reforms have not been able to significantly reduce the level of poverty. Further, they have found that all-India and state level impacts of reforms on poverty display significant and somewhat sizeable differences. Thus, the evidences of impact of liberalization and upward shift in the growth performance have brought mixed responses on the incidence of poverty, where few states have managed to reduce their poverty levels while others could not.

Although the reforms-poverty nexus has been an important issue in the post reforms era, equally significant concerns have been the changes in the social, demographic and institutional parameters affecting the behaviour of poverty. An important line of research in India has been the analysis of regional and state level variations in the existence of poverty as well as the contribution of economic growth in reducing poverty across both space and time. Studies such as Ravallion and Datt (2002), Mehta and Shah (2003), Dev and Ravi (2007) and Dubey and Tiwari (2018), among others, have focused on the socio-economic nature of poverty across rural and urban states as well as the differences among them. Key findings of these studies are that while economic growth has brought some improvement in the reduction of poverty, the impact of growth has not been uniform on poverty across states and regions. Furthermore, the broad

conclusion of these studies is that rural and urban poverty levels have fallen over time irrespective of the ways in which poverty line is measured and estimated.

Ahluwalia (2014) and Tiwari (2018) have analyzed poverty in terms of their rural and urban dimensions respectively. Findings of Ahluwalia (2014) suggest that poverty has fallen across rural sector and the author also found some evidences on the inverse relationship between agricultural performance (measured as agricultural output per head) and poverty rates. Dubey and Tiwari (2018) stressed on analyzing poverty levels for urban states. They also attempt to link income inequality with poverty distribution and find that the fruits of higher economic growth have not fully trickled down to all the urban states. They find that while most of the states show a reduction in urban poverty on account of higher growth, some states do not attest to this finding. Surprisingly they find that per capita income inequality, whether it has increased or remained stable, has contributed positively in poverty reduction across many states.

This brief review obviously does not dwell into the details of wide heterogeneities in the underlying theoretical and empirical frameworks concerning the socio-economic implications of poverty. It is very difficult to find uniform set of studies across time and space to strictly compare the issues as a result of differences in methods, measurement and construction of data for analysis. These observations are possibly also indicative of the rich set of accumulated knowledge on the subject of poverty in India.

3. DATA, VARIABLES AND METHODOLOGICAL NOTES

3.1. Nature of Data used

This study employs various socio-economic variables that are mainly real in nature and are majorly in the forms of ratios and percentages for specified frequencies. The variable POVR and GPD represent poverty rate² and decadal growth rate of population per square kilometre of area respectively. GSDP is the mean value of annual percentage growth rate in state level Gross Domestic Product (GDP) for the period as stated in table 1 below, GSR shows the decadal percentage growth rate in number of females per one thousand males, LITR signifies the official literacy rate of India and finally GSOE shows the mean value of annual percentage growth rates for the period under study in social sector expenditure by various state governments. The data pertaining to these variables were collected from various officially published sources such as various issues of Handbook of Statistics on Indian States, Population Census Reports, Economic Surveys and the Handbook of Statistics on Indian Economy. Some internationally published sources such as World Inequality Report 2018, Human Development Reports and the online data base on various socio-economic indicators of the United Nations Development Programme (UNDP) were also utilized wherever needed.

TABLE 1: NATURE OF THE DATA EMPLOYED

Sr. No.	Variables	Measurement Unit	Definition	Time Period	Data Frequency
1	POVR	Percentages	Head Count Ratio	2004-05 to 2011-12	Three Points in time during the sample
2	GPD	Percentages	Decadal Percentage	2001 to 2011	Decadal

			Growth in population per square KM of area		
3	GSDP	Percentages	Mean Value of Annual Percentage Growth Rates in State-level GDP at factor cost	2004-05 to 2011-12, Base 2004-05	Annual
4	GSR	Percentages	Decadal Percentage Growth in number of females per 1000 males	2001 to 2011	Decadal
5	LITR	Percentages	Percentage of population who are literate as per official definition of literacy	2001 to 2011	Decadal
6	GSOE	Percentages	Annual Percentage Growth Rate in Social Expenditure by the State Governments	2003-04 to 2011-12	Annual

3.2. METHODOLOGICAL NOTES

The choice of study period ranges from 2004-05 to 2011-12 and the data collected on state level information are designed by keeping in mind the time period for which the data on poverty variable is available. Uniform and comparable data on poverty, measured as the Head Count Ratio (HCR), are available for three years namely 2004-05, 2009-10, and 2011-12³. These estimates are provided on Mixed Recall Period (MRP) basis by using National Sample Survey (NSS) household expenditure survey data for various states. The data on other variables were also collected for making them consistent and comparable with the available poverty data. Demographic⁴ variables such as GPD, GSR, and LITR were not available in continuous form for chosen time period. The most relevant years for which the data were available on these variables were the calendar years 2001 and 2011. Accordingly they were adjusted and utilized.

The data for GSDP and GSOE were available mostly in continuous form, with data on some states missing as mentioned in table 2, for the period 2004-2005 to 2011-2012. The estimates on GSDP were calculated based on the data on state-level real GDP at factor cost as contained in various volumes of the Handbook of Statistics on Indian States. We chose to employ the data with base 2004-05 instead of 2011-12, which is the base year in the latest estimates, as the information on West Bengal state was almost completely missing for our study period in the data with 2011-12 base year and thus we could not locate any linking factor for rebasing the same. We do not attempt to construct poverty estimates using household expenditure survey data of National Sample Survey (NSS) for generating continuous data for obvious reasons.

Once the data for chosen time period on the selected variables were collected, we estimated their mean values across the time⁵ period chosen for various states. Measures of quartiles are worked out for four different quartile groups of data for cross-section comparison. It is important to mention that the quartiles are used only to divide the information into four different grouping of states for analytical comparisons and subsequently estimates of arithmetic mean are arrived for each grouping so as to enable not only cross-comparison possible but also the uniformity is maintained across variables. While estimating various quartiles, odd and even numbers are adjusted for calculations as some of the information is not available for some states. Additionally, measures of correlation are also employed to understand linear associations across socio-economic variables with poverty.

3.3. Choice of Variables

Our aim is to articulate analytically the associations between poverty and other variables which are essentially socio-economic in nature. GPD signifies the change in the population density across the inelastic supply of productive land in India. Variations in this variable might be associated with changes in poverty rates due to various factors such as the impact of vertical and horizontal migrations, increased pressures on scarce natural resources, increased urbanization, etc. GSDP in this study has been chosen to represent the rate of economic growth at state level that might have some meaningful connections with poverty rates. GSR captures the decadal growth in sex ratio which might provide some insights into the association between improvements in gender equality and reductions in poverty levels. LITR represents the role that better education and skills can play in allowing the people occupying the poverty space to come out of deprivation and get access to better standard of living. GSOE represents mean value of annual growth rates of the social sector expenditure by state governments, which are mainly directed towards literacy, health, etc., that can possibly have some meaningful implications for the behaviour of poverty.

TABLE 2: DATA ACROSS VARIABLES IN TERMS OF NUMBER OF STATES

Sr. No.	Variable	Number of States	Information Loss in terms of States
1	POVR	35	0
2	GPD	35	0
3	GSDP	32	3
4	GSR	35	0
5	LITR	35	0
6	GSOE	30	5

Source: Authors' Estimations

The table above shows the loss of information in terms of data for some states which are not presented in the official sources as per the definition evolved for the analysis. We have not deliberately excluded any state from the analysis but the states for which data on concerned variables are not available have not been placed for estimation purpose. In order to work out correlations among the selected variables in a consistent, reliable, and uniform manner, we homogenized the number of observations in all other variables to the number of observations in GSOE i.e. 30 states.

4. Empirical foundations

Poverty is a multidimensional problem and it needs to be addressed from well-coordinated policy-frameworks of all concerned areas to deal with its nature, dimensions, problems and possible remedies. Poverty has been persistently a prominent problem for India, not only at policy-making level, but also for the very foundation of evolving an egalitarian society consistent with proper development goals. It is possible to study the analysis of poverty in terms of its nature and dimensions from purely an economic angle but the emphasis made here is to throw some light on the socio-economic aspects of poverty behaviour by purely analyzing income and demographic variables including literacy. Though there are several studies that cater to the need of examining this issue, the focus in this paper will be to analytically examine the relationship between changes in the poverty with the variations in key socio-economic variables. The variables that are selected for the analysis, which are already mentioned, are placed for their scrutiny on the distributional characteristics. This can give some insights into how poverty can be addressed by placing demographic and socio-economic variables under considerations.

Table 3 gives estimates of descriptive statistics and we have mainly analyzed the estimates for mean, median, coefficient of variation, kurtosis and skewness. The estimates presented are pertaining to the aggregate value of concerned statistics from all the states that are taken into consideration. The mean value of LITR for all states put together worked out to be 73.93 percent in aggregate. This should not be taken as an all-India estimate for literacy rate for obvious reasons. Apart from LITR, all other mean values estimated are statistically significant as standard deviation is very low, indicating that the efficiency of estimates are reasonably good. GPD for aggregates of all states is 19.31 percent and this can be considered as a phenomenal growth rate in terms of density which reflects how population dynamically moves upwards and evolves over a period of time. Variability in the GPD seems to be moderate and this is probably because the density of population varies reasonably across states, space and time. Kurtosis and skewness indicate the clear non-normal values and then there is good amount of excess kurtosis with some positive skewness. This is typical for population density distributional characteristics.

TABLE 3: DESCRIPTIVE STATISTICS

Statistics	Variables					
	POVR	GPD	GSDP	GSR	LITR	GSOE
Mean	23.48	19.31	8.74	1.17	73.93	17.01
Median	20.07	18.56	8.21	1.31	73.59	17.23
SD	12.20	11.22	2.59	3.12	9.69	2.83
CV	51.96	58.12	29.63	266.95	13.10	16.63

Kurtosis	-0.75	4.50	7.27	12.39	-0.85	0.90
Skewness	0.44	1.65	2.18	-2.81	0.01	0.53
No. of States	35	35	32	35	35	30

Note: SD and CV refer to Standard Deviation and Coefficient of Variation respectively.

Source: Authors' Estimation.

The estimates of median are also reported essentially because the classification of states is organized by quartiles. There are not many deviations between the estimates of mean and median, though the kurtosis and skewness seem to be somewhat non-normal. Most of the series are consistent and have less variance as this can be observed from standard deviation and coefficient of variation from table 3. But growth rate of sex ratio has very high estimate of coefficient of variation and this indicates phenomenal variability in this series. This variability is reflective of the fact that the changing behaviour of sex ratio has been volatile and non-uniform. Otherwise, the estimates for coefficient of variation for all variables seem to be excellent across states. Variables such as GPD, GSDP and GSR have significantly non-normal estimates of kurtosis and skewness. Positive excess kurtosis values along with positive estimates of skewness for growth in population density as well as growth rate in real incomes of states are consistent with the theoretical assumption of the way in which the variables GPD and GSDP might be distributed. The general presumption seems reflected in the estimates of descriptive statistics. However, the more meaningful understanding of the theoretical issue can be observed at least in terms of their association by analyzing the estimates of correlations of these stated variables from the table 4.

TABLE 4: CORRELATION MATRIX FOR THE VARIABLES EMPLOYED

Variables	POVR	GPD	GSDP	GSR	GSOE
GPD	0.21	-	-	-	-
GSDP	-0.32	-0.11	-	-	-
GSR	-0.32	-0.20	-0.06	-	-
GSOE	0.29	-0.01	0.04	-0.13	-
LITR	-0.57	-0.36	0.27	0.37	-0.32

Source: Authors' Estimation.

The estimates of correlation *prima facie* suggest that linear association among most of the variables are low and the correlation between POVOR and LITR is moderate. Though, the values of correlations are comparatively low for most of the variables under study, the estimated signs give some meaningful indications. The estimates for literacy and poverty rate turned out to be negative suggesting that increase in the literacy rates reduce poverty moderately. Surprisingly, GSDP and GSR have low correlation with negative signs as growth has not significantly reduced poverty as against the claim that growth promotes considerable reduction in poverty. Changing literacy rate upwards in India seems to have worked in enhancing the idea of promoting favourable population density distribution and healthy sex ratio while it has contributed in poverty reduction as well. In pure statistical sense, most of these correlations are significant and this is indicative of the strong underlying relationship that exists among the variables that have been chosen for the study. Dynamically changing sex ratio, and the population density that could account for migration and urbanization problems, would probably give good amount of details on how the nature of poverty is varying across time. This has to be framed properly with the

variations in the growth rate across states, while taking into consideration how various governments spend their money on social sector. The data available for recent period indicate that there is increasing awareness among governments to spend more on social sector to strengthen and enhance education, healthcare and social hygiene. Spread of larger infrastructural networks, involvement of private sector and Non-Governmental Organizations (NGOs) might also complement this process.

5. Observations on Poverty and Socio-economic variables

Reduction in poverty is not merely meant for achieving the target of lifting the poor from hunger. It has more meaningful ethos around the people on which reasonable degree of life exists for civilians in the democratic society. Although poverty can be narrowly and broadly defined to take care of certain aspects, but the meaningful scenario in the developmental context exists only when education, the standard of living, sex ratio and population density are properly scaled to achieve certain goals in which poverty eradication is taken care. One important way to look at this issue is to organize some sort of an understanding among these variables while placing them in the context of dynamic change. This attempt is presented in the following table where mean values of growth rates and percentages of concerned variables are presented.

TABLE 5: DISTRIBUTION OF POVERTY BASED ON QUARTILES ACROSS KEY VARIABLES

Groups of States	Group-wise Mean Values of Variables				
	GPD	POVR	GSDP	POVR	GSR
	(1)	(2)	(3)	(4)	(5)
1	32.52	26.33	11.92	14.52	3.98
2	20.45	26.93	8.88	26.3	1.75
3	15.88	26.96	7.13	21.85	0.96
4	8.51	14.1	5.78	26.27	-1.95
Total no. of Observations	35	35	32	32	35
Groups of States	Group-wise Mean Values of Variables				
	POVR	LITR	POVR	GSOE	POVR
	(6)	(7)	(8)	(9)	(10)
1	16.65	86.13	11.54	20.38	30.89
2	23.71	78.03	22.29	17.70	23.00
3	28.33	63.21	25.03	16.42	24.54
4	25.26	55.9	29.25	13.57	20.14
Total no. of Observations	35	35	35	30	30

Source: Authors' Estimation.

The table 5 is organized in a manner that the variable GPD, GSDP, GSR, LITR and GSOE have been grouped into four different categories of states based on quartile estimates as explained earlier. The variables are ordered in descending manner in order to make quartile-based groupings. Once grouping is done, the distribution of states for a particular variable becomes a watertight compartment. According to the quartile grouping and distribution, the mean values of poverty estimates of group of states are arrived by following the same grouping in a manner that

poverty estimates vary across all variables depending on the way groupings are created for each variable. The first column in the table 5 indicates quartile groupings of GPD where population density for the first group is the highest while that of fourth group is the lowest. Column 2 tells mean values of poverty rates for same group of states which are organized in column 1 and therefore it can be inferred from these two columns that higher the density growth, higher is the level of poverty. Rest of the table is also organized in a similar manner when it comes to groupings of variables and accordingly looking at poverty without changing the composition of the group. Correspondingly, for a similar analysis, range is presented in table 6 for the same grouping and corresponding poverty estimates. It can be seen for both GPD and POVR that the range is moderately high for both first and fourth quartile groups while second and third groups share very narrow range. Without changing the composition of the group for column 1, poverty range is observed to be almost similar. It can be stated that irrespective of density growth, variations in the poverty are similar.

TABLE 6: DIFFERENCES IN THE LIMITS OF RANGES OF POVERTY VIS-A-VIS KEY VARIABLES

Groups of States	GPD	POVR	GSDP	POVR	GSR
	(1)	(2)	(3)	(4)	(5)
1	33.17	38.88	9.37	10.32	3.36
2	3.62	28.05	1.16	33.73	0.74
3	4.71	28.06	0.95	29.35	0.59
4	14.68	25.53	1.93	29.68	13.37
Groups of States	POVR	LITR	POVR	GSOE	POVR
	(6)	(7)	(8)	(9)	(10)
1	33.29	9.79	17.47	6.43	33.61
2	25.64	5.09	27.18	0.82	36.23
3	29.33	6.12	30.99	1.77	27.75
4	41.89	12.54	36.23	2.48	32.12

Source: Authors' Estimation.

GDP growth rates of states in column 3 exemplify that higher group of states perform well in poverty reduction where states which have 11 plus growth rates have managed to reduce poverty to somewhere around 14 percent. The lowest growth produces highest poverty rates and surprisingly the same rate of poverty is observed for the second quartile group, while the third group managed to reduce poverty considerably. Therefore, growth *per se* has not uniformly taken care of poverty reduction. For the same variables, range of poverty rates and GDP growth rates signify that poverty variations become larger and larger once growth rates become smaller and smaller. Declining trend in the sex ratio, which is indicative of number of females falling per one thousand males, suggest that poverty rates escalate when sex ratio worsens. Columns 5 and 6 clearly demonstrate this fact. Ranges pertaining to the same also suggest that when sex ratio worsens, the variations in the sex ratio become stronger. Correspondingly, mean values of poverty rates for different groupings of states become phenomenally escalated once variations in the falling sex ratio becomes stronger. A cursory look at columns 7 and 8 of table 5 reveals that higher the literacy, lower is the poverty level, as for the first grouping of the states, LITR worked out to be 86.13 percent and for the same states in the group, poverty is the lowest which is 11.54

percent. It can be seen in the columns that with decrease in the literacy rate, poverty rates phenomenally increase. For example, last group of states where literacy rate is 55.9 percent, the corresponding mean value of poverty is around 30 percent. The dispersion for the same, which are placed in the columns 6 and 7 of table 6, suggest that literacy variations are high when literacy rates are low. It is noted that the variations in poverty become larger and larger when literacy rates fall.

Finally, with every increase in the social sector expenditure growth, poverty rates are declining. The range for the same is unevenly distributed across various quartile-groupings of states. In fact, for higher expenditure groupings such as groups 1 and 2, poverty variations seem to be higher. Therefore, it is not about the social sector expenditure growth rate *per se* by states but it is about variations in the expenditure of growth rates itself across states that make the variations in poverty fall. Although GSOE is not directly serving the purpose of poverty eradication, it mainly works through education, health, hygiene, social infrastructure, etc. and this can be noted with a caution that there are many other intermediate variables that influence poverty, which should be separately and properly examined.

TABLE 7: DISTRIBUTION OF KEY SOCIO-ECONOMIC FACTORS ACROSS DIFFERENT QUARTILE GROUPS OF POVERTY

Groups of States	Group-wise Mean Values of Variables					
	POVR	GPD	GSDP	GSR	LITR	GSOE
1	40.99	24.14	7.24	0.42	65.84	18.05
2	25.41	18.78	8.90	1.30	71.51	16.94
3	17.51	19.84	9.84	0.56	75.49	16.89
4	10.23	14.41	8.97	2.41	82.61	15.89
Total no. of Observations	35	35	32	35	35	30

Source: Authors' Estimation.

Considerable amount of reflections can be unearthed once quartile groupings of states are organized, first for poverty and then arranging the estimates of mean values of different variables without changing the grouping that is placed on poverty. This gives freedom to look at the behaviour of socio-economic variables under different levels of poverty. This is exactly opposite to what was presented in tables 5 and 6 where we changed the poverty groupings of states according to the groupings of individual variables. The first group belongs to very high mean value of poverty rates of around 40 percent for different states and the fourth group of states indicates the number of states that belong to the lowest poverty rate of around 10 percent. It is important to see the mean values of group one vis-a-vis others and it is also evident that the difference between the mean values of first and second groups is phenomenally large.

TABLE 8: DIFFERENCES IN THE LIMITS OF RANGES OF KEY VARIABLES VIS-A-VIS POVERTY

Groups of States	POVR	GPD	GSDP	GSR	LITR	GSOE
1	12.45	41.50	4.06	7.14	25.18	8.62
2	9.90	16.93	7.27	5.15	20.34	4.90
3	5.05	54.59	11.79	17.34	26.32	12.39
4	12.74	23.18	5.43	6.06	31.09	5.96

Source: Authors' Estimation.

According to the distribution of quartile groupings on poverty levels, other variables such as GPD, GSDP, GSR, LITR and GSOE are arranged. It is interesting to note that lower growth rate of sex ratio, lower literacy, lower growth of state level GDP and higher population density growth rate produce severe poverty. For the same groupings, dispersion in terms of range reported in table 8 is very high for GPD and LITR, while GSDP, GSR and GSOE share lower range.

A similar interpretation can be noted for second group as poverty declines, we observe improvement in economic growth of states, sex ratio growth rate and literacy rate. In other words, improvements in these three parameters push poverty down. Finally, when mean values of poverty rates for states grouped under four become lowest, literacy rate becomes highest though GSDP of states do not confirm to this fact. As far as growth rates of state-level GDP and sex ratio are concerned, some variations in groups 4 and 3 can be noted. The value of growth rate in sex ratio in group 3 corresponding to poverty rate of 17.51 percent is 0.56 percent which is actually lower than the groups 2 and 4. Therefore, the unique pattern of sex ratio growth is not noticed with continuously falling poverty rates. This indicates that the growth rate of the sex ratio does not really push down poverty as expected. For obvious reasons one would understand, increasing growth in sex ratio for a country like India shows well-developed and properly managed democratic society which can contribute to the sense of reducing poverty levels but ultimately cannot fully help towards pushing poverty levels down. The grouping 3 in table 8 is observed to be having large values of ranges while the same is shared in case of GPD and LITR across all groupings. This clearly indicates huge amount of variations in literacy and density levels irrespective of levels of poverty and importantly, density growth and literacy rates *per se* have larger influence in shaping the behaviour of poverty while variations in them do not matter.

6. A Critical Note

An attempt has been made to update the information on most of the demographic variables including poverty by exponential smoothing technique while giving more weightage to the latest information. There are also variable such as GSDP and GSOE which have continuous and latest information from published sources mentioned in the study. We have placed this information to work out the levels of poverty across groupings. The naive estimates, which are not reported here, suggest that most of the states have experienced reduced levels of poverty, while there is a considerable improvement in the literacy and sex ratio. Growth rates of state level GDP and population densities seem to be having some variations across time and groups. It is clearly evident that the reduction in poverty level is achieved while improvements in the demographic and other variables are noticed.

7. LIMITATIONS OF THE STUDY

This study has looked at the inter-state group variations of poverty in India by examining its behaviour across quartile-based groups of states and also tried to associate it with the distribution of other socio-economic variables. Some useful insights that have emerged from this study are noteworthy. However, the results of this study must be interpreted carefully by noting some important limitations.

One can construct a larger exercise of understanding the poverty behaviour by placing across considerable amount of issues on socio-economic, institutional and political variables while also building rigorous time-series data through appropriate methodology. Large-sized macroeconometric model can also reveal dynamics in the poverty levels while taking into consideration the larger picture of both internal and external sectors. These are not attempted in this study. Variations in Quartile classifications and adopting different methodologies might throw very different estimates and accordingly the estimates are sensitive to the data, frequencies with which they are used and the methodology employed. Poverty estimates are required to be adjusted for variations in inflation, growth and development levels to see the depth and severity of poverty variations. Therefore, further studies can take these issues into account.

8. CONCLUDING REMARKS

Poverty and hunger are severe problems for humanity. A society cannot afford to ignore the existence and persistence of poverty including its consequences. Poverty in India has been a major problem from rural route till the policy-making institutional objectives. This study brings out some important insights that could be useful in this direction. It can be clearly noted that the inter-state variations in poverty are highly unequal with the poverty levels for some states actually having escalated off-lately. Probably, this has something to do with rising unemployment and inequality. If one looks at this more objectively, the scenario of rising both unemployment and inequality has put tremendous pressure and hurdle on not only the dispersion of poverty levels across states, but has also slowed down the rate of decline in poverty. This is an important implication for developmental policy perspectives. While the Government is continuously putting efforts on reducing poverty for political economy considerations, the comprehensive policy framework needs to be evolved by linking growth, development and reduction in the poverty. This probably includes addressing critical issues related to rural development, sustainable steady rate of minimum growth of agricultural sector, changing demographic features and the social sector. This study also points out that the improvements in growth rate of sex ratio and literacy rate have a long way of positively contributing to the problems of poverty and population densities though urbanization and unemployment remain key issues arising out of this nexus. Some of the states in India have managed to overcome key problems pertaining to both poverty levels and incidences but these problems still need to be addressed across many other states. It is precisely because of this that a comprehensive national policy on poverty eradication needs to be formulated while taking into consideration of the success stories.

NOTES

1. Poverty in India is measured within the expenditure framework in which the minimum average expenditure required per household to purchase a representative basket of commodities is used to define a poverty line, and this line differs for each state depending on the adjustments made for inflation prevailing therein and the importance of commodity combinations in the basket. However, this definition has been subjected to several criticisms, particularly in the context of its lack of solid welfare foundations (Panagariya and Mukim, 2014) and in comparison with other more holistic concepts of poverty such as Sen (1981) and Government of India (2009) while taking into account of the changing characteristics and distribution of poverty

itself across the states in India. Moreover, the qualitative differences between those below the poverty line and those who are not far above it remain an important area of debate in the Indian context and therefore a minimalistic definition of poverty thus accounts for only the subsistence notion of poverty.

2. In India, Head Count Ratio (HCR) is used as a predominant measure of poverty levels which is a ratio that is based on the household expenditure surveys as conducted by the National Sample Survey (NSS).

3. The Tendulkar methodology of poverty estimation was a seminal shift in the measurement and analysis of poverty in India. Though there are many complex dimensions of the various changes introduced by Government of India (2009), the shift in estimation of poverty line from a calorie-intake norm to one that was based on actual reported private household expenditures for a chosen poverty line basket was a critical change in the very conception of poverty itself. This is evolved by looking at poverty line from the normative expenditure that is consistent with nutritional, educational and health outcomes.

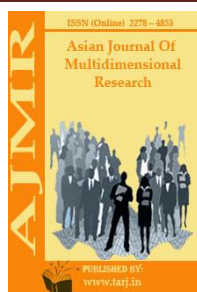
4. Data on the demographic variables, namely GPD, GSR and LITR, were estimated from their original raw data for two points in time namely 2001 and 2011 and the decadal data before 2001 were not included, so as to maintain broad uniformity with the time period of 2004-05 to 2011-12 as chosen in this study.

5. This paper has chosen to build the data on various variables used by taking their mean values across their sample periods for each state, as against their median values across time. Our belief is that mean can serve as a better measure for locating the central value of a variable for a single state across time as the mean utilizes all the relevant information in the form of actual observations. However, we found that the distribution of states for a variable across quartiles differed moderately between the mean values and median values of the same, though this does not seem to be a critical threat to the broad results obtained.

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SOCIO-ECONOMIC DETERMINANTS OF DIGITALISATION AND INTERNET PENETRATION: A CROSS COUNTRY ANALYSIS

Gaganpreet Kaur Kaushal*

*Assistant Professor of Economics
Sri Guru Gobind Singh College,
Chandigarh, INDIA
Email id:gagankaushal78@gmail.com

ABSTRACT

Internet has become a lifeline for national and global economy that provides opportunity to the corporates and the customers to make informed choices besides accelerating their speed and efficiency. Despite of its rising importance, there are still many countries where internet penetration is very less and affecting their present and future growth prospects. The present paper aims to identify socio-economic determinants of cross-country disparities in Internet penetration by examining a set of 18 countries which have more than 1% of the total world population. The study includes variables like GDP per capita, literacy rate, Percentage of population in the age group of 15-64, Level of urbanization, Telephone density, Trade in goods as percentage of GDP, consumption of electricity per capita, Personal computers per 100 people and Percentage of English speaking population in the country. Step wise regression analysis has been carried out to examine the relative importance of these variables in determining the overall variability in internet penetration across nations. The study concludes that Gross Domestic Product per capita along with telephone density, mobile cellular subscriptions and possession of personal computers together explain 85% of variations in internet penetration across these eighteen nations. However, Percentage of English speaking population, Percentage of population in the age group of 15-64, level of urbanisation, literacy rate and trade in goods as percentage of GDP emerged to be relatively insignificant variables. The study suggests that greater public investment in telecommunications Infrastructure especially in developing countries can help to mitigate the problem of global digital divide.

KEYWORDS: Digitalisation, ICT, Internet, Linear Regression, Statistical Significance.

I. INTRODUCTION

Increased use of internet connected digital technologies and related applications have changed the way economies work and the businesses are conducted across the world. According to the World Bank, digitisation supported by Internet promotes economic growth by providing access to opportunities which could never be earlier afforded or even imagined by the economically disadvantaged people across nations. Gone are the days when one could survive in business and other fields without having much information about the relevant environment. Informed choices and informed decisions have now become imperative for survival and growth of individuals and corporates. Given the rising need of right and adequate information, role of Internet cannot be avoided.

Internet provides tremendous opportunity to small and medium enterprises as through internet they can get easy access to the global marketplace without making huge costs and without any physical presence in other countries. Digital progress can help the nations to create level playing field for the small and large producers. The complex business solutions which were earlier restricted to large corporations are now in the reach of small companies and that too at a much lower cost. Internet has facilitated business collaborations around the world. Because of reduced cost of communication and travel, business collaborations of various types have become a routine. Therefore digitalisation makes business processes more efficient by improving the access to labour, raw materials and customers.

Digitalisation helps to create consumer awareness by empowering the consumers with knowledge and this is what makes it increasingly difficult for the sellers to take advantage of consumers' ignorance concerning product quality and price. Easy access to online markets makes the competition among sellers increasingly tough and helps to improve prices at consumer level. Internet helps to narrow down rural and urban divide by giving the farmers easy access to information concerning emerging farm practices and technologies, market demand for different products and market prices. This in turn raises profits and incomes of the farmers. Internet access and ICT development in rural areas broadens the employment base of rural people beyond traditional industries. Rural people get benefitted by more job opportunities and reduced isolation.

Free content available on internet in the form of product commentaries, social networks and specialised blogs helps the businesses to advertise their products, consumers to give their feedback and governments to disseminate information concerning their programmes and policies. Several times in the past, governments in the advanced nations i.e., US, Germany, Australia and New Zealand have invested huge amounts of capital in ICT infrastructure and broadband connection to address the problem of down business cycle and to create new job opportunities in the market. Taking account of digital dividends, World Bank calls internet and digitisation as a key driver of economic growth and job creation in countries.

II. REVIEW OF LITERATURE

Caselli and Coleman II (2001) tried to explain variation in ICT investment across nations and used the ratio of computer imports to workers as a proxy variable. After comprehensive analysis of variables such as income and investment per worker, share of agriculture and manufacturing in GDP, human capital, import and export to and from OECD nations, they concluded that openness to imports from OECD countries, the level of educational attainment are statistically more significant variables that explain variation in ICT investment.

Kiiski and Pohjola (2001) analysed Internet hosts per 1000 inhabitants as a proxy for level of Internet use across nations. They found income per capita, average years of schooling and telephone access costs as the major determining variables for disparity in internet penetration across nations.

Pohjola (2003) analysed cross-country investment in ICT. He regressed per capita investment in ICT in different countries on their per capita income, price of ICT equipment, human capital, share of agriculture in GDP and openness to international trade. The study found positive effect of human capital on ICT investment whereas effect of agriculture share in GDP was found to be negative.

Chinn and Fairlie (2007) in their study found that the global digital divide is mainly because of global income disparities. Lopez et al. (2011) analysed the impact of various economic, demographic and regional factors to explain frequency and intensity of Internet use by people in Spain. Their study suggested that internet use is mainly associated with age, education, employment, occupation, urbanisation and regional GDP per capita.

A survey of literature suggests that although many studies have been carried out with respect to cross country variations in internet penetration and digitalisation but most of these studies use proxy variables for internet penetration rather than using the actual variable i.e., the use of internet itself. Besides, these studies seem to have conducted partial analysis of the problem whereas the present study makes holistic use of several socio-economic factors to analyse the problem.

III. SIGNIFICANCE OF THE STUDY

Diffusion of information through greater internet penetration improves communication efficiency and political engagement (Jorgenson, 2001) and allows developing countries to "leapfrog" traditional production methods resulting into increased productivity (Steinmueller, 2003). According to The World Economic Forum, about 10% increase in the usage of communications and information technology (ICT) by companies, consumers and government in a country can account for at least 0.75% additional growth in per capita GDP and may contribute to nearly 1.02% reduction in the level of unemployment.

Given the benefits of digitalisation and widespread internet access, it is easier to understand that digital divide across nations would rather worsen the problem of global economic divide. Poor digitisation and lack of Internet facility with poor ICT infrastructure would make it increasingly difficult for the developing and least developed countries to catch up with the advanced nations of the world.

The striking differences in digitalisation and internet penetration that exist across nations may pose a serious challenge to equity and economic justice at the global level. These differences in digitisation and internet penetration and resultant variations in information diffusion may have substantial economic consequences for the nations especially the developing countries and therefore it becomes important to estimate the extent of digital divide across nations and also to identify and analyse the socio-economic factors that cause such digital divide across nations.

IV. OBJECTIVES OF THE STUDY

The present paper aims at identifying the level of digital disparity across nations especially in terms of internet penetration. Besides analysing the level of global digital divide, the present

study makes comprehensive analysis of socio-economic factors governing the use of Internet across nations and also studies the relative importance of these factors in determining the overall variability. Therefore, broadly the study has been run with following objectives in mind:

1. To identify the level of digital disparity across nations especially in terms of internet penetration.
2. To identify the socio-economic determinants of internet penetration across nations
3. To analyse the relative role and significance of various factors in the overall variability.

V. RESEARCH METHODOLOGY

Although the primary indicator of digitalisation of any country is the use of internet by its people but acknowledging the fact that internet is accessed mainly through fixed broadband connection or through smartphone, (as people with smartphone have been observed to have relatively higher probability of internet use), so the present study makes an attempt to analyse cross country disparity in terms of these indicators too.

The study has been carried out on 18 countries. These are the countries with population of more than 1% of the total world population. Together these countries represent about 69.93% of the world population and these countries are China, India, United States, Indonesia, Brazil, Pakistan, Nigeria, Bangladesh, Russia, Mexico, Japan, Ethiopia, Philippines, Egypt, Vietnam, Germany, Iran and Turkey. Democratic Republic of the Congo, which also has the population of more than 1% of the total world population, has been left out of the purview of study because of unavailability of the data.

In addition to this, the present paper also attempts to identify the factors that cause global digital divide along with comprehensive analysis of relative importance of these factors in the determination of whole. The factors included in the study are:

- Gross Domestic Product per capita (GPC)
- Level of urbanisation measured by percentage of total population living in urban areas (LOU)
- State of human capital measured by literacy rate (LTR)
- Percentage of population in the age group of 15-64 (PAG)
- Percentage of English speaking population (ESP)
- Telephone density measured by fixed telephone subscriptions per 100 people (FTS)
- Mobile cellular subscriptions per 100 people (MCS)
- Number of personal computers per 100 people (PCS)
- Trade in goods (sum of imports and exports) as percentage of GDP (TIG)

With a view to analyse the extent of disparity across nations, coefficient of variation has been used. Simple regression and step-wise regression analysis have been carried out to identify the factors causing the global digital divide and also to analyse the relative importance of these factors in the determination of overall variability. The statistical significance of regression coefficients has been examined by applying t-test. R^2 has been used to see the percentage variation in the dependent variable explained by a particular independent variable / many variables taken together. To compare the explanatory power of different sets of regression equations, value of adjusted R^2 has also been used.

VI. STATE OF CROSS-COUNTRY DIGITAL DIVIDE

Datashows huge amount of cross country differences in Internet Penetration as evident from the very large value of coefficient of variation which is 0.49 in terms of internet penetration. Results have been reported in Table 1.

TABLE 1: INTERNET PENETRATION (INT), FIXED BROADBAND CONNECTIONS (FBR) AND SMARTPHONE PENETRATION (SMT) ACROSS NATIONS (2017)

Country	Use of Internet per 100 people*	Fixed Broadband Subscriptions per 100 people	Use of Smartphone per 100 people
China	53.20	26.86	51.72
India	29.55	1.33	22.41
United States	86.18	33.85	69.31
Indonesia	25.45	2.29	20.70
Brazil	60.87	13.70	37.72
Pakistan	15.51	0.93	6.51
Nigeria	25.67	0.04	14.83
Bangladesh	18.25	4.43	5.21
Russia	73.09	21.44	54.73
Mexico	59.54	13.26	40.70
Japan	93.18	31.68	50.14
Ethiopia	15.37	0.55	14.35
Philippines	55.50	3.24	23.31
Egypt	41.25	5.35	30.43
Vietnam	46.50	11.80	26.40
Germany	89.65	40.45	68.81
Iran	53.23	12.39	37.12
Turkey	58.35	14.77	49.83
Average	50.02	13.24	34.68
SD	25.09	12.72	19.72
CV	0.49	0.96	0.57

Note: *pertains to 2016

Source: International Telecommunications Union (ITU), World Telecommunication/ICT Development Report, 2016/2017 and Newzoo's Global Mobile Market Report, 2017

The data suggests that there are huge gaps in Internet penetration in different countries. Internet use per 100 people is 93 in Japan, 89 in Germany, 86 in United States and 73 in Russia whereas

it is only 29 in India, 18 in Bangladesh and 15 in Pakistan. The average internet penetration rate, as evident from table 1, is 50.02 per 100 persons. As per data available, eight countries i.e., India, Indonesia, Pakistan, Nigeria, Bangladesh, Ethiopia, Egypt and Vietnam are performing much below the average in terms of internet penetration.

As far as fixed broadband connections are concerned, cross country disparities have been found to be tremendously higher. The value of coefficient of variation in terms of fixed broadband connections per 100 people is found to be surprisingly high i.e., 0.96. Germany leads all other nations in terms of fixed broadband connections followed by United States, Japan, China and Russia whereas Nigeria and Ethiopia lie at the bottom.

Disparities in the level of smartphone penetration are also tremendously higher with the coefficient of variation amounting to 0.57. United States leads all the nations in terms of Smartphone penetration followed by Germany, Russia, China and Japan respectively. Bangladesh, Pakistan, Ethiopia and Nigeria stand at the bottom.

VII. Determinants of Cross-Country Differences in Internet Penetration Rate

To identify the important determinants of cross country differences in internet penetration and to examine their relative significance in explaining the total variability, the techniques of simple regression analysis and multiple regression (step-wise) analysis have been used. In multiple regression analysis, we often come across the problem of multi-collinearity which results into inaccurate and imprecise estimates. To overcome this problem, the technique of step-wise regression analysis has been applied. Linear regression equations have been fitted by regressing the dependent variable (i.e., Internet Penetration) on each of the relevant independent variable separately as well as jointly through step-wise multiple regression analysis.

Variables in the step-wise regression model have been included based on their 't' values. The first independent variable considered in the model is the one which has the highest 't' value. Only those determinants have been included into step-wise regressions which are found to be individually significant as suggested by the results of simple regression analysis.

VIII. RESULTS AND DISCUSSION

Technique of simple regression analysis has been used to find those variables which are statistically significant when considered alone. To know the statistical significance of these variables, T values have been computed. The results of simple regression analysis have been reported in Table 2.

As clear from the Table 2, Internet penetration and GPC per capita has the highest and statistically significant value of correlation coefficient as evident from the T value followed by mobile cellular subscriptions per 100 people, fixed telephone subscriptions per 100 people, No. of personal computers per 100 people, Level of urbanisation and Literacy rate respectively.

Percentage of population in the age group of 15-64 shares very weak and statistically insignificant correlation with cross-country internet penetration. Same holds true for percentage of English speaking population and trade in goods as percentage of GDP. As Percentage of population in the age group of 15-64, percentage of English speaking population and trade in goods as percentage of GDP have been found to be statistically insignificant so these variables have been dropped straightaway and are not carried forward.

TABLE 2: RESULT OF PEARSON'S LINEAR CORRELATION AND SIMPLE REGRESSION WITH INTERNET PENETRATION AS DEPENDENT VARIABLE AND OTHER FACTORS AS INDEPENDENT VARIABLES.

	GPC	LOU	LTR	PAG	ESP	FTS	MCS	PCS	TIG
Pearson's R Statistic	0.886	0.756	0.675	0.167	0.362	0.816	0.811	0.529	0.279
Slope	622.291	0.735	0.544	0.117	0.438	0.639	0.551	0.704	0.506
Intercept	-134.98	26.659	61.247	57.174	6.931	-7.094	-13.58	69.141	17.531
T value	7.647*	4.621*	3.659*	0.679	0.678	5.593*	5.872*	4.907*	0.379

*Statistically significant at 1% level of significance

Source: Computations based on the values taken from International Telecommunications Union's (ITU) World Telecommunication Indicators Database. Data on income and demographics is taken from the World Bank's *World Development Indicators* database.

All other variables i.e., GPC, LOU, LTR, FTS, MCS and PCS have been further analysed with the help of step wise regression analysis to find their relative importance in the determination of internet penetration differentials. The variables have been entered into step wise regression model based on their t-values. The variable with the highest t-value i.e., GPC has been entered into the model first whereas one with the lowest t-value i.e., LTR entered last.

TABLE 3: RESULTS OF STEP WISE REGRESSION ANALYSIS WITH INTERNET PENETRATION AS THE DEPENDENT VARIABLE AND OTHER FACTORS AS INDEPENDENT VARIABLES

Intercept	GPC	MCS	FTS	PCS	LOU	LTR	R ²	\bar{R}^2	F value
-13.982	0.3796* (5.863)						0.793	0.773	61.16
23.521	0.3119* (4.178)	1.154* (3.556)					0.804	0.792	30.72
21.796	0.4132* (5.192)	0.407* (4.287)	0.280* (4.243)				0.846	0.813	25.67
7.577	0.514* (4.636)	0.743* (2.931)	0.674* (2.674)	0.476** (2.289)			0.887	0.852	25.40
4.793	0.302* (4.346)	0.695* (3.124)	0.569* (3.863)	0.463 (0.185)	0.364 (1.09)		0.890	0.841	19.50
1.436	0.343* (3.854)	0.247* (3.453)	0.764* (3.273)	0.557 (1.035)	0.276 (1.32)	0.451 (1.13)	0.892	0.833	15.16

Note: 1. *Significant at 1% level of significance 4. R² denotes coefficient of determination

2. ** Significant at 5% level of significance 5. \bar{R}^2 Denotes adjusted coefficient of determination
3. Figures in the brackets are t-values.

The results of step wise regression are shown in Table 3. The table suggests that GPC per capita alone explains 77% variations in cross country internet penetration. Together with no. of mobile cellular subscriptions per 100 people, the explanatory power of the model increases to 79%. When number of fixed telephone subscriptions was added to the model, the explanatory power of the model further rose to 81%. During the fourth step, no. of personal computers per

100 people was added which further raised the explanatory power of the model to 85%. But when the level of urbanisation and literacy rate were added to the model, value of adjusted coefficient of determination rather reduced to 84% and 83% respectively. Besides their regression coefficients were also found to be statistically insignificant.

IX. CONCLUSION

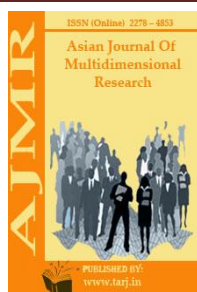
The study exhibits huge amount of cross-country differentials in the level of internet penetration. The study brings out some surprising revelations and concludes that Percentage of English speaking population, Age composition of population, level of urbanisation and literacy rate have nothing much to do with cross country differences in internet penetration. Trade in goods as percentage of GDP also plays insignificant role in determining internet penetration rate across nations. On the other hand, Gross Domestic Product per capita along with telephone density, number of mobile cellular subscriptions and no of personal computers per 100 people have emerged to be the major determinants of cross country differences in internet penetration and together these indicators explained 85% of total variations in internet penetration across countries.

The study suggests that greater public investment in telecommunications Infrastructure in the developing countries can work wonders to address the issue of cross country differences in digitalisation and internet penetration. Besides, global focus on economic growth of the developing nations through greater funding by the international financial institutions and development organisations can help to mitigate the problem of global digital divide.

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VIRTUAL TECHNOLOGIES IN IMPROVING LIBRARY SERVICES: AN OVERVIEW

Dr. M. Suganya Aravazhi*

*Post Doctoral Research Fellow,
Department of Sociology, University of Madras,
Chennai, INDIA
Email id: suganyaaravazhi2015@gmail.com

ABSTRACT

World Wide Web has totally changed the meaning of a library. Physical presence has been decreased rapidly with the invention of virtual library. There are many types of e-resources like e-books, e-journals, e-database, e-thesis, e-dissertation and gate ways to deliver the information to the desktops of the users. The major aim of this article is to analyse the role of various systems in improving library services i.e., Open Service Library Management System (OSLMS), Library 2.0, Radio Frequency Identification (RFID), Virtual Reference Service (VRS), Real Simple Syndication (RSS), Knowledge Organization System (KOS), Digital Geo Libraries, Library Automation, Library Cataloguing, Circulation services of library, Acquisitions, Inter-Library Loan (ILL), Library Consortium and Library Portals.. Adoption and adaptation of modern technologies is the need of the hour for any academic institution. The implementation of virtual technologies in library service promises to offer value added services to the existing operations of library and information centers that the electronic age librarians should immediately bank on.

KEYWORDS: *Digital Library, E-Sources, Information Centers, Learning Resources, Virtual Technology.*

INTRODUCTION

Virtual technologies offer a revolution in efficiency of information management and traceability. The operations of a library get a quantum jump with the introductions of computers. The computer helps to provide fast and reliable access to the resources available in the library as well as elsewhere. World Wide Web has totally changed the meaning of a library. Physical presence has been decreased rapidly with the invention of virtual library. Changing needs of users have changed the role of librarian, which has transformed to librarian into information professional. Librarians have always acted as a link between knowledge source and its users. In today's high-tech learning environment, the library as a learning resource is taking up increasingly more academic space and time in the life of learner.

Users are being connected to the information resources via internet for hyperlinks and for any more options and choices for advance search. The change in the information seeking behaviour is the result of the invention of e-resources. There are many types of e-resources like e-books, e-journals, e-database, e-thesis, e-dissertation and gate ways. The challenge posed by the information explosion is being successfully met by electronic information sources. Technologies such as e-mail and web provide tremendous opportunities for library and scientists to deliver the information to the desktops of the users (Dilip K Swain (2012).

REVIEW OF LITERATURE

Asad Khan (2016) investigated the factors that influence the adoption of Digital Library among research students. The findings revealed that Interface characteristics influence cognitive response which predicts student's intention of using digital library. Usefulness is directly affected by system characteristics and system quality. Finally, it is found that usefulness have highest effects on digital library usage intention.

Ekere et al (2016) study the perception of users towards digital library facilities, resources and services and found that users are highly satisfied with it. Users are highly aware and satisfied about the digital library resources such and WWW, WIFI and search engines compare to online databases, portals, online abstract, video CDs, CD-ROMs, and online indexes and abstract.

Fatima D. (2008)⁶⁶ investigated the impact of internet on reference services by exploring the following areas: user internet access and training in the library use and integration of the internet as an information tool in reference services and the internet training and knowledge of reference librarians. The result showed that all responding libraries have internet access and all but one provided access to their users. On average, users have had internet access for three and a half years on average; reference librarians have had internet access for five years. Librarians reported that the reference process took longer, that user search behavior had changed and expectations had increased while the majority of libraries had websites, only a small number of librarians had individual pages that they updated and maintained. The majority of libraries provided electronic reference via e-mail and the library websites, but these are characterized by low usage. Finally, libraries tended to offer both end user and intermediary searching to online databases.

Mohamed H. (2007)⁶³ investigated the application of information and communication technologies (ICT) in special libraries of Kerala and his study revealed that though the libraries had hardware, software and communication facilities to some extent, ICT- based resources and services were not reaching the users to the expected extent. Library automation in special libraries was largely commenced during the period 1990-2000. CDS/ISIS was used more in the libraries than any other software. The library catalogue found to be the most popular area for automation. The ICT-based resources used by the largest percentage of the users were the e-mail.

Most of the libraries were hampered by lack of funds, lack of infrastructure and lack of skilled professionals to embark on automation of all library management activities and applications of ICT. A good number of the library users were not satisfied with the application of ICT in their libraries and “indicated inadequate ICT infrastructure” as their major reasons for dissatisfaction.

Xianjin et al (2015) worked on Flow experience with respect to Mobile Library and try to compare perception of user’s with mobile libraries and web digital libraries with respect to flow experience. Where flow experience defined as best experience about an activity that can be done by comparing perceived skills and perceived challenges. Study reveals that more users experienced flow in using web digital libraries than mobile libraries.

OPEN SERVICE LIBRARY MANAGEMENT SYSTEM (OSLMS)

The growing body of institutions accepting open sources as a model for delivery of the core library catalogue is a testament to the nimbleness open source systems have shown in adopting a new generation of library delivery in the Library 2.0 framework. In particular Koha and Evergreen have phenomenal acceptance in the last decade. There is also a solid deployed base of open source systems for digital library management, including systems with widely installed base such as space and Fedora.

Open source systems (OSS) can provide a cost-viable model for implementation of open access in smaller institutions. The availability of a wide range of open source tools and technologies offers an opportunity for direct technical engagement in a number of ways: by learning web 2.0 technologies that allow direct re-engagement with the library patron base: by downloading and installing OSS and by contributing to the community enhancement of the software. The adoption of open source systems can be a practical response of increasing information capability in a context of a diminishing budget. There is also a role in engagement across the multiple modes of communication.

LIBRARY 2.0

The term ‘Library 2.0’ was coined by Michael Casey on his blog Library crunch as a direct spin-off of the terms business 2.0 and web 2.0. It is a model for library service, such a model encourages constant and purposeful change, and first of all it invites user participation in the creation of physical and virtual service forms and provides feedback and evaluation. Library 2.0 is a transformation in the way library services are delivered to library users. It provides new tools to make the library space more interactive, collaborative and driven by community needs. It encourages collaboration in two way social interactions between library staff and library customers. Blogs and wikis are fundamentally 2.0 and their proliferation has enormous implication for libraries. With the help of web based library services in the developed countries users are attending it round the clock.

RADIO FREQUENCY IDENTIFICATION (RFID)

It is an automatic identification and data capture technology. It uses radio waves as the communication medium between RFID tagged objects and RFID reader stations. Tags (electronic labels) operate as portable data bases that can be accessed wirelessly. The memory on these tags can be read and written remotely and at a very high speed. FID system consists of four main components. They are 1) RFID tags are flexible, paper thin, smart labels that are applied directly to the library collection. Tags may be passive (which have no battery or other power source and derive all the power required for their operation from the reader’s

electromagnetic field or active (which has a transmitter to send back information and use a battery to transmit a signal to a reader) or sensor tags (which incorporate sensors as well as memory on the tag). 2) Antenna is a conduct between RFID tags as they pass through the activation field. Once a tag is activated, it can send information to or receive information from the coupler. 3) Coupler is a link between RFID tag and the PC. It can read information from a tag and send it to the PC or can read information from the PC and send it to the RFID. 4) Personnel computer (PC) is the link between the coupler and the library automation system.

Advantages of RFID in Libraries are followed;

- 1) RFID is designed to work efficiently with a materials sorting system, which will automate the check in and checkout processes.
- 2) It eliminates the applied labor of manual checkout and return processes. The self-check machines are extremely user friendly.
- 3) It gives better availability of books as the library database is updated in real time.
- 4) Inventory is faster with RFID than with barcodes.
- 5) With usage of the self-check and drop box machine, which are fully automated, the library staff can focus on assisting patrons.

VIRTUAL REFERENCE SERVICE (VRS)

Virtual reference can deliver a reference service by electronic means from asynchronous via e-mail and web forms to real time via chat, web push etc., a collaborate Virtual Reference Service (CVRS) allow libraries to share experience and exchange knowledge with one another. Dr.S.R.Ranganthan father of library science has already advocated for reference services and now due to developments in web2.0.Virtual reference service can be effectively rendered remotely at the desktop of users. Instant messaging Virtual Reference Service carried out by various chat software's like Meebo. Under this instant chatting service, every day the librarian has to login chat service providing login ID and password. This becomes available for public where in the user can put a query at the box. The users can interact and can obtain queries clarified instantly.

REAL SIMPLE SYNDICATION (RSS)

It is a new method to transmit the information over internet. It is a protocol which pushes the website updates to its subscriber through the RSS reader. Currently electronic age librarians are keen on using RSS feed for getting latest and most required information mainly in a filtered and organized way. RSS feed can be integrated into the library's website to provide value added library services. Instead of searching through the various contents of library website to see what new users are can have the information on their computer by 'RSS Reader'.An RSS feed is a document that contains either a summary of content from a website or the full text of a website. It makes possible for people to keep up with their favorite websites automatically rather than checking them manually. Many Bulletin Board Services and library training programs can be converted to RSS for helping the user.

Students or Faculties subscribe to different library feeds using a variety of RSS aggregators chosen based on their personal preference. At regular intervals, the aggregators automatically check for and download the new contents from the RSS feeds. When they look out their aggregators they see a list of all the feeds and which they can quickly access through the aggregator. When they feel the information is not require for them, they can easily delete it or

remove the feed from the aggregator, utilizing RSS feeds to provide library services within an electronic library environment in an effective tool to provide targeted users groups relevant information as well as efficient method to provide dynamic web pages.

KNOWLEDGE ORGANIZATION SYSTEM (KOS)

Knowledge Organization Systems are mechanisms for organizing information; they are at the heart of every library, museum and archive. A KOS serves as a bridge between the user's information need and the material in the collection. All digital libraries use one or more KOS. Some important functions of KOS in Libraries are followed:

- a) Analysing user needs: It is essential to thoroughly understand the environment of the user. One must look not only at the needs for organizing the digital library materials but also at possible links between content within and outside the digital library walls.
- b) Locating KOS: Once the user's needs have been analysed, it is necessary to locate KOS to meet the need.
- c) Planning the infrastructure: It is necessary to make decisions about the architecture of the KOS in the context of the digital library setting. If the system is available on the web, it is possible to consider linking to the KOS as an external system.
- d) Maintaining the KOS: Version control of the KOS is extremely important. Reloading a new version from the system provider is one way to accommodate changes.
- e) Presenting the KOS to the user: The KOS can be exposed to the user in different ways. Material can be grouped into KOS related themes or categories on the digital library's web site. Ontology is the newest label to be attached to some KOS. It describes knowledge in a specific area is often connected with systems for data mining and knowledge management.

DIGITAL GEOLIBRARIES

One approach used by librarians in making digital geospatial data available to their users is to incorporate web-based mapping functions with their library geospatial information holdings. Such efforts combine the location aspects of the metadata descriptions of the geospatial data in the catalog with the mapping capabilities of GIS software. In building web based functions into their geospatial collections. Some libraries have termed their collection as 'digital geolibrary'.

A geolibrary would ideally provide open access to many types of information with geographic references. Web GIS (Geographic information systems) application is available on the Internet gives access to a varying amount of specialized geospatial data. The mapping sites give access to socio economic, demographic and planning data. Many government sites use ESRI software products such as ArcGIS and ArcWEB services to facilitate data searches for information. Other WebGIS application include environmental planning agricultural planning, wetlands management, archaeological research, health planning research, transportation planning and education planning. Internet sites essentially provide access to GIS data, software educational and mapping or related services. For Libraries, the services can give access to current and large amounts of geospatial data are usually available in a timely manner.

LIBRARY AUTOMATION

It refers to the use of computers to serve the needs of library users. The application of computers in the library operations avoids repetitive jobs and saves lot of labour, time, speeds up operations, increase use of library resources. Library computerization is now gaining importance necessitating the establishment of profession-wide standards. Comprehensive studies of library computer systems world over include discussions of machine managed acquisitions, cataloguing, serial control, circulation and bibliographic service modules. In general, librarians are looking to maximize the benefits of automation by spreading computer use to as many aspects of library activities as possible by taking advantage of developments in computer hardware and software and telecommunications.

Library automation is maintained in major areas. These are acquisitions, technical services, cataloguing, circulation, serial control, reference services, user tools, bibliographic utilization, reprography, Inter-library communications, general administration, grants administration, library publications, bindery, periodical citation searching, OPAC, bibliographic data base and etc. A Library planning to automate undertakes a process by which representative staff and users can identify service needs and objectives.

LIBRARY CATALOGUING

Online catalogue search has adopted a diversity of methods including comparative studies, prototyping, controlled experiments, transaction, log analysis and protocol analysis. Cataloguing and classification are used to develop an index of the library collection to enable users to determine the availability of resources. They create a card or manual system with two different files that have 1) a shelf list file for staff use and 2) a dictionary catalogue for use by staff and students. The extensive and powerful searching and retrieval capabilities that computer technology has introduced to library catalogues, such as keyword searching truncation, Boolean searching, hypertext searching were first introduced in A&I Services. Library cataloguing has come to a set of principles which are internationally agreed upon and has provided bibliographic data, where as A&I services have not. However, in the online environment with a variety of users, all the junctions of the catalogue need to be considered important.

CIRCULATION SERVICES OF LIBRARY

The circulation desk is the library's reception room as well as its book distribution and information centre. The circulation department being responsible for loan services, usually maintains a record of all loans, keeps a file of registered borrowers, provides machinery for the recall of overdue items and for reserving titles in demand, supervises the shelving of material in the stocks and arranges extension, inter library and public relations services, circulation control is one of the most widely automated library operations and it is often the first and simplest activity to be automated in a given library, because circulation control systems bear on obvious resemblance to inventory management, retail charge card operations and other transaction processing activities which have been successfully automated in general business applications. Bernius, S (2010)

While prewritten circulation control software packages are available for computers of all types and sizes, medium sized and larger public and academic libraries have typically relied on mainframe and minicomputer based products. Minicomputer based turnkey circulation control systems are available from CLSI, Geac, Data research associates (DRA), Dynix, OCLC and other vendors. Rather than being written into programs, particular operating parameters are selected by libraries from a range of possibilities.

ACQUISITIONS

Acquisitions may be defined as, all library activities involved in the purchase, leasing or otherwise obtaining legal access to information sources. The acquisition process is fundamentally the same in any library setting, irrespective of size of budget and staff or the type of users served. The acquisitions demands for interconnectivity and interfacing with outside computer systems. Since acquisitions deals in commercial transactions, it needs convenient access to the commercial world's systems.

Major functions of acquisitions are; a) obtaining information about materials. b) Initiating the purchasing process. c) Maintaining records of materials ordered. d) Authority payment. e) Clearing order records. f) Claiming and cancelling orders and g) Developing and analyzing performance statistics. The acquisition of free internet distributed documents and data files is especially prone to communication gaps, since they can be down-loaded, or simply connected by staff members not involved in the acquisitions process.

INTER-LIBRARY LOAN (ILL)

It is concerned with lending of document to the user for a specific period of time. ILL systems of OCLC are World's largest online computerized ILL system used by over 6000 libraries worldwide. OCLC an online library network facilitates co-operative computerized catalog using. Besides this library of congress is also offering ILL Services.

Digital Preservation Strategies

It is an action or set of actions that ensure preservation of digital information for maximum time. They are:

- A) Refreshing is the solution to the deterioration of physical media.
- b) Migration is the process of transferring data from a platform that is in danger of becoming obsolete to a current platform.
- c) Replication means creating duplicate copies of data or information on one or more systems is called replication.
- d) Emulation is the replicating of functionality of an obsolete system (a programme of one computer running on another).
- e) Digital museum is another technique through which the digital data can be preserved.

LIBRARY CONSORTIUM

Library consortium is a community which has formally agreed to coordinate, cooperate or consolidate certain function to achieve mutually objectives. It is an association of a group of librarians to achieve mutually the joint benefits. Consortium may be formed on a local, regional, national or international basis or on a functional basis. Consortium providing library services with access to new electronic resources including databases and services offered by the World Wide Web (WWW). It provides facility to build up digital libraries. The consortium have been offered better terms of licenses for use, archival access and preservation of subscribed electronic resources, which would not have been possible for any single institution and available 24/7.

Health Science Library and information Network (HELINET) an electronic resource sharing consortia has grown to be single largest library consortium in the country by membership.

HELINET's goal is to deliver information to users' desk top with round the clock access (MahenderChoudhary and M.Ram, 2014). The major benefit is this consortium was expanded access to core international, e-journals, cooperation between the Universities, Publishers and libraries would be the advantage of all members of the scholarly community.

LIBRARY PORTALS

The portal sites or gate ways redirect a user to the holders of the original digital material. The librarians being the earliest users of the web, started to gather and organize link to important web-based resources on various subject. A subject gateway can be defined as facilities that allow easier access to web-based resources in a defined subject area. Subject gateways are also known as subject based information Gateways (SBIG), subject based gateways, subject index gateways, virtual libraries, clearing houses, subject trees, pathfinders, etc., Subject gateway is an important component of a library web site designed for the library users so as to help them discover high-quality information on the internet in a quick and effective way.

Subject gateways employ subject experts and information professionals to select, classify and catalogue Internet resources to aid search and retrieval for the users. In the process, users get benefited from the expertise to librarians and subject experts with subject gateways rather than having to locate, evaluate, filter and organize the resources themselves, specialized software are available as freeware or as priced software to create and maintain professionally developed subject gateways.

CONCLUSION

Libraries in India are rapidly transforming into digital libraries and virtual learning resource centres. Adoption and adaptation of modern technologies is the need of the hour for any academic institution. Today, the librarian plays a significant role in information handling and information transfer. He is rightly known as the information officer and supposed to provide an active service for maximum use of information with minimum cost and time. Hence social networking tools provide the new platform for students outreach beyond the four walls of traditional library by allowing students to access the library and its resources along with the comforts of visiting then on web, which they often desire for. The implementation of virtual technologies in library service promises to offer value added services to the existing operations of library and information centres that the electronic age librarians should immediately bank on.

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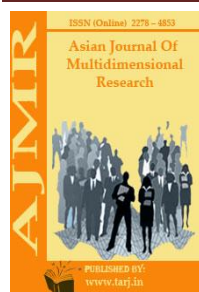
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ASSOCIATION OF DEMOGRAPHIC VARIABLES ON QUALITY OF WORK LIFE OF TEACHING STAFF IN PRIVATE ENGINEERING COLLEGES

Dr. Balaram Bora*

*Associate Professor,
Department of Management Studies,
Aditya Institute of Technology and Management,
Tekkali, Srikakulam, Andhra Pradesh, INDIA
Email id: balaram_bora@rediffmail.com

ABSTRACT

Technological advancement is showing enormous impact on the modern civilization and it has changed the pace and face of the economies of the world. At this juncture, engineering colleges are playing pivotal role in producing highly talented human capital, which is inevitably a factor in making the economy vibrant. In this context, faculty members constitute an important element in the teaching-learning process and delivery of outcomes. Quality teaching learning systems and processes as well as quality faculty are inevitable in transmission of knowledge and skills to the students. Further, modern organizations are trying to reinvent their cultures with high emphasis on positive workplace behaviours and attitudes in their employees. In this connection Quality of work life practices are considered as useful in promoting positive workplace behaviour and attitudes. Thus perceived positive quality of work life experience in the private engineering college employees may affect the outcomes at work place. The universe of the study includes 6 private engineering colleges situated in Srikakulam district of Andhra Pradesh State and 837 college teachers were working. A sample of 209 respondents (comprises 25%) was collected from the universe. The researcher has chosen survey based descriptive research design in view of nature of the present study. Simple percentages, Descriptive statistics, independent samples t-test, and One-way ANOVA and Chi-square test was conducted. As per the results, mother tongue, technical/non-technical educational background of the respondents and their annual pay has shown highly significant association with the perceived Quality of Work Life in these respondents.

KEYWORDS: Perceptions, Parameters, Quality of Work Life (QWL), Teaching Staff, Determinant

INTRODUCTION:

The concept of Quality of Work Life (QWL) has emerged as an important determinant of a model employment. Wages and salaries do not indicate how good the employer is. It is the total Quality of Work Life, wages and salaries include that is taken into account while rating employment conditions. Effective management therefore, is also about ensuring better quality of work life to the working class. The emphasis has to be on how good are the total living conditions of the working class rather than only the work climate provided in the industrial unit. Worker does not lead on the job work life only. In fact the off the job life is also equally important. Sometimes, maybe it is more important because a worker spends more time off the job than on the job. Obviously, the quality of work will always have to be a function of both whether the managements like it or not. In order to ensure high quality performance, the managements need to provide a high quality of work life.

The term QWL was introduced by Louis Davis. Dubey defined QWL as 'the degree of excellence of one's life which contributes to the individual and benefits the society at large'. Quality of work life can be defined as the status of objective conditions/status of living of workers at the work place. It is a function between objective conditions of life and the subjective attitude. The condition in which the worker is exposed to the workplace is work place environment. A fair quality of work life can be defined for an engineering college employee as a condition in which he is able to meet his and his family members' necessary requirements without stretching the means he has. The below given dimensions of Quality of Work Life are considered for the present study. They are 1. Work Environment, 2. Organization Culture and Climate, 3. Relation and Cooperation, 4. Training and Development, 5. Compensation and Rewards, 6. Facilities, 7. Job Satisfaction and Job Security, 8. Autonomy at Work, and 9. Adequacy of Resources.

REVIEW OF LITERATURE:

The researcher has reviewed the available literature and research on quality of work life both from Indian and international perspectives. In this connection, few studies are presented here.

Nanjundeswaraswamy and Swamy (2013) conducted a study on QWL of employees in private technical institutions and found that out of the 109 respondents, 48.6% were satisfied while 51.4% were found not satisfied with the QWL. Their results reveal a significant relationship between QWL of teaching and non-teaching staff but demographic variables such as age, gender, designation, salary, experience are independent of QWL. According to them, Quality of work life is important for all organizations to maintain and attract the employees. It is also revealed that adequacy of resources is more correlated and training and development are less correlated with quality of work life in teaching staffs and in case of non teaching staffs compensation and reward are more correlated and work environment is less correlated with QWL. The study indicated that enhancement in the dimensions of QWL, can lead to increase in overall quality of work life of faculties.

Jain Bindu and Swami Yashika(2014), in their study divulged that QWL in Indian academic sector is of low level. A planned change in the working environment is required to improve QWL in academic sector. Training, redesign of work, workshops for knowledge enhancement and personal growth, valuable participation in decision making, modification in promotion scheme etc. are some of the ways through which we can improve QWL. Improved QWL is beneficial for both the employee and institute so it's the mutual responsibility of the two. QWL

of teachers at academic sector is below satisfaction and required attention and implementation of effective measures to improvement it.

The prime objective of Malarkodi. K, Prasanna. S. and Renukadevi R.(2017), research is to critically envisages the various parameters determining Quality of work life among the faculties. Descriptive research Design and convenient sampling method adopted for this study. 200 sample size from the total population chosen for this study. Faculty members have expressed their opinion that the management needs to take necessary steps for structuring proper work load models to be offered to the faculties.

Ayesha Tabassum (2012)investigated QWL of employees in the private universities of Bangladesh. She collected data from 72 fulltime faculty members among 11 private universities. She analyzed the dimensions of quality of work life and its relationship with job satisfaction. This study concluded that there is positive relationship between the dimensions of QWL and job satisfaction. This study suggested to the management of the institutions that the policies designed in such a way that QWL issues should be concerned. An improved QWL provides a higher level of job satisfaction which in turn reduce faculty member turnover rate.

Balaram Bora (2017)observed that studies stoutly substantiated the relevance of QWL in honing positive workplace behavior and attitudes like job satisfaction, Organizational commitment, reduced absenteeism and stress levels, employee well being , engagement in job and even improved performance. Hence, it can be concluded that Quality of Work Life practices triggers positive workplace experiences in employees, academicians in specific. Which will in turn reciprocated with valued outcomes at work place. Even on a value premise, Quality of Work Life practices will be a mutually beneficial to develop healthy employer-employee relationship at work place in general, academic setting in specific.

Abdulkadir Mohamud Dahie et al. (2017) utilized convenient sampling to collect 95 questionnaires from University of Somalia in Mogadishu, Somalia. These respondents were provided a questionnaire with three main construct which measuring general well-being, career and job satisfaction and working conditions. However, the study found that general well-being, career and job satisfaction as well as good working condition workplace have significant impact on quality of work life.

It was clear that some of the researchers have already studied quality of work life in educational institutions. Nevertheless, till now no study was undertaken to study quality of work life in private engineering colleges situated in Srikakulam district of Andhra Pradesh State, India. With this in mind the present research is undertaken.

OBJECTIVES OF THE STUDY:

The study of the Quality of work life would essentially serve the following important objectives:

1. To examine the concept of quality of work life, to review the literature, and to study the importance, determinants, and dimensions of Quality of Work Life.
2. To identify different parameters of quality of work life that significantly impacts the employees working in select private engineering colleges and their respective contribution.
3. To offer suitable suggestions for improving the quality of work life among teaching staff associated with the select private engineering colleges of the study.

METHODOLOGY OF THE STUDY:

The researcher has chosen survey based descriptive research design in view of nature of the present study. The study confines to 6 private engineering colleges situated in Srikakulam district of Andhra Pradesh State. From the total teaching staff working in these colleges, i.e 837 faculty members, a random sample of 209 faculty members were chosen for the study. So the teaching staff comprises 25% of the total faculty population of the total teaching staff working in these 6 colleges.

Data Collection Process:

Primary data was collected through questionnaire constructed for this study. The questionnaire consists of two parts. The first part contains demographical data of the respondents. The second part of the questionnaire contains 94 questions to tap respondents' perceptions with regard to Quality of Work Life in their respective engineering colleges. The second part questionnaire contains 9 qualities of work life **parameters** including work environment, organizational culture and climate, relation and co-operation, training and development, compensation and rewards, facilities, job satisfaction and job security, autonomy at work, and adequacy of resources. The questionnaires was distributed to the respondents to teaching staff by personal visits to all these six campuses and collected.

Secondary Data has been collected from administrative records and college websites. This data has been largely used in providing the background and profile of the selected engineering colleges. Various journals were referred for the purpose of literature review.

Data Analysis:

The data was tabulated and neatly presented. Simple percentages were calculated for item-wise analysis of each item in all the 9 dimensions of QWL questionnaire. Descriptive statistics were calculated for understanding the mean and standard deviation of perceptions of teaching and non-teaching on various dimensions as well as for composite QWL. For knowing the significant differences in perceptions on various dimensions of QWL, independent samples t-test, and One-way ANOVA was conducted. To study the association between demographics of respondents and QWL, Chi-square test was conducted. For hypothesis testing process, significance level (α) at $p < 0.05$ level was considered as statistically significant.

ANALYSIS AND INTERPRETATION:

Demographic Variables:

The demographic data of the respondents was analyzed in terms of their age, gender, marital status, caste cum reservation category, total experience, organizational tenure, designation, mother tongue, educational attainments, level of education, and annual pay. In this process, the demographic features of the teaching staff are presented.

Table-1 shows that 35.4% of the family members are in the age group of those who are below 30 years of age, while majority of them (59.3%) are having age between 30 to 45 years, the remaining 5.3% of the family –respondents are having the age between 46 to 60 years. With regard to gender, major proportion of the respondents (78.5%) in the teaching staff is male, and the remaining of the respondents (21.5%) are female. Regarding marital status, majority (71.3%) of the respondents in the teaching staff are married, while the remaining 28.7% of them are single.

The data pertains to distribution of the faculty-respondents as per their caste –cum-reservation category reveals that majority (66.5%) of them belong to backward classes. Respondents from open categories constitute only 23.4% of the sample on teaching staff, while 7.7% of the faculty-respondents belong to scheduled castes, the remaining meager proportion (2.4%) of the respondents belong to scheduled tribes.

According to Table-1, it is evident that 23% of the family respondents have a total experience below 2 years, 25.8% of them have 2-5 years of total working experience, and 31.6% of the respondents have 6-10 years of total experience in teaching, while the remaining 19.6% of them have above 10 years of total experience in teaching in engineering colleges. With regard to organizational tenure, 28.2% of the sample teaching staff have below 2 years of length of service in the present institution they are working with. 34.9% of them have 2-5 years of organizational tenure, 24.9% of the respondents in teaching staff have 6-10 years of service in the current institution they are associated with. The remaining 12% of them have above 10 years of organizational tenure.

It is already mentioned that the faculty respondents are working in Professor, Associate Professor and Assistant Professor Designations. As shown in Table-1 majority (81%) of the faculty-respondents are Assistant professors associated with the select engineering colleges, 13% of them are Associate Professors and the remaining 6% of them are working as Professors. The information provided in the Table clearly shows that major proportion of the teaching staff are in Assistant Professor cadre, while the least proportion of the teaching staff are in Professor cadre. With regard to language, among the sampled teaching staff, majority (89%) of them can read and write Telugu language, but 6.2% of them can read and write Odiya language. Only 4.8% of the teaching staff-respondents can read, write and understand Hindi language.

As far as the educational attainments are concerned the data indicates that a vast majority (75%) of the sample respondents in the teaching staff have post graduation either in Engineering, Management Studies, Basic Sciences or Humanities. 10% of them have M.Phil degree, and the remaining 15% of them have doctorate degree in the requisite area of specialization. Regarding to technical or non-technical education, 82.3% of the sample respondents in the teaching staff have technical education and 17.7% have non-technical education. Pertains to Annual Pay, 37.3% of the sampled teaching staff are receiving annual pay in the range of Rs. 1-2 lakhs. 40.1% of the sampled teaching-respondents are receiving annual pay of above Rs. 2 Lakhs and upto 4 Lakhs, 10.5% of the sampled teaching staff are in receipt of annual pay of above Rs.4 Lakhs and upto R. 5 Lakhs, 12% of those respondents are receiving annual pay of above Rs.5 lakhs.

Predominantly, the sample pertains to teaching staff respondents ($n=209$) of the select engineering colleges consists of employees in the age group of 30-45 years, majority of them are male, married, belong to backward classes, Assistant Professors by designation, having 6-10 years of total experience, 2-5 years of organizational tenure, Telugu speaking, having post-graduation in requisite fields of specialization, and are in receipt of annual pay above Rs.2 lakh and up to Rs.4 lakh.

Descriptive statistics of quality of work life variables:

The data pertains to distribution of Mean \pm Standard deviation of the scores of Quality of Work Life and its various dimensions are provided in Table-2. The mean values of Quality of Work Life perceptions in the total teaching staff respondents (Mean= 3.5 \pm S.D =0.5) are all reflecting

a positive but only moderate level of satisfaction with regard to the Quality of Work Life at their workplace.

The data on distribution of Mean \pm Standard deviation of the scores of teaching staff respondents on Working environment (Mean= 3.7 ; S.D =0.6), Organization culture and climate (Mean= 3.5 ; S.D =0.7), Relation and co-operation (Mean= 3.7 ; S.D =0.6), Training and development (Mean= 3.6 ; S.D =0.7), Compensation and rewards (Mean= 3.3 ; S.D =0.7), Facilities (Mean= 3.6 ; S.D =0.6), Job satisfaction and job security (Mean= 3.6 ; S.D =0.6), Autonomy of work (Mean= 3.5 ; S.D =0.6), and Adequacy of resources (Mean= 3.4 ; S.D =0.6) are also indicating a positive but moderate level of faculty respondents' satisfaction with regard to the nine facets of Quality of Work Life.

The overall mean QWL perceptions in the teaching staff (\bar{x} = 3.5) is positive but moderate. These aggregate perceptions indicate that the respondents are neither fully satisfied nor have strong perceived QWL in their engineering colleges. At dimensional level, faculty member respondents perceived more perceived work environment (\bar{x} = 3.7) and more perceived relations and co-operation at workplace (\bar{x} = 3.7), but they perceived comparatively less perceptions on compensation and rewards dimension of QWL (\bar{x} =3.3). According to the above results, the mean scores of the respondents' perception on overall Quality of Working Life as well on its nine facet are closer to ($3.3 \leq \text{Mean} \leq 3.7$) the response "I am satisfied=4" on the rating scale and as such it reflects that the study participants are not fully or highly satisfied with QWL nor with regard to its 9 dimensions of QWL. The mean perceptions of faculty-members are on the higher side with regard to work environment and relation and co-operation at workplace, however, perceived lower mean perceptions on compensation and rewards dimension.

Perceptual mean variance in QWL dimensions by demographics:

Significant differences in the mean QWL perceptions in teaching respondents are examined with reference to their demographics. In this regard *independent samples t-test* and *one-way ANOVA* was performed wherever necessary and the results are tabulated and interpreted carefully.

A closer examination of the above overall results pertain to the mean perceptual variance with regard to the 9 dimensions of Quality of Work Life among the teaching staff-respondents based on their demographic features reveals a *clear cut pattern of their experiences/feelings* at their engineering colleges can be seen in Table-3. It is as follows:

- ✚ The mean perceptions of teaching staff-respondents on all the 9 dimensions of Quality of Work Life (Working Environment, Organizational Culture and Climate, Relation and Co-operation, Training and Development, Compensation and Rewards, Facilities, Job Satisfaction and Job Security, Autonomy at Work, and Adequacy of Resources) have significantly and consistently varied according to their demographic features of *caste-cum-reservation category, mother tongue, technical/non-technical educational background, and their annual pay*.
- ✚ More specifically, the results reveal a clear picture that on all the 9 dimensions of Quality of Work Life, teaching staff-respondents who belong to *Scheduled tribes*, whose mother tongue is *Hindi*, who are from *non-technical education background*, and respondents who are in receipt of *annual pay above Rs.4 lakh and up to Rs.5 lakh have expressed lower mean perceptions*. Respondents who are Professors by designation, who got M.Phil qualification perceived higher side of satisfaction on all the 9 dimensions of Quality of Work Life when compared with their counterparts. However, the perceptual difference among the respondents

as per their designation and educational attainments has not reached statistically significant level($P>0.05$).

- ✚ Respondents in the age group of 40-60 years perceived significantly lower level of perceptions on facilities at work place and autonomy at work than their counterparts in other age groups. Teaching staff respondents who are having below 2 years of working experience perceived significantly lower autonomy at workplace. Teaching respondents with above 10 years of organizational tenure have perceived significantly lower level of working environment and facilities at their engineering colleges. Assistant professors perceived lower autonomy at work than Associate Professors and Professors.

There is *no significant variance in the mean perception of the teaching staff* respondents with respect to any of the 9 dimensions of Quality of Work Life *according to their gender, marital status, and educational qualifications.*

SUGGESTIONS:

It is often reiterated in research and literature that Quality of Work Life of employees directly or indirectly influences their performance, workplace behavior and attitudes. In this context, and based on the results of the present study, the researcher tries to present few recommendations to improve Quality of Work Life of teaching and non-teaching staff members working in the study private engineering colleges.

- ✚ Allocation/distribution of employee outcomes at workplace like their remuneration, increments, promotion, incentives or punishment etc. will be just and fair only when the allocation decisions are backed by fair policies and their impartial execution in reality. The procedures used in arriving at such allocation decisions should be unbiased. Thus private engineering colleges considered for the study required to develop fair policies for deciding employee outcomes at workplace and the policies must be used with propriety. Besides that, employees must be timely informed of the changes taking place in the policy base, procedures, or executive decisions which show impact on their economic or psychological well-being. Empowerment is highly solicited by the study respondents.
- ✚ Employee compensation and rewards constitutes an important area of their motivational architecture. Compensation is a hygienic factor and an important determinant of employee Quality of Work Life. Adequate and fair compensation is the focal area of attention for employees and familiar source of industrial conflict and disputes. Hence, in view of present study results, the researcher recommends that the study private engineering colleges need to pay fair remuneration to faculty members following the norms prescribed by the apex regulatory bodies i.e. AICTE and UGC. Besides that provision for fringe benefits and their allocation to employees by judicious executive decisions will enhance employee morale and performance at work.
- ✚ The study private engineering colleges must take steps to generate healthy and competitive working environment so that it instills confidence in employees. Superior authorities must feel the responsibility to conduct honest performance appraisal and timely feedback on employee performance and must establish free flow of transparent communications through two-way communication process. Superiors are also required to create avenues to employees to develop their strengths and abilities by overcoming their weaknesses.
- ✚ People skills are an essential part of managing employees at workplace. However, people skills cannot be equipped immediately. Thus, the persons who are in superior positions either

at department level or in administrative positions must be trained on people skills, so that it promotes a dignified and respectful working environment in these institutions.

- ✚ Perceived organizational support in employees tends to the formation of positive workplace behavior in employees. Identification of areas for professional development of employees, providing training to employees for their skills and knowledge enhancement will contribute towards organizational effectiveness. Hence, these private engineering colleges considered for the study must look into areas of professional development of their employees after analyzing the gaps, and need to encourage and support them to attend training programs. It is beneficial to both employees and institutions.
- ✚ Based on the study findings and in view of the health and hygiene of the employees working in the study private engineering colleges, it is required that these institutions need to improve safe drinking water facility to all the employees. Quality of food in canteen also requires to be improved. In addition to that the toilet facility also requires to be improved further with hygienic conditions.
- ✚ Necessary infrastructural facilities, material inputs, technical equipment, aids, and budgetary allocations made at workplace can make the completion of targets happen within the time frames. Hence, the select private engineering colleges of the present study need to provide adequate resources for the smooth and effective completion of targets at workplace. This helps in enhancement of technical education quality.
- ✚ The study engineering colleges can effectively manage the complaint that considerable number of employees are suffering from stress emanating from work. At organizational level, employee counseling sessions, employee assistance programs, work-family initiative will be helpful in mitigating stress. At the job, social support from the workgroup and superior authority, honest feedback on performance, provision for employee participation in decision making will also improve the situation.
- ✚ The results revealed that the faculty member-respondents who belong to scheduled tribes, who are speaking Hindi as their mother tongue, who are from non-technical educational background and who are in the annual pay bracket of Rs. 4,00,001- 5 lakh have reported significantly lower perceptions towards all the 9 dimensions of QWL. This manifest lower Quality of Work Life perception in the above said sub-groups of faculty respondents is not a welcoming sign and might be the result of their experiences with regard to some inequitable policy initiatives taken by the institutions or the inequitable real-time implementation of those policies. So the study institutions need to take appropriate policy measures to resolve the perceptual gaps and divergence existing in the QWL perceptions of these respondents.

CONCLUSIONS:

Technological advancement is one of the critical success factors of economic prosperity of any nation. Undoubtedly, engineering colleges are playing key role participation in shaping the national economy by producing highly skilled and competent human resources catering to the needs of industrial economy. In the aftermath of liberalization and privatization efforts taken place in the 1990s, there was a phenomenal growth of private engineering colleges and technical

(higher) education in India. However, the very much believed the higher yield of return to the society at large by technical education tends to be a reality only when the managements of the private engineering colleges are committed to deliver *quality education* to the students. Besides infrastructure, highly competent faculty members striving towards the mission of these engineering colleges are inevitably vital factors in this regard.

Based on the above results it can be safely concluded that, although majority of the teaching respondents have expressed their satisfaction on various aspects in the 9 dimensions of Quality of Work Life, still their dissatisfaction on various aspects of QWL is found substantial, which requires to be mitigated. Demographic characteristics of the faculty-respondents are found associated with the overall Quality of Work Life at their institutions which once again reiterated the role of demographics in shaping QWL perceptions in the study subjects.

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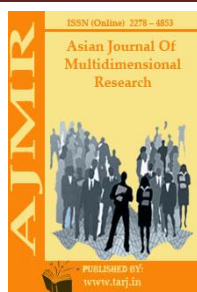
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TABLE-1 : DEMOGRAPHIC PROFILE OF RESPONDENTS			
Variable	Category	n	Percent
Age Group	Up to 30 Years	74	35.4
	31 – 45 Years	124	59.3
	46–60 Years & above	11	5.3
Gender	Male	164	78.5
	Female	45	21.5
Marital Status	Single	60	28.7
	Married	149	71.3
Caste	Open Categories	49	23.4
	Backward Classes	139	66.5
	Scheduled Castes	16	7.7
	Scheduled Tribes	5	2.4
Total Experience	Below 2 Years	48	23.0
	2-5 Years	54	25.8
	6-10 Years	66	31.6
	Above 10 Years	41	19.6
Organizational Tenure	Below 2 Years	59	28.2
	2-5 Years	73	34.9
	6-10 Years	52	24.9
	Above 10 Years	25	12.0
Designation	Asst. Professor	169	81.0
	Assoc. Professor	28	13.0
	Professor	12	6.0
Mother Tongue	Telugu	186	89.0
	Odiya	13	6.2
	Hindi	10	4.8
Educational Attainments	Post-Graduation	157	75.0
	M. Phil.	19	10.0
	Ph. D.	33	15.0
Technical/Non-Technical Education.	Technical	172	82.3
	Non-technical	37	17.7
Annual Pay	Rs.1- 2 Lakhs	78	37.3
	Rs.200001 – 4 Lakhs	84	40.1
	Rs.400001 –5 Lakhs	22	10.5
	Above Rs.5 Lakhs	25	12.0

Sl. No	Variable	n	Mean	Std. Dev.
I	Overall Quality of Work Life			
	Faculty Members	209	3.5	0.5
II	Faculty Members Mean perceptions			
	Work environment	209	3.7	0.6
	Organization culture and climate	209	3.5	0.7
	Relation and co-operation	209	3.7	0.6
	Training and development	209	3.6	0.7
	Compensation and rewards	209	3.3	0.7
	Facilities	209	3.6	0.6
	Job satisfaction and job security	209	3.6	0.6
	Autonomy of work	209	3.5	0.6
	Adequacy of resources	209	3.4	0.6

S.L. No	Demographic Factor	Pearson Chi-Square	Likelihood Ratio	p-Value	Significance
1	Age	6.308	7.059	0.177	Not Sig.
2	Gender	1.621	1.695	0.445	Not Sig.
3	Marital status	0.586	584	0.746	Not Sig.
4	Caste	8.081	9.917	0.232	Not Sig.
5	Total Experience	9.486	9.48	0.148	Not Sig.
6	Organizational Tenure	5.334	5.3	0.502	Not Sig.
7	Designation	3.936	3.656	0.415	Not Sig.
8	Mother Tongue	14.647	19.007	0.005	Significant**
9	Educational Qualifications	8.515	8.779	0.074	Not Sig.
10	Technical/Non-technical Education	10.081	10.596	0.006	Significant **
11	Annual Pay	21.161	20.255	0.002	Significant **



BOOK REVIEW MOHNISHPABRAI (2007: REPRINT 2018): THE DHANDHO INVESTOR, WILEY. PP 195.ISBN 978-81-265-6463-7. ₹.299/-.

Dr. Jyoti Nair*

*Associate Professor,
N.L.Dalmia Institute of Management Studies and Research,
Mumbai, INDIA
Email id: jjyotn@gmail.com

ABSTRACT

In such times, the success of investors like Benjamin Graham, Warren Buffet and Charlie Munger have attracted millions to the concept of value investing. (Rapp,.D.J. et al, 2017). The book is divided into 17 chapters. The book scores in its simplicity in putting across fundamental principles of value investing in a convincing manner. A stock is not a piece of paper but an ownership in an existing business but with certain advantages over buying and selling entire business. The author uses the story of Arjuna from Mahabharata to drive home the need to be focused on a few stocks from the multitude of financial instruments available in the market. The second section explains the Dhandho framework and strategies.The third section explains art of selling and investing through the lives of of Arjuna and Abhimanyu -characters from Mahabharata. Here the business mantra is 'Few bets, big bets, infrequent bets' referring a long term, risk averse investment. Both these success stories highlighted current sacrifices for future returns. Mittal's approach was to 'get a dollar's worth of assets for less than a dollar'. This helped him turn around monolith steel mills to run profitably.The book drives home the idea to look at stocks as business and use market fluctuations to one's advantage. 'Dhandho Investor' takes the reader through various investment strategies using real life examples.According to the author, buying a stock ensures participation in a running business with an opportunity to share rewards without much effort.

KEYWORDS: *Investors, Convincing, Dhandho Investor', Infrequent*

INTRODUCTION:

The quest for wealth creation through capital market investments have engaged investors in searching for that elusive perfect formula. Scores of books and articles have tried to put across various strategies for profitable investments. Investing correlates high returns with high risks. The recent financial crisis and its impact on global prices have raised serious concern about investment decisions. High levels of volatility in equity market and collapse of several hedge funds have forced investors to rethink their investment strategies, (Gabriel, G, 2008). In such times, the success of investors like Benjamin Graham, Warren Buffet and Charlie Munger have attracted millions to the concept of value investing. (Rapp, D.J. et al, 2017). Value investing refers to acquiring stocks that are priced lower than its intrinsic worth. Value investors look for bargains in 'out of favour stocks', (Moskal, M. B, 2002). This book takes this concept further by showing maximisation of wealth while minimising risks, a complete departure from basic rule of investment. The book drives home the idea to look at stocks as business and use market fluctuations to one's advantage. 'Dhandho Investor' takes the reader through various investment strategies using real life examples. The author defines 'Dhandho' as business – an endeavour to create wealth.

The book is divided into 17 chapters. The chapters can be grouped under three sections. The first section takes the reader through business approaches using cases of successful business. The second section explains the Dhandho framework and strategies. The third section explains art of selling and investing through the lives of Arjuna and Abhimanyu - characters from Mahabharata.

In Section 1, the author delves into the strategies of four successful businesses in USA - Patel Motels, Manilal Motels, Virgin Atlantic/Virgin Mobile and Mittal Steel. The book explains each business' wealth creation model in a very detailed and lucid manner. Patel's success is credited to grabbing available business opportunities and taking ultra-low risk decisions with ultra-high returns. The author interestingly sums it up as '*Heads I win; tails, I don't lose much*'. Manilal's success story hinges upon integrity, work ethos and patience. Their business investment was the result of years of hard work and savings. Here the business mantra is '*Few bets, big bets, infrequent bets*' referring to a long term, risk averse investment. Both these success stories highlighted current sacrifices for future returns. The book throws up a question – Can one run a successful business and live life to the fullest at the same time? The answer is given through the life of Richard Branson and Virgin Atlantic. Sensing business opportunities, creative thinking and quick decisions explain the success of Virgin Atlantic and Virgin Mobiles. How a very capital intensive business requiring huge workforce and operating in a tightly regulated industry was started with virtually no capital makes for an interesting read. Virgin's business model is the venture capital model with limited risk exposure. In his fourth example, the author explains how Mittal invested all his energies and limited capital in an economically unsound steel industry where there is no control over the final selling prices nor cost of raw materials. Mittal's approach was to '*get a dollar's worth of assets for less than a dollar*'. This helped him turn around monolith steel mills to run profitably. The author, through his narrative, establishes the presence of the fine art of 'Dhandho' behind these successful businesses.

In the second section, the author lays down the 'Dhandho' framework and explains its constituent nine principles. The author helps the reader discover common threads existing amongst the diverse business approaches adopted by the entrepreneurs as discussed in Section 1. Buying an existing business with a defined business model and a long history of operation for analysis, buying businesses with ultra-slow long term change, buying businesses with a durable

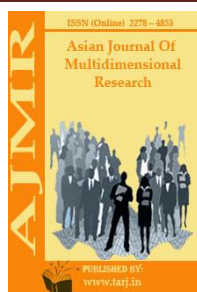
competitive edge, betting heavily when odds are in favour, focusing on arbitrage, buying business at discounted rates in relation to their intrinsic value, identifying low risk-high uncertainty business and lastly being a follower rather than an innovator are some of the business principles laid down in the framework. The author advocates that every investor should think like a businessman. A stock is not a piece of paper but an ownership in an existing business but with certain advantages over buying and selling entire business. According to the author, buying a stock ensures participation in a running business with an opportunity to share rewards without much effort. The author implores that investors should participate in capital market using the powerful 'Dhandho framework'. Also the author highlights the importance of getting right data points on valuation of stocks periodically for maintaining a healthy portfolio.

While sections 1 and 2 lays the framework for investing, section 3 focuses on exit strategies. According to the author, selling stocks at the right time is more important than buying stocks. Through the story of Abhimanyu, as penned in one of the greatest epics in India – Mahabharata, the author emphasises the importance of exiting a maze (chakravyuh) - a metaphor for capital market, for survival. Through cases of companies, the author cites a few exit strategies. The author also warns the readers about the pitfalls of index investing as a strategy. The author uses the story of Arjuna from Mahabharata to drive home the need to be focused on a few stocks from the multitude of financial instruments available in the market. In conclusion, the author asserts that the 'Dhandho' framework enables an investor to invest in simple, well understood businesses to maximise his wealth.

The book scores in its simplicity in putting across fundamental principles of value investing in a convincing manner. The narrative is kept light and interesting with appropriate examples to support the strategies elaborated. It will be a very useful read to new and small investors to get a tight hold on the capital market charavyuh.

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PHILOSOPHICAL BASES OF SOCIAL-POLITICAL SKILLS OF WRITERS

Abdivohidov Sunatillo Abdinabievich*

*Samarkand Institute of Economics and Service,
Samarkand, UZBEKISTAN
Email id:abdivohidov80@mail.ru

ABSTRACT

This article explains the philosophical views of the Jadides based on the views of East and West thinkers about nature and society, the basis of their socio-philosophical views on human society's developmental dimensions, and the classification of the Jadid into religious and secular sciences and their classification. In their view, the unity of humanity is a lie, and in practice, we understand only the unity of the organic world and the various exact forms of culture. "The transition from one society to another, from a historical period to a second, begins with the enlightenment. The book "Leading Salvation", written in 1915, is a philosophical essence, and has justified the independence of the Uzbek people. The history of civilization is divided into two parts. History of Literature, History of Natural History, History of Politics. Political history is also divided into two. General and special dates. It is because of these principles that the Jadis are well aware that man can be governed by methods such as ethical principles, religious values, legal documents and political mechanisms. Thus, the true Muslim cries out that the world and the Hereafter need to be able to succeed in worldly happiness. The main task of the second direction is to determine the philosophical and methodological foundations of the knowledge based on the historical reality with natural-scientific knowledge.

KEYWORDS: Educators, Traditional Islam, Sharia, Sufism, Positivist Philosophy, Education, Education, Reasoning, East and West Educators, Progress, National Consciousness, Patriotism, Patriotism

INTRODUCTION

In the late 19th and early 20th centuries, the interest in history philosophy increased in two directions. The first direction is related to the understanding of rational thinking from the cultural and historical spheres of social life. Here lies the objective of realizing the historical realities with the help of definite methods and tools. The main task of the second direction is to determine the philosophical and methodological foundations of the knowledge based on the historical reality with natural-scientific knowledge. The supporters of the first line are primarily derived from the biological model of the historical process. In their view, the unity of humanity is a lie, and in practice, we understand only the unity of the organic world and the various exact forms of culture. Secondly, history-freedom does not gradually go through, but through the pluralistic model of historical development. In the history of the world, there is no unity, but there are different cultural and historical models [1,652].

In their view, society is a part of nature, that is, the specific form of society as a social entity, a complex system that is constantly evolving and growing, with a large number of relationships between people. Every new era needs to know the essence of society.

Similarly, the beginning of the first decades of the 19th and early 20th centuries in the socio-philosophical, religious-moral and cultural development of the people of Uzbekistan is distinguished by the diverse ideological-ideological and ideological forms. At that time in our country there were socially characteristic ideological and ideological streams - the ancient, the cypress, the rebels, the disobedient, the goddesses. There were also conscious gatherings that united the leading educators, such as "Chagatoy gurungi" in philosophical direction, and various "gaps".

The advent of such an educational movement in Turkistan played an important role in the development of the idea of the Jadid.

Main Part

The Jadid movement has a role and role in the system of social-philosophical thinking of the East. The Jadid Movement played a major role in the formation of ideas such as freedom, equality and justice in the national consciousness of the indigenous people in Central Asia, including Turkestan. Moreover, Jadidism was formed as an opposing doctrine of Marxism-Leninism, with its ideological-philosophical basis that began to spread and spread in Russia in the late 19th and early 20th centuries.

The activity of the representatives of Jadidism and Jadid movement has attracted many scholars from the East and West. Orientalist scholars in L.Azizzoda dwelled on the role of M.Behbudi in the Jadid movement and wrote: "When we look at Turkestan's awakening period by studying the media, the press and the society, we see Behbudi at the beginning of this movement" [2,156].

The scientist, a great philosopher, professor Q.Xonnazarov, in his interview with "Muloqot" magazine, answered the question of Mahmudhuzha Behbudiy's question, "Is there a philosophy of Uzbek?" And replies: "... On the national ground," says Q.Xonnazarov, "Avesto"From Navoi, Babur, Mashrab, and the Uzbek nationals who came to Behbahi and Fitrat through the races of Navoi, Babur, Mashrab, rising to one of the highest peaks in the works of Ibn Sino, which continued by Zoroastrianism and continued by Moniy and Mazdak We need to build a whole set of philosophical philosophy. This is our sacred duty to our nation and to the world philosophy "[3.3].

When we look at the enlightenment aspect of the work of the Creator, we see that they always have an idea of ideals rather than artistry. This has made a great contribution to the formation and development of progressive-democratic literature. The great literary scholars U.Tursunov and B.Orinboev write: "Most of them are in the literary life, and the essence and ideological foundations of progressive-democratic literature are the ideas of patriotism, patriotism and enlightenment" [4.136].

Indeed, the doctrine of the Jadid philosophy was influenced by the teachings of Eastern intellectuals Farabi, Ibn Sina, Beruni, Al-Khwarizmi, Imam Bukhari.

Thus, the philosophical foundations of the Jadid movement and its ideas must be sought from this movement as the embodiment of a new spiritual-social development in Turkistan. Because it was based on the philosophical foundations of the teachings of the Jadid from traditional Islamic, Sharia, Sufism, and modern Western philosophical methods [5.136].

LITERATURE REVIEW

Academician E.Yusupov, philosopher, academician E.Yusupov puts the culprit's social essence to the social essence of French educators: "Although Jadidism, for instance, is a phenomenon that took place several centuries after French enlightenment, it is a cultural and educational has played a positive role in his life as well as the French enlightenment "[6.74].

D.Alimova, historian scientist, commented on the philosophical foundations of the ideological ideas of Jadids: "This process can be compared to the 18th century European Enlightenment. There were geniuses like Monteste, Russo, Didro, and Voltaire at that time, and their ideas enshrined the great French Revolution. ... Jadids were not only fans of these philosophers, but also propagandists of the doctrines they founded. Indeed, Mahmudkhoja Behbudiy Ogyust Kont, Abdurauf Fitrat Sh. Senoboss, and Abdulla Avloniy are very interested in the works of Plato, Sukrot and Aristotle, and pay great attention to their views on education and teaching. "[7,55-56] These jadidas have the idea and nature of philosophical reasoning about the social, economic and cultural development of Turkestan helped to define his wishes [8.8].

It is worthwhile to mention the words of German historian I.Baldauf: If "Oyna" magazine has shown the world from Paris to Japan to the Central Asian bourgeoisie, Travel memories have invented the Muslim East in front of Turkestan[9].

D.Alimova, a historian, commented on the ideological views of Jadid, in her view there are two important features: a strong hereditary root and aspiration for the theoretical heritage of the East and West educators, philosophers, and thus bringing the nation to the path of progress [7.55].

Reflecting on the philosophical views of Jadids, literary scholar Sh.Rizaev asserts that the idea of national liberation is deeply rooted in the essence of the enlightenment, and that this idea eventually led the second phase of Turkestan education, and that new great figures came to the stage of history [11.75].

"Behbudi's views on human thought have been reflected in its socio-philosophical and ethical-aesthetic principles, the concept of ideas of enlightenment, national consciousness and national consciousness [12].

As far as the essence of cadibacy is concerned, we see that enlightenment and jadidism are complementary criteria. As J. Mirzazade underlines, "Jadidism" is the historical name of social-

philosophical and literary-cultural process, and its enlightenment is its essence and content [13.27].

"The transition from one society to another, from a historical period to a second, begins with the enlightenment. The prominent intellectuals, who know the most mature, conscious, white-haired, time-consuming, self-sacrificing, glorious, who live as homeland are enlightened. The educators usually raise ideas for the present and the future of society, and struggle for the realization of these ideas"[14.113].

It should be noted that the current scientific literature does not have enough information on the philosophical-ideological foundations of the Jadid movement and no research in this direction. In this context, we must admit that Professor J.Yakhshilikov "...is a comprehension of the fact that Behbudi speaks about the role and importance of education, science and culture in the life of society, the fate and nation," [15.45]. it would be expedient to say that the Jadidian philosophy was enlightened by their adherence to the idea.

As it is evident, the Jadid are the enlightenment, but primarily the ancestral heritage, but they have deeply inherited the legacy of Muslim scholars and rulers, who not only teach the Islamic teaching, but also "compile a book on intellectual and science sciences." Behbudi himself in this section of the "Turkic philosophers" section of the "General Geography Curriculum" has greatly appreciated the great development of natural and social sciences by our great ancestors: "If Turkestan scholars who classify books for intellectual and non-Islamic sciences need to write all their population and classification , it is necessary to prepare a book larger than our book "[16.190].

As we can see, when we talk about the Jadid's philosophical views, we must first of all rely on the views of Oriental thinkers on nature and society.

In Behbudi's philosophical views, the basis of society development is enlightenment and enlightenment. Turkiston, which served as the cradle of development for all humanity, regretted and saddened that it was in such a situation. About this, he writes in his Travel Remembrance: "... your style and classification is that we are Muslims today. It will be an ignominy for you to follow us. "[17.114]

Behbudiy's philosophical views are based on the views of human society on its developmental dimensions.

At the same time Fitrat's social-philosophical outlook is no exception. It is reflected in his works of social-philosophical outlook. The book "Leading Salvation", written in 1915, is a philosophical essence, and has justified the independence of the Uzbek people. On the other hand, Fitrat sought to save society from influenced by the religious influence of Bukhara's khan Amir Alimkhan on the one hand, and on the other hand, he sought to develop a society that was influenced by religious persuasion, and concluded that this was due to its deviation from the moral and ethical wisdom of society, based on traditional philosophy. And the meaning of life is that of the two worlds, whereby the universe is organized in the absence of materialism in the absence of life. The purpose of life is to make that happiness. Thus, the true Muslim cries out that the world and the Hereafter need to be able to succeed in worldly happiness.

The essence of this effort is to fulfill the obligations of conscience in the eyes of Fitrat and to strive for the sake of eternal purification. Therefore, it is the moral obligation of a person 1. Spiritually. 2. Humanity. 3. They are family members.

DISCUSSIONS

This philosophical approach to Fitrat's morality is in harmony with the views of the ancient Greek philosopher Aristotle. Because Aristotle's morals in the Age of Ethics, this quality, the quality of mind, is to choose the best way. In Aristotle's view, Fitrat also emphasizes that ethics is the work of the mind and the heart. Because the mind of the mind is separated into clues and knowledge [18.152].

It should be noted that Fitrat has three types of power in the human spirit: 1. Intelligence, 2. Power of anger, 3. Emphasizing the existence of anger, they point to the components of ethical education.

Fitrat describes the idea of perfecting the human mind with no matter what a terrible situation it might be, and says that there are two types of human reason:

Occupational or Relativistic Intelligence - Intelligence that is created by science. According to Fitrat, "The essence of human life is the happiness and happiness of the two worlds and the achievement of reason. The Islamic religion never exists in science, but in the proofs of its point of view, from the Koran and Hadith sermons: "Seek knowledge from birth to t ..."

As we study the philosophical views of Fitrat, we find that it divides science into religious and secular sciences and classifies them. In his view, religious sciences are descriptive, hadith fiqh, knowledge of kalam, linguistics, linguistics (Arabic language, style and shape). Fitrat reflects the history, geography, and civilization history of worldly knowledge. The history of civilization is divided into two parts. History of Literature, History of Natural History, History of Politics. Political history is also divided into two. General and special dates.

The fact that Fitrat was a philosopher is that he came to the conclusion that the science was the result of all mankind's discoveries. Because everyone should use science regardless of gender, religion or religion. At the same time, he has three subjects, namely 1 Natural sciences, 2. Exact sciences. 3. Philosophical sciences. In his view, natural sciences include: medicine (chemistry, physics), nabobat (botany), animal (zoology), knowledge of ore (geology); Exact disciplines include: calculus, algebra, handasa (geometry), jury (astrology); and philosophical sciences: the state of the soul, psychology, ethics, logic and theology (mysticism).

Fitrat's "Leader of Salvation" is part of the family education, subject to the laws of the universe. This idea was based on the continuity of the generations, namely, the birth, the living, the general development.

Fitrat is a social responsibility of the family, such as "Education of generation", "Ideological education", "Ethical education".

The reformist character of the Jadid movement has gone through a complex historical complex. This path has turned into a clash of diverse philosophical ideas and outlook on the prospects of Jadidic society development. This clash of ideas originates on the conceptual basis of the ideology of violation of feudalism and colonialism.

Spiritual needs include the aspirations of the universe, self-awareness, outlook, knowledge, art, ideology, spiritual aspirations. Hence, in the modern philosophy, the growth of individual freedom, which is a criterion for the development of society, is seen as an important indicator of the development of society. Any change in the community depends on the expansion of human

needs. The crusaders, on the other hand, developed their own action program, despite their every move, idea, and objective.

Jadids have supported the idea that Abu Nasr Farabi and Beruni are the result of nature's influence. Man can change his inner appearance only through hard work and effort. Everyone is the owner of his or her own conduct. Society evolves through evolutionary evolution. Justice, the care of the citizens, the destruction of the oppression, the rule of society and the state with reason and justice were the main ideals of Behbudiy.

Thus, the essential feature of the Jadid's philosophy is its political security. Political support is a key element of cultural development.

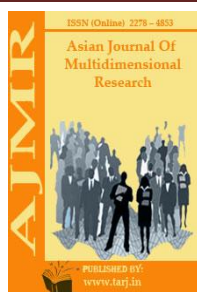
CONCLUSION

The philosophical outlook of the Jadid differs by his theoretical and well-founded work. Therefore, in their philosophical view, the common principles of the philosophical outlook are scientific, historical, logical, universal, purposeful, ideological. It is because of these principles that the Jadids are well aware that man can be governed by methods such as ethical principles, religious values, legal documents and political mechanisms. That is why they believe that they are based on the wisdom of man to guide them to goodness; religious beliefs; laws and regulations; penitentiary institutions; politics - is based on public functions and has the specific direction of action. Jadids regarded the philosophical world as a power that, in essence, summarizes the socio-historical experience, shows the community's prospects, and describes it as a power that unites the people around the idea.

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SPATIAL PATTERNS AND TRENDS OF INTERNAL MIGRATION IN KASHMIR: A STUDY OF RURAL-URBAN CONTINUUM

Tanveer Ahmad Khan*

*Junior Research Fellow
Institute: Aligarh Muslim University,
Department of Sociology,
Aligarh, Uttar Pradesh, INDIA
Email id:tanveerkhan101.tk@gmail.com

ABSTRACT

Intellectuals on the demography of Kashmir have focused largely on trends in fertility, mortality, and international migration. But little attention has been paid to spatial patterns and trends in internal migration, despite its strong influence on population change at the regional and local levels of Kashmir. The continuous flows from rural areas have led to the tremendous increase in urban population with strong Backwash effects on one region and weak Spread effects on the other. The present paper is an attempt to understand the pace of how fast cities are growing and rural areas are shrinking in Kashmir. Prior studies have focused mostly on net migration at the state level and in some instances case studies for particular regions or communities particularly Kashmiri Pandits have been given due consideration. The recent shift from sub-urbanization to re-urbanization that has been noted in other states of Indian has not yet been studied comprehensively in the Kashmir context. This paper adopts a spatially explicit approach to the study of migration flows between Kashmiri's cities, tribes and rural areas. The main focus of the present paper is to explore the trends of internal migration along the rural-urban continuum and to understand the trends of intra-district and inter-district migration. The research paper is based on primary observations and secondary sources of data including books, journals, periodicals, official records and internet sources as well.

KEYWORDS: Trends; Internal Migration; Rural-Urban Continuum; Kashmiri Pandits

1. INTRODUCTION

Migration is one of the most important components of population dynamics besides fertility and mortality. However, there is no consensus among the thinkers regarding the meaning and definitions of migration. The acceptable definition of migration is 'it is concerned with the movement of population from one place to another within the country or outside it' (Haq 2007).

The term internal migration is used for the movement of people within the country or within the districts of the country. It varies considerably from a few kilometers to several thousand kilometers. For example, migration to Delhi, Luck now, Bihar, Uttar Pradesh and other states of the country while as on the other hand people are constantly changing residence from one town to another town, from one village to another, from less developed region to highly developed region and finally from rural to urban areas due to matrimony, occupational linkages, job security and several other reasons. The operational definition of migration as a change of residence from one civil division to another is generally applicable to internal migration. A person who has changed his usual place of residence from one area to another area is known as migrant and his activity is known as migration.

2. Trends and patterns of Internal Migration

Internal migration is a major driving force of population change at the regional and local scales in the Kashmiri society. The earlier work of the demographers, government officials as well as non-governmental organizations on internal migration in Kashmir have focused mostly on net migration at the state level or on case studies of particular communities especially Kashmiri Pandits who in fact added to the art, literature, and philosophy of the Kashmiri society. But they were forced to leave their native places due to political turmoil in Kashmir. This happening of political turmoil in the Kashmir valley led to the displacement of minority communities particularly the Kashmiri Hindus. The political instability in Jammu and Kashmir and the issue of majority-minority dynamics of a population in the state led to the displacement of about three lakh persons (particularly Hindus) from the valley in 1989-90. And more than two lakh Muslims were displaced in the provinces of Jammu in Hindu dominated areas. Thus, the displacement of the population either by militancy or by the military forces for security reasons have imbalanced the population distribution in the Indian administered Kashmir. The existence of perpetual fear either by military or militancy has made the life of people havoc in the valley. While collecting data on internal migration a number of participants narrated that "during the day, we are working in the farmland but in the evening both police and army without any warrant or reason investigate and interrogate us and even disappear us at an alarming rate, so in order to escape we prefer to stay in those areas which are free from such incidences". This has disturbed our family life and has increased our expenses for residing in other localities on the rent basis. Similarly, those who are facing threats from militants migrate towards safe areas especially in the areas of *Nishat*, *Dal-gate* and other areas of the city. Thus, the composition of the rural-urban population is always in flux mode. Fear is implanted among the members of the minority as well as majority communities.

Despite rapid dependency ratio and declining ratio of working population and the decline of Kashmiri's rural population, surprisingly little attention has been paid to the ways in which inter-regional migration flows impact on the redistribution of the population at the local scale. The matter of concern in this context is the effect of migration on population concentration and the development of urban systems. Previous studies for other states of India, especially Delhi and Kerala have shown that the well-established model of urban development, in which urban growth

is followed by urban sprawl and ends in urban decline. Interstate migration in India doubled between 2001 and 2011 compared to the previous decade, with Pune and Surat emerging as the most affected cities in the Asian region, says a WEF report. According to the World Economic Forum's report on 'Migration and Cities', India is home to one-fourth of the 100 fastest-growing cities in the world while Mumbai, Delhi, and Kolkata are among the 10 most populous urban areas worldwide¹.

This model of urbanization is increasingly inadequate for explaining contemporary trends in urban growth and decline in the valley of Kashmir. Given that intensifying sub-urbanization and re-urbanization tend to coexist across urban agglomerations in the state, a multiple-dimensional approach that goes beyond simple net-migration measures to take into account the entire system of interregional flows and how they differ across time and over the life course is needed (sander 2014).

It is difficult to find out uniform trends in internal-migration because migrations vary from region to region and from place to place. Historically, internal migration particularly in Kashmir and more generally in India has been low (Davis, 1951), and a declining trend in mobility is noticed till about the 1990s (Kundu and Gupta, 1996). National Sample survey data for 1992-1993 and 1999-2000 suggest an increase in mobility during the last decade (Srivastava and Sasikumar, 2003) (Mishra 2016). However, the nature of internal migration in Kashmir is quite different from other states of India. The valley of Kashmir has witnessed migration since times immemorial as it became an attractive place for different invaders who always tried to capture the land of valley due to its material richness and everyone tried to exploit its resources indefinite period of time. The foreign rulers like Mughals, Afghans, Sikhs, and Dogras who ruled it for shorter or longer periods considered the people of the valley as their subjects, excessive exploitation of the Kashmiri's artisans by the different rulers forced them to migrate to other states of India especially in the state of Punjab (Hameed, 2012). More notably, the famines of 1724, 1735 and 1746 have had badly affected the lives of people in Kashmir forced them to sell their personal belongings including their small children (Ahad Abdul, 1987). These natural famines have resulted in human trafficking, trade of children and ultimately child labour. These periods in the history of Kashmir are marked by extreme death rates of artisans who died 'like dogs' nameless, unrecognized, obscure and unwept. Those who got escaped migrated towards the plains of Punjab in search of livelihood and thus depopulated the Srinagar city. Thus, all historical records reveal that Kashmir experienced migration throughout its history from antiquity to date. Migration in Kashmir has reshaped the Kashmiri society at important epochs of history and in all stages of development. People have been migrating to the region mainly due to religious-political and economic factors and the outmigration or emigration has also taken place (e.g. in early 90's) due to several other reasons as political or religious (e.g. Pandit migration) (Kashmir 2014). In modern times there is a huge flow of in-migrants as laborers from the states of Punjab, U.P, M.P, West Bengal, numbers. There are a number of factors that force them to migrate as some labours especially Masons and painters reported that economic, communal riots, psychological and other cultural issues act as push factors and the environment, geography, hospitality, high wages, and social set-up of Kashmir as the pull factors.

The internal migration within the state followed the trend of Rural to rural, rural to urban, urban to rural, urban to urban and now-a day's we have intra-district migrants, inter-district migrants, and a small portion of international migrants. In this paper, the following categories of migration- rural to urban migration and intra and inter-district migrants along with causes and

consequences have been taken into consideration. This internal migration might be involuntary (forced) or voluntary depending upon the situation in which a person grew up and lives.

3. Causes of Internal-Migration

3.1 Push Factor in Rural Areas: The findings of the study revealed that unemployment and underemployment was the major reason for rural people to migrate towards urban areas followed by very less or no educational opportunities for their children at their place of origin. Besides these two, other factors which play their role were found to be Natural disasters, population pressure, and rural violence, less political or religious freedom.

3.2 Pull Factors in Urban areas: Some of the essential pull factors in urban areas found throughout the study are, Access to services, Better job opportunities, People attracted, to improve the standard of living and More chances of accumulating more money.

4. OBJECTIVES OF THE STUDY:

The study was based on the following objectives:

- 1) To study the trends and patterns of internal- migration in Kashmir.
- 2) To understand how regional disparity in development influences inter-state migration pattern in specific regions of Kashmir.
- 3) To understand the causes and consequences of internal migration at intra and inter-district levels.

5. METHODOLOGY

The detailed methodology has been explained in the following steps.

5.1 Tools and Techniques Employed for Data Collection:

The present study as Spatial Patterns and Trends of Internal Migration in Kashmir: A Study of Rural-Urban continuum was based on primary and secondary sources. Secondary sources of information have been collected through books, Journals, periodicals, governmental and non-governmental organisations, and internet sources as well. Primary data has been collected through comprehensive Case Studies in the regions of district Gander BAL.

5.2 Selection of the Area: - The universe for conducting the present study has been selected through a pilot study carried out in district Gander bal. Two blocks; block Kangan and block Gander bal has been selected to carry out the field study. Kangan represents the hilly, backward and Gujjar/Bakerwal resident area while as Gander bal represents a town i.e. a developed block. Thus in the intra-district migration case, migration shall occur from Kangan to Gander bal. From each block, six villages have been selected to represent the true sample of the population study. The selected villages are as under:

- ❖ Kangan Block/Hilly (backward one): Akhal, Kangan, Wanghat, Satrina, Margund, and Ander wan.
- ❖ Gander bal Block/Plain (developed one): Arch, Lar, Tulmulla, Barsoo, Manigam, and Safapora.

From each village, ten respondents were interviewed to fill the structured questionnaire. Thus from each block, 60 respondents gave their responses in the interview schedule. Thus, the total

sample size was 120 respondents were selected according to the well statistically established relationship between population and sample size.

Data has been collected through well-structured interview schedule and in some cases, in-depth group discussion and focused group discussion was also followed. Both nominal and ratio scales were used to gather information from the respondents. Cronbach's Alpha helped to know the exact number of respondents upon which the survey has been conducted.

5.3 Analysis of data: - After the collection of the data it has been tabulated and analyzed with simple statistical tools. Percentages were calculated to understand the pattern of migration and graphs were made in MS Excel to depict the true picture of rural-urban migration.

6. Findings and Discussion on Trends of Internal-Migration Along the Rural-Urban Continuum

6.1. Intra-District Migration

When the migrant move within the district it is called intra-district migration. For example, in district Ganderbal it was found that people from far-flung areas are migrated towards mainstream whereby reducing unemployment in the native place but meanwhile increasing unemployment and magnitude of the population in the city side. There are several reasons for their migration such as lack of employment, lack of connectivity, lacking educational and health facilities. In some regions of block Kangan many communities especially Gujjar, even locals and Choopans (Shepherds) residing in the areas of Akhal, Satrina, Wangat, Chatergul, and Hari-Ganivan mentioned that due to the threats of wild animals we are leaving our natives villages and we don't have connectivity facilities even in modern times. For protecting future we want to move from this darkness and some even told aloud that "we are eagerly waiting for modernization to come to our village". Most of them are unable to migrate, because some intervening factors like lack of money, strong family ties, distance and lack of knowledge play a due role.

6.2. Inter-District migration

Persons, who are enumerated in a district but were born in and move to another district within the state, this is inter-district migration within the state. For example, when people from different districts move to Srinagar we call it inter-district migration for permanent or temporary settlement and for business or educational purpose. While collecting data in the district Ganderbal researcher found that a large number of people especially from *Shalla Bug, Rakh Harran, Gadoor, KoragDomarag, Gogigund, TullamullaGhat, Rabitar, GundRoshan, and Tullamulla* migrate towards Ladakh for selling wooden logs and other essential commodities. The business continues for at least six months in a year. Some of the communities reflected that we have been migrating towards Ladakh since from forty years especially *Danga community*. The residents of that community mentioned that the demand for wood is increasing day by day and we have established our own Wood Dippos (*Kaddy*) in the Leh, Ladakh, Zaskar, and Drass. These wood Dippos are the main source of our income besides agriculture. Initially, the only male was going to these regions but nowadays female are also participating in this business. The Danga community is providing employment to more than 100 persons in the village. They have opened new doors of business both for themselves and for other local communities who were earlier unemployed. But this business has created child labour in the village and on another hand imbalanced population in the village.

6.3. Inter-State Migration

Persons, who are enumerated in the state but were born in and move in other states, this is interstate migration across the state. In Kashmir mostly labour migrants came from UP, Bihar, MP, and Punjab and from other states. Similarly, migrants from Kashmir migrate to Delhi, UP and other states of the country. There are several reasons for their migration. During the field investigation, the researcher noted that most people from 20- 30 years of age migrate towards other states. Majority of them are men and mostly student migrants. It was also found that students prefer to move to Aligarh Muslim University than the other universities. The migration is purely gender centered. Many female students intimated that parents are not allowing them for education outside the state. This has decreased the ratio of men in the state.

6.4. International Migration

In terms of education and business purposes, Kashmiri people move to other countries. But due to lack of data, exact figures are not known. In the district, Ganderbal few students have migrated abroad. Personally, the researcher met two Post-doctoral fellows who are doing research at Oxford university one male namely *Dr. Gh. Hassan from Tullmulla* who is doing his post-doctoral research on "Cancer" and one female student from Batwana name withheld. This shows that the trend of international migration is very low in the state. People also move to the other countries for better job opportunities and Gulf countries were found to be the primary option.

6.5. Rural-Urban Migration along with Rural-Urban Continuum

The most common form of migration in the state of Jammu and Kashmir is the rural-urban migration. In this form of migration, most migrants want to leave their farmlands for urban areas and for non- agricultural activities.

Rural-Urban Continuum is a famous concept widely used by sociologist and geographers. The size of the continuum depends upon the size of the town or city. This concept suggests that the population size depends on the population density and the number of settlement. The continuum at the rural end of the continuum is characterized by simplicity, homogeneity, integration and less mobility. Whereas the urban end it is usually characterized by heterogeneity, mobile population, and diversity. The continuum is seen as marking a process of social change. Here social change can occur without intervention i.e. through the replacement of an original rural population simply by rural innovators, rural tourism, and rural entrepreneur and through efficient agriculture. It is also possible to find rural societies in urban settings, and urban societies in rural settings. The association between these two setting is not entirely perfect, although the continuum concept still has some validity

Robert Redfield (1941) described the folk society as "a society, which is small, isolated, non-literate and homogenous with a strong sense of group solidarity.

The nexus between migration and development has remained an issue under vigorous academic debate. Development in an area is always correlated with in and out-migration at inter-state, intra-state or international levels. Therefore, the process of people moving to other areas in search of a better life is not a novel one. During the study, it was found that people in large numbers have moved voluntarily in quest of a better quality of life from a less developed rural area to more developing rural or urban areas. These people include both low- skill and Low wage workers as well as high skill and high wage- workers. The people who moved to Gander bal were

found to be from less developed and far-flung areas of Ladakh and Bandipora. Similarly, people from Ganderbal generally move towards district Srinagar, most developed district of Kashmir.

7. Intervening Factors between Rural-Urban Internal- Migration: During the study, it was found that the main intervening factors that prevented people from moving to include lack of resources, strong family ties, long distances and lack of knowledge.

8. Impact of Rural-Urban Internal-Migration:

8.1 On Rural Areas: The findings of the study revealed that due to the process of migration there is a significant reduction in unemployment in rural areas. It reduces economic growth in the native place and thus fosters the strong growth of the backwash effect in the local region where from people moving. The excess of migration also resulted in the depopulation of the rural areas with its impact on the institutions of marriage and family.

8.2 On Urban Areas: The study suggested that due to the increase in migration from rural to urban areas the population of the city increases which leads to overcrowding and congestion. Moreover, excessive migration contributes to the growth of migrant areas e.g. Ghettos.

9. Trends of the Population in Rural and Urban areas of Jammu and Kashmir

The State of Jammu and Kashmir is composed of three distinct geographic regions such as Jammu, Kashmir, and Ladakh. Each region has different physiography, social, economic, political, religious and cultural conditions. Informing about the population trends in the rural and urban area of Jammu and Kashmir, the second part of the Census 2011 is indicative of growing urbanization in the state, and Srinagar city being the high urbanized district. There has been a shift in the occupational pattern of people in the face of increased urbanization in the state in the last decades, the Census reveals. The percentage of urban population in the state has increased from 24.81 in 2001 to 27.21 in 2011 Census. Srinagar, with 12,34,245 people in 22 districts have the highest urban population. It was also found that it has the lowest number of rural population with only 15,928 people. Jammu follows on the second number with 7,57,829 urban population and Anantnag is at third number with 2,78,512 urban people. The largest rural population is found in the Baramulla district of north Kashmir with 8,40,948 people living in villages followed by Anantnag district of south Kashmir with 7,91,237 and Kupwara with 7,76,332 rural populations. Ramban has the lowest number of urban population with 11,786 people living in the towns. Kargil has 12,753 people living in urban areas. The number of districts has gone up to 22 from 14, while the number of sub-districts has increased from 59 to 82; the number of towns has spiraled to 122 from 79, and a number of villages have gone down from 6552 in 2001 census to 6551 in 2011 census. There are approximately 234 un-habited villages in the state.

The total population of the state is 1,25,48,926 in which 91,34,820 is rural while 34,14,106 is urban population. Kashmir Valley has a population of 69.08 lakh while Jammu division have 53.50 lakh and Ladakh region account for 2.90 lakh population of the state. The literacy rate in the state has increased from 55 percent in 2001 Census to 68 percent in the 2011 Census, Director Census said, adding that while the state has a total literacy rate of 68.74 percent, it is 64.97 and 78.19 percent in rural and urban areas respectively.

The literacy rate among the men is 78.26 percent and among female folk, it is 58.01 percent. Literacy rate in rural males is 75.51 percent in urban males it is 84.90; similarly among the rural females literacy rate is 53.36 percent and the urban female literacy rate is 70.19 percent, the census data reveals. The total population in the 0-6 age group is 20,08,642 which is 16.01

Percent of the total population of the state while as the population in a 0-6 age group in rural areas is 15, 96,076 while in urban areas it is 4, 12,566. The overall sex ratio (females per thousand males) in the state is 859; in rural and urban areas it is 850 and 854 respectively.

The sex ratio in the rural areas has shown a downward spiral from 917 in 2001 to 899 in 2011. However, the sex ratio in the urban areas has shown an increase from 819 in 2001 to 840 in 2011.

Leh district in Ladakh region has a shocking sex ratio of just 583, which is a massive drop of 240 from the 2001 census considering the sex ratio, Leh district is ranked 22nd in as many districts in the state. Nearby Kargil district is one rank ahead at 21st position with a ratio of 775, down 62 from 2001 Census. Kulgam and Shopian districts in south Kashmir have the highest sex ratio of 951, which are 11 more than the national average. The overall sex ratio in the state caused alarm when it was revealed that number has fallen from 892 to 883 in last 10 years. (The whole paragraph has been taken from Kashmir forum. Org: J&K Census 2011). The pattern and trends of rural-urban population in totality and district wise is shown under following tables:

TABLE NO. 1

A) Total Population:	12548926
B) Male Population:	6665561
C) Female Population:	5883365
D) Sex Ratio	883 (Females per 1000 males)
Rural:	899
Urban:	840
E) Density (Person per sq. km):	124
F) Percentage of Literacy:	68.74%
G) Total No. of population attending school	914014
H) Crude Birth rate:	17.8
I) Crude Death rate:	5.5

District Wise Population of J&K as per 2011 Census**TABLE NO. 2.**

S.No.	District	Person	Male	Female	Density	Rural	Urban
1	Srinagar	1250173	665789	584384	1056	15928	1234245
2	Ganderbal	297003	158900	138103	284	250203	46800
3	Budgam	755331	400583	354748	550	666620	88711
4	Anantnag	1069749	552203	517546	366	791237	278512
5	Kulgam	423181	216873	206308	396	343739	79442
6	Pulwama	570060	297988	272072	525	491370	78690
7	Shopain	265960	136302	129658	852	251010	14950
8	Baramulla	1008039	542171	473332	242	825539	182500
9	Bandipora	385099	201531	183568	967	320070	65029
10	Kupwara	875564	475126	400438	368	776322	99242
11	Leh(ladakh)	147104	92907	54197	3	83901	63203
12	Kargil	143388	80791	62597	10	130635	12753
13	Jammu	1526406	815727	710679	653	768577	757829
14	Samba	318611	168948	149663	350	264990	53621

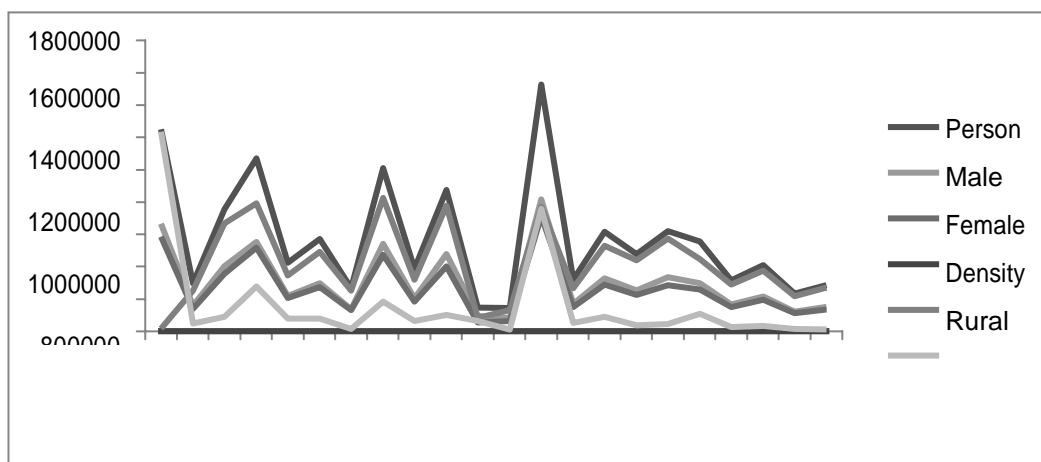
15	Kathua	615711	327953	287758	246	527176	88535
16	Poonch	476820	252240	224580	284	438176	38644
17	Rajouri	619266	332424	286842	235	575332	43934
18	Udhampur	555357	298094	257263	224	445850	109507
19	Reasi	314714	166392	148322	185	288010	26704
20	Doda	409576	213091	196485	137	377003	32573
21	Kishtwar	231037	120496	110541	29	216196	14841
22	Ram ban	283313	149032	134281	210	271527	11786
23	Total Persons	12548926	6665561	5883365	124	9134820	3414106

(Data Source: Digest of Statist

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Email: jk-env@nic.in Source: http://jkervis.nic.in/administrative_demography.html 1/2

Graph 2



Source: Table 2 Table No.3

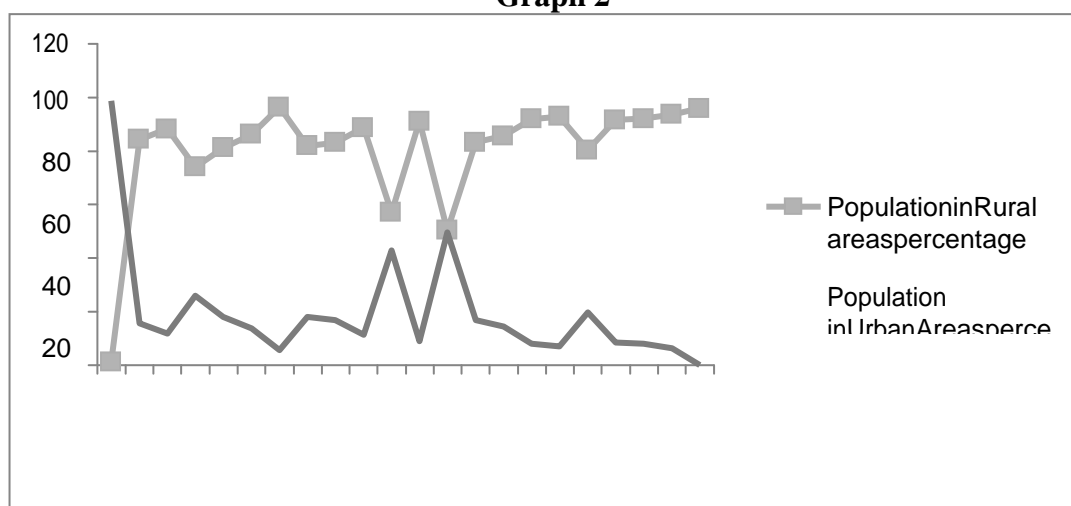
Percentage of rural urban population

S.No.	District	Total population	Population in Rural areas percentage	Population in Urban Areas percentage
1	Srinagar	1250173	1.275	98.72
2	Ganderbal	297003	84.24	15.75
3	Budgam	755331	88.2553	11.74
4	Anantnag	1069749	73.964	26.035
5	Kulgam	423181	81.228	17.93
6	Pulwama	570060	86.19	13.8
7	Shopain	265960	96.37	5.63
8	Baramulla	1008039	81.9	18.1
9	Bandipora	385099	83.1136	16.88
10	Kupwara	875564	88.67	11.33
11	Leh(ladakh)	147104	57.03	42.96
12	Kargil	143388	91.106	8.89

13	Jammu	1526406	50.35	49.64
14	Samba	318611	83.17	16.82
15	Kathua	615711	85.62	14.37
16	Poonch	476820	91.89	8.1
17	Rajouri	619266	92.9	7.07
18	Udhampur	555357	80.28	19.72
19	Reasi	314714	91.51	8.48
20	Doda	409576	92.05	7.95
21	Kishtwar	231037	93.58	6.42
22	Ramban	283313	95.83	0.041

(Data Source: Digest of Statist This site is designed, developed and maintained by J&K ENVIS Centre. Email: jk-env@nic.in)

Graph 2



Source: Table 3

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For my friend Mohamad Iqbal Rather, and Showket Ali Dar, thank you is perhaps too less a word to express my feelings. They scanned each and every single page that I have ever written with their critical and productive suggestions. Finally I am thankful to my parents who have been with me in all moments of my life.

CONCLUSION

It is essential to point out that in the state of Jammu and Kashmir no concrete records are available regarding the trends of internal migration. It seems that neither government nor any other organisation is interested in collecting data related to migration instead; of knowing it has a strong influence in the composition and distribution of population dynamics. In opposite to the state of J&K, all other states of our country have maintained a detailed record about migration. In the state of J&K, people from tribal and rural areas are tremendously migrating towards nearby towns and cities as the result many hilly areas have remained depopulated. Consequently, district Ganderbal has one uninhabited village as per 2011 Census. A new reason apart, from already cited reasons of internal migration in Kashmir, is the lack of connectivity in the tribal and rural locales of Kashmir. Therefore, the connectivity should be the prime focal point for the government. Regional disparity is at its pace in some regions of the valley. In hilly areas, those who have avenues move towards cities thus having a strong backwash effect at their native place but strong spread effect at a new place as they have contributed towards increasing market opportunities in the developed region. The residents of *Sadarbal in Darga* are mostly migrants who came from Uri, Tral and other regions of the valley especially in the Professors colony have opened new dimensions of development in the region. It was found that the most common causes of internal as well as international migration in the valley are the oppression and exploitation done by the Indian forces as they failed to maintain peace in the valley. Death and violence is the order of the day in Kashmir. People, all over the world, are busy in making their ends meet while in Kashmir, men and women, young and old are busy in fighting against Indian Security forces that are enjoying the civilian killings, and forced migration in Kashmir under an armed safety act, very often misused in Kashmir. Thus, there are multiple reasons for internal migration in Kashmir

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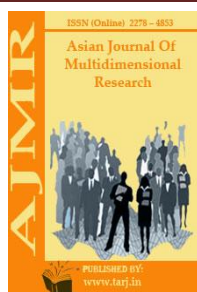
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SIKH MARTYRS DURING 1716 AD-1750AD

Ranjit Kaur*

*Assistant Professor in History,
G.G.D.S.D. College, Haryana,
Hoshiarpur, INDIA
Email id:ranjit1031985@gmail.com

ABSTRACT

In Sikh faith one who gives evidence of truth, justice and sacrifices himself for defending the claims of conscience is known as Martyrs. Sikhs have a history the pages of which are full of blood of martyrs. It is the history of brave people who were always ready to sacrifice their lives fighting against the injustice of the fanatic rulers. After the demise of Banda bahadur a new era of martyrdoms of Sikh commenced. At the hands of Mughal rulers Sikhs faced social injustice, religious fanaticism, persecution, torture and oppression for about half a century. Far from submission, they inspired by the teachings of gurus and fired with the spirit of freedom. The Sikhs fought against the injustice, religious fanaticism of the Mughals, Afghan and other rulers and sacrificed their lives. The research paper named Sikh martyrs deals with some of better known martyrs of the Punjab history during 1716 AD-1750AD.

KEYWORDS:*Injustice, Religious Fanaticism, Sacrifice, Sikh Martyrs.*

INTRODUCTION

After the persecution of Banda Bahadur a new era of martyrdoms of Sikhs commenced. From 1716AD to 1720AD there was an absolute black out of the activities of the Sikhs in the history of Punjab. The Subedar of Punjab compiled with instructions of the monarch in such a rigorous way that the vast land of Punjab looked nothing but a pool of blood. As a result the Sikhs went helter-skelter and took resort in the Lakhi jungle and the Shivalik hills. Some of them even took shelter in the deserts of Rajputana. The Sikhs had a hard time; they had to survive on the bark and leaves of the trees. Abdus Samad Khan, Zakriya Khan, Yahiya Khan, Mir Mannu, Ahmad Shah Abdali had tried to suppress the Sikhs but they failed. The Sikhs of Punjab were brave people who fought against the inhuman administration and behaviour of Mughal and afghan rulers and they sacrificed their lives.

Some prominent Sikh martyrs

Bhai Tara Singh Van: Bhai Tara Singh Van was the eldest son of S. Gurdas Singh. He was born around 1687 AD. He was a Butter Jat of village Baen Dall (Now 'Van') in Lahore district. He took Amrit from Bhai Mani Singh. He always helped the needy. He was God fearing man and a vigorous struggle against the local administration. He equipped himself with the weapons of warfare and wore blue dress. He had taken upon himself to serve the cause of Dal Khalsa to get rid of the Mughal slavery. He believed that resort to warfare was the only alternative left to deal with the Mughals. When Banda Singh Bahadur was struggling against the Mughals Tara Singh Van helped the Sikhs. He ran a community kitchen (Langar) for them. He gave refuge to any Sikh who came to him to escape persecution. All these led to the martyrdom of Bhai Tara Singh Van.

There broke a quarrel among Sikhs and Chaudhari Sahib Rai of Naushera Pannuan, which led to the martyrdom of Bhai Tara Singh Van. Sikh stole two mares of Chaudhari and sells them in the Malwa region and deposited the money in the Langar of Tara Singh Van and took shelter with Bhai Tara Singh Van. Chaudhari demanded for culprits but denied by Tara Singh Van. Chaudhari reported the matter to the Faujdar of Patti. Faujdar lodged a report against Sikhs before Zakriya Khan, the governor of Lahore. Zakriya Khan sent 2200 horsemen, 40 jamburas, 5 elephants and 4 rekkalas under the command of Momman Khan. Sikh gave a tough fight to the enemy; however they all died as martyrs along with their fearless leader Tara Singh Van in 1726 AD.

Bhai Haqiqat Rai: Bhai Haqiqat Rai was born in Sialkot, Punjab in 1724 AD. He was a son of a wealthy trader, Bhag Mal Rai. In the childhood Haqiqat Rai was sent to maulvi to learn Persian. All his other classmates were Muslims. He became the target of religious fanaticism of the times. He is said to have passed certain remarks against the prophet of Islam in response to the criticism of Hindu God and Goddesses. The Muslim boys complained to the Haqiqat Rai blaspheming the prophet and Islam. Haqiqat Rai was arrested and sent to Amir beg, the administrator of Sialkot. Amir beg was a cruel man and immediately ordered killing of innocent boy. He said boy can be pardoned only if he accepts Islam as punishment of blasphemy. Because of his refusal to embrace Islam, he was condemned to death. Haqiqat Rai was executed by the orders of governor on January, 1735 AD.

Bhai Mani Singh: Bhai Mani Singh who made a supreme sacrifice for a noble cause was born on April 07, 1644 AD at Multan. He was hardly five year of age when was brought under the patronage of guru Teg Bahadur. Bhai Mani Singh was childhood companion of Guru Gobind

Singh. He also took initiation of sword from Guru Gobind Singh. He compiled the Bani of Guru Gobind Singh and also settled a rift of Bandais with the Dal Khalsa at the crucial age. He was sent to Amritsar by Mata Sundri to manage the affairs of Harmandir Sahib and to guide the Sikhs.

During the conflicts of Khalsa with the Mughals and the Afghan's Bhai Mani Singh took keen interest and emphatically stressed the need for the organization of Khalsa. Zakriya Khan had banned the assemblage of the Sikhs at Harmandir Sahib. The permission was granted for a tribute of Rs 5000. Bhai Mani Singh hoped that he would be able to pay the sum out of the offering to be made by Sikhs who were invited to come. The administration demands the stipulated amount for non-payment of which Bhai Mani Singh was held responsible. Bhai Mani Singh was taken into custody and offered the usual choice of adopting Islam. But he refused to do so. Along with his companions he was put to death at Nikhas Chowk, Lahore in 1738 AD. The Nikhas Chowk has since been known as Shaheed Ganj-the place of martyrdom.

Bhai Bota Singh and Bhai Garza Singh: Both were prominent Sikhs who were ever ready to sacrifice their lives for defending their faith. Under the Mughal emperor and the governor of Lahore Sikhs were to be haunted down like wild beasts after Banda Bahadur's persecution. As a result most of the Sikhs left the plains and took shelter in the Shivalik hills, the Lakhi jungle and the sandy deserts of Rajputana. Bhai Bota Singh and Bhai Garza Singh both used to come occasionally to Amritsar at night in order to bath in the sacred tank.

One day when they were returning from Amritsar seeing them, a party of wayfarers said that they cannot be Sikhs because there was no Sikh left anywhere in the neighbourhood. They must be a pair of cowards, jackals hiding about to shave their skin. These taunting remarks stung Bhai Bota Singh and Bhai Garza Singh. Bhai Bota Singh began to collect toll tax of one Anna per cart and one pice per donkey load on the grand trunk road Lahore and Amritsar near Sarai Nurdin. None dare to refuse his demand. All paid it quietly. Bhai Bota Singh did not like it. His object was only to prove to the financial rulers that, in spite of their all-out effort to exterminate the Sikhs, the Sikhs were still very much in existence. He wrote a letter to challenge his administration "*With a big stick in hand, on the road I stand levying an Anna for a cart and a pice for a donkey load. Tell sister-in-law Khano, that this is the message from Bota Singh*"

As a result Zakriya Khan sent Jalal Din for taking Bota Singh and Garza Singh into custody. Both of them faced Mughal army bravely and fell martyrs at last in 1739 AD.

Bhai Mehtab Singh: He was a resident of Mirankot, 8 km north of Amritsar. He was son of S. Heera Singh. Mehtab Singh grew up amidst the most ruthless persecution Sikhs suffered under the later Mughals. He was known for his valour and dedication to the Sikh Gurus. He never wavered from his faith in Sikh doctrines even amidst very trying circumstances. Mehtab Singh came into prominence by killing Massa Rangar. Massa Rangar was contemporary hakim of Amritsar. He converted the holy place of Harmandir into a pleasure house (nautch ghar). Mehtab Singh managed to enter the Harmandir along with Bhai Sukha Singh and severed the head of Massa Rangar with a single stroke of his sword in 1740AD. Faujdar Nurdin raided the ancestral village of Mehtab Singh but could not capture Bhai Mehtab Singh. After five years later when Bhai Mehtab Singh received the news of the arrest of Bhai Taru Singh. He surrendered himself and died by Bhai Taru Singh's side. Bhai Mehtab Singh was broken on the wheel in the Nakhas square in Lahore in 1745AD.

Bhai Taru Singh: Bhai Taru Singh was the son of Bhai Jodh Singh and Bibi Dharam Kaur. He was born around 1720 AD into a Sandhu Jat family of village Poohla in the Majha region. He was a devoted Sikh. On the orders of Zakriya Khan, Bhai Taru Singh and his sister Tat Kaur were arrested for being given food and other aid to the gursikhs. When he was caught along with his sister many Sikhs offered to rescue him but he denied because he wanted to show Mughals that Sikhs are not afraid of death. At much convincing he allowed his sister to be rescued and the Sikhs and villagers paid bribes and got Taru Singh's sister rescued. When he was brought before Zakriya Khan, he was offered the usual choice of accepting Islam or facing death. His sacred hair with scraped along with his scalp and he was condemned to death. Bhai Taru Singh fell martyr in July 1745 AD.

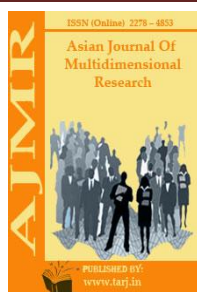
Bhai Subeg Singh and Bhai Shahbaz Singh: Bhai Subeg Singh was born to Rai Bhaga of the village of Jambar in Lahore. He was a scholar of Persian. He was working as government contractor (kotwal) at Lahore. During his tenure as kotwal he ensured peace and security to the people. After the death of Zakriya Khan, his son Yahiya Khan succeeded his father as the governor of Lahore. He turned to hostile to Bhai Subeg Singh and started entertaining complaints against him. Bhai Subeg Singh had a handsome and intelligent son named Shahbaz Singh. Shahbaz Singh was studying Persian language from a Muslim Qazi. Qazi wanted to convert to Shahbaz Singh to Islam and make him his son-in-law. Shahbaz Singh had rejected his proposal. Both father and son were arrested and offered the choice of embracing Islam to save their lives. Both preferred death to conversion as Muslims. Both were tied on separated sets of wheels opposite each other, which ripped apart the flesh of two. Both father and son fell martyr in 1745-1746AD.

CONCLUSION:

Thus the history of the Sikhs reveals the martyrdoms of the Sikhs during the eighteenth century. During this time many Sikhs sacrificed their lives fighting against the injustice of fanatic rulers. All these martyrs inspired us not to give up against injustice, torture and oppression.

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EVALUATION OF URINARY TRACT INFECTION AND THEIR CONTROL BY MEDICINAL PLANTS

M.Kannahi*; P. Nisha**

*Asst. Professor,
PG & Research Dept. of Microbiology,
S.T.E.T. Women's College,
Mannargudi, Tamilnadu, INDIA
Email id: kannahiamf@gmail.com

**PG and Research Department of Microbiology,
Sengamalathayar Educational Trust, Women's College,
Mannargudi, Tamilnadu, INDIA
Email id: Kannahiamf@gmail.com

ABSTRACT

Urinary tract infection (UTI), the most common of all bacterial infections affects human throughout their life span. Twenty percent to 35% of all women experience at least one episode of UTI sometime in their lives. The effect of antibacterial activity of *Aegle marmelos* leaf with methanolic extract of 100 μ l concentration was extraordinary properties against *Bacillus sp* followed by *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* recorded respectively whereas the effect of antifungal activity of *Aegle marmelos* leaf with diethyl ether extract of 100 μ l concentration was maximum zone of inhibition 10.00 \pm 3.34 mm zone of inhibition against *Bacillus sp* followed by *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* and the effect of antifungal activity of *Aegle marmelos* leaf with diethyl ether extract of 100 μ l concentration was maximum zone of inhibition 10.00 \pm 3.34 mm against *Bacillus sp* followed by *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Escherichia coli*. The minimum zone of inhibition 3.67 \pm 1.23mm zone of inhibition against *Staphylococcus aureus* recorded respectively. The characterization of phytochemical compounds of *Aegle marmelos* was 17 compounds identified with respective molecular formula and molecular weight and retention time of functional group for identified of bioactive compounds by FTIR.

KEYWORDS: Urine sample, *Aegle marmelos*, *Adhatoda vasica*, Antibacterial and Antifungal properties, FTIR.

INTRODUCTION

Urinary tract infection (UTI) is one of the most common infections of childhood, with an incidence of around 5% across populations. Every child on the assumption that finding vesico ureteric reflux (VUR) and giving prophylaxis would prevent further infection and what was thought to be “renal scarring” i.e. damage from further infection. The renal abnormalities found in conjunction with high grade reflux are now known to usually be congenital not acquired. Comparison of the numbers of children who suffer a UTI (approx 50,000 per million children), compared to those who are thought to have end stage kidney disease from “reflux nephropathy” (approx 5 per million) show a weak association at best. UTI may be a marker for underlying renal and urological structural abnormality but it is seldom the cause.

1. *Aegle marmelos*

Bael (*Aegle marmelos* (Linn.) is Indian medicinal plant; which has enormous traditional values against various diseases and many bioactive compounds have been isolated from this plant.

Systematic position

Kingdom	:	Plantae
Order	:	Sapindales
Family	:	Rutaceae
Genus	:	<i>Aegles</i>
Species	:	<i>marmelos</i> (L.) Corr.

Adhatoda vasica

Adhatoda vasica Nees belonging to family Acanthaceae, commonly known as Adosa, is a small, evergreen shrub found in many regions of India and throughout the world, with a multitude of uses in traditional Ayurveda. Vasica is most well-known for its effectiveness in treating respiratory conditions. The leaves of Vasica are showed stimulant effect on the respiratory system. Vasica shows an antispasmodic and expectorant effect, and has been used for centuries with much success to treat asthma, chronic bronchitis, and other respiratory conditions. The powdered herb, boiled with sesame oil is used to heal ear infections and arrest bleeding. Boiled leaves are used to treat rheumatic pain and to relieve the pain of urinary tract infections. It is also believed to have abortifacient properties. It is used in some parts of India to stimulate uterine contractions, thus speeding childbirth (Claeson *et al.*, 2000).

MATERIALS AND METHODS

Collection of Samples

The midstream urine samples were collected from urinary tract infection patients in sterile screw cap tube. The urine samples were collected from Thanjavur Medical College of Thanjavur District.

Isolation of bacteria from urine sample

The samples were diluted serially as described by Waksman (1922). 1ml of urine samples were diluted in 10 ml distilled water and further diluted in 10 fold distilled water blank as serial dilution. Nutrient agar media was used for bacterial cultures Revival Nutrient agar medium was

prepared and pH of the media was adjusted to 6.5. The media was then autoclaved 121°C, for 15 minutes at 15 lbs pressure in an autoclave. Then 0.1 ml of the 10⁻³ diluted sample was poured and spread on petri plates containing sterilized nutrient agar medium. Replicate plates were maintained for each sample. The inoculated plates were incubated in the room temperature was maintained at 37°C for 24 hours. The colonies growing on nutrient agar plates with different morphology were counted separately.

Isolation of fungi from urine sample

Dilution plating technique described by Warcup (1950) was used to isolate the fungi from urine samples. One g urine sample was weighted and diluted in 10 ml distilled water. One ml of the diluted (10⁻³, 10⁻⁴ and 10⁻⁵) sample was poured in separate Petri plates, then sterilized PDA medium was poured into the Petri plates, tilt gently and allow for solidification. After solidification the inoculated plates were incubated in a dust free cupboard at the room temperature (24±2 °C) for 7 days. Two replicates for each dilution were maintained. One per cent streptomycin solution was added to the medium before pouring into Petri plates for preventing fungal growth.

The colonies growing on PDA plates with different color and morphology were counted separately. A portion of the growing edge of the colony was picked up with the help of a pair of needles and mounted on a clean slide with lacto phenol cotton blue stain. The slide was gently heated in a spirit lamp so as to facilitate the staining and remove air bubbles if any. The excess stain was removed with the help of tissue paper and then the cover slip was sealed with transparent nail polish. The slide was observed under a compound microscope.

Microphotography of the individual fungal species was also taken using Nikon phase contrast microscope (Nikon, Japan), Thanjavur.

Identification

Colony color and morphology were noted besides hyphal structure, spore size, shapes and spore bearing structures. They were compared with other standard works of Ainsworth *et al.* (1973); Raper and Fennell (1965) and Ellis (1976) for identification of the fungal species.

Collection of Plant Material

Fresh healthy leaves of *Adhatoda vasica* and *Aegle marmelos* were collected from Keelakurchi, Mannargudi, Thiruvarur (dist) Tamilnadu (Plate I). The Flora of Presidency of Madras (Gamble, 1935) and The Flora of Tamil Nadu Carnatic (Matthew, 1983) were used for identification of the plant. Collected material was washed thoroughly in running tap water, rinsed in distilled water, stored in sterile polythene bags and used for further studies.

Sterilization of plant materials

The disease free and fresh plant parts (Leaf) were selected for this investigation. About 2 gm fresh plant materials were taken for washed with distilled water. Then, surface sterilized with 0.1% mercuric chloride and alcohol for few seconds. Again the plant materials were washed thoroughly with sterile distilled water (Three times).

Preparation of plant extracts (Alade and Irobi, 1993; Essawi and Srour, 2000).

Two grams of leaves were taken in the 10ml of different organic solvents (methanol and diethyl ether) and crushed with use of cleaned sterile mortar and pestle. Then the solvent extracts were

filtered through Whatmann No.1 filter paper and series of sterile filter. These prepared leaf extracts were stored in sterile glass bottles at 4°C for further use.

Qualitative Phytochemical Analysis (Hanaa *et al.*, 2008)

The phytochemical analysis was carried out for leaf of *Adhatoda vasica* and *Aegle marmelos* with standard methods of Harborne (1984). It was done to assess the qualitative chemical composition of crude extracts using commonly employed, precipitation and colorations reaction to identify the major natural chemical groups such as Alkaloids, steroids, triterpenoides, glycosides, cardiac glycosides, anthraquinones, phenols, carbohydrates, protein and amino acid. General reactions in these analyses revealed the presence or absence of these compounds in the plant extracts.

Quantitative analysis of phytochemicals

Tannins (Chanwitheesuk *et al.*, 2005), Saponins (Trease and Evans, 1989), Alkaloid (Plummer, 1990), Carbohydrate (Krishnaveni *et al.*, 1984), Terpenoids (Indumathi *et al.*, 2014) and Protein (Lowry *et al.*, 1951)

Determination of antimicrobial activity (Perez *et al.*, 1990)

Antibacterial activity

The stock cultures of bacteria isolated from urine samples of diabetic patients were used in this study was maintained on nutrient agar slants at 4°C. Inoculum was prepared by suspending a loop full of bacterial cultures into 10 ml of nutrient broth and was incubated at 37°C ± 2°C for 24 to 48 hours.

Antifungal Activity

Several methods for detecting activity are available, but since they are not equally sensitive or not based upon the same principle, results will be profoundly influenced by the method. There are several methods available for antifungal activity testing, which can be classified into three main groups, i.e., diffusion, dilution, and bioautographic methods.

Fourier Transform Infrared Spectrophotometer (FTIR) (Marimuthu *et al.*, 2013)

Fourier Transform Infrared Spectrophotometer (FTIR) is perhaps the most powerful tool for identifying the types of chemical bonds (functional groups) present in compounds. The wavelength of light absorbed is characteristic of the chemical bond as can be seen in the annotated spectrum. By interpreting the infrared absorption spectrum, the chemical bonds in a molecule can be determined. Dried powder of different solvent extracts of each plant materials were used for FTIR analysis. 10 mg of the dried extract powder was encapsulated in 100 mg of KBr pellet, in order to prepare translucent sample discs. The powdered sample of each plant specimen was loaded in FTIR spectroscope (Shimadzu, IR Affinity 1, Japan), with a Scan range from 400 to 4000 cm⁻¹ with a resolution of 4 cm⁻¹.

RESULTS

Isolation of bacteria and fungi from urine sample

Urine sample were collected from diabetic patient and analyzed for the isolation of bacteria using nutrient agar medium and fungi using potato dextrose agar medium. The bacteria were isolated in suitable dilutions are 10⁻⁵, 10⁻⁶, 10⁻⁷ and the colonies as 25, 22 and 15 CFU/ml recorded and

fungal colonies as 16, 13 and 17 CFU/ml in the dilutions of 10^{-3} , 10^{-4} and 10^{-5} from the dilution factors recorded and tabulated (Table 1).

TABLE 1: ISOLATION OF BACTERIA AND FUNGI FROM URINE SAMPLE

Name of the sample	Total no. of colonies (CFU/ml)					
	Bacteria			Fungi		
	10^{-5}	10^{-6}	10^{-7}	10^{-3}	10^{-4}	10^{-5}
Sample (Urine)	25	22	15	16	13	7

Identification of bacteria from urine sample

Totally five bacteria were isolated and identified based on microscopic evaluation and biochemical characterization. *Bacillus* sp. are positive in gram stain, indole, voges proskauer, sugar fermentation with oxidase and negative in motility, methyl red, citrate, catalase and lactose fermentation. *Escherichia coli* showed results positive in motility, indole, methyl red, catalase, lactose and sugar fermentation, whereas *Klebsiella pneumoniae* was recorded positive reaction in catalase, lactose and sugar fermentation. Likewise *Pseudomonas aeruginosa* showed positive reaction in indole, citrate, catalase and oxidase, *Staphylococcus aureus* showed positive in gram stain, catalase, lactose, sugar and oxidase and others are negative results recorded respectively (Table 2 and Plate 3).

Some of the bacteria were identified viz., *Bacillus subtilis*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* and *Klebsiella pneumoniae* were isolated and identified from the urine sample (Table 3).

Identification of fungi from urine sample

Five different fungi were identified from the urine samples such as *Aspergillus niger*, *Aspergillus fumigatus*, *Aspergillus ochraceus*, *A.terreus* and *Penicillium* sp. represented (Table 4).

Qualitative phytochemical analysis of medicinal plants

The Qualitative Phytochemical analysis of *A.marmelos* with methanolic leaf extract showed the presence of alkaloids, phenols, phylobactins, protein, carbohydrate, saponins, steroids, tannin and terpenoids were analysed respectively. In diethyl ether with *A.marmelos* leaf extract showed in phytochemicals were alkaloids, phenols, phylobactins, protein, carbohydrate, saponins, steroids, tannin and terpenoids were resulted but absence in flavonoids contents in both solvents of methanol and diethyl ether with *A.marmelos* (Table 5 and Plate 5).

Adhatoda vasica with methanolic leaf extracts were showed the presence of flavonoids, protein, carbohydrate, saponin, tannin and terpenoids and absence of alkaloids, phenols, phylobactins, and steroids in methanolic extracts represented, whereas diethyl ether extracts of plant which contain protein, saponin, steroids, tannins and terpenoids are present and absence of alkaloids, flavonoids, phenols and phylobactins recorded correspondingly (Table -6 and Plate-6).

Quantitative phytochemical analysis of medicinal plants

Methanolic and diethyl ether extracts of *A.marmelos* leaf were estimated in phytochemicals are alkaloids (0.14 μ g/ml), saponin (0.53 μ g/ml), steroids (1.42 μ g/ml) and tannin (0.78 μ g/ml) in methanolic extract. In diethyl ether extract of *A.marmelos* was 0.08, 0.13, 0.40 and 0.43 μ g/ml quantity of alkaloids, saponin, steroids and tannins were estimated with respective test plant (Table -7 and Fig.- 1).

In *Adhatoda vasica* methanolic leaf extracts was in saponin as 1.67 µg/ml, tannins as 0.45 µg/ml and terpenoids as 0.78 µg/ml and diethyl ether leaf extracts of 0.08, 0.10 and 0.33 µg/ml estimated with above mentioned phytochemicals recorded respectively (Table- 8 and Fig.- 2).

Antibacterial activity

Aegle marmelos

Four different concentration of methanolic extract of *Aegle marmelos* leaf against some bacteria such as *Bacillus* sp., *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* were analysed. The maximum zone of inhibition was measured in 100µl of *A.marmelos* plant with methanolic extract as 11.00±3.67, 7.00±2.34, 8.00±2.67, 10.00±3.34 and 8.00±2.67 mm in diameter zone of inhibition recorded in *Bacillus* sp., *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* suppressed respectively, whereas, 25µl of extract was 5.67±1.89, 3.00±1.00, 4.00±1.34, 4.02±1.32 and 3.00±2.00 mm in diameter zone of inhibition were observed with above mentioned bacteria respectively (Table -9).

TABLE 9: ANTIBACTERIAL ACTIVITY OF METHANOLIC LEAF EXTRACT OF AEGLE MARMELOS

Name of the bacteria	Zone of inhibition (mm)			
	25µl	50µl	75µl	100µl
<i>Bacillus</i> sp.	5.67±1.89	8.00±2.67	10.00±3.34	11.00±3.67
<i>Escherichia coli</i>	3.00±1.00	5.67±1.89	05.68±1.89	07.00±2.34
<i>Klebsiella pneumoniae</i>	4.00±1.34	5.67±1.89	07.00±2.34	08.00±2.67
<i>Pseudomonas aeruginosa</i>	4.02±1.32	5.34±1.78	06.34±2.12	10.00±3.34
<i>Staphylococcus aureus</i>	3.00±2.00	0.06±2.00	07.00±2.34	08.00±2.67

Mean ± Standard Error

The effect of antibacterial properties of *A.marmelos* leaf with diethyl ether extracts was more significant results against *Bacillus* sp. 6.00±2.00, 6.00±2.00, 8.00±2.67 and 10.00±3.34 mm zone of inhibition found to be measured in different concentration of 25, 50, 75 and 100µl of plant leaf extracts followed by *Escherichia coli* was observed in 3.00±1.00, 4.00±1.34, 3.34±1.12 and 4.34±1.45mm, *K.pneumoniae* was suppressed with 2.34±0.78, 3.00±1.00, 3.67±1.23 and 4.67±1.56mm zone inhibition recorded. *P.aeruginosa* was 2.00±0.67, 3.00±1.00, 3.34±1.12 and 4.67±1.56mm and *S.aureus* in 3.00±0.67, 2.00±0.67, 4.00±1.34 and 3.67±1.23 mm in diameter zone of inhibition in 25, 50, 75 and 100µl concentration of plant leaf extracts were recorded respectively (Table -10, Plate-8 and Fig.- 4).

Adhatoda vasica

The effect of antibacterial properties of medicinal plant *Adhatoda vasica* leaf with methanolic extract of different concentration of 25, 50 75 and 100µl was treated against urinary tract infecting bacteria *Bacillus* sp, *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* were analysed. The maximum concentration of 100 µl of plant leaf extract was 7.67±2.56, 5.00±1.67, 6.00±2.00, 4.00±1.34 and 5.00±1.65 mm zone of inhibition against *Bacillus* sp, *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* bacteria recorded respectively, whereas minimum concentration of plant leaf with methanolic extract of 25µl was 7.00±2.31, 2.27±0.89, 3.00±1.00, 2.00±0.67,

3.00±0.01mm in diameter zone of inhibition represented with above mentioned bacteria respectively (Table - 11; Plate - 9 and Fig. 5).

The effect of antibacterial activity *Adhatoda vasica* with diethyl extract showed maximum zone inhibition against *Escherichia coli* was 1.67±0.56, 3.00±1.00, and 3.67±1.23 and 4.00±1.34 mmdiameter zone of inhibition recorded from 25, 50, 75 and 100µl concentration of plant leaf extracts. In maximum suppression of *K.pneumoniae* and *P.aeruginosa* (3.67±1.23mm), *Bacillus* sp. (0.06±1.23 mm) and *S.aureus* (3.34±1.12 mm) zone of inhibition were recorded in 100 µl concentration of respective plant (Table - 12; Plate - 10 and Fig. 6).

Antifungal activity

Aegle marmelos

The maximum zone of inhibition in *A.niger* (4.00±1.34 mm), *A.fumigatus* (3.67±1.23 mm), *A.ochraceus* (4.00±1.34 mm), *A.terreus* (4.00±1.34 mm) and *Penicillium* sp. (3.00±1.00mm) were observed in higher concentration of 100 µl of methanolic extract of *A.marmelos* when compared to lower concentration (Table -13).

TABLE 13: ANTIFUNGAL ACTIVITY OF METHANOLIC LEAF EXTRACTS OF AEGLE MARMELOS

Name of the fungi	Zone of inhibition (mm)			
	25µl	50µl	75µl	100µl
<i>Aspergillus niger</i>	1.67±0.56	1.67±2.56	2.00±0.67	4.00±1.34
<i>A.fumigatus</i>	2.00±0.67	2.00±0.67	3.00±1.00	3.67±1.23
<i>A.ochraceus</i>	2.00±0.67	2.00±0.67	3.00±1.00	4.00±1.34
<i>A.terreus</i>	2.67±0.89	3.00±1.00	3.34±1.12	4.00±1.34
<i>Penicillium</i> sp.	1.67±0.56	2.00±0.67	3.00±1.00	3.00±1.00

Mean ± Standard Error

Aspergillus niger was showed in 1.67±0.56, 2.00±0.67, 2.00±0.67 and 3.00±1.00 mm in diameter followed by *A.ochraceus* as 1.67±0.55, 2.00±0.67, 2.00±0.66 and 3.00±1.00 mm, *A.terreus* (2.00±0.67, 2.00±0.67, 2.67±0.89 and 3.34±1.12 mm), *Penicillium* sp. 5.34±1.78, 6.00±2.00, 7.67±2.56 and 8.00±2.67 mm) in 25, 50, 75 and 100µl of diethyl ether extract of leaf of *A.marmelos* recorded respectively (Table -14; Plate - 12 and Fig. 8).

Adhatoda vasica

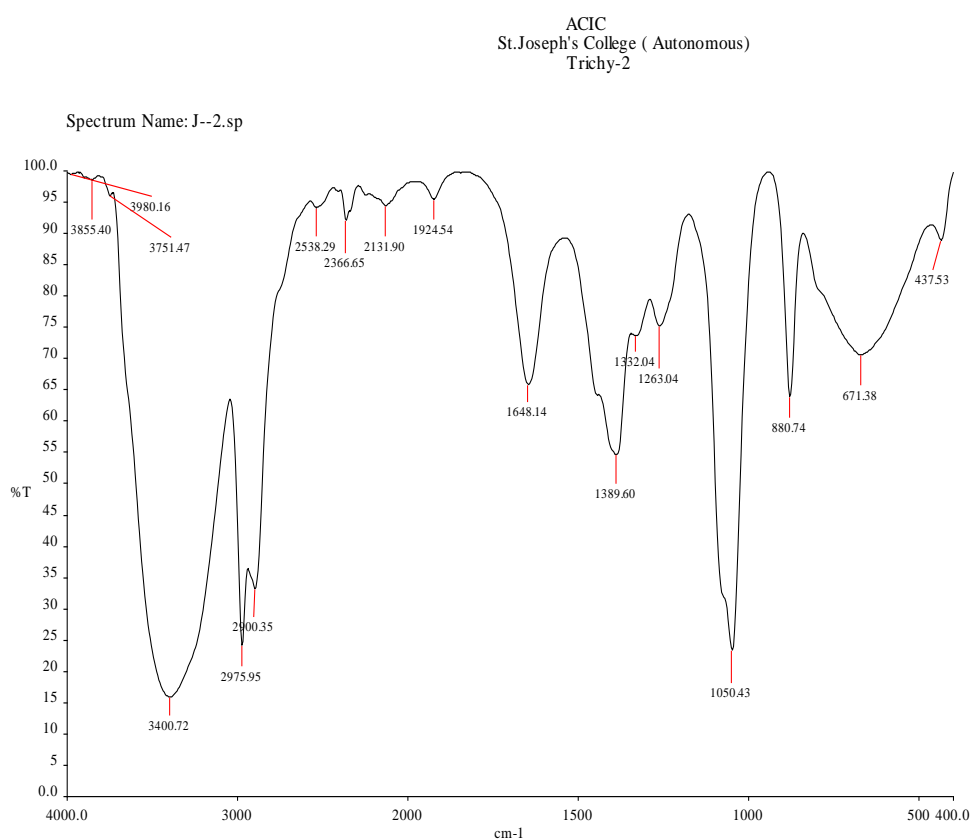
The maximum zone of inhibition was observed in 100µl of methanolic extract of *A.vasica* showed in moderate effect of plant leaf extract agaisnt *Aspergillus niger* (2.00±0.67mm), *A.fumigatus* (4.00±1.34mm), *A.ochraceus* (5.00±1.67mm) and *A.terreus* (4.00±1.34mm) zone of inhibition recorded. 75µl concentration was *A.niger* (2.00±0.67mm), *A.fumigatus* (3.66±1.22mm), *A.ochraceus* (4.00±1.34 mm) and *A.terreus* (3.34±1.12mm), 50µl concentration was showed in 1.67±0.56, 3.00±1.00, 4.00±1.34 and 3.34±1.12mm in the zone of inhibition with *A.niger*, *A.fumigatus*, *A.ochraceus* and *A.terreus* recorded respectively. Similarly in 25µl concentration showed 1.34±0.45, 2.00±0.67, 3.34±1.12 and 3.67±1.23 mm zone of inhibition suppressed with *A.niger*, *A.fumigatus*, *A.ochraceus* and *A.terreus* recorded

The effect of antifungal properties of *Adhatoda vasica* leaf with diethyl extract of different concentration of 25, 50, 75 and 100µl against fungi were tested. As per the higher concentration of *A.vasica* was 4.00±1.34, 8.00±2.66, 7.34±2.45, 3.00±1.00 and 6.34±2.12mm in diameter zone

of inhibition recorded against *Aspergillus niger*, *A.fumigatus*, *A.ochraceus*, *A.terreus* and *Penicillium* sp. recorded respectively whereas minimum concentration of 25 μ l plant leaf extract was 0.00 \pm 0.00, 2.0 \pm 0.67, 1.67 \pm 0.56, 1.67 \pm 0.56 and 3.67 \pm 1.22 mm zone of inhibition observed respectively. However, the higher concentration of plant extract has more suitable for this type of fungi from experiments (Table -16; Plate -14 and Fig.-10).

FTIR analysis of methanolic extract of *Aegle marmelos*

Totally eighteen functional group were retrieved in *A.marmelos* plant leaf with methanolic extracts. The retention time was 3986.16, 3855.40, 3751.47, 3400.72, 2975.95, 29.00.35, 2366.65, 19.24.54, 1648.14, 1389.60, 1332.04, 1263.04, 1050.43, 880.74, 671.38 and 437.53 recorded in the active functional group of bimolecules which is responsible for all the function of cellular mechanisms (Fig.- 11).



CONCLUSION

In the present investigation suggested that the urine samples were collected from urinary tract infection patient for isolation of bacteria and fungi from urine sample. The maximum number of colonies were isolated from (25) CFU/ml in 10⁻⁵ dilution of bacteria and total number of colonies (16) were isolated from CFU/ml in 10⁻³ dilution of fungi. The identified bacteria such as *Bacillus* sp., *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Staphylococcus*

aureus and fungi like *Aspergillus niger*, *A.fumigatus*, *A.ochraceus*, *A.terreus* and *Penicillium* sp. recorded respectively.

The two medicinal plants of *Aegle marmelos* and *Adhatoda vasica* were collected from Keelakurichi, Mannargudi, Thiruvarur (Dist). The qualitative and quantitative phytochemicals like alkaloids, flavonoids, phenols, phylobactins, protein, carbohydrate, saponin, steroids, tannin and terpenoids were represented. The phytochemicals like alkaloids, phenols, phylobactins, protein, carbohydrate, saponin, steroids, tannin and terpenoids recorded from methanolic leaf extract of *Aegle marmelos* plant, whereas *Adhatoda vasica* methanolic leaf extracts was protein, carbohydrate, saponin, tannin and terpenoids when compared to diethyl ether with test plant extracts.

The antimicrobial activity of *A.marmelos* and *Adhatoda vasica* against bacteria like *Bacillus* sp., *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* and fungi like *Aspergillus niger*, *A.fumigatus*, *A.ochraceus*, *A.terreus* and *Penicillium* sp.was analysed in individually four different concentrations of methanol and diethyl ether solvents were used for the antimicrobial activity were performed and significant result from methanolic extract when compared with diethyl ether solvent.

The effect of antibacterial activity of *Aegle marmelos* leaf with methanolic extract of 100µl concentration was extraordinary properties against *Bacillus* sp followed by *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* recorded respectively whereas the effect of antifungal activity of *Aegle marmelos* leaf with diethyl ether extract of 100µl concentration was maximum zone of inhibition 10.00±3.34 mm zone of inhibition against *Bacillus* sp followed by *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* and the effect of antifungal activity of *Aegle marmelos* leaf with diethyl ether extract of 100 µl concentration was maximum zone of inhibition 10.00±3.34 mm against *Bacillus* sp followed by *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Escherichia coli*. The minimum zone of inhibition 3.67±1.23mm zone of inhibition against *Staphylococcus aureus* recorded respectively.

The medicinal plant *Adhatoda vasica* was excellent antifungal activities against some clinical isolates performed. The antifungal activities of *Adhatoda vasica* leaf with methanolic extract of different concentration of 25, 50, 75 and 100µl were treated with fungi like *A.ochraceus*, followed by *A.fumigatus*, *A.terreus*, *Aspergillus niger* and *Penicillium* sp. as 3.1±2.21mm zone of inhibition was minimum zone of inhibition which was lesser activity observed respectively whereas antifungal activity of *Adhatoda vasica* with diethyl ether extract was maximum zone of inhibition was 8.00±2.66 mm zone recorded against *A.fumigatus* followed by 7.34±2.45 mm in diameter *A.ochraceus*, *A.terreus* and *Penicillium* sp as 6.34±2.12 mm zone measured, *Aspergillus niger* 4.00±1.34 mm in diameter and minimum zone of inhibition was 3.00±1.00 mm zone of suppression against *A.terreus* fungi recorded respectively.

The characterization of phytochemical compounds of *Aegle marmelos* was 17 compounds identified with respective molecular formula and molecular weight and retention time of functional group for identified of bioactive compounds by FTIR.

Development of resistance to chemotherapeutic agents showed by the microorganisms appears to be a continuous process since the antibiotics were discovered. So every antibiotic has certain life span regarding its efficacy. Scientists have realized an immense potential in natural products from medicinal plants to serve as alternate source of combating infections in human beings

which may also be lower cost and lesser toxicity. Further work on isolation and characterization of active principle compounds from medicinal plants and their pharma co-dynamic study using latest techniques would be highly beneficial for human being.

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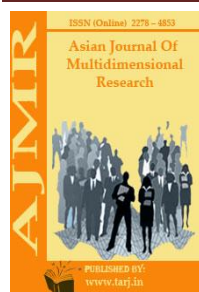
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SOCIAL ANALYSIS OF "INFORMATION" AND "INFORMATION EXCHANGE " IN YOUNG PEOPLE'S LIVES

Rahimova Shahnoza Anvarovna*

*Faculty of Social Sciences,
The National University of Uzbekistan,
Independent Researcher of the Department of Sociology,
UZBEKISTAN
Email id: Shaxnoz10@mail.ru

ABSTRACT

This article provides an overview of the concepts of "information" and "exchange of information", and features of information exchange processes. In addition, an analysis of the results of the sociological research conducted by a student studying at a higher education institution on the formation of culture of information exchange among young people was presented.

KEYWORDS:*Information, Information Exchange, Information Processing, Information Society, Obstration, Youth, Lifestyle, Sociological Research*

INTRODUCTION

It is characteristic that in the works on the theory of the press, and in the statements of sociologists-practitioners on the pages of professional periodicals, the mentioned requirement of combining sociology and social psychology is increasingly interpreted with reference to the study of the information fabric of the sociology of activity, to the sphere of information exchange (communication, interaction) of people.

After all, "social relations are manifested, the nature of social consciousness is revealed, in particular, the peculiarities of mass consciousness and public opinion".

Among the theories, contiguous sociology of interaction, it is necessary to name the "theory of communication" (Mansurov V.A, Mansurov N.S, Nozhin E.A, Fedyakin I.A, etc. participated in its development); "Information theory" (also known as the "theory of awareness"), about the necessity of which was written by Gott V.S. and Ursul A.D.; "The theory of social information," one of the authors of which is Afanasyev V.G.

Since the object of our study is interaction of people, it is as unlimited in life and diverse as human society itself. The diversity in its own way was reflected in social science. In the literature on philosophy, psychology, and the theory of the press itself do we count dozens of definitions of the notion of "communication", which are very different in both meaning and scope. Our task is not to classify and examine the whole variety of definitions, especially since they reflect such aspects of the content and functions of communication as the exchange of activities, abilities, feelings, emotional states, etc.

Communication is mostly the exchange of information. This definition distinguishes also from the very concept of "communication", and from that environment, or those processes that it reflects (i.e. from information sphere and processes), the most essential component of them.

Firstly, the "world of communication" that is familiar to it is just a small fragment of the real world of people's communication. Secondly, the professional employee of the press, radio, television usually knows neither the laws of this "big world", nor the driving forces, nor many other important features of it, even though these laws, forces and features have a broad social scale than one that is commensurate with the scope of the journalist's profession, and because its laws have not been sufficiently studied by science.

As already noted, communication is a phenomenon that is primarily of an informational nature. This is a special kind of information process. In general, information processes which is transmission, reception, selection, storage, etc. in the scales of society appear as a movement, the circulation of messages, knowledge, etc., or how the dissemination of information to provide it with various social processes, including the processes of social organization and management. Information processes cover the entire social organism, permeate all social subsystems, they are available in any level, even the smallest fragment of public life.

Information process is clothed not always in the form of a word, language, and writing. On the contrary, there is reason to assert that the message in verbal (verbatim) form is only a relatively small and special part of information exchange in the society.

Let's try to outline at least a general contour of the "information field" of the society, meaning that we will also denote the boundaries of communication. If we take as a basis the existing attempts at scientific systematization of social information, then we can draw conclusions, it can

be individual (personal experience) and supra-individual; biological (genetic), hereditary and actually social, acquired; fixed and non-fixed in sign systems; predictive, planned, indicative, and so on¹.

Without going further into these varieties, we only note that all the diversity of information gives grounds to talk about such large areas of exchange in the process of communication, such as communication in the field of material and spiritual production, in the processes of knowledge and dissemination of knowledge, that is, the sphere of social consciousness, in the processes of social organization and management, in the world of science and technology, in communication systems, in every human community, in the work community, in various social groups, in the family, finally, in the process of auto communication, that is, human communication with oneself.

As we can see, among these basic types of social information and, accordingly, the varieties of communication as an exchange of information. Deep social determination of people's communication raises the question of what is the role of this exchange of information for the life and development of society as a whole.

Similar view of information exchange is quite widespread in the scientific literature (for example, on monographs of Afanasyev V.G, Tyukhtin V.S, Ursula A.D, and others), and the characteristic for it is precisely the translation of the entire research at a certain stage of it into the layer of the system (structural-functional) analysis.

Let's define the original concepts such as "information" and "information exchange." What is the information? It is a message, news, data. But for the sociophilosophical understanding of the entire mechanism of information exchange in a society, this (especially scientific or even practical-applied) treatment of "information" is not enough. And although in the following chapters we will return to this "narrow" understanding of the notion of "information", but now we need to rise above it, abstract from the features and particulars of "messages" in order to see features common to all types of information, to understand the typical in any process of information exchange, so that through the phenomenon or form of the beginning of this process, as Hegel said, to light on its essence.

Essence of information is not in the signs of the message, but in the fact that it is related to the level, degree of organization of the participants in the information exchange. And the very exchange of information in its most general form is caused by the diversity of the organization of its participants, the differences in the orderliness of their structures, if these participants are also represented as generalized as possible: as systems.

Characteristics of the information exchange process:

Information exchange, no matter how important and independent it may seem in itself, always acts only as an official mechanism of interaction.

The most important final, in-depth result and the consequence of the functioning of the information mechanism is a mutually conditioned change in the organizational parameters of the participants in the interaction, their alignment, and their co-organization. In this sense, we can talk about the information management mechanism.

These and other features allow us to talk about the regulative function of information exchange (and communication, in particular) as the main one, ie, one to which any other of its functions

can always be reduced (for example, the educational function of communication is a purposeful regulation of the formation consciousness, knowledge, worldview).

The exchange of information is directly related to the actualization of the relationship. Relationships are a condition and a sign of interaction. But in the sphere of information exchange they find their own special expression, for example, in the division of information into "potential" (possible, albeit objectively available) and "topical" (used).

The exchange of information is indicative. This means that, having data on at least one component of the interaction, we can confidently talk about the rest, we can calculate where and how to find them.

So, the analysis of concepts of "information" and "information exchange" gave the most general idea of the characteristic features of the process of information exchange and its connection with interaction, reflection, (co) organization, the idea of a "mechanism" role of information exchange in the life of society.

The world is rapidly developing. Today's novelty in science until managing to be yet released all over the world, the more advanced version of that same invention is appearing. This, of course, can be attributed to the participation of modern information technologies in information exchange.

The features of socializing in the modern lifestyle of young people will depend on transformation of society and subjective situations that it has created. The task of young people in this process, the issues of forming the culture of information exchange in the information society, adaptation to the conditions and the prospects for future development should be scientifically analyzed and predicted in sociological terms.

In today's age of information, the policy of our state towards young generation is of great importance as the expression of the centuries-old aspirations of the nation's children in the education of the nation, the foundation of which is the noble goal of bringing up a healthy and harmoniously developed generation. Today's analysis of the world's strategy shows that there is a strong competition in the highly-informed societies. Dangers faced by the population, especially young people, are gaining momentum. Therefore, in the age of information, it is important to study the issues of forming and strengthening the worldview of young people on a scientific basis, to make the necessary conclusions, as well as to develop necessary methodological and practical recommendations.

For full resolution of the problem of youth, it is necessary to study comprehensively and thoroughly through the methods of sociological subjects. At the same time, for the benefit of the youth, this process should not be one-time, but repeated all the time. To do this, it is necessary to gradually monitor the thoughts and actions of young people.

Shavkat M. Mirziyoyev, The President of Uzbekistan made a speech at the 72nd session of the UN General Assembly: "The young people of today's world are the largest generation in the history of human life amounting to 2 billion people. In this regard, the most important task is the struggle for the minds of people, for the minds of the youth. The next day, the welfare of the planet, depends on what kind of people these children will grow up. Our key task is to provide conditions for self-adjustment of the youth to create a barrier to the spread of the "virus" of ideology of the population. "²

In this article, a sociological survey was conducted in the higher education institutions of Uzbekistan on the theme "Formation of culture of information exchange among young people in the information society (for example, students in higher education institutions)" to study the level of formation of the culture of information exchange in our society.

The research was conducted in participation of 3 institutes as the Uzbek State Institute of Arts and Culture, Tashkent Pediatric Medical Institute, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, and 4 universities as Tashkent University of Information Technologies named after Muhammad al-Khorezmi, Tashkent State Pedagogical University named after Nizami, Tashkent State Agrarian University, Uzbekistan State University of World Languages and 5 branches of the Tashkent University of Information Technologies named after Muhammad Al-Khorezmi in Samarkand, Fergana, Urgench, Nukus and Karshi by involving students 18 to 33 years old.³

Students who participated in the survey responded to the first question in our questionnaire. Dear Respondent, what do you think the concept of information means? 28% respondents described it as a systematic casting of events, 22% of respondents described as any significant information, 16% respondents described it as an information on something, 22% respondents described it as information necessary in human activities, 11% respondents described it as information relayed through mass media, 1% respondents limited with a response as it is difficult to answer this question.

Summarizing the answers above, we can see that the level of information awareness is almost positive. At the same time, this factor influences the ability of people to fully understand and accept information. Everybody knows that the information has a serious impact on the psycho-emotional state of the person, so it is essential that the rules of dissemination and use of information should be constantly improved with the modernization of the society. In addition, new forms of information use may be used in the context of the use of information, in which the impact of the group's internal environment and the impact of its influence can be used as a tool for information dissemination among other members of the group.

Respondents' answers to the question "Please show the source of information" in the questionnaire were as follows: 21% respondents marked TV, 13% respondents showed print media sources (books, newspapers, magazines), 7% respondents marked radio, 28% respondents marked internet, 6% respondents marked people around, 7% respondents marked social media (such as Facebook, Twitter, etc.), 8% respondents marked messengers (Telegram, WhatsApp, etc.) and 10% respondents marked library.

This was mainly due to the fact that our survey was conducted among generations of 18-33 years old. It is worth noting that the use of information and information through the Internet is widely used among young people. Another interesting aspect is that only 6% of respondents said that people around them were the main sources of information for them. This indicates that individuals are actively seeking information or information.

Respondents' answers to the question "Do you share the information you have with your friends, close people or others around you?" were as follows: 41% respondents answered "Yes", of course, 3% respondents answered "No", 55% respondents "Sometimes, based on what information it is", 1% of respondents answered "It is difficult to answer".

From the above answers, we can see that the half of respondents feel that they are living in an information-sharing environment and that this process is often related to their psycho-social attributes. Respondents' answers to the question "How Do You Arrange Your Free Time?" were as follows: 46% respondents - Internet, 36% - work during free time, 14% respondents - in libraries, 4% respondents - in leisure, and 1% - no free time.

We are aware that organizing and conducting leisure activities of young people is done exclusively out of educational and cultural institutions. The survey found that most of the respondents spent their free time surfing the Internet. The Internet is a tool that influences the minds of young people. There are many positive aspects of the Internet, but it does have negative sides as well. Unfortunately, all this time is not just built on ethical values.

To the question, "Do you have membership at the Information Resource Center (library)? 83% of the respondents said "Yes, of course", and 17% of respondents said "No". As we were not fully satisfied with this question, an expert interview was held. This is because the 1st year students enrolled in higher education institutions are registered at information resource centers in compulsory manner. This does not mean that 83% of young people use the information resource centers. The expert survey showed that 60% of students use information resource centers.

To the question "What purposes do you use Information Resource Center if you are a member?", 35% of respondents answered "To receive reliable information", 18% respondents answered "I visit mainly for spiritual leisure, 5% of respondents - "I use for retrospective data", 7% respondents - "There is a high level of service quality", 31% respondents - "I can always find the information I look for", 4% respondents - "I don't not know, never thought about it before".

35% of our respondents are answering that they receive reliable information and 31% of the respondents have always been able to find the information there and thus they are showing higher percentages. It is clear from their answers that the funding of the information resource centers of higher education institutions is well-established, and it is important for students to find reliable information in the information library facilities.

Dear respondent, what kind of world information resources do you use? 17% respondents - EBSCO, 61% respondents - eLibrary, 7% respondents- JSTOR, 7% respondents - ProQues, 4% respondents - Emerald, and 4% respondents - Springer.

In the recent years, the use of global information resources has been rarely used. World news resources are scientific and educational electronic resources of leading world companies and publishers, which use six licensed information resources in the field of science and education. They make a great contribution to the development of business and business. Today, the National Library named after Alisher Navoi consists of local EBSCO, eLibrary, JSTOR, ProQues, Emerald and Springer. These informational resources open up new opportunities for students to support research and educational activities. The electronic resources provided are available in various fields of science and education: medicine. agriculture, sociology, library science, financial management and information technology. In addition, students can use not only online information resources of foreign scientific education but also in reading rooms of information-library facilities, as well as through their web-sites.

Today, our young people, who are able to freely communicate in some foreign languages, are using the online information resources of scientific education as the first pleasant fruit of all our efforts in the field of education. We can add to the positive aspects of the exchange of

information when young people are educated, their rational use of scientifically-educational resources.

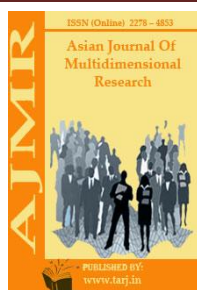
To the question, "Is the culture of communication in the Internet formed in Uzbekistan?", 37% respondents answered "Yes", 30% respondents answered "No, but this is a serious question", 30% respondents answered "No, it is in the process of being formed", 3% respondents answered "No, there is no need".

In conclusion, the results of the research show that the culture of information exchange among the youth of the country is satisfactory in the process of modernization of the society. Considering the fact that Sociological Research was conducted among students of higher education institutions, it is necessary that important conclusions, recommendations are developed and put into practice in real life. It is impossible to draw conclusions based on the results of a single study of the actual situation in the culture of information exchange among the Uzbek youth and the level of information culture, so it is vital to gradually phase out the problem of youth, develop effective ways and means of solving the problem.

The following recommendations have been developed as a result of this research: creating a methodology for shaping the worldview for information among young people; developing and disseminating information literacy guidelines to enhance the intellectual capacity of young people; strengthening spiritual work in raising the spiritual image of youth in the era of globalization; consistent implementation of measures to increase the culture of information exchange; increasing normative documents on Internet Protocols when information is being exchanged in an informed society; promoting the dissemination of scientific worldwide information resources in the rational use of young people's information resources.

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CURRENT STATUS AND DEVELOPMENT PROSPECTS OF LIVESTOCK IN UZBEKISTAN

Makhmud Oripov*; **Sukhrob Davlatov****

*Associate Professor,
Bukhara state university,
PhD of Economics department,
UZBEKISTAN
Email id: maorif@mail.ru

**Senior Teacher,
Bukhara state university,
Senior teacher of Economics department,
UZBEKISTAN
Email id: dsoukhrob@mail.ru

ABSTRACT

This article describes key issues of national livestock production and analyses the main factors of cattle sub-sector efficiency. It also provides recommendations for further livestock production improvement. This Chapter is generally based on the official statistics data and findings of interviews among private and dekhkan farms carried out in summer, 2018. This publication is the result of analytical work carried out in the framework of the preparatory phase of the project "Improving the economic efficiency of livestock through the development of livestock raw materials (for example, Bukhara region)". The objective of this publication is to describe the current state, development trends and key challenges of the domestic livestock production.

KEYWORDS: *Livestock, Farms And Dekhkan Farms, Economic Growth, Meat, Milk.*

INTRODUCTION

The livestock sector is one of dynamically developing agricultural sectors of Uzbekistan, accounting for 42,7 % of the gross national agricultural output. The bulk of livestock output is produced by small household (dehkan) farms with an average size of 0.15 hectares (ha), which is the key specific feature of the sector. Livestock production in dehkan farms plays a significant social role, because it is the important source of income and food for rural families. However, small size of the overwhelming majority of livestock producers poses significant challenges for application of modern technologies and limits potential economies of scale effects, resulting in relatively low levels of the sector's efficiency.

Realizing importance of ensuring sustainable livestock production development and urgency of the existing problems, the Government of Uzbekistan is undertaking a series of measures on reforming the sector, including implementation of decisions set forth in the Presidential Decree Republic of Uzbekistan number PP-2841 March 16, 2017 "On additional measures to deepen economic reforms in livestock."

Starting since 1991, livestock herd number in the country has increased by almost 1.5 times that accordingly was reflected in increased livestock output share in the gross national agricultural product. It means that the growth rate was from 30-35% in the 1980s to 45-50% after 1997 (Table 1, the Annex). These indices are particularly illustrative when compared to those of other countries like Russia, Ukraine, Belarus, Kazakhstan and Kyrgyzstan, which are the major producers of livestock output among the CIS countries. During 1990-2017, the share of livestock production in those countries went down from 55-56% to 45%.

Production growth of the main livestock output - meat and milk is of high social and economic importance for community development, considering that it is one of the basic food products and also represents a ponderable part of revenues in the rural area and in case of successful sector's development - it could become the export oriented commodity.

Livestock sector reforms and relevant state policy. During recent years major organizational changes occurred in livestock sector, caused by deep socioeconomic reforms targeted towards transition from administrative-command and economy to market economy.

The Government provided considerable support to farmer and dehkan engagement in livestock production during the period when new organizational and legal forms of activity in agriculture were emerging. Population was given access to preferential loans to buy cattle, also some land plots were allocated to establish farms and feed production; the state procurement quotas for livestock production were abolished; pedigree stock was supplied from the countries with developed pedigree animal breeding; production of feed compounds was established as well.

The Presidential Resolution №308 dated 23 March 2006 on «Measures for Encouragement of Livestock Expansion in Household plots, Dehkan and private Farms», as well as Resolution of the President of the Republic of Uzbekistan No. PP-2841 of March 16, 2017 "On additional measures to deepen economic reforms in livestock" was of particular importance for livestock sector's development, where special attention was given to the state support for procurement of pedigree stock and intensification of pedigree animal breeding; establishment of veterinary services; provision of micro-loans to buy highly productive livestock; creation of new jobs; increasing income and food security of rural population through their motivation to breed livestock.

RESEARCH METHODOLOGY:

This publication is the result of analytical work carried out in the framework of the preparatory phase of the project "Improving the economic efficiency of livestock through the development of livestock raw materials (for example, Bukhara region)". The objective of this publication is to describe the current state, development trends and key challenges of the domestic livestock production.

The baseline data for this study include the following:

- official statistics (the State Statistics Committee, Ministry of Agriculture Resources, Uznaslkhizmat Association, the main State Department of Veterinary under the MAR, State inspection for livestock Pedigree Breeding under the MAR and State Committee for Land, Geodesy and Cadastre (Goscomcadastre);
- statistical data collected from external sources (data provided by the inter-national, intergovernmental and research organizations);
- data available in mass media, the internet; and
- findings of the dehkan and farmer survey conducted under the Project.

The survey findings and outcomes have been extensively used in this book. Therefore, it is important to provide more detailed description of the survey methodology.

The goal of the survey was to provide extended information on key economic and social factors that impact livestock sector development of private and dehkan farms.

The main objectives of the survey were as following:

- to collect information on socio-economic features of rural households including demographic data, education background data, employment and in-come sources, family earning and spending profiles, including revenues and consumption from household plots, household resources, etc.;
- to collect general data on rural producers of various types, rural production inputs, which they use, including land and cattle herd;
- to collect data on agricultural production from various farming entities, output structure, including livestock output and information on non-farm income generating activity;
- to evaluate access to resources and services, including fodder availability, access to vet services and artificial insemination.

RESULTS AND OUTPUTS:

Accelerated development of livestock are considered by many countries as a problem of national importance. To increase the productivity of the industry, scientifically based and integrated approaches are applied. Particular attention and development of this industry is primarily due to shifts in the nutritional diet of the population of developed and rapidly developing countries towards a sharp increase in the consumption of livestock products.

Nevertheless, with the growth of incomes of the population of Uzbekistan, the trend of growth in consumer demand for meat and meat products is increasing. Over the past ten years, in the republic, the physical sales of meat of all kinds in the retail trade increased annually by an average of 3-5%. At the same time, the level of consumption of meat and meat products by the

population is significantly lower than the recommended rational norm, with very significant structural distortions by type of meat, despite the fact that in the 90s per capita in the republic accounted for an average of 55 kg of meat per year currently, this indicator has grown 1.3 times.

The consistent implementation of measures to further increase the potential of the livestock industry, as well as the systemic state support provided, contributed to the growth of livestock numbers and the saturation of the domestic consumer market with animal products. Table 1. demonstrate data on livestock production by region.

TABLE 1. MEAT AND MILK PRODUCTION BY REGION (2018, ALL FARMING ENTITIES)

	Meat production (slaughter weight)		Milk production	
	thousand	%	thousand	%
Republic of Karakalpakstan	76,7	4,3	220,8	2,8
Andijan	110,4	6,2	613,5	7,8
Bukhara	176,5	9,9	687,5	8,8
Djizak	154,2	8,6	463,5	5,9
Kashkadarya	217,7	12,2	861,2	11,0
Navoi	117,2	6,6	339,7	4,3
Namangan	111,4	6,2	537,6	6,9
Samarkand	217,2	12,1	1026,1	13,1
Surkhandarya	123,1	6,9	548,8	7,0
Syrdarya	54,4	3,0	263,7	3,4
Tashkent	190,2	10,6	727,7	9,3
Fergana	117,3	6,6	699,4	8,9
Khorezm	122,5	6,8	840,6	10,7

The volume of livestock production in January-September 2018 amounted to 24 840.6 billion sums, or 107.0% compared to the corresponding period of 2017. In the total volume of agricultural production, the share of livestock products was 42.7%, including: meat — 30.7%, milk — 8.9%.

In January-September 2018, all categories of farms produced 1,788.8 thousand tons of meat in live weight (6.8% more than in January-September 2017), 7 830.1 thousand tons of milk (6,9%), 30.2 thousand tons of wool (1.8%).

Most volumes of meat and milk are produced in Samarkand, Tashkent and Kashkadarya regions that can be explained by high population density and availability of rangelands in those regions. Also, meat and milk sub-sectors are developed in those regions while in the other - only milk sub-sector in most cases.

Sheep and goat breeding is widespread in Kashkadarya, Navoi, Samarkand and Surkhandarya regions.

It is difficult to make productivity assessment of livestock sector due to absence of adequate

indices, which would include specifics of its development in Uzbekistan.

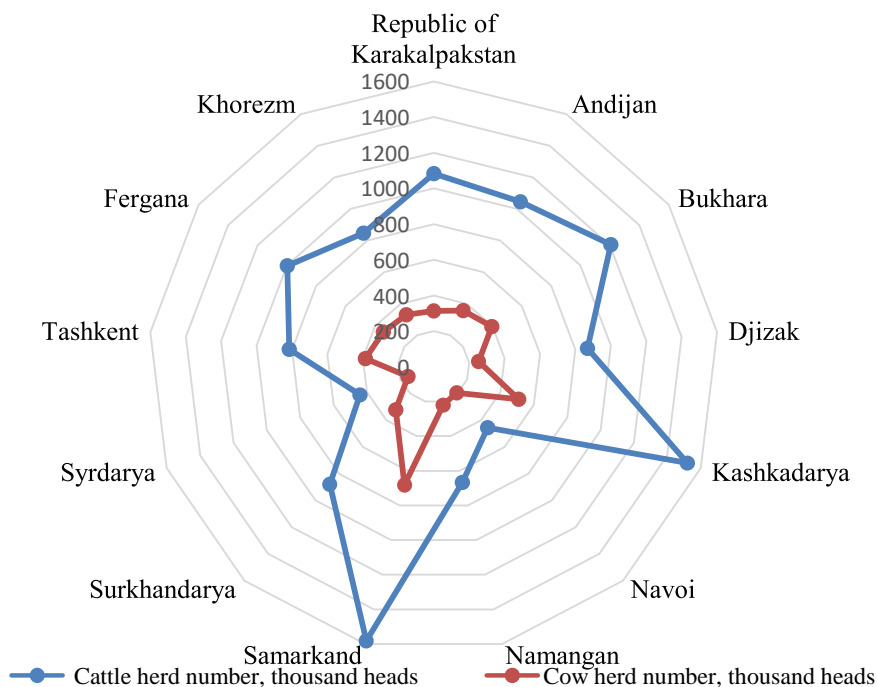
TABLE 2. PRODUCTION OF MAJOR LIVESTOCK PRODUCTS BY FARM CATEGORIES (JANUARY-SEPTEMBER 2018)

	All categories of farms		including					
	amount	rates of growth, %	farms		dekhkan (personal subsidiary) facilities		organizations engaged in agricultural activities	
amount			rates of growth, %	amount	rates of growth, %	amount	rates of growth, %	amount
Live weight meat, thousand tons	1 788,8	106,8	53,6	129,9	1679,9	105,6	55,3	129,6
Milk, thousand tons	7 830,1	106,9	284,8	117,3	7486,2	106,5	59,1	107,6
Wool, thousand tons	30,2	101,8	2,3	121,2	26,4	101,9	1,5	81,2
Karakul thousand. Pcs.	1001,4	100,1	72,4	126,8	826,2	100,5	102,8	84,5

Analyzing indicators of livestock production by categories of farms, it should be noted that 93.9% of the total volume of meat in live weight falls on dekhkan (personal subsidiary) farms, as well as 95.6% of milk, 87.5% of wool, 82.5 % of karakul also fall to the share of dekhkan (personal subsidiary) farms.

As of October 1, 2018 the total number of cattle has reached 12 408.8 thousand heads, including cows - 4 462.3 thousand heads, sheep and goats - 21 087.8 thousand heads. Compared with the corresponding period of 2017, in all categories of farms the livestock of cattle increased by 297.3 thousand heads (by 2.5%), including cows - by 91.5 thousand heads (by 2.1%), sheep and goats - by 756.9 thousand heads (by 3.7%).

Figure 1. Cattle herd by region, 2018, (all farming entities)



Analyzing the data on the livestock of cattle by categories of farms on October 1, 2018, it should be noted that 5.0% of cattle are farm enterprises, 93.7% are dekhkan (personal subsidiary) farms, 1.3% are on organizations engaged in agricultural activities, respectively, of the total number of sheep and goats, farms account for 10.3%, dekhkan (personal subsidiary) farms — 84.1%, organizations engaged in agricultural activities — 5.6%, and also of the total number of birds on farms account for 12.8%, dekhkan (personal subsidiary) farms - 60.8%, organizations engaged in agricultural activities - 26.4%.

Low productivity indices in the livestock sector restrain it from performing its full-fledged social function, not to mention realization of its economic capacity, related to exporting of livestock products. Indicators of production (consumption) of meat and milk per capita in the country in 2017 almost increased from the level of 2006. In 2017, per capita production was 55.9 kg of meat and 244.7 kg of milk that was considerably below approved nutritional standards (65 and 260 kg, respectively).

What are the reasons behind low cattle sub-sector efficiency? To answer this question it is important to identify the main factors influencing sector productivity and profitability. Expert assessments and statistical data analysis, including analysis of the survey data will help to do so. Understanding of efficiency factors will enable, in its turn, to understand what should be done for the sector's development.

In general, the development of production in the livestock complex is hampered by the following factors:

- the cessation of activities in the course of reforms of large livestock complexes led to concentration in the hands of small private entrepreneurs of livestock production, and this in turn caused a loss of quality control;

- reduction of fodder base as a result of the shortage and reduction of acreage under forage crops, the relative reduction of grazing areas caused by an increase in the number of cattle, as well as the high cost of feed and the lack of high-quality fodder;
- unsatisfactory provision of farms of all categories of purebred, highly productive livestock, lack of domestic breeding cattle;
- low availability and quality of veterinary services. Many veterinary stations carry out their activities formally; there is no corresponding material and technical base;
- an acute shortage of specialists in the professional handling of animals (veterinarians, livestock technicians), as a result all stages of work with livestock suffer (selection, production, veterinary medicine);
- extremely low number of research works for the preservation and enhancement of the animal gene pool.

At the stage of processing livestock products there are also serious problems.

The absence of large livestock farms has led to a significant reduction in demand for large processing plants. Small private farmers (farmers, dehkane) in the home with the use of "artisanal method" carry out the slaughter and process stingray skins, which in the future without preservation of quality and compliance with sanitary standards are not suitable for subsequent industrial processing.

The lack of modern high-tech equipment in the main enterprises. The technologies and material and technical base of enterprises created in the Soviet era are cumbersome and labor-intensive, not fully and not effectively using their capacities, which leads to high costs. Therefore, much of the product is lost, sold at prices that do not reimburse the cost of production. If there is a sufficient amount of raw materials (meat, milk, hides, etc.), which is in the hands of the population, there is no mechanism for its purchase and procurement by large enterprises.

There is an acute problem of the territorial distribution of processing facilities. In regions that specialize in livestock, processing capacities are underdeveloped, there is no corresponding production infrastructure. So, despite the almost identical volumes of meat production in Samarkand, Kashkadarya and Tashkent regions, the share of processing only in the Tashkent region is 28%, and in the other two - only 11-12%, as well as the average in the country.

Despite the expanding assortment of sausage products and the growth in production, sufficient demand from the population is observed only in the capital. In general, in the country, with a general decrease in the production of sausage products, compared with 1990, the production of sausages and wieners and the production of canned meat decreased more than 2 times. Production capacities of meat processing enterprises are used only by 40-45%.

The decline in livestock production is also due to pricing. Existing purchase prices for meat not only do not provide profitability, but also do not compensate for production costs. This situation has led to a decrease in purchases of raw materials for industrial processing. Its deficit is one of the most important problems in the development of the meat industry.

CONCLUSIONS:

The implementation of the following measures can contribute to the solution of numerous problems in livestock.

The revival of large high-tech cattle-breeding complexes for growing. In large livestock farms, resources are used most efficiently and effectively, product quality standards for their further processing are observed.

Foreign and domestic experience suggests that integrated structures, combining various links (from the production of agricultural products to their sale to final consumers), are more efficient. With some support from the state, large meat processing plants could become similar integrators. On the basis of the integration of agricultural enterprises and enterprises of the processing industry, it is possible to create compact raw material zones, which will provide significant savings on livestock transportation.

Improving and increasing the feed base requires a full-scale inventory of agricultural land for their intended and effective use. According to the experience of European countries with a developed livestock industry, it seems effective to form specialized firms for feed production, equipped in the required quantity with all types of means of production (feed areas, equipment, storage facilities, etc.) and labor resources.

Improving the quality of veterinary services and breeding requires a sufficient amount of material and financial costs, which is not always justified at the level of a separate complex. Therefore, inter-farm cooperation and the creation of specialized firms for the provision of outsourcing services seem to be more effective in terms of animal vaccination, artificial insemination, and advisory assistance for enhancing the practical skills of specialists.

To change the structure of consumption of meat products by the population, the cultivation of ostriches deserves special attention. The productivity of the ostrich (weight - 160 kg), significantly higher than the cow. If in one year a cow is capable of producing 1-2 calves, then an ostrich female during the same time will bring offspring for a total weight of about 1.8 tons. However, the production of ostrich meat has not yet become widespread, there are only isolated episodes of growing ostriches in the Fergana, Andijan, Tashkent regions.

Taking into account the existing potential for the development of animal husbandry, the republic could fully provide the domestic market and supply the external market with up to 20% of the output. The successful development of the domestic market of meat and meat products in the near future will be determined mainly by diversifying production, its technological modernization, which will ensure a reduction in production costs and an increase in livestock productivity.

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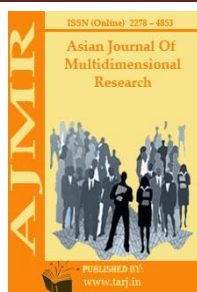
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A REVIEW ON ZINC SOLUBILIZATION

N.Uma Maheswari*; **S.Priaimathi****

*Head & Asst. Professor,
PG Research Department of Microbiology,
Sengamalathayar Educational Trust, Women's College,
Mannargudi, Tamil Nadu, INDIA
Email id: umasamyamf@gmail.com

**Research Scholar,
PG Research Department of Microbiology,
Sengamalathayar Educational Trust, Women's College,
Mannargudi, Tamil Nadu, INDIA

ABSTRACT

Zinc is plant micronutrient which is involved in many physiological functions its inadequate supply will reduce crop yields. Zinc deficiency is the most wide spread micronutrient deficiency problem, almost all crops and calcareous, sandy soils, peat soils, and soils with high phosphorus and silicon are expected to be deficient. Zinc deficiencies can affect plant by stunting its growth, decreasing number of tillers, chlorosis and smaller leaves, increasing crop maturity period, spikelet sterility and inferior quality of harvested products. Beside its role in crop production Zn plays a part in the basic roles of cellular functions in all living organisms and is involved in improving the human immune system, due to its insufficient intake, human body will suffer from hair and memory loss, skin problems and weakness in body muscles .

KEYWORDS: *Zinc, Bioavailability, Plant Micronutrient, Human Health*

INTRODUCTION

Zinc is essential for the growth in animals, human beings, and plants it is vital to the crop nutrition as required in various enzymatic reactions, metabolic processes, and oxidation reduction reactions. In addition, Zn is also essential for many enzymes which are needed for nitrogen metabolism, energy transfer and protein synthesis. Zinc deficiency not only retards growth and yield of plants, but it also has effects on human beings. More than 3 billion people worldwide are suffering from Fe and Zn deficiencies, and this condition is particularly wide spread in areas where population is heavily dependent on an unvaried diet of cereal based foods, in which Fe and Zn are stored almost exclusively in the husk, and are therefore lost during milling and polishing¹⁴⁻²⁵.

A comparison study between the isolated indigenous bacteria and chemical Zn fertilizer (ZnSO₄.7H₂O) was conducted to evaluate their potential to augment Zn nutrition of Zn responsive (NDR 359) and Zn non responsive (PD 16) varieties of rice under the green house. Three bacterial strains namely; BC, AX and AB isolated from a Zn-deficient rice-wheat field belonging to the genera *Burkholderia* and *Acinetobacter* were investigated for the growth promotion and Zn uptake in rice plants.

The plant growth promotory properties such as Zn solubilization and IAA production of the isolates was checked in a previous study. These three isolates when used individually or in combination were found effective in significantly increasing the mean dry matter yield/pot (12.9%), productive tillers/plant (15.1%), number of panicles/plant (13.3%), number of grains/panicle (12.8%), grain yield (17.0%) and straw yield (12.4%) over the control and Zn fertilizer treatment, respectively. Bacterial inoculations also significantly enhanced the total Zn uptake/pot (52.5%) as well as grain methionine concentration (38.8%). Effect of bacterial treatments on the bioavailability of Zn was assessed by estimating the levels of phytic acid in grains. A reduction of nearly 38.4% in phytate: Zn ratio in grains was observed under bacterial inoculations.

Role of zinc plant

The Zn plays very important role in plant metabolism by influencing the activities of hydrogenase and carbonic anhydrase, stabilization of ribosomal fractions and synthesis of cytochrome. Plant enzymes activated by Zn are involved in carbohydrate metabolism, maintenance of the integrity of cellular membranes, protein synthesis, regulation of auxin synthesis and pollen formation⁴². The regulation and maintenance of the gene expression required for the tolerance of environmental stresses in plants are Zn dependent¹⁵. Its deficiency results in the development of abnormalities in plants which become visible as deficiency symptoms such as stunted growth, chlorosis and smaller leaves, spikelet sterility.

Micronutrient Zn deficiency can also adversely affect the quality of harvested products; plants susceptibility to injury by high light or temperature intensity and to infection by fungal diseases can also increase [15,42]. Zinc seems to affect the capacity for water uptake and transport in plants and also reduce the adverse effects of short periods of heat and salt stress²⁰⁻⁵¹. As Zn is required for the synthesis of tryptophan which is a precursor of IAA, it also has an active role in the production of an essential growth hormone auxin¹⁻⁴. The Zn is required for integrity of cellular membranes to preserve the structural orientation of macromolecules and ion transport systems. Its interaction with phospholipids and sulphhydryl groups of membrane proteins contributes for the maintenance of membranes¹⁻¹⁴⁻²⁰.

The Zn-finger transcription factors are involved in the development and function of floral tissues such as anthers, tapetum, pollen and pistil secretory tissues in many plant species, it is likely that *VvZIP3* may play a key role in both flower and normal fruit development³². The alteration of *VvZIP3* expression during flowering and fertilization can modify the distribution and availability of Zn, hence affects normal reproductive development³³.

Zinc deficiency in soil

Zinc deficiency can be found in every part of the world and almost all crops respond positively to application of Zn⁷⁸. Normal soils inherit their trace elements which include Zn primarily from the rocks through geochemical and phydochemical weathering processes. Besides mineralogical composition of the parent material, the total amount of Zn present in the soil is also dependent on the type, intensity of weathering, climate and numerous other predominating factors during the process of soil formation⁵⁸. Meanwhile, high pH and high contents of CaCO₃, organic matter, clay and phosphate can fix Zn in the soil and give rise to the reduction of available Zn³⁴.

Soils derived from granite and gneiss can be low in total Zn³⁴. Similarly, total Zn is low in highly leached, acid, sandy soils such as the ones found in many coastal areas. Quartz in the soil dilutes Zn from it because the reported concentrations of Zn in quartz are very low, which ranged from 1.0 µg g⁻¹ to < 5 to 8 µg g⁻¹¹⁵⁻²⁹. According to the Food and Agriculture Organization (FAO), about 30% of the cultivable soils of the world contain low levels of plant available Zn⁵. The lowest Zn concentrations were always found in Spodosols (28 µg g⁻¹) and luvisols (35 µg g⁻¹), while higher levels were found in fluvisols (60 µg g⁻¹) and Histosols (58 µg g⁻¹)³⁵.

Generally, Zn deficiency is expected in calcareous soils, sandy soils, peat soils, and soils with high phosphorus and silicon¹. The submerged soils are well recognized for the lack of Zn availability to the plants; particularly due to the reaction of Zn with free sulphide⁴⁸. Flooding and submergence bring about a decline in available Zn because of the changes in pH value and the formation of insoluble Zn compounds. Meanwhile, the insoluble Zn compounds formed are likely to be with Mn and Fe hydroxides from the breakdown of oxides and adsorption on carbonates, specifically magnesium carbonate. Under the submerged conditions for rice cultivation, Zn is transformed into amorphous sesquioxide precipitates or franklinite; Zn Fe₂O₄⁶⁰.

Zinc deficiency causes multiple symptoms which usually appear 2 to 3 weeks after transplanting of rice seedlings, with leaves developing brown blotches and streaks that may fuse to entirely cover older leaves, and plants remain stunted, whereas in severe cases, the plants may die, while those which recover will show substantial delay in maturity and reduction in yield⁴⁴⁻⁷⁷⁻⁸⁰.

Zinc under submerged soil conditions

Zn deficiency is very common under flooded soil conditions. In acidic soils, Zn is precipitated as Zn (OH)₂ and as ZnS in sulfur-rich and alkaline soils. The availability and solubility of Zn decreases while pH increases. The oxides of Mn and Zn along with CaCO₃ or MgCO₃ are strongly absorbed by Zn under submerged condition. Whereas in calcareous soils, HCO₃⁻ is the predominant anion, which mainly reduces Zn transport from root to shoot, but not so much the Zn uptake by roots. Under anaerobic condition Zn forms an insoluble Zn phosphate. Under this condition plant roots will not take up the soluble Zn from the Zn solution as required by the plant.

Under submerged conditions, when organic acid concentration increased, the Zn uptake is reduced and this effects the plant growth. The Zn uptake is also reduced under acidic rhizosphere condition due to the release of H⁺ from the roots and the surplus intake of cat ions over anions. Under acidic rhizosphere conditions, Zn is released from acid-soluble fractions (e.g., absorbed Zn, organic matter or Fe (OH) 3) and is available for plant uptake. Generally, rice plants absorb most Zn from solubilization in the rhizosphere because the available Zn in soil is very low in flooding condition¹⁹.

Soil factors Associated with Zn deficiency

All types of soil may be affected by Zn including: loams, sands, clays (with all classification),loess, alluvium, and soils formed from basalt, sandstone, granite, volcanic ash and manyother rocks. In general, soils of arid and semi arid regions and the slightly acidic, leachedsoils of warm and tropical climates are most inclined to Zn deficiency, however, crops arenot equally susceptible to Zn deficiency and at the same soil some crops may suffer from Zndeficiency while others are not affected.¹⁵⁻²⁻⁷²

Major deficiency

- (i) Soils of low Zn content (Parent material),
- (ii) Soils with Restricted Zones,
- (iii) PH,
- (iv) Soils low in organic matter
- (v) Microbially inactivated Zn,
- (vi) Cool soil temperature,
- (vii) Plant species andgenotypes
- (viii) High level of available phosphorus and
- (ix) Effects of nitrogen 1⁻⁷²

Zn deficiency problems may occurs in soils with the subsequent characters; (a) strongly alkaline in reaction (b) high phosphorus status by application of phosphatic fertilizers may reduce use of zinc (c) leached sandy soils (d) acid soils of low total Zn status developed on highly weathered parent material (e) calcareous soil (f) peat and muck soils (g) permanently wet (water logged) and (h) high bicarbonate and magnesium in soils or irrigated water¹⁶.

Parent material of soil and zn content

The amounts of Zn in unpolluted soils typically are lower than 125 ppm [30] . The majorfactors affecting the concentration of Zn in soils is the concentration of Zn in soil parent material. The soils derived from gneisses and granites can be low in total Zn and also thoseoriginating from sandstone and limestone had lower Zn contents⁷⁻⁵² . Quartz (sand) in the soils also dilutes soil Zn as concentrations of Zn in quartz are very low which range between 1 - 8 µg⁵.

Also total Zn is low (< 30 µg g-1) in highly leached acid sands. Zinc deficiency may occur in such soils which are inherently low in Zn. The total Zn concentrations in soils vary between 10 to 300 µg g-1 with an average of 50 µg g-1 . But the average available Zn varied from 1 to 3 µg g-1 (extracted by dithizone). The problem is that only a small amount of soil Zn is available to

the crop because of one or more adverse factors. The remainder of the total Zn is fixed in the soil in an insoluble or unexchangeable form and difficult to make available to crop ⁶¹.

Soil pH

Zinc availability is highly dependent on pH. When the pH is above 6, the availability of Zn is usually very low. The availability of Zn in alkaline soils is reduced due to lower solubility of the soil Zn. The concentration of Zn in the soil solution decreases from 10⁻⁴ (6.5 µg g⁻¹) to 10⁻¹⁰ M (0.007 µg L⁻¹) with an increase from pH 5 to pH 8 ³⁵. Thus it is more probable that Zn deficiency will occur in alkaline rather than acidic soils. The solubility constant values of ZnCO₃ and hydroxides suggest that a soil having high pH would usually contain a small amount of available Zn. In the case of soils characterized by high contents of hydroxyl (OH⁻) ions, it is difficult to get a crop response even to applied Zn. The lower availability of Zn under alkaline conditions is attributed to the precipitation of Zn as Zn (OH)₂ or ZnCO₃ ⁵⁸⁻⁶².

The higher carbonate contents in alkaline soils also absorb Zn and hold it in an unexchangeable form ⁷⁴. All these factors contribute to the low availability of Zn at higher pH values. Liming of acidic soils increases pH and also the Zn fixing capacity, particularly in soils with high P levels ¹. The movement of Zn in limed soils is considerably lower than in acidic soils so that absorption of Zn by the crop may be low. Liming can thus reduce the Zn uptake and induce Zn deficiency ⁷⁵.

Soil organic matter

Low organic matter contents in soils give rise to Zn deficiency as it is observed that available Zn increases with increase in organic matter in soil. Soil organic matter is an important soil constituent which originates from decomposition of animal and plant products. The most stable organic compounds in soil are humic substances such as humic and fulvic acids. Both of these substances contain a relatively large number of functional groups (OH, COOH, SH) which have a great affinity for metal ions such as Zn²⁺. Fulvic acids mainly form chelates with Zn over a wide pH range and increases the solubility and mobility of Zn ³⁵.

Simple organic compounds such as amino acids, hydroxy acids and also phosphoric acids are effective in complexing Zn, thus increasing its mobility and solubility in soils ⁵². An increase in the organic matter contents of a soil will increase its Zn availability; however, if the organic matter content in soil is too high, like in peat and muck soils, this can also contribute to Zn deficiency due to the binding of Zn on solid state humic substances ³⁶.

Soil texture

Lighter textured soils (sands) contain low levels of Zn. Finer texture soils like clay have higher CEC values and therefore have highly reactive sites and can retain more Zn than lighter textured soils. Therefore heavier textured soils with larger CEC have higher capacities for Zn adsorption than light textured soils. Consequently, Zn deficiency is more likely to occur in sandy than clayey soils. Clay soils adsorb Zn and this adsorption is controlled by CEC and pH ²¹. Redd *et al* ⁴⁶. Showed that a certain portion of the Zn adsorbed on the clay was not exchangeable but was acid soluble. This portion of Zn was not available to the plants. ⁵³ found that kaolonite fixes less Zn than bentonite or illite. Thus clays such as bentonite and illite with higher CECs contribute to the fixing of Zn more strongly, thus making it unavailable to plants.

Phosphate fertilizers

Soils with higher phosphate levels, either from native P or due to application of phosphate fertilizers, can cause Zn deficiency stress in crops[1]. Heavy application or prolonged use of phosphatic fertilizers reduces Zn uptake by plants. This effect may be due to the physiological imbalances within the plant. Zinc deficiency due to phosphorus application is termed “P-induced Zn deficiency”⁶⁴.

Soil flooding

Zinc deficiency is more often associated with flooded soil than dry soils. For example, riceplants under submerged conditions suffer from Zn deficiency in calcareous soils. But wheat grown in the same soil following rice grows normally³⁷. Zinc deficiency due to flooding was a result of Zn reaction with free sulphide⁴³. Under the submerged conditions of ricecultivation, Zn is changed into amorphous sesquioxide precipitates or franklinite; $ZnFe_2O_4$ ⁶⁰⁻⁶⁵. Thus a delay in Zn application until after flooding for rice minimizes Zn fixation by sesquioxides.

Soil temperature

In warm and moist soils, Zn uptake was higher in rice than in maize (*Zea mays* L.1). Temperatures below 16°C during growth caused decreased Zn uptake in maize tops²². It appears that Zn deficiency was associated with cool and wet seasons. Soil temperature effects appear to be due to the rate of Zn mineralization⁷¹. Other factors which can cause Zn deficiency in plants are high light intensity and long day-lengths [44]. Besides the natural soil and environmental factors, soil management practices carried out by man often causes Zn deficiency beside this plants can also suffer from Zn deficiency under adverse climatic condition¹.

ZincInteraction with Other Nutrients

Interactions occur between the micronutrients and some macronutrients. ‘Interaction’ may be defined as “an influence, a mutual or reciprocal action of one element upon another in relation to plant growth”⁵⁰. Another factor is the differential response of plants to one element in combination with varying levels of a second element applied simultaneously i.e. the two elements combine to produce an added effect not due to each of them acting alone⁵⁰. Such interactions may take place in the soil and within the plant. These interactions should be taken into account when providing adequate micronutrient supply to plants.

Other nutrients may interact with Zn by affecting its availability from soils and its status in the plant throughout the growth process, especially Zn absorption, distribution or utilization. These interactions may enhance or reduce plant growth as a response to Zn. Where an interaction does occur, it is necessary for the diagnosis and treatment of Zn deficiency to identify the factors and its sites and modes of action⁴⁰.

Phosphorus-Zn interactions

The study of the interaction between P and Zn started in 1936⁸ and till now, this important plant growth disorder is still under investigation. The interaction is usually termed ‘P-induced- Zn deficiency’. This disorder in plant growth is associated with high levels of available P or with application of P to soil. The Zn deficiency symptoms can be prevented by the application of Zn fertilizers. The actual causal relationship and mechanisms are still not fully understood. In general, four possible causes have been considered responsible for P -induced- Zn deficiency.

These include

- (i) A P-Zn interaction in soil;
- (ii) A slower rate of translocation of Zn from the roots to shoot;
- (iii) A simple dilution effect on Zn concentration in plant tops due to growth response to p;
- (iv) A metabolic disorder within plant cells related to an imbalance between P and Zn⁵⁰.

It was suspected that formation of an insoluble Zn₃(PO₄)₂ in the soil reduced the Zn concentration in soil to deficient levels. But these suspicions were disproved and further observed that Zn₃(PO₄)₂ was a good source of fertilizer for sorghum [9]. The investigation of this precipitation as a mechanism that causes Zn deficiency continued till 1970. ¹⁶ reported that maximal or near maximal yields were found with legumes at 0.05 μM Zn in flowing culture and with cereals at 0.01 μM. This evidence indicates that precipitation of Zn₃(PO₄)₂ is not involved in P-induced Zn deficiency. Many researchers have reported that applied P accentuated Zn deficiency symptoms in plants ⁴¹⁻⁶⁶.

The higher P levels in soil reduced the Zn concentrations in the plant tops and also reduced total Zn content ⁶⁴. These scientists suggested that P-Zn antagonism existed in the roots of the plants. Other studies suggested that although P decreased the Zn concentrations in the tops, the total Zn contents either increased or remained the same ¹⁰⁻¹¹. The cause of this P-induced-Zn deficiency has been suggested to be due to interference by P with the uptake, translocation, or utilization of Zn.

Nitrogen-Zn interaction

Zinc deficiency can be increased or ameliorated in plants with the application of nitrogen fertilizers. The interactions resulting from the effects of N application helps to promote plant growth and, to a lesser extent, in changing the pH of the root environment since application of N promotes the growth of plants, it is possible to find positive interactions between increasing levels of Zn and N fertilizers ¹. It was reported that wheat grown on N deficient soil with adequate levels of all nutrients except N and Zn, did not respond to Zn application in the absence of NH₄NO₃ fertilizer, however, a strong response to Zn application was observed in the presence of N fertilizer ¹⁷.

On the other hand, in soils low in Zn and high in fertility, N fertilizers have ameliorated (or intensified) Zn deficiency by affecting Zn absorption through changing pH. As ammonium ions have an acidifying effect, ZnSO₄ application with concurrent dressings of N were very effective in controlling Zn deficiency where ZnSO₄ alone had no effect. It was also observed that NH₄⁺ salts inhibited Zn absorption from low Zn²⁺ concentration, in a short term study with wheat ¹⁷.

Macronutrient cation zn - interaction

Macronutrient cations such as Ca, Mg and K inhibit the absorption of Zn by plants from solution. They need to be considered when interpreting the results of solution culture experiments involving Zn nutrition, however, in soil they seem to be less effective in the inhibition of Zn absorption compared to the effects of their salts on soil pH. Zinc concentrations were highest in legumes grown in solution culture at constant pH with the lowest Ca level at which the plants were not Ca deficient.

Zinc concentrations progressively decreased with increasing Ca concentrations in solutions¹². They found that increasing concentrations of Ca (NO₃)₂ from 0 mM to 40 mM inhibited the rate of Zn absorption by wheat seedlings in a non-competitive manner, however, higher Ca concentrations (100mM) had no additional effect on Zn absorption. This inhibition was attributed to Ca as varying the anions and had little effect on Zn absorption, whereas substituting other cat ions for Ca had similarly negative effect¹⁷.

In soils, the effects of Ca compounds on Zn nutrition are variable, due to the effects of its salts on soil pH. Zinc concentrations in plants growing in soil treated with CaSO₄ (which decreased the soil pH from 5.6 to 4.8) increased slightly but decreased strongly when an equivalent amount of CaCO₃ was applied (which increases the soil pH from 5.7 to 6.6)⁷⁹. The macronutrient cat ions K, NH₄ and Mg all inhibited the rate of Zn absorption strongly from solutions of low Ca concentrations; with increasing Ca concentrations, the inhibitory effects weakened and in the case of two ions (K, Mg) tested at sufficiently high Ca concentration (2.5-10 mM) eventually disappeared, suggesting that they operate through the same mechanism as Ca¹⁷.

Copper-Zn interactions

It was reported that Cu and Zn may interact in several ways: Zn strongly depresses Cu absorption, Cu competitively inhibits Zn absorption and Cu nutrition affects the redistribution of Zn within plants⁴⁰. A very strong Cu-Zn antagonism has been observed in wheat growing on soils deficient in Cu and Zn³⁷. In N-Cu-Zn experiment,¹⁷ found that N fertilizer increased grain yield in the absence of Zn and diluted Cu concentrations to deficiency levels in plant. Addition to that, Zn along with N fertilizer intensified the Cu deficiency so severely that grain yield was lower than in the control plants (without NH₄NO₃).

In this case, Zn intensified Cu deficiency in plants by depressing Cu uptake. This may be a result from competitive inhibition of Zn on Cu absorption. The competitive inhibition of Cu²⁺ ion on Zn²⁺ absorption has been established in short term studies. While Zn severely depressed Cu uptake by wheat, Cu did not depress Zn absorption in the same experiment. The reason for the difference in soil and solution culture results may be the form of these ions present in the soil and solution. In solution studies, the Cu and Zn were present as divalent ions whereas in most of the soils they are predominantly present as complex forms and a much higher proportion of Cu is complexed compared to Zn²⁷. So Zn²⁺ activity would be much higher than Cu²⁺ activity at the abzincorsorbing sites making it an effective competitor in Cu absorption and making its absorption less sensitive to competition from Cu⁴⁰.

Mechanism of zinc

Plant growth promoting rhizobacteria can affect plant growth by different direct and indirect mechanisms. PGPR influence direct growth promotion of plants by fixing atmospheric nitrogen, solubilizing insoluble phosphates, secreting hormones such as IAA, GAs, and Kinetics besides ACC deaminase production, which helps in regulation of ethylene. Induced systemic resistance (ISR), antibiosis, competition for nutrients, parasitism, production of metabolites (hydrogen cyanide, siderophores) suppressive to deleterious rhizobacteria are some of the mechanism that indirectly benefit plant growth. Zinc (Zn) is an essential element necessary for plant, humans and microorganisms.

Human and other living things require Zn throughout requires in little quantities to compose a complete array of physiological functions. Zinc is a vital mineral of

“exceptional biological and public health importance”. Furthermore 100 specific enzymes are found in which zinc serves as structural ions in transcription factors and is stored and transferred in metallothioneins and typically the 2nd most abundant transition metal in organisms, after iron and it is the only metal which appears in all enzyme classes.

Zinc is important micronutrient for plant which plays numerous functions in life cycle of plants. Crop growth, vigor, maturity and yield are very much reliant upon essential micronutrient (Zn). To address the problem of Zn deficiency⁷⁸, micronutrient biofortification of grain crop is increased interest in developing countries. Several approaches have been projected and practiced for fortification of cereals. Enhancing Zn concentration of cereal grain has been recognized as an approach of tackling human Zn deficiency. Plant scientists are formulating different methodologies to tackle the Zn deficiencies in crop through fertilizers applications and/ or by means of plant breeding strategies to augment the adsorption and or bioavailability of Zn in grain crops .

Plant growth promoting rhizobacteria are the soil bacteria inhabiting around/on the root surface and are directly or indirectly involved in promoting plant growth and development via production and secretion of various regulatory chemicals in the vicinity of rhizosphere. Generally, plant growth promoting rhizobacteria facilitate the plant growth directly by either assisting in resource acquisition (nitrogen, phosphorus and essential minerals) or modulating plant hormone levels, or indirectly by decreasing the inhibitory effects of various pathogens on plant growth and development in the forms of biocontrol agents.

Various studies have documented the increased health and productivity of different plant species by the application of plant growth promoting rhizobacteria under both normal and stressed conditions. The plant-beneficial rhizobacteria may decrease the global dependence on hazardous agricultural chemicals which destabilize the agro-ecosystems.

Plant growth promoting rhizobacteria (PGPR) is multifunction microbes functioning in sustainable agriculture. PGPR are a diverse group of bacteria that can be found in the rhizosphere on root surfaces as well as in association with roots. These bacteria move around from the bulk soil to the living plant rhizosphere and antagonistically colonize the rhizosphere and roots of plant. Soil bacteria which are important for plant growth are termed as plant growth promoting rhizobacteria (PGPR).

In addition to phosphate mobilization they are responsible to play key role in carrying out the bioavailability of soil phosphorus, potassium, iron, zinc and silicate to plant roots. Viable application of PGPR are been tested and are repeatedly promising; however, good understanding of microbial interactions will significantly raise the success rate of field application .

Importance of zn in human

Zinc deficiency is common in humans, animals and plants. More than 30% world's population suffers from Zn deficiency⁷⁸. Zinc plays a part in the basic roles of cellular functions in all living organisms and is also involved in improving the human immune system. The optimum dietary intake for human adults is 15 mg Zn per day. Zinc acts as a catalytic or structural component in various body enzymes.

Unsatisfactory intake and improper absorption of Zn in the body may cause deficiency of Zn. Due to Zn deficiency; the human body will suffer from hair and memory loss, skin problems and weakness in body muscles. Further insufficient intake of Zn during pregnancy also causes stunted brain development of the fetus. Infertility has also been observed in Zn deficient men. Zinc deficiency may cause congenital diseases like Acrodermatitis enteropathica³⁹.

As per recommendations an average male need 11 mg of Zn daily while an average female needs 9 mg of Zn. During pregnancy and lactation, the female needs 13 mg to 14 mg of Zn daily. Infants from 7 months to 3 years need 3 mg, 4 to 8 years need 5 mg and children from 9 to 13 years need 8 mg of Zn daily [23,28]. Zinc is stored in the rice husks and grains and with the consumption of this cereal human zinc deficiency can be decreased. The foods rich in Zn are beef, pork, chicken, and breakfast cereals, nuts like roasted peanuts, almonds, walnuts, oats and dairy products like yogurt, cheese and milk¹⁴.

Zinc Efficiency

Zn efficiency can be defined as “the ability of plants to maintain high yields in soils with low Zn availability”. Many mechanisms are perhaps involved in Zn efficiency [56]. Depending on the nature of experiments and plant species, the most significant mechanisms may be Zn utilization in tissues and Zn uptake²⁴. Under Zn deficiency, Zn-efficient genotypes have a high activity of Cu/Zn anhydrase and carbonic anhydrase¹⁸⁻²⁸.

Zn efficiency and Zn uptake are very susceptible for plant growth and its total content in soil is influenced by several soil properties like pH, CaCO₃, organic matter content, crop, as well as cultivars and nutrient interactions in soil environment. There is no precise mechanism used in determining Zn efficiency is available so far; however, several crops have been evaluated for their Zn efficiency like: beans, wheat and rice¹³⁻¹⁹⁻⁴⁸.

Effect of Zn Deficiency on Plants and Its Correction

Zinc is an essential micronutrient for plant growth and plays an important role in the catalytic part of several enzymes its deficiency will result in stunted growth. Many researchers observed that Zn is closely related to the nitrogen metabolism pathway of plants, thus causing a reduction in protein synthesis for Zn deficient plants. Zinc deficiency significantly affects the root system including root development. Zinc deficiency affects the absorption of water and nutrients from soil and thus resulting in growth and yield reduction in the plant. Indicated that the flowering and fruiting process were greatly reduced under severe Zn deficiency.

Zinc deficiency is one of the major constraints in world food production. Identification of Zn deficient areas, and causes would help in planning the appropriate strategies to correct these Zn deficiencies. Although Zn is widely used as a fertilizer, but efficient and economical methods to correct its deficiency on a long term basis and in a specific cropping system is desirable. Zinc deficiency can be corrected through the application of Zn fertilizers, recycling crop residues, natural organic manures and cultivation of Zn efficient genotypes⁶⁹.

Zinc fertilizers are broadcast and sprayed onto topsoil, banded in the seedbed, applied as foliar sprays, used as seed treatment and in the case of transplanted rice seedlings, roots of these seedlings are dipped into Zn before transplanting. Zinc sulphate is the commonly used fertilizer compound (ZnSO₄·7H₂O containing 26% Zn, or ZnSO₄·H₂O containing 37% Zn). Other Zn compounds are Zn chloride (ZnCl₂), Zn nitrate (Zn (NO₃)₂), Zn oxide (ZnO), Zn oxy-sulphate and Zn-coated urea⁴⁵.

Zinc Deficiency Symptoms in Plants

Visual symptoms of Zn deficiency in plants are fairly characteristic and are relatively easy to identify. These distinctive symptoms are useful for recognizing acute Zn deficiency and for indicating Zn responsive soils, but not the hidden or marginal deficiencies. The most common symptoms of Zn deficiency include: stunted growth, shortened internodes and petioles, and small malformed leaves (little leaf) which results in the “rosette” symptom in the early growth stages of dicotyledons and “fan shaped” stems in monocotyledons⁷⁰.

The deficiency symptoms first appear on young leaves as Zn is immobile under conditions of deficiency. These leaves remain small, cup upward and develop interveinal chlorosis and necrotic spots on the upper leaf surfaces which later join to each other to form brown necrotic and brittle patches. The necrosis is often more noticeable on middle aged leaves which eventually wilt, bend and collapse⁴. Zinc deficiency is typically patchy, even within a single field and symptoms develop rapidly but depend greatly on the degree of stress.

Enzyme activity, like ribonuclease activity or carbonic anhydrase activity can be used as an index for precise information. This is particularly important in the initial stages of growth when micronutrient requirements of plants are very low and the total contents of Zn fail to provide precise information about the hidden deficiency. Zinc deficient plants are unthrifty, lack vigor; give patchy appearance with short and thin stems. In young plants interveinal areas are with dark brown necrotic lesions⁶.

The visible symptoms in rice are: wilting due to loss of turgidity in the leaves, basal chlorosis of the leaves, delayed development of the plants, “bronzing” of the leaves and in some cases death of the rice seedling. The common symptoms of Zn deficiency in rice are: chlorosis in the mid rib at the base of the youngest leaf within 2-4 weeks after sowing or transplanting and the appearance of brown spots on the older leaves. The spots enlarge, coalesce and give the leaves a brown color. Zinc deficient plants show stunted growth and reduced tillering. If the deficiency is not too severe the plant may recover after 4-6 weeks but maturity is delayed and yields of susceptible cultivars are reduced⁴⁹.

The most noticeable symptom is the plant’s loss of turgidity, where plants fall over and float on the surface of the water. The basal leaves become pale green and after 3-7 days the leaves become chlorotic. It is important to note that visual symptoms of Zn deficiency in rice vary, to a certain extent, with soil type, cultivar and growth stages. Symptoms can be mistaken for those of N, Mg, Mn or Fe deficiencies which are often combined with Zn deficiency, making it difficult to distinguish between the symptoms of the two. Therefore, plant analysis is required for confirmation¹.

Zinc critical levels in plants

Zinc deficiency is one of the major constraints in world food production. It is therefore essential to identify the Zn-deficient areas, and the different causes of deficiency. It would help in planning the appropriate strategies to correct these Zn deficiencies. Although Zn is being used as a fertilizer, an understanding of efficient and economical methods to correct Zn deficiency on a long term basis and in a specific cropping system is desirable. It was reported by that there is a strong relationship between Zn concentration in tissues with the growth and yield of crops.

The critical limits of Zn in plants indicates deficiency as suggested by are :< 10 mg kg definite Zn deficiency, 10–15 mg kg-1 very likely, 15–20 mg kg-1 likely and >20 mg kg-1 unlikely

(sufficient). In most crop species leaf sufficiency range for Zn 15 to 50 ppm in the dry matter of mature plants and In most crop species leaf sufficiency range for Zn 15 to 50 ppm in the dry matter of mature plants and in most cases 15 ppm Zn is considered as critical value⁶.

Zinc toxicity

The threshold of Zn toxicity varies among plant species, time of exposure to Zn stress and composition of the nutrient growth medium. Plant growth inhibition extends in *E. maculate* and *E. urophylla* by five weeks after addition of 400-1600 mM ZnSO₄, whereas *Pisum sativum* became inhibited after 1000 µM Zn application. Photosynthesis is strongly affected in plants exposed to heavy metals excess. High Zn concentrations in plants can cause phytotoxicity. The yield may be reduced when plant leaf Zn concentrations reach about 300 - 1000 µg Zn 1 g.

A typical phytotoxicity critical concentration is about 500 µg Zn g⁻¹. The best way to identify Zn deficiency in crops is the determination of Zn concentrations in tissues, however, the result should be interpreted in full recognition of the interaction of Zn with other nutrients because the deficiency of one nutrient may result in excess accumulation of other nutrients by a plant³⁶.

Effect of Zn on microbial activity

Microorganism requires various nutrients for their growth and metabolism. Among the nutrients, Zn is an element present in the enzyme system as co-factor and mental activator of many enzymes. Zinc might limit the growth of bacteria at higher levels (>13.60 mg kg⁻¹). Furthermore, cell growth as well as microbial populations and their activity in soil were badly affected under high levels of Zn¹⁹.

CONCLUSION

Our extensive review of literature has shown that Zn is very essential plant nutrient for all types of crops. It is deficient in all parts of the globe with different types of soils. Under these conditions application of Zn fertilizer is necessary for healthy crop growth and higher yields. Soil and foliar applications of Zn fertilizer are recommended for correcting deficiencies. Soil dressings of Zn chelates, sulfates and oxides should be broadcast and mixed in the soil. Soil applied Zn had residual effects for subsequent crops but foliar sprays have no residual effect and fresh applications must be made to be each crop.

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ORGANIZATIONAL CITIZENSHIP BEHAVIOUR AT WORK: A COMPARATIVE STUDY OF LOWER AND UPPER DIVISIONAL CLERICAL EMPLOYEES

Zarreen Zaheer*

*Research scholar,
Department of Psychology,
Aligarh Muslim University,
Aligarh, INDIA

Email id: zarinzaheer80@gmail.com

ABSTRACT

In Industrial and Organizational Psychology, Organizational citizenship behavior is a person's voluntary commitment within an organization that is not a part of his/ her assigned task. Organizational citizenship behavior has rapidly become one of the most extensively studied areas of Organizational behavior, which has been linked to overall organizational effectiveness. Thus employees with Organizational citizenship behavior have an important consequence at workplace. Therefore the present investigation was aimed to examine Organizational citizenship behavior among lower and upper divisional clerical employees. For this purpose a scale for measuring Organizational citizenship behavior was developed by Podsakoff et.al (1990). The data were collected on clerical staff N= 100 working in various departments of Aligarh Muslim University, Aligarh. The data was analyzed by using t-test. The obtained result revealed significant difference between lower and upper divisional clerical groups. The result has been discussed in detail in the light of socio-cultural milieu.

KEYWORDS: Organizational behavior, Organizational citizenship behavior, lower divisional clerks, upper divisional clerks

INTRODUCTION

In this changing scenario and hi- tech working environment employees' behavior towards their work is important for the development of the organization, (Dunlop & Lee 2004). Various researchers and academicians focuses on the study of the employees behavior that contribute a lot towards the success of the organization and this behavior is called Organizational Citizenship Behavior was first introduced by Organ (1988).The tendency to work extra for the organization may not present in all employees, various factors play a key role which produce the sense of love and belongingness that lead to engage in citizenship behavior. The past researches also argued that Organizational citizenship behavior is positively related to psychological capital (Avey et.al 2010).Employees with Organizational Citizenship Behavior are more committed towards their work, (William & Anderson 1991; Smith, Organ & Nean 1983), therefore the present study focus on the position of the employees in the organization which may have an influence on Organizational Citizenship Behavior because of power, autonomy and other benefits that is not similar for all employees. Organ (1988), defined Organizational Citizenship Behavior as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in aggregate promotes the effective functioning of the organization" (p. 4).This is the behavior which go beyond the requirement of the assigned task and related to the extra work of the employees for which employees are not get benefit by the company. Podsakoff et.al (2000), designed a theoretical model for the explanation of the Organizational Citizenship Behavior with five factors:

Altruism: is the helping behavior of the employees with their coworkers (podsakoff & et al, 2000).

Consciousness: Employees behavior that is more conscious towards their work beyond their expected level (Dippalla & Hoy, 2005).

Courtesy: is the gracious behavior that prevents conflict at workplace.

Sportsmanship: In this behavior employees are more ready to adjust themselves in the working environment.

Civic Virtue: the behavior of employees which shows their involvement in the organizational activities. (Shokrkon & et.al 2003)

REVIEW OF LITERATURE

There are more than hundred researches till 2000 had been done regarding Organizational Citizenship Behavior, their consequences, and their relation with other variables and majority of the studies shows their positive impact on the future of the organization.

A study conducted by Dash and Pradhan (2014), examined that high employee retention, job satisfaction and low absenteeism are their positive consequences.

Mohammad Quoquab and Alias (2011), conducted a study on job satisfaction and Organizational Citizenship Behavior, among higher learning institutions. The study concluded that extrinsic and intrinsic both type of job satisfaction is important for increasing employee's citizenship behavior.

Bukhari (2008) inquire that employee with Organizational Citizenship Behavior, always defending their organization in difficult circumstances.

Qureshi (2015), conducted a research on Indian police officer, studied Organizational Citizenship Behavior and its antecedents, a large sample of 829 police officers were taken from two district. The result shows that organizational justice, job satisfaction, task variables and organizational commitment are strongly related to Organizational Citizenship Behavior. The findings of Indian police officer are similar as western police officers, the similarity between these two findings indicate that these antecedents may be universally important predictors of Organizational Citizenship Behavior.

Isen and Daubmen (1984), find out that positive emotions play an important role to increase citizenship behavior.

Pradhan et.al (2016) conducted a study and demonstrates the positive relationship between psychological capital and organizational citizenship behavior.

SIGNIFICANCE OF THE STUDY

In every organization, employees are the most important part for achieving the desired goal. In this study we are concerned about the factors that are related to the job itself which influence the behavior of employees at work; the study is significant to the position and designation of employees in the organization for determining their responsibilities and performing the extra work for the organization.

OBJECTIVE

To study Organizational Citizenship Behavior and its dimensions among lower and upper divisional clerical employees.

METHODOLOGY

Sample

In the present study random sampling technique was used to collect the data of 100 employees working on the post of clerks at different departments of Aligarh Muslim University, Aligarh.

Instrument

The questionnaire used in the study was developed by Podsakoff, Mackenzie, Moorman & Fatter in 1990. The scale consisted 24 items which focused on extra role behavior of individual. This scale is mainly based on five dimensions i-e, Altruism, Conscientiousness, Sportsmanship, Courtesy & Civic virtue proposed by Organ in 1988.

RESULT AND DISCUSSION

TABLE NO.1: MEAN S.D AND T-VALUE OF ORGANIZATIONAL CITIZENSHIP BEHAVIOR AMONG LOWER AND UPPER DIVISIONAL CLERICAL EMPLOYEES.

Sr.	Mean	S.D	t
Senior	118.78	5.0	4.3
Junior	114.58	3.4	

As shown in Table no.1 when both the groups are compared on organizational citizenship behavior, t-value (4.3) has been found to be significant. It is therefore inferred from this that lower and upper employees differs significantly on the basis of organizational citizenship behavior.

TABLE NO.2: MEAN S.D AND T-VALUE OF CONSCIENTIOUSNESS AMONG LOWER AND UPPER DIVISIONAL EMPLOYEES.

Sr.	Mean	S.D	t
Senior	28.05	1.8	4.1
Junior	26.48	1.5	

As shown in Table no.2 when both the groups are compared on conscientiousness, t-value (4.1) has been found to be significant. It is therefore concluded that conscientiousness differ significantly among lower and upper divisional employees.

TABLE NO.3: MEAN S.D AND T-VALUE OF COURTESY AMONG LOWER AND UPPER DIVISIONAL EMPLOYEES.

Sr.	Mean	S.D	t
Senior	26.95	2.11	3.4
Junior	25.33	2.12	

As shown in Table no.3 when both the groups are compared on courtesy, t-value (3.4) has been found to be significant. It is therefore concluded that courtesy differ significantly among lower and upper divisional clerical employees.

From the descriptive analysis of the study it has been found that upper divisional employees possess high level of citizenship behavior than lower divisional clerical employees. The result seems to be very logical because upper divisional employees enjoying more perks and benefits, and also have job security that develops a high sense of belongingness in them towards their organization which may enhances citizenship behavior of the of upper divisional employees. Furthermore, the result found to be significant on conscientiousness and courtesy dimension i.e., when mean scores of both the groups are compared on conscientiousness and courtesy dimension it has been found that upper divisional employees scored higher as compared to their lower divisional employees. This may be due to the fact that working with the organization for a longer period of time develops a strong sense of belongingness and responsibility towards the organization in them and they are likely to immerse themselves in their job tasks which go beyond the expected level of their performance. In addition to this upper divisional employee are also found to be more courteous as they enjoying respectable positions in the organization.

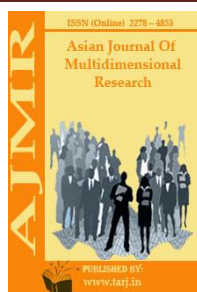
CONCLUSION

From the result of the above study it is concluded that senior employees possess higher citizenship behavior at workplace, they shows positive behavior, such as helping their colleagues in the accomplishment of the task, reduce mutual conflict, work for the betterment of the organization and so on.

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AN ASSESSMENT OF GROWTH OF TEA INDUSTRIES IN WEST BENGAL

Gautam Roy* ; Dr. Biswambhar Mandal**

*Research Scholar,
Department of Commerce,
University of Kalyani,
Nadia, INDIA
Email id: gautamroy.1981@gmail.com

**Assistant Professor,
Department of Commerce,
University of Kalyani,
Nadia, INDIA
Email id: biswambhar.mandal@gmail.com

ABSTRACT

The present study analyses the growth of tea industries in West Bengal compared to India. Growth of tea industries in West Bengal depends on the firm's overall performances and government's policy towards the firms, tax structure, government's intervention etc. The study is based on secondary data collected from Tea Board of India, Indian Tea Association, Siliguri Auction Centre, Ministry of Corporate Affairs and data collected from Banijya Tatha Bhaban (Kolkata) for the period from 2006-07 to 2017-18. We evaluate the growth of tea industries in West Bengal with the help of areas of tea cultivation, tea production, tea export, tea import, average auction price of tea and average labour employed in tea industry. We have measured the growth with the help of annual growth rate (%), Compounded Annual Growth Rate (CAGR) and Chi-square (χ^2) test has been tested whether the growth rate is satisfactory at 5% level or not. The CAGR result shows that except export of tea, in all other cases growth rate is higher than India is moderate but not satisfactory. Growth of tea import in West Bengal is lower than India but it is favourable for the industry. χ^2 test results shows that growth of tea exports and tea imports are satisfactory at 5% level of significance and rest of the cases χ^2 test results are not satisfactory. Except tea production and tea export, in all other cases trends of West Bengal are better than India.

KEYWORDS: Tea Industry, Growth, Trends, CAGR, χ^2 Tests, West Bengal, India.

1. INTRODUCTION

The growth of tea industry in West Bengal is due to the growing demand of tea in European countries and suitable climatic condition in the hilly areas of Darjeeling, hill slide and plain areas of Dooars and river bank of Terai region. After the successful plantation of tea in Assam in the year 1834¹, the East India Company expand their business and successfully planted tea in Darjeeling region in 1841² and in Dooars and Terai region in 1874³. Tea plantation is spread after 1878, when tea cultivation was granted by West Bengal government passed under the Tea Lease Rules of 1875. Tea industries in West Bengal is increasing moderately but not at the satisfactory level. This chapter mainly focused on the growth and trends of the tea industry in West Bengal in comparison to India. We have measured the growth and trends of tea industry in West Bengal with the help of areas of tea cultivation, tea production, tea export, tea import, average auction price of tea and average labour employed in tea industries in West Bengal.

2. LITERATURE REVIEW

To investigate the problem in an effective and efficient manner, the review of existing and related literature is very important because it can help to understand the methodology and find out the appropriate research gap. Therefore, keeping in mind the importance of review of related literature, we try to attempt the review of available literature on the same subject under study.

Samantaroy and Ashutosh (2012)¹ examined the trend of tea industries in India for the period between 1950 and 2006 based on secondary data obtained from CMIE prowess database and annual reports of Tea Board of India with the application of descriptive and prescriptive study on regression analysis, time series analysis and cluster analysis. Experiment results state that the tea industry is incapable of being generate cash and sufficient resources to carry out long-term developmental investments to overcome the challenges postured by competitors and new technology. They noticed that weak linear correlation ($r = 0.23$) between production of tea and exports, indicates that the auction price is somewhat dependent of the amount of production.

Dhakre (2015)² studied national trends on agricultural crop (Tea) production and export using various statistical tools like regression analysis, time series analysis and cluster analysis for the period from 1954-55 to 2012-13. He found that India could not export more quantity of tea that it produces due to weak correlation between production and exports of tea. It shows only 1.1% of the variations in exports is explained by production. Indian tea industry is unable to generate cash and sufficient resources to undertake long-term developmental investments to meet the challenges posed by competitors and new technology. He suggested that in order to gain the competitive advantage, Indian tea industry needs to improve in research facility, introduction of modern technology etc.

Tasnuba and Mohammad (2011)³ examined tea production, consumption and exports in global and Bangladeshi perspective to focus on the world tea production, Bangladeshi tea production and to analyse internal or external markets of Bangladeshi tea with the help of secondary data collected from Economic Survey reports and Statistical Yearbooks. The researcher argued that these analyses helping us to depict the real pictures of world tea demands, productions, exports and imports. But they could not give any particular solution of the problem and fail to depict the picture of Bangladeshi tea industry.

Bordoloi (2012)⁴ studied global tea production and export trend to analyse growth and export patterns of major producing and exporting countries along with a comparative study in relation to

India with the help of secondary data collected from Tea Board of India publications for the period of thirty-year periods from 1981 to 2010. Appropriate statistical model is used to find out the growth trend for production and export in relation to time and to test small samples of goodness of fit (R^2) and variance ratio (F- test) is used. To test the variability of production and export for individual countries coefficient of variation (C.V) is used. He found that the production trends of all countries and total world production have shown linear growth except for Indonesia. China has the highest estimated annual growth in production and become the highest producer of tea which is almost double of India's annual production growth. The percentage production and export growth in Vietnam, Kenya and China is found to be more than global growth. India is the only major tea producer which has shown decline in export.

Arya (2013)⁵ analysed the growth and trends of tea industry in Assam using secondary data collected from Tea Board of India for the period from 1989 to 2007 for measuring growth and monthly data of 2008 only for measuring the trends. He used percentage for measuring the growth & trends. He found that 59,717 small tea gardens have the holding size of less than 3 acres, which is 87 per cent of the small tea growers in the state are small farmers. Small tea growers produced around 400 million kgs. of green leaf in 2008 and it is expected to touch 500 million kgs in the coming years. He argued that the government of India through the Tea Board of India has taken several steps for the development of the small tea growers in the country.

Narzary (2016)⁶ studied the status of growth and trends of tea industry in Assam to determine the growth of number of tea garden, area under cultivation and tea production in the state, to determine the scenario of employment generation in the tea industry in the state, to make comparative analysis of tea production and average yield among different districts in the state and to give an idea about the future prospects of tea industry in the state of Assam. He applied secondary data collected from different sources for analysis and interpretation for the periods of 12 year from 2001 to 2012. He found that tea in Assam is expanding continuously and effectively. He added government should support both big and small tea garden financially and politically for the greater interest of the society and for the benefits of the state.

Padachi (2006)⁷ analysed the trends in working capital management and its impact on firms' performance of Mauritian small manufacturing firms. To identify the causes of significant differences between the industries working capital needs and profitability of firms are examined. He has taken return on total assets as dependent variable for measuring profitability and inventories days, accounts receivables days, accounts payable days and cash conversion cycle as independent variable for measuring working capital management. Correlation coefficient has been made to test the relationship between working capital management and corporate, with the help of 58 sample small manufacturing firms, using panel data analysis for the period 1998–2003. He found that high investment in inventories and receivables is associated with lower profitability. He concluded that there is a need for further empirical studies to be undertaken on small business financial management by extending the sample size that explains the better performance for some industries and these best practices could be extended to the other industries.

2.1 Research Gap: From the available literature review it is found that no intensive study has been done on the particular topic, especially in the context of West Bengal. Under this perspective, our sincere effort will be to throw light on growth of tea industries in West Bengal.

3. Objectives of the Study

The main objective of the study is to enquire into the growth of tea industries in West Bengal with the help of Annual growth rate and Compounded Annual Growth Rate

4. Hypothesis of the study

Hypothesis-1: H_0 : Growth of tea industries in West Bengal are not pleasant;

H_1 : Growth of tea industries in West Bengal are pleasant.

5. RESEARCH METHODOLOGY

5.1 Data type: The study is based on secondary data collected from Tea Board of India, Indian Tea Association, Siliguri Auction Centre, Ministry of Corporate Affairs and data collected from Banijya Tatha Bhaban (Kolkata). For the purpose of supplement the secondary data similar earlier studies, government publications, magazines, papers are also studied.

5.2 Periods of the study: The period of the study is confined to 12 years from 2006-07 to 2017-18.

5.3 Tools and technique used: We evaluate the growth and trends of tea industries in West Bengal with the help of areas of tea cultivation, tea production, tea export, tea import, average auction price and average labour employed in tea industries in West Bengal. We measure the growth with the help of annual growth rate and Compounded Annual Growth Rate (CAGR) and test the satisfactory level with the help of Chi-square (χ^2) tests.

6. Growth of Tea Industries in West Bengal

Growth of tea industries depends on various factors. These factors can be divided into two parts such as financial factors and non-financial factors. We considered only some financial factors. Out of so many financial factors we have taken only 6 factors such as growth of areas of tea cultivation, tea production, tea export, tea import, average auction price and average labour employed in tea industry in West Bengal. To analyse the growth, we have surveyed Annual growth Rate (%) and Compound Annual Growth Rate (CAGR) to interpret the financial data.

6.1 Growth of Tea Industry Using Annual Growth Rate

Actual areas of tea cultivation, actual tea production, actual tea export, actual tea import, actual average auction price of tea, actual average labour employed in tea industry and their growth rate in West Bengal and in India are shown in table 1 and table 2 below:

TABLE 1: ACTUAL AREAS OF TEA CULTIVATION, ACTUAL TEA PRODUCTION, ACTUAL TEA EXPORT AND THEIR ANNUAL GROWTH RATE IN WEST BENGAL AND IN INDIA

West Bengal						
Year	Area of Tea Cultivation (in thousand hectares)	Annual Growth (%)	Tea Production (in million kgs.)	Annual Growth (%)	Tea Export (in crore rupees)	Annual Growth (%)
2006-07	114.788	-	237.106	-	41.787	-
2007-08	115.095	0.267	236.344	-0.321	42.757	2.321
2008-09	115.095	-	233.133	-1.359	24.334	-43.088

2009-10	115.095	-	221.573	-4.959	45.031	85.054
2010-11	115.095	-	229.784	3.706	58.829	30.641
2011-12	115.100	0.004	271.600	18.198	58.086	-1.263
2012-13	115.100	-	279.300	2.835	67.866	16.837
2013-14	124.320	8.010	312.880	12.023	81.887	20.660
2014-15	132.860	6.869	329.460	5.299	78.248	-4.444
2015-16	140.440	5.397	324.500	-1.505	45.228	-42.199
2016-17	141.330	0.634	356.300	9.800	69.705	54.119
2017-18	141.560	0.163	384.510	7.917	71.213	2.163
CAGR = 1.762%			CAGR = 4.111%		CAGR = 4.543%	
Chi-square value = 2.683			Chi-square value = 16.015		Chi-square value = 29.920	
India						
Year	Area of Tea Cultivation (in thousand hectors)	Annual Growth (%)	Tea Production (in million kgs.)	Annual Growth (%)	Tea Export (in crore rupees)	Annual Growth (%)
2006-07	567.020	-	981.805	-	2006.526	-
2007-08	578.458	2.017	986.427	0.471	1810.110	-9.789
2008-09	579.353	0.155	980.818	-0.569	2392.914	32.197
2009-10	579.353	-	978.999	-0.185	2785.846	16.421
2010-11	579.353	-	966.403	-1.287	3058.301	9.780
2011-12	579.353	-	1115.720	15.451	3291.870	7.637
2012-13	563.979	-2.654	1126.330	0.951	3750.760	13.940
2013-14	563.979	-	1200.410	6.577	4355.230	16.116
2014-15	563.979	-	1207.310	0.575	4054.020	-6.916
2015-16	566.660	0.475	1208.660	0.112	4355.320	7.432
2016-17	566.660	-	1267.360	4.857	4632.500	6.364
2017-18	566.660	-	1325.050	4.552	5064.880	9.334
CAGR = - 0.005%			CAGR = 2.530%		CAGR = 8.022%	
Chi-square value = 0.619			Chi-square value = 17.737		Chi-square value = 139.217	

Source: Computed from Appendix- I

From the above table it is seen that annual growth of areas of tea cultivation in West Bengal is not remarkable. There is lower growth in the year 2013-14, 2014-15 and 2015-16 and the remaining years there is very lesser or no growth. On the other hand in case of India, there is very lesser or no growth all over the years except the year 2007-08. So, it can be says that growth rate of areas of tea cultivation in West Bengal is not prominent but it is better than India. It may be the cause of non availability of cultivated land, changes in weather condition, low return or high risk, low profitability, collusion between owner and labour organisation, increasing rate of population caused decreasing cultivated land etc. Total 23.323% of areas of cultivated land increased in West Bengal which is higher than (-0.063%) in the study periods.

Again, annual growth of tea production in West Bengal are negative in the years 2007-08, 2008-09, 2010-11 and 2015-16; moderate in the years 2010-11, 2012-13, 2014-15, 2016-17 and 2017-18; and satisfactory in the years 2011-12 and 2013-14. On the other hand, negative or lesser annual growth in all of the year except the year 2011-12. In the study periods, total 62.168% of tea production increased in West Bengal, which is better than India (34.96%) with respect to the base year. The tea production in West Bengal is increased moderately due to changes in weather condition, moderate management policy, use of old technologies, proper care, etc.

Further, annual growth of tea export in West Bengal are moderate in the years 2009-10, 2011-12, 2012-13, 2013-14 and 2016-17 and rest of the year's annual growth rate is lesser or negative. On the other hand, negative growth in the years 2007-08, 2014-15; satisfactory growth rate in the year 2008-09 and rest of the year's growth rate is lesser. It may be the cause of price competition in the international market, inferior quality of tea production and decreasing demand of the particular tea in the international market etc. or importing inferior quality of tea and mixtures with the domestic tea and further re-exporting to the international market. In the study periods, total 62.168% of tea production increased in West Bengal, which is better than India (34.96%) with respect to the base year.

TABLE 2: ACTUAL TEA IMPORT, ACTUAL AVERAGE AUCTION PRICE OF TEA, ACTUAL AVERAGE LABOUR EMPLOYED IN TEA INDUSTRY AND THEIR ANNUAL GROWTH RATE IN WEST BENGAL AND IN INDIA

West Bengal						
Year	Tea Import (in crore rupees)	Annual Growth (%)	Average Auction Price of Tea (per kg. in rupees)	Annual Growth (%)	Average Labour Employed in Tea Industry (in thousands)	Annual Growth (%)
2006-07	119.410	-	64.900	-	314.700	-
2007-08	104.600	-12.403	65.920	1.572	314.870	0.054
2008-09	161.970	54.847	85.280	29.369	314.980	0.035
2009-10	216.030	33.376	104.640	22.702	315.320	0.108
2010-11	184.940	-14.392	104.430	-0.201	315.890	0.181
2011-12	206.540	11.679	103.460	-0.929	316.420	0.168
2012-13	256.120	24.005	120.180	16.161	317.570	0.363
2013-14	252.380	-1.460	121.980	1.498	318.860	0.406
2014-15	272.630	8.024	132.210	8.387	319.520	0.207
2015-16	235.960	-13.450	137.540	4.031	320.120	0.188
2016-17	286.100	21.249	147.360	7.140	321.410	0.403
2017-18	288.120	0.706	164.320	11.509	322.040	0.196
CAGR = 7.616%			CAGR = 8.049%		CAGR = 0.192%	
Chi-square value = 32.828			Chi-square value = 4.005		Chi-square value = 0.011	
India						
Year	Tea Import	Annual Growth (%)	Average Auction Price of Tea	Annual Growth (%)	Tea Export	Annual Growth (%)
2006-07	125.056	-	66.010	-	1259.950	-

2007-08	126.529	1.178	67.270	1.909	1260.620	0.053
2008-09	188.124	48.681	87.780	30.489	1261.350	0.058
2009-10	271.351	44.241	106.700	21.554	1261.650	0.024
2010-11	198.583	-26.817	106.320	-0.356	1262.520	0.069
2011-12	209.892	5.695	106.070	-0.235	1262.580	0.005
2012-13	269.614	28.454	125.250	18.082	1262.820	0.019
2013-14	284.967	5.694	132.230	5.573	1263.020	0.016
2014-15	381.580	33.903	130.910	-0.998	1263.780	0.060
2015-16	365.840	-4.125	128.600	-1.765	1264.120	0.027
2016-17	325.860	-10.928	134.260	4.401	1265.320	0.095
2017-18	312.610	-4.066	133.110	-0.856	1265.890	0.045
CAGR = 7.934%			CAGR = 6.019%		CAGR = 0.039%	
Chi-square value = 72.951			Chi-square value = 9.490		Chi-square value = 0.001	

Source: Computed from Appendix- I

Table 2, demonstrated that annual growth of tea import in West Bengal is not noteworthy. There is negative growth rate in the years 2007-08, 2010-11, 2013-14 and 2015-16, satisfactory growth rate in the years 2008-09 and 2009-10 and rest of the years it is very lesser. On the other hand in case of India, there is significant growth in the year 2008-09, 2009-10, 2012-13 and 2014-15 and rest of the years it is very lesser or negative growth over the study periods. Further it can be noticed that total 141.286% of tea import increases in West Bengal is lower than India (149.976%) with respect to the base year. So, it can be says that growth of tea import in West Bengal is not notable but it is lower than India, that's why it is favourable for the industry. The tea import in West Bengal is favourable due to domestic consumption rate and quality production of tea.

Further, annual growth of average auction price of tea in West Bengal are favourable in the years 2008-09, 2009-10 and 2012-13 and negative in the years 2010-11 and 2011-12 and rest of the year's growth rate is moderate or lower. On the other hand, in case of India there is favourable growth in the years 2008-09, 2009-10 and 2012-13 and remaining of the years there is negative or lesser annual growth in all of the years. In the study periods, total 153.190% average auction price is increased in West Bengal and it is higher than India (101.651%) with respect to the base year. The average auction price of tea in West Bengal increased significantly because of better quality of tea production, higher demand in the domestic as well as international market etc.

Additionally, annual growths of average labour employed in tea industry in West Bengal are very lesser in all over the years. On the other hand, in case of India annual growth rate is very lower all over the years. Total 2.33% average labour employed increased in tea industry in West Bengal is better than India (0.471%) with respect to the base year. The average labour employed in tea industry in West Bengal is not increasing satisfactorily because of collusion between owner and labour organisation; new companies would not come into the market. It may be the causes of government policy to the tea industry was not sufficient and the tea board of India did not functioning effectively.

6.2 Growth Rate of Tea Industry Using Compounded Annual Growth Rate (CAGR)

The compound annual growth rate (CAGR) is the mean annual growth rate of tea over the 12 years period of time. It is useful tool to measure the growth rate. CAGR used here to calculate the average growth of a single year's areas of tea cultivation, tea production, tea export, tea import, average auction price of tea and average labour employed in tea industry in West Bengal compared to India. Because the market volatility rate of year-to-year growth of areas of tea cultivation is difficult to interpret.

The formula for CAGR is used here: $CAGR = \left(\frac{EV}{BV}\right)^{\frac{1}{n}} - 1$

Where, EV = Ending Value, BV = Beginning Value, n = Number of periods (years)

CAGR results indicate that growth rate of areas of tea cultivation of West Bengal (1.762%) is higher than the growth rate of areas of tea cultivation of India (- 0.005%), growth rate of tea production of West Bengal (4.111%) is higher than the growth rate of tea production of India (2.53%), growth rate of tea export of West Bengal (4.543%) is lower than the growth rate of tea export of India (8.022%), growth rate of tea import of West Bengal (7.616%) is lower than the growth rate of tea import of India (7.943%), growth rate of average auction price of West Bengal (8.049%) is higher than the growth rate of average auction price of India (6.019%) and growth rate of average labour employed in tea industry in West Bengal (0.192%) is higher than the growth rate of average labour employed in tea industry in India (0.039%) over the study periods which are shown in table 1 and table 2. Growth rate of areas of tea cultivation, tea production, average auction price of tea and average labour employed in tea industry in West Bengal are higher than India and hence those favourable for the industry. In case of tea export, growth rate is lower than India, therefore it is not satisfactory. But in case of import, the growth rate is lower than India, hence it is satisfactory. Further, growth rate of tea industry in West Bengal is increased positively compared to India except export of tea. Chi-square test results indicate that the difference is significant at 5% level. So, the first null hypothesis (growth of tea industries in West Bengal are not satisfactory) is rejected.

7. FINDINGS, CONCLUSIONS AND RECOMMENDATION OF THE STUDY

Annual growth rate results shows that areas of tea cultivation in West Bengal is not increasing satisfactorily because the nature of the industry. It is not possible for the industry to increase the cultivated land every year or in an era. Tea production in West Bengal does not increased significantly due to old aged tea bushes, in appropriate management policy, collusion between labour union and proprietor etc. Annual growth of tea export is fluctuating and not up to the level of India because of West Bengal could not compete with the other states of India like Assam and Tamil Nadu. Annual growth of tea import in West Bengal is fluctuating and significantly but lower than India. So, it is favourable for the industry. Annual growth rate of average auction price of tea is fluctuating. It is increased to some extend but not up to the level of India because of price competition in domestic as well as international market, quality of tea production etc. Average labour employed in tea industry did not increased in West Bengal due to not increasing the tea cultivated area, collusion between labour union and proprietors and new company could not came to the market.

CAGR results indicates that growth rate of areas of tea cultivation, growth rate of tea production, growth rate of average auction price of tea and average labour employed in tea industry in West Bengal are higher than India and it is moderately suitable for the industry. Growth rate of tea

export is lower than India, hence it is not satisfactory. Growth rate of tea import of West Bengal is lower than India and hence it is acceptable and favourable for tea the industry. Chi-square test results indicate that the difference is significant at 5% level. So, the first null hypothesis (growth of tea industries in West Bengal are not satisfactory) is rejected.

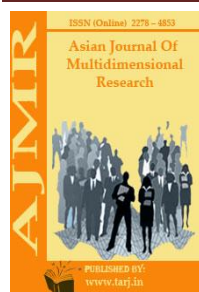
So, it is recommended that tea industry should increase their production and export to increase the profit and it is vital for expand the industry. Government should nurture the tea industry to increase the employment generation. Quality production should be increased so that price of tea increases.

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Appendix - I

West Bengal							
Year	Area (Thousand Hectors)	Tea Production (Million Kgs.)	Export (Rs. in Crores)	Import (Rs. in Crores)	Average Auction Price (In Rs.)	Average labour employed in Tea Industry (Thousand Persons)	Average Tea Consumption (Thousand Kgs.)
2006-07	114.788	237.106	41.787	119.41	64.9	314.7	319.7
2007-08	115.095	236.344	42.757	104.6	65.92	314.87	334.5
2008-09	115.095	233.133	24.334	161.97	85.28	314.98	347.8
2009-10	115.095	221.573	45.031	216.03	104.64	315.32	358.7
2010-11	115.095	229.784	58.829	184.94	104.43	315.89	369.8
2011-12	115.1	271.6	58.086	206.54	103.46	316.42	379.2
2012-13	115.1	279.3	67.866	256.12	120.18	317.57	389.1
2013-14	124.32	312.88	81.887	252.38	121.98	318.86	396.2
2014-15	132.86	329.46	78.248	272.63	132.21	319.52	425.7
2015-16	140.44	324.5	45.228	235.96	137.54	320.12	459.8
2016-17	141.33	356.3	69.705	286.1	147.36	321.41	474.6
2017-18	141.56	384.51	71.213	288.12	164.32	322.04	482.3
India							
Year	Area (Thousand Hectors)	Tea Production (Million Kgs.)	Export (Rs. in Crores)	Import (Rs. in Crores)	Average Auction Price (in Rs.)	Average labour employed in Tea Industry (Thousand Persons)	Average Tea Consumption (Thousand Kgs.)
2006-07	567.02	981.805	2006.526	125.056	66.01	1259.95	7750
2007-08	578.458	986.427	1810.11	126.529	67.27	1260.62	7980
2008-09	579.353	980.818	2392.914	188.124	87.78	1261.35	8260
2009-10	579.353	978.999	2785.846	271.351	106.7	1261.65	8550
2010-11	579.353	966.403	3058.301	198.583	106.32	1262.52	8600
2011-12	579.353	1115.72	3291.87	209.892	106.07	1262.58	8820
2012-13	563.979	1126.33	3750.76	269.614	125.25	1262.82	9030
2013-14	563.979	1200.41	4355.23	284.967	132.23	1263.02	9260
2014-15	563.979	1207.31	4054.02	381.58	130.91	1263.78	9450
2015-16	566.66	1208.66	4355.32	365.84	128.6	1264.12	9650
2016-17	566.66	1267.36	4632.5	325.86	134.26	1265.32	9850
2017-18	566.66	1325.05	5064.88	312.61	133.11	1265.89	10120



GREEN TOURISM FOR SUSTAINABLE DEVELOPMENT

Dr Meghana V P*

*Asst Professor,
NSS College for Women Neeramankara,
Affiliated to kerala university, INDIA
Email id:meghukanara@rediffmail.com

ABSTRACT

In recent years, companies around the world into the twenty-first century business era has more demands for leisure and transportation to increase their convenience. At the same time, the demand of modern travel, tourism, and visitors cannot be denied to be a factor of global warming. As a member of the Earth, we have the responsibility and obligation to promote the practice of low-carbon trip green tour. The rise in environmental consciousness, emphasizing the low-carbon era today, green tourism will be the new direction for the future development of tourism. In all aspects of the tourism process, “green tourism” includes tourists, hotels, attractions, tourist managers, travel agents, tour operators and travel guides. This green tourism will protect the green environment with concepts of green consumption activities, so as to achieve social responsibility, economic development and ecological sustainability of the realm. In this study, the concept of green tourism, with the success stories, will establish a complete management of the green tourism market. Thus, in order to build a quality environment and service industry for our children and work towards a sustainable development while traveling the world combined with the latest trends.

KEYWORDS: *Green tourism; Green tourism market; Leisure and tourism; Global warming; Low-carbon era*

INTRODUCTION

Green Tourism or Ecotourism is often highlighted and touted as the best way to enjoy your vacation but ask ten people what ecotourism or green tourism really is and you will likely get some very different and perhaps very interesting responses. Despite popular belief, ecotourism is about much more than just jumping on a jet to save the rain forests. That does not mean that eco-friendly tourism spots have to be boring either though.

As tourism thrives, interaction between service-workers and customers becomes more frequent. The service quality has become increasingly important. In the meantime, tourism has become a highly connected industry and full of severe competition.

Due to government promotions and an increase of leisure time worldwide, many enterprises have over the years upped their investments in hotel market as they expect the hotel industry to bloom in the future.

Communication plays a key role in motivating employees and improving service in an effort to build customer relations. Also, in order to maintain customers' respect, build loyalty and long term relationships, promises made must be kept. The technologies used in the hospitality industry have been effective in marketing, booking, room service, communication, billing and payment.

On one hand, ecotourism or green tourism involves people traveling to endangered environments or locations where the ecosystem is overly fragile, offering them some type of education regarding the local ecosystem and offering solutions as to how it can be better preserved. Since the primary concerns on these types of vacations are environmental in nature and require people to study and actually learn, they are probably not something that a group of rowdy college kids will want to enjoy during spring break although there are exceptions to every rule.

Additionally, these vacations will offer the eco-tourists a limited amount of access to semi-virgin territory. Generally these are locations on the fringes of the endangered ecosystem and they can offer some spectacular scenery, some unforgettable Kodak Moments and even a rush or two in some of the more isolated environments that require a day or two of hiking to access. While it may sound more like an extracurricular course than a vacation, there truly are some amazing benefits to green vacations such as this.

Another type of ecotourism or green tourism involves visiting many of these same areas but generally with a bit less of the schooling and within ecosystems and environments that are not nearly as fragile or as endangered. In some cases, portions of the endangered environments are opened up to a limited number of people in order to raise funds to protect the rest of the project.

LITERATURE REVIEW

A review of relevant literature was undertaken using the internet, library catalogue and database. The review of literature helped to inform our understanding of hospitality and green tourism.

According to Dictionary of Leisure, Travel and Tourism, hospitality is friendly and welcoming treatment given to guests." Lodging means "accommodation" and tourism was the business of providing travel, accommodation, food, entertainment, etc." The term hotel has multiple definitions, such as "a place which supplies board and lodging," "a place for the entertainment of the travelers," "a large city house of distinction" and a "public building". The hospitality performs three functions: accommodation, food and beverage and entertainment .

Pyhrr et al. said “A hotel is an establishment that provides transient lodging for the public and often meals and entertainment. Factors affecting the success or failures of a hotel development vary according to its primary function.” The frequent turnover of guests means that hotels require more constant management than most other categories of space.

Hotels and tourism development are often criticized for destroying the attractiveness of a sensitive location. However, this view must be balanced against the extensive economic benefits derived from tourism. Care should be taken when selecting sites which may provide the means for financing conservation. Hotels are often developed from restored historic buildings and are used as catalysts in attracting reinvestment into depressed urban and rural areas. Mindful of need to regularly attract visitors, most designers carefully respond to their environmental settings, whether to blend into the landscape or to make a dramatic statement in the otherwise bland surroundings.

Cooper and Hall identified four basic elements of a geographic tourism system:

- (1) A generating or source region: The places where the journey begins and ends.
- (2) A transit route: The path departing the source region and reaching the destination region.
- (3) A destination region: The region a tourist has chosen to visit.
- (4) The environment: Those surrounding the transit region or route as the guests travel to destination and return home.

Beaver defined related terms as follows:

- (1) Hotel: A place that provides residential accommodation and food to members of the public. Usually, a hotel is a superior type of accommodation that offers a range of other services.
- (2) Lodging industry: A North-American term for the accommodation industry.
- (3) Hospitality industry: the hotel and catering industry, broadly the provision of accommodation, food and beverages.

Overall, the definition of the hospitality industry is wide, including hotels, restaurants, food-beverage service and entertainments. A hotel is a public place, a temporary home which provides rooms, food and drink, facilities and entertainments for travelers.

GREEN TOURISM

Green tourism is a term that can be applied to any form of tourism that relates to the natural environment and cultural heritage of an area or that undertakes good environmental **management** (or green) practice. There are three methods included by which a tourism practice would have to demonstrate practices for preventing or minimizing impacts to the environment if it were to be considered a green operations as follows:

- a. The wise use of resources such as raw materials, water and energy.
- b. The prevention of pollution (air, land, and water).
- c. The protection and where possible the enhancement of biodiversity.

SUSTAINABLE TOURISM

Sustainable tourism is all encompassing term which can also be applied to many green tourism practices, although a sustainable tourism operation would also include social and economic principles as well as green environmental practices. The tourism industry is heavily reliant on its natural environment and sustaining and enhancing that environment has to be a key long term objective for the industry. There is also a growing **market** for green products and in the tourism industry the green tourist is becoming increasingly interested in ensuring that their holiday experiences are undertaken sustainably and that environmental management and sustainability principles are adopted and evident in the service provision.

Eco-tourism is described as a more “alternative” and ‘hard’ form of tourism that is primarily nature-based. It must in some way assist with the conservation effort for biodiversity and involve the participation of local indigenous people and cultures in a way that protect their quality of life and sustains their well being. It should involve a learning experience and be carried out in an ecologically sustainable way.

NEED FOR THE STUDY

Green tourism, a form of ecotourism, is low-impact tourism with an eye toward protecting the environment and culture of an area. The United Nations has set up certain criteria for ecotourism, but green tourism can cover a wide range of standard conditions, from fully compliant to less stressful on the environment than standard tourism. There are many opportunities for green travel available worldwide. The number of tourists traveling the world has been increasing, which makes green tourism not only preferable but a necessity in some areas. It might seem wiser to some people to protect natural habitats and pristine, fragile environments by banning visitors completely to these areas, but many areas depend on the income from tourism to support the local economy. Green, sustainable tourism is considered offer the best of both worlds, protecting the ecology of an area while keeping local schools and business thriving.

A very green holiday can be spent studying the local flora, fauna and cultural heritage of the area, as well as learning ways to protect and preserve it. Guides, tours and wildlife- viewing platforms help tourists experience all that an area has to offer while making little or no impact on the environment. There also are trips available in which vacationers take an active part in improving the local area by working to preserve the natural habitat, helping to build a school or performing other services that benefit the area. These vacations can be a lot of work, but many people find them to be very rewarding and interesting learning experiences.

As green tourism becomes more popular, there are likely to be more vacationing options available. More resort areas likely will take steps to have less of an impact on the surrounding environment, and sustainable tourism could easily become the standard. Local economies might be able to take full advantage of the booming tourist trade without compromising the local environment, allowing tourists to enjoy the beauty that these areas have to offer for many years to come.

OBJECTIVES

The research of this study is to investigate the green ecotourism best practice and to examine the characteristics that will contribute to green tourism success at strategic level at a business level. The purpose of this study is to:

1. Study what best practice green tourism operators are doing and what characteristics are contributing to their success.
2. Study what characteristics are present in countries that had been identified.

Incorporates sustainability issues

The lodging and hotel industry accounts for 8% of energy consumption in the services sector. The hotel industry is one of the world’s largest employers and represents more than 19.5 million jobs and 10.2% of the world’s GDP. In addition, the industry reports annual capital investments of \$685 billion.

The tourism industry has forecasted to approach more than 1.56 billion people by the year 2020, and the hotel industry will need to accommodate the demand by providing more properties. Industry participants recognize that new hotel construction must occur in a manner to incorporate sustainability issues. The industry recognizes the need to enhance sustainability, but many of the efforts in operations have occurred independently by various hoteliers. The International Business Leaders Forum (IBLF) and Green Globe certification represent two attempts to draw consensus about sustainability efforts. In 2005, the IBLF and Conservation International developed a plan for implementing sustainability into hotel planning and development to help guide planners, investors, hotel owners, and developers. This plan was developed in conjunction with nine of the world’s leading hotel companies: Accor, Carlson, Four Seasons, Hilton, InterContinental, Marriott, Rezidor SAS, Starwood Hotels & Resorts Worldwide Inc., and Taj Hotels Resorts and Palace. This plan focuses on site selection, building design, and construction.

Structure

There is inevitably some cross over between best practice green tourism and ecotourism. The green tourism is understood to move left along the green tourism scale as its level of “greenness” rises. Best practice green tourism will therefore lie somewhere on the far left hand side of the scale. Ecotourism is the type of tourism that is most often found at the end of the green scale

(Figure 1).

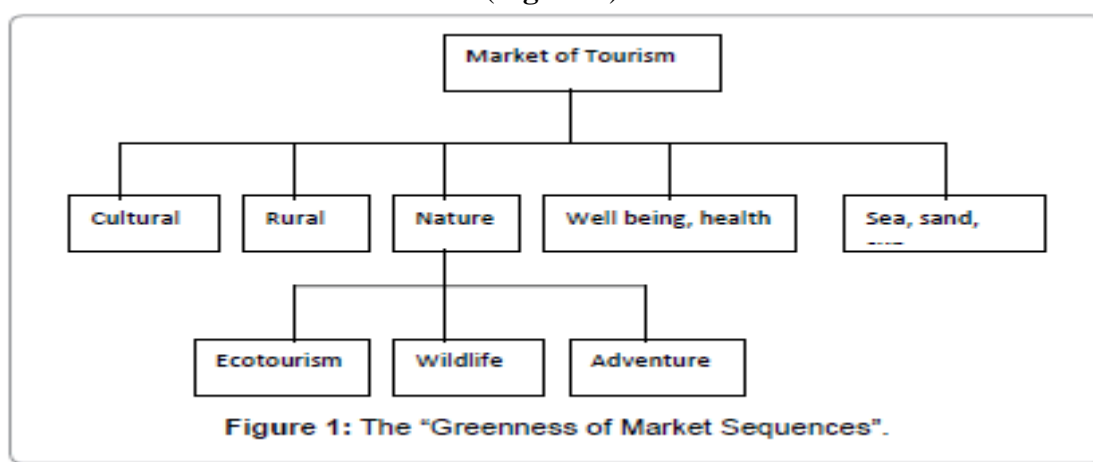


Figure 1: The “Greenness of Market Sequences”.

The above organization illustrates how market of tourism represents the different green market sequences fit the content of the overall market of tourism. They are arranged from left to right to indicate their order of greenness from ecotourism at one extreme to sea, sand and sun at the

other. There is also an attempt to indicate the range within the ‘hard’ to ‘soft’ categories of tourism. (Source: modified from World Tourism Organization) (**Figure 2**).

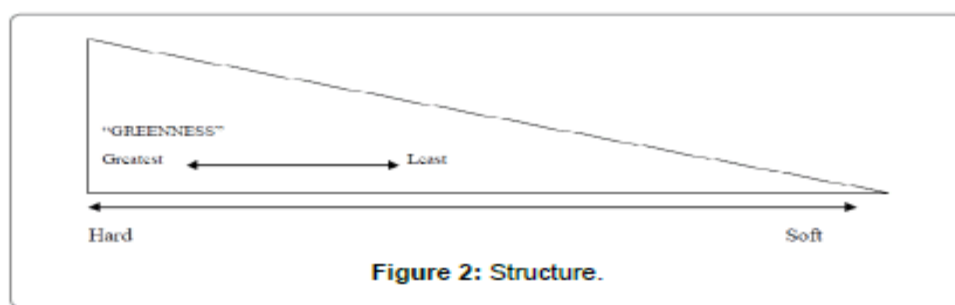


Figure 2: Structure.

Best practice green tourism operator

For the purposes of this research a best practice green tourism business is one that

- (1) Meets the criteria identified the green tourism definition.
- (2) Markets itself according to its green credentials.
- (3) Has received a rational or international eco-tourism (or equivalents) accreditation award.
- (4) Stands out as doing something that extends beyond the standard criteria to be recognized as best practice in its respective country.

APPROACH AND METHODOLOGY

A flow diagram of the methods which have been used to undertake the research is presented. The approach is briefly discussed below (**Figure 3**).

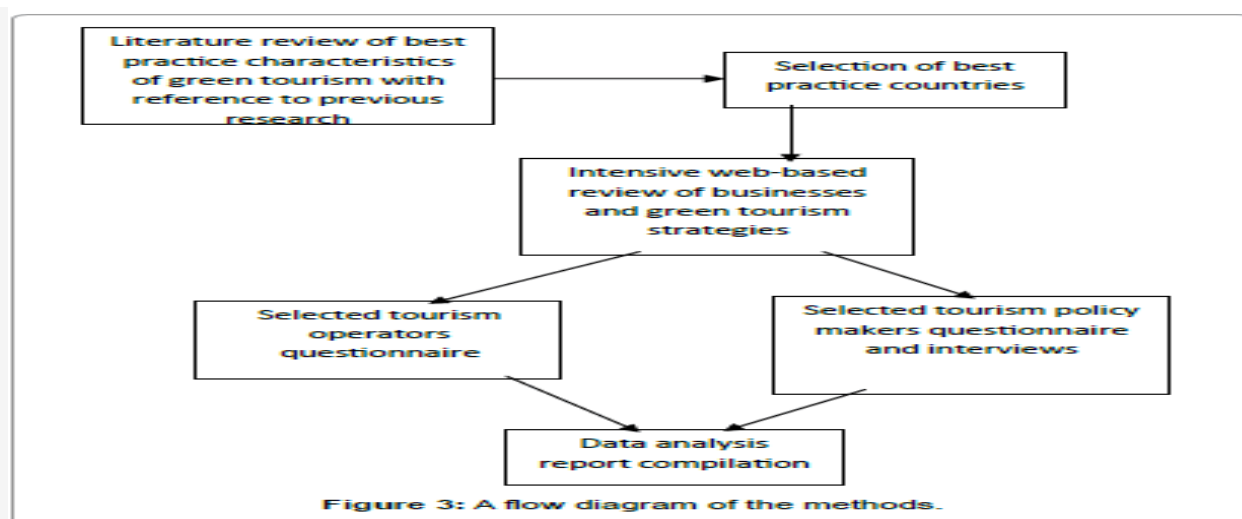


Figure 3: A flow diagram of the methods

Environmental development

The plan has focuses on site selection, building design, and construction. The main facets of the plan include:

Sustainable building site and design

Design concerns examine architectural features such as site location, passive solar design, day lighting, renewable energy, water conservation, and landscaping. In addition, the pal examines environmental considerations associated with windows, insulation, and other building materials. The design also calls for resource-efficient technologies and appliances.

Sustainability in construction involves ensuring that modifications to initial plans do not impair the sustainability features of the design, nor do they reduce energy efficiency. The environmental integrity of the site is to be preserved at all costs. Additionally, the site must be a clean and safe workplace.

CONCLUSION

Green tourism is a growing agenda for the future development of tourism. The growth in this agenda and increase in demand for green tourism are underpinned by many drivers including:

- (1) The development of a world-wide societal consciousness about nature protection and appreciation, fuelled largely by the environment's higher media profile.
- (2) A growing interest by individuals to 'reconnect' with nature and seek out experiences of a more spiritual thought provoking and physically challenging kind.
- (3) Pressure in the workplace and the highly competitive lifestyles led by many in the developed world.
- (4) Improved access to the countryside and more free time and disposable income for an increased number of people.

The Scottish enterprise network recognizes that while some businesses are responding to a growth in demand for green products there is more that can be done, by government agencies and businesses to better develop green tourism in Scotland. Other countries around the world are capitalizing on the increasing interest in nature, wildlife and green tourism and the desires of people to seek out a wilderness experience. The purpose of this research was to investigate best-practice green tourism examples from around the world to understand how they are capitalizing on this interest and what Scottish tourism businesses and strategists in turn can learn from these experiences around the world. This research presents the outcome of this research and presents some best-practice characteristics of countries and businesses that are succeeding in green tourism.

In this paper, green tourism is also called ecotourism, which is a kind of low Impact to environment but contributing or protecting to the environment and culture inherently. As we can see from the criteria for ecotourism set up by the United Nations, green tourism has a wide range of conditions and standards, but which also means there are many possibility and potential development for green tourism worldwide.

With the increasing number of traveling around the world, people prefer green travel and make it to the locations. So, it is a kind of wisdom to promote and advocate people to cultivate the awareness and good habits in travel, such as protecting natural habits and fragile tourism sites. However, simply banning the entrance to the sites might decrease the experience of tourism and the local economy. Green traveling, here is also has another meaning of sustainable tourism, which contains two aspects, contributing not only to the ecology but also the local economy thriving. In other words, green tourism, doesn't necessarily mean the leisure time spend in

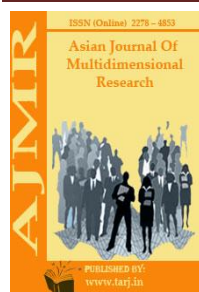
tourism sites with comforts and contributes to local environment, culture or economy, but on the contrary, it is also an adventure to balance the relationship between people and environment in the sense of physical and emotional.

Take one kind of green tourism as an example, office people can take their green holidays to study the local flora, fauna and cultural heritage at their chosen tourism destination, by wildlife-viewing guide and tour, which might help them to enrich their experience and involvement locally with little or no negative impact on the native environment. Also, the relationship between tourist and environment gets improved when tourists are learning how to protect and preserve local environment. Meanwhile, the learning experience from tourist will be brought to their residence places, and rewarded back to the places where they are working and living. Furthermore, the booming tourists are not only contributing to the local economy of the tourism sites, but also improved the relationship between people and environment nearly and remotely.

Companies operating in the lodging and hotel industry can increase the level of sustainability from proper building site and design, refurbishing and reusing existing buildings, and sustainable construction.

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JOB EXPECTATION AND EMPLOYEES CONDUCT AMONG THE NURSES: A CASE STUDY OF GOVERNMENT MEDICAL COLLEGE AND HOSPITAL, SECTOR-32 CHANDIGARH

Manjulla verma*; Manjushah Sharma**

*Research scholar,
Department of public administration,
Kurukshetra University, kurukshetra, INDIA
Email id: manjullaverma55@gmail.com

**Prof.
Department of public administration,
Kurukshetra University, kurukshetra, INDIA

ABSTRACT

Health is not only basic to leading a happy life for an individual but it is also necessary for all productive activities in the society. Good health is a prerequisite to human productivity and the “development” process. It is essential to economic and technological development. A healthy community is the infrastructure upon which to build an economically viable society. The progress of the society greatly depends on the quality of health of its people. This paper is investigating the job expectation and employees conduct among the nurses.

KEYWORDS: *Health, Health Care Administration, Role Of Nurses In Health Care, Gmch-32 Chandigarh Hospital, Job Expectations And Employees Conduct Among The Nurses*

INTRODUCTION

Health is viewed differently by different people all over the world. The World Health Organization defined health as —a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity. Thus good health is a synthesis of physical, mental and social well-being. As stated in the First Five Year Plan, —Health is a positive of well-being in which harmonious development of mental and physical capacities of the individuals lead to the enjoyment of a rich and full life. It implies adjustment of the individuals to his total environment- physical and social. The factors influencing health could be classified into three broad categories: hereditary, environmental and personal. Similarly, the various conditions which play a vital role in determining one’s health status can be put under three major areas, viz., mental health, spiritual health and physical health

LEVELS OF HEALTH CARE

Primary health care level which is the first point of contact a person encounters with the health care system. Primary care is typically provided by general practitioners/family doctors, dentists, pharmacists, midwives, etc. It is where most preventative health can be achieved and where early diagnosis can be possible, which may prevent more expensive hospital treatment being required.

Secondary health care level which means health care provided by hospital clinicians for a patient whose primary care was provided by the general practitioner or other health professional who first diagnosed or treated the patient. Secondary care cannot be accessed directly by patients. For example, a general practitioner who assesses a patient with an unusual skin condition may refer the patient to a dermatologist, who then becomes the source of secondary care.

Tertiary health care level, which means a specialized, highly technical level of health care that, includes diagnosis and treatment of disease and disability. Specialized intensive care units, advanced diagnostic support services and highly specialized personnel are usually characteristic of tertiary health care. It offers highly centralized care to the population of a large region and in some cases to the world.

MULTISPECIALTY

Single-specialty practice is the presence of two or more physicians providing patients with one specific type of care while multispecialty hospital practices various types of medical specialty care under one roof.

HEALTH CARE ADMINISTRATION

Basically health administration is a branch of Public Administration which deals with matters relating to the promotion of health, preventive services, medical care, rehabilitation, the delivery of health services, the development of health manpower and the medical education and training. The purpose of Public Health Administration is to provide total health services, to the people with economy and efficiency. According to C.E.A. Winslow health administration is the “the science and art of preventing diseases, prolonging life, promoting health efficiency through organized community effort for the sanitation of the environment, the control of communicable diseases, the education of the individual in personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, the development of social machinery to ensure to every citizen a standard of living adequate for the maintenance of health, so organizing these benefits as to enable every citizen to realize his birth right of health

and longevity”. Thus Public Health Administration is the application of administrative processes and methods which are used in carrying out the objectives of health in an organized community. The term community refers to the entire population and functionally defined geographic area that has developed common interests, activities and inter-relations.

MEANING AND SIGNIFICANCE OF HOSPITAL

The hospital the major social institution for the delivery of health care in the modern world, offers considerable advantages to both patients and society. From the standpoint of individual, the sick or injured person has access to centralized medical knowledge and technology so as to render treatment much more thorough and efficient. From the standpoint of society, hospitalization both projects the family from many of the disruptive effects of caring for the ill in the home and operates as a means of guiding the sick and injured into medically supervised institutions where their problems are less disruptive for society as a whole.

Today, a hospital is a place for the definition and treatment of human ills and restoration for health and well-beings of those temporally deprivies of these. A large number or professionally and technically skilled people apply their knowledge and skill with the help of complicated equipment and appliances to produce quality care for patient. The excellence of the product-thermion d'être for a hospital, therefore, depends on how well the human and material resources are applied to promote patient care.

Hospital is among the most complex and dynamic institutions of our society whose main function is to promote the health of the community. Hospital is an intuition which provides faculty for medical and nursing care for in-patients, constituency and medical services for the outdoor patients. In any hospital, a patient is the main focus of all activities starting from time to his entry till his discharge. The first and foremost function of a hospital is to take care of the sick and the injured and restore the health of those suffering from diseases. Hospital services are those who approach them. In Modern-times we heavily depend on these hospitals for seeking proper medical care.

Government Medical college and hospital, Chandigarh has been taken up for this study.

GOVERNMENT MEDICAL COLLEGE AND HOSPITAL SECTOR-32, CHANDIGARH

Government medical college and hospital sector 32, Chandigarh is a hospital in public sector which is committed to total computerization and adequate hospital management for proper patient care. The institution developed is environment as well as patient friendly. Government medical college and hospital sector 32 Chandigarh is a 500 bedded hospital which had become a necessity not only for catering to the needs of patients in southern sectors of the cities but also to cater for patients from the satellite township of tri-city, Punjab, Haryana, Himachal Pradesh.

WORKING AND FACILITIES AT THE GOVERNMENT MEDICAL COLLEGE AND HOSPITAL

Hospital providing treatments for almost all kinds of alignments and also with teaching facilities up to post graduate level for physicians and surgeons and nurses. The hospital has a big infrastructure. There are treatment facilities right from minor disease to terminal disease like cancer. Doctor patient ratio is not very favorable (100:1). Even nurses have to attend large number of patients in wards. There are 500 beds for the indoor wards patients and at the emergency. Laboratories are well equipped with latest instruments. Other facilities like indoor/

ward facility, x-rays, blood bank, ECG service, food and dietary services, pharmacy, housekeeping, telecommunication service, physiotherapy, ambulance services (24x7), operation theatres, security, arrangement of stretchers/wheelchairs are very good. Operation theatres are also well equipped. Recovery rooms, ventilators are also available in the hospital. But ventilators are not enough, keeping in view that the number of accidents in the tri-city reported every day is high. Hospital has well stocked chemist shops. Government hospital has huge parking area for doctors and patients. The diet service is excellent in the hospital. Healthy food served all the times to patients. O.P.D is run during specific timing. Monday to Saturday 9 am to 5 pm where as emergency works 24x7. Online registration facility is also available. There are about 200 doctors including professor, assistant professor and associate professor, senior and junior doctors and interns. The registration fee is affordable at the rate of 10 rupees. For treatment, clinical test and for operation additional fees are charged which is also affordable. The problem is that doctors and paramedical staff have to attend huge number of patients. O.P.D is overcrowded and emergency are full. Patients have to wait for admission for the wards and then have to wait for the operation. Attendants also face problems at every step. There are not enough facilities for them to sleep in the night and relax to be able to attend the patients.

NURSES

Nurses are very important people. They are health care professionals that work with lots of other people to help make sick people better. Nurses in medical offices usually help doctors by asking the patients about their symptoms, taking their temperature, recording the patient height and weight, giving them shots and taking blood and urine. The most important job of a nurses is to make sure that the patient understands what the doctors tells and that the patient and their parents known how to follow up.

Nurses work in an environment that is constantly changing to provide the best possible care for patients. They are continuously learning about the latest technology and medication as well as considering the evidence that heir nursing practice is based upon. As they actually spend more face to face to time with the patient than doctors, nurses must be particularly skilled at interacting with patients, putting them at ease, and assisting them in their recovery. It is often said that physicians cure and nurses care. Therefore, nurses are considered as an integral part of hospitalized patients care, they also are pivotal in hospital efforts to improve quality. As hospitals face increasing demands to participate in a wide range of quality improvement activities, they are reliant on nurses to help address these demands.

ROLE OF NURSES IN HEALTH CARE

For many years, nurses were seen as doctor's handmaidens. Their education was heavily focused on technical skills and their duties were task-based. Nurses are usually better educated, with a focus on coordinating patient care and use of critical thinking. They care for patients with complicated diagnosis who may spend little time in the hospital but who still require highly technological care. Physician and nursing shortages, an aging population, health care reform and expanding role of technology will require that nurses take on new roles in the future.

ROLE PLAYED BY NURSES

1. Leadership

Education changes in nursing now prepare nurses at all levels to assume leadership roles. There has been an increasingly strong call to make a baccalaureate degree the minimum educational

preparation for registered nurses. The standards for national nursing licensure exams have also been raised. Some experts argue that nurses should achieve a masters degree within 10 years of licensure to strengthen the position of the registered nurses (RN) in a health care setting where many other professionals such as pharmacists, physicians and physical therapists have masters or doctoral degrees.

2. Safety

Nurses have always played a major role in patient safety. As the professionals who are with patients around the clock, nurses are positioned to prevent medication errors, ensure patients receive the correct therapy and provide safeguards from problems such as falls or skin breakdowns. The bedside professional is well also aware of health care system problems that delay care or make it less effective. As the people charged with coordinating care, nurses are more likely to recognize inefficiencies and to be able to make recommendations for change.

3. Clinical quality

Nurses are often the generalists in health care, professionals who can work with multiple levels of staff, provide a broad range of technical care and coordinate the work of other health care professionals to meet patient goals. The role of clinical leaders- a nurse who devotes her time to patient care and outcomes while the nurses manager deals with management issues such as budgeting or policy development- in one way organizations such as the U.S department of veterans affairs is trying to increase the quality and safety of clinical care.

4. Advocacy

Although it can have personally negative effects to challenge a physician or organization on behalf of a patient, another vitally important role for nurses is that of patient advocate. Nurses at the bedside often recognize potentially serious issues such as a high rate of infections in one surgeon's patients, the misuse of certain kinds of expensive medications or even verbal or sexual abuse. Nurses are taught they have a responsibility to report such issues to protect the patients in their care.

5. Advanced practice

Advanced practice nurses such as nurse practitioners, clinical nurses specialists, certified nurse midwives and certified registered nurse anesthetists are taking on roles once reserved for physicians. These nurses can provide direct care in the field of adult or pediatric primary care, educate staff, deliver babies and administer anesthesia. Advanced practice nurses diagnose and treat illness or injury, prescribed medications and assume the overall management of the patients in the care.

6. Caregiver

The care afforded depends on the needs and requirements of a patient. Patients are at different stages of illness, thus some need more attention and care than others. This might include total care which entails doing everything for the patient. The care might also entail helping a patient with the prevention of an illness. Furthermore, nurses have an obligation to care for a patient holistically. Holistic care implies that a whole person is more important than the sum of their parts. This means that care ought to address cultural, spiritual and mental needs concurrently.

7. Decision maker

Anurse is decision maker for a patient and is ought to use his/her critical thinking skills to come up with the most significant outcomes for the patient. Some of these critical thinking skills entail evaluating a patient, recognizing a problem and implementing interventions that promote the health of the patient. A nurse must always use his judgment to determine what is in the best interest of the patient.

8. Communicator

Effective communication in the healthcare system can improve outcomes in the healthcare environment. If the communication is not effective, the healing process will be inhibited. A nurse has the responsibility of devising the best strategies for communicating to the patient as well as family members. Once this done, the healing process will be expedited.

9. Counselor

Nurses help the client to recognize and cope with stressful, psychological or social problems. She assists the clients for developing good inter-personal relationship. Nurses help the patients in developing new attitudes, feelings and behaviors.

Job expectations and employees conduct

1. **Hours of work** : employee expect working hours that allow one enough time with their family or time to pursue other strong interests and live ones preferred lifestyle.
2. **Work Breaks**: work breaks are a must in any job one join so that one can relax and get back to work with the same enthusiasm.
3. **Provision of leave**: employees expect provision of leave in case of emergency situations as well as for personal use.
4. **Performance evaluation**: employee seek appraisal for work they do. Human being look out for appraisals for the work they do which motivates them to do the work more effectively or efficiently and also help them to improve upon things whenever required.
5. **Respectful workplace**: employees look for respectful work place or job where there is no bullying or harassment.
6. **Type of work**: employees search for a kind of work that makes the best use of their abilities and give one a feeling of accomplishment.
7. **Security**: job security is must for every human being; they obviously look out for a job that provides a steady employment.
8. **Place of work**: employees hunt for place of work that has a good reputation and where he/she feels proud of working.
9. **Advancement**: employees also seek progress in the job or career, where they can have the chance to advance and improve upon their skills.
10. **Pay**: one of the most important employee expectations is being paid at least enough to meet ones needs, and being paid fairly in comparison to others.
11. **Hours**: having working hours to allow one enough time with the family and time to pursue other strong interest and live ones preferred lifestyle.
12. **Benefits**: employees expect certain benefits that meet ones need and compare well with those of others.
13. **Relationships**: employees expect cordial relations with the co-employees an individual cannot remain in vacuum and requires social interaction.

OBJECTIVE OF THE STUDY

- 1) To assess the level of job expectations and employees conduct among the nurses of government medical college and hospital, sector-32 Chandigarh.

RESEARCH METHODOLOGY

For the present study both primary and secondary data was used for the purpose of collection of primary data, interview schedule was prepared. The secondary data was collected from various books, journals, newspapers, publications, government publications, reports, statistical abstracts, policy documents

The following analysis highlights job expectations and employees conduct among the nurses.

TABLE.1 THE NATURE OF THE JOB YOU ARE PERFORMING IS OF YOUR INTEREST.

		Question-1							Chi-Square	p-value
		Agree		Undecided		Disagree		Total		
Age	Below 40 year	38	95.0%	0	0.0%	2	5.0%	40	.346	0.556
	Above 40 year	39	97.5%	0	0.0%	1	2.5%	40		
Gender	Male	20	100.0%	0	0.0%	0	0.0%	20	1.039	0.308
	Female	57	95.0%	0	0.0%	3	5.0%	60		
Professional Qualification	GNM	24	100.0%	0	0.0%	0	0.0%	24	1.336	0.248
	BSc NSg	53	94.6%	0	0.0%	3	5.4%	56		
Experience	<10 year	40	95.2%	0	0.0%	2	4.8%	42	.251	0.616
	>10 year	37	97.4%	0	0.0%	1	2.6%	38		
	Total	77	96.3%	0	0.0%	3	3.8%	80		

The high significant majority of the Nurse respondents of GMCH-32 (96.3 per cent) expressed that the job they were performing was of their interest. Very few respondents of GMCH-32 (3.8 per cent) were disagreed with the statement.

TABLE.2 YOUR JOB PROVIDE OPPORTUNITIES TO LEARN MORE IN THE FIELD YOU ARE WAITING.

		Question-2							Chi-Square	p-value
		Agree		Undecided		Disagree		Total		
Age	Below 40year	40	100.0%	0	0.0%	0	0.0%	40	2.051	0.152
	Above 40year	38	95.0%	0	0.0%	2	5.0%	40		
Gender	Male	20	100.0%	0	0.0%	0	0.0%	20	0.684	0.408
	Female	58	96.7%	0	0.0%	2	3.3%	60		
Professional Qualification	GNM	23	95.8%	0	0.0%	1	4.2%	24	0.391	0.532
	BSc NSg	55	98.2%	0	0.0%	1	1.8%	56		
Experience	<10 year	42	100.0%	0	0.0%	0	0.0%	42	2.267	0.132
	>10 year	36	94.7%	0	0.0%	2	5.3%	38		
	Total	78	97.5%	0	0.0%	2	2.5%	80		

The high significant majority of the Nurse respondents of GMCH-32 (97.5 per cent) expressed that their job did provide opportunities to learn more in the field of their work. Few respondents of GMCH-32 (2.5 per cent) were disagreed with the statement.

TABLE.3 THE JOB YOU ARE PERFORMING HELPS YOU TO GROW PROFESSIONALLY.

		Question-3							Chi-Square	p-value
		Agree		Undecided		Disagree		Total		
Age	Below 40year	38	95.0%	0	0.0%	2	5.0%	40	2.051	0.152
	Above 40year	40	100.0%	0	0.0%	0	0.0%	40		
Gender	Male	20	100.0%	0	0.0%	0	0.0%	20	0.684	0.408
	Female	58	96.7%	0	0.0%	2	3.3%	60		
Professional Qualification	GNM	24	100.0%	0	0.0%	0	0.0%	24	0.879	0.348
	BSc NSg	54	96.4%	0	0.0%	2	3.6%	56		
Experience	<10 year	40	95.2%	0	0.0%	2	4.8%	42	1.856	0.173
	>10 year	38	100.0%	0	0.0%	0	0.0%	38		
	Total	78	97.5%	0	0.0%	2	2.5%	80		

The high significant majority of the respondents of GMCH-32 (97.5 percent) were agreed to the statement that their job helped them in professional growth.

TABLE 4.4 YOUR COLLEAGUES COORDINATE WITH YOU IN THE PERFORMANCE OF YOUR JOB.

		Question-4							Chi-Square	p-value
		Agree		Undecided		Disagree		Total		
Age	Below 40year	40	100.0%	0	0.0%	0	0.0%	40		
	Above 40year	40	100.0%	0	0.0%	0	0.0%	40		
Gender	Male	20	100.0%	0	0.0%	0	0.0%	20		
	Female	60	100.0%	0	0.0%	0	0.0%	60		
Professional Qualification	GNM	24	100.0%	0	0.0%	0	0.0%	24		
	BSc NSg	56	100.0%	0	0.0%	0	0.0%	56		
Experience	<10 year	42	100.0%	0	0.0%	0	0.0%	42		
	>10 year	38	100.0%	0	0.0%	0	0.0%	38		
	Total	80	100.0%	0	0.0%	0	0.0%	80		

The cent per cent of the nurse respondents of GMCH-32 (100 per cent) were agreed that their colleagues cooperated with each other while performing their duties.

TABLE.5 YOU HAVE REQUISITE ACCESS TO THE EXPERT ADVICE IN THE MATTERS THOSE NEEDS CONSULTATION.

		Question-5							Chi-Square	P-value
		Agree		Undecided		Disagree		Total		
Age	Below 40 year	37	92.5%	3	7.5%	0	0.0%	40	.213	0.644
	Above 40year	38	95.0%	2	5.0%	0	0.0%	40		
Gender	Male	20	100.0%	0	0.0%	0	0.0%	20	1.778	0.182
	Female	55	91.7%	5	8.3%	0	0.0%	60		
Professional Qualification	GNM	22	91.7%	2	8.3%	0	0.0%	24	0.254	0.614
	BSc NSg	53	94.6%	3	5.4%	0	0.0%	56		
Experience	<10 year	37	88.1%	5	11.9%	0	0.0%	42	4.825	.028*
	>10 year	38	100.0%	0	0.0%	0	0.0%	38		
	Total	75	93.8%	5	6.3%	0	0.0%	80		

The high significant majority (93.8 per cent) of the nurse respondents of GMCH-32 were expressed that they did had the required access to the expert advice whenever they felt the need for the same.

TABLE.6 YOU ENJOY ENOUGH AUTHORITY TO PERFORM ASSIGNED DUTIES

		Question-6							Chi-Square	P-value
		Agree		Undecided		Disagree		Total		
Age	Below 40year	34	85.0%	6	15.0%	0	0.0%	40	2.222	0.136
	Above 40year	38	95.0%	2	5.0%	0	0.0%	40		
Gender	Male	19	95.0%	1	5.0%	0	0.0%	20	0.741	0.389
	Female	53	88.3%	7	11.7%	0	0.0%	60		
Professional Qualification	GNM	23	95.8%	1	4.2%	0	0.0%	24	1.296	0.255
	BSc NSg	49	87.5%	7	12.5%	0	0.0%	56		
Experience	<10 year	36	85.7%	6	14.3%	0	0.0%	42	1.805	0.179
	>10 year	36	94.7%	2	5.3%	0	0.0%	38		
	Total	72	90.0%	8	10.0%	0	0.0%	80		

The significant majority of the nurse respondents of GMCH-32 (90.0 per cent) were agreed that they enjoyed sufficient authority while performing the assigned duties.

However, some of the respondents of GMCH-32 (10.0 per cent) were unsure with the statement and the uncertainty was visible among younger in age doctor respondents of GMCH-32 (15.0 per cent), female respondent respondents of GMCH-32 (11.7 per cent) , respondents with BSc Nsg GMCH-32 (12.5 per cent), respondents with work experience less than 10 years of GMCH-32 (14.3 per cent).

TABLE.7 YOUR WORKLOAD RELATED SUGGESTIONS ARE VALUED BY YOUR SUPERVISOR.

		Question-7							Chi-Square	p-value
		Agree		Undecided		Disagree		Total		
Age	Below 40year	32	80.0%	0	0.0%	8	20.0%	40	.000	1.000
	Above 40year	32	80.0%	0	0.0%	8	20.0%	40		
Gender	Male	16	80.0%	0	0.0%	4	20.0%	20	0.000	1.000
	Female	48	80.0%	0	0.0%	12	20.0%	60		
Professional Qualification	GNM	22	91.7%	0	0.0%	2	8.3%	24	2.917	0.088
	BSc NSg	42	75.0%	0	0.0%	14	25.0%	56		
Experience	<10 year	33	78.6%	0	0.0%	9	21.4%	42	.113	0.737
	>10 year	31	81.6%	0	0.0%	7	18.4%	38		
	Total	64	80.0%	0	0.0%	16	20.0%	80		

The significant majority of the nurse respondents of GMCH-32 (80.0 percent) stated that their suggestions were valued by the supervisor.

However, some of the respondents of GMCH-32 (20.0 per cent) were disagreed with the statement. The dissatisfaction were visible among the same senior and junior in age of respondents of GMCH-32 (20.0 per cent), dissatisfaction were visible among the same male and female respondents of GMCH-32 (20.0 per cent), respondents with Bsc Nsg as professional qualification of GMCH-32 (25.0 per cent) and respondents with work experience less than 10 years of GMCH-32 (21.4 per cent).

TABLE.8 THERE IS GOOD AVENUES FOR PROMOTION IN YOUR JOB.

		Question-8							Chi-Square	p-value
		Agree		Undecided		Disagree		Total		
Age	Below 40year	12	30.0%	8	20.0%	20	50.0%	40	6.356	.042*
	Above 40year	23	57.5%	6	15.0%	11	27.5%	40		
Gender	Male	8	40.0%	5	25.0%	7	35.0%	20	1.040	0.595
	Female	27	45.0%	9	15.0%	24	40.0%	60		
Professional Qualification	GNM	13	54.2%	5	20.8%	6	25.0%	24	2.741	0.254
	BSc NSg	22	39.3%	9	16.1%	25	44.6%	56		
Experience	<10 year	13	31.0%	8	19.0%	21	50.0%	42	6.319	.042*
	>10 year	22	57.9%	6	15.8%	10	26.3%	38		
	Total	35	43.8%	14	17.5%	31	38.8%	80		

The noticeable proportion of the respondents of GMCH-32 (43.8 per cent) were elucidated that their job did provided good promotion avenues

However, noticeable proportions of the respondents of GMCH-32 (38.8 per cent) were disagreed with the statement. The dissatisfaction among the respondents was visible among the younger in age nurse respondents (50 per cent) of GMCH-32, female respondents of GMCH-32 (40.0 per cent), respondents with BSc nursing professional qualification of GMCH-32 (44.6 per cent), respondents with work experience less than 10 years of GMCH-32 (50.0 per cent).

Nevertheless, there were some respondents of GMCH-32 (17.5 per cent) who were not sure with the statement and the uncertainty was visible among younger nurse respondents (20.0 per cent), male respondents (25.0 per cent), with GNM nursing as professional qualification (20.8 per cent), and the respondents with work experience of less than 10 years (19.0 per cent)..

TABLE.9 YOUR EXEMPLARY EFFORTS WHILE PERFORMING YOUR JOB ARE RECOGNIZED BY MANAGEMENT.

		Question-9							Chi-Square	p-value
		Agree		Undecided		Disagree		Total		
Age	Below 40year	40	100.0%	0	0.0%	0	0.0%	40	7.671	.006*
	Above 40year	33	82.5%	0	0.0%	7	17.5%	40		
Gender	Male	19	95.0%	0	0.0%	1	5.0%	20	0.470	0.493
	Female	54	90.0%	0	0.0%	6	10.0%	60		
Professional Qualification	GNM	24	100.0%	0	0.0%	0	0.0%	24	3.288	0.070
	BSc NSg	49	87.5%	0	0.0%	7	12.5%	56		
Experience	<10 year	42	100.0%	0	0.0%	0	0.0%	42	8.479	.004*
	>10 year	31	81.6%	0	0.0%	7	18.4%	38		
	Total	73	91.3%	0	0.0%	7	8.8%	80		

The high significant majority of the nurse respondents GMCH-32 (91.3 per cent) stated that management did recognize their efforts while performing a task.

Moreover, some of the respondents of GMCH-32 (8.8 per cent) were disagreed with the statement and the disagreement was visible among senior in age respondents (17.5 per cent), female respondents (10.0 per cent), respondents with BSC professional qualification (12.5 per cent) and respondents with work experience more than 10 years (18.4 per cent).

TABLE.10 YOU ARE PROVIDED IN-SERVICE TRAINING TO ENHANCE YOUR PERFORMANCE

		Question-10							Chi-Square	p-value
		Agree		Undecided		Disagree		Total		
Age	Below 40 year	40	100.0%	0	0.0%	0	0.0%	40		
	Above 40 year	40	100.0%	0	0.0%	0	0.0%	40		
Gender	Male	20	100.0%	0	0.0%	0	0.0%	20		
	Female	60	100.0%	0	0.0%	0	0.0%	60		
Professional Qualification	GNM	24	100.0%	0	0.0%	0	0.0%	24		
	BSc NSg	56	100.0%	0	0.0%	0	0.0%	56		
Experience	<10 year	42	100.0%	0	0.0%	0	0.0%	42		
	>10 year	38	100.0%	0	0.0%	0	0.0%	38		
	Total	80	100.0%	0	0.0%	0	0.0%	80		

The cent per cent of the nurse respondents of GMCH-32 (100 per cent) expressed that they were provided in service training to enhance their performance.

The MAIN FINDINGS OF THE STUDY

1. The High significant majority of the nurses were agreed that the nature of the job they were performing were of their interest.
2. The High significant majority of the nurses were agreed that their job did provide opportunities to learn more in the field of their work.
3. The High majority of the nurses were agreed that the job they were performing helps them to grow professionally.
4. The cent per cent nurses were agreed that their colleagues were coordinate with them in the performance of their job.
5. The High majority of the nurses were agreed that they had the required access to the expert advice whenever they felt the need for the same.
6. The Significant majority of the nurses were agreed that they enjoyed enough authority to perform their assigned duties.
7. The Significant majority of the nurses were agreed that their workload related suggestions were valued by their supervisor.
8. Noticeable majority of nurses were agreed with that their job did provide good promotion avenues.
9. The High significant majority of the nurses were agreed that the management did recognize their efforts while performing a task.
10. The cent per cent nurses were agreed that they were provided in service training to enhance their performance.

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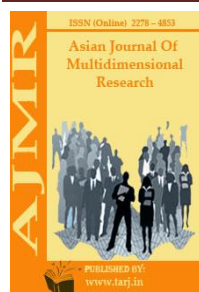
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PUBLIC PERCEPTION OF POLICE: A COMPARATIVE STUDY OF URBAN AND RURAL CITIZENRY OF AMBALA POLICE DISTRICT

Dr Sandeep Kaur*

*Assistant Professor,
Public Administration,
SGGS Khalsa college-26,
Chandigarh, INDIA

Email id: sandeepkaurindhu@rediffmail.com

ABSTRACT

Police are the Wielding Arm of the State, therefore most of the times Onus to implement the law of the land and maintaining law and order fall on it. While performing its duties Police have to interact with public and such interactions often ends up in bad taste for the violators and at times even justice seeking parties also have to accept the unfavorable decisions. Since the Police are meant to safeguard the interests of the Citizens, thus their opinion of Police is of prime importance while judging the performance of Police and the role of the State. Ironically, public, World over and in India as well, don't find the Police as fair agency in its dealings. The present paper is an endeavour to assess the opinion of the urban as well Rural Citizenry of Ambala Police District in the State of Haryana.

KEYWORDS: *Interactions, Wielding, Safeguard, Ironically*

INTRODUCTION:

The police are the protector of the people and can never remain away from them. The police play an important role for the protection of the individual's legal rights and is intended to protect the weak from the powerful. It is also expected to prevent oppression, crime, and to represent the cause of law and order at all times and in all places. The Nations which are based on democracy and which are following rule of law have developed various laws to curb the endless powers of the police officers, to stop them from these powers unjustly. Implementation of Law and Order is the prerequisite for the working of democratic institutions. The development production comes to a standstill unless law and order is maintained properly. Law and order is mostly identified with the Police administration. Indeed, the police are not only directly responsible for the public safety and prevention of crime but also for keeping the state intact.

The police represent the state and the police administration is an integral part of the state administration. Police is mainly responsible for the establishment crime Free State and to see citizens from all the mishappenings. The word police originate from the Latin word 'politia' meaning 'civil administration' which is derived from the Ancient Greek word 'polis' meaning 'city'. According to the Oxford dictionary

“The civil force of a state, responsible for the prevention and detection of crime and the maintenance of public order”.

But, with the change in the concept of the state from *laissez faire* to welfare and with the governance changing the mode to Good Governance, the administration as a whole and the police in particular have turned Citizen-Centric wherein more of emphasis is laid on the fact that administration exist to 'serve'. Further, Good Governance lays emphasis on the certain aspects of governance such as social equity, responsive, accountable, transparent and participative in nature. Therefore, to ensure accountability and transparency and also to ensure public participation in the administration there is need to have better Police-Public relations. Significantly, the relationship between the two is of immense importance for the academicians and the practioners.

IMPORTANCE OF PUBLIC PERCEPTION

The social phenomenon known as public perception can be seen as the difference between an absolute truth based on facts and a virtual truth shaped by popular opinion, media coverage and/or reputation. Celebrities, politicians', corporations and government departments all face the same scrutiny by the public they serve, and it can be very difficult to overcome a negative public perception.

However, in cases where the changes require modifying public policy or public behavior, public perceptions become important and if ignored may result in the failure of technically good innovations. For example, a different regulatory approach or different regulatory priorities may be necessary.

HARDLY a day passes without the police in India getting the stick for lapses or excesses committed while investigating crime. Though some of the criticism may be merited, most of it is not. In the present study, the researcher has investigated the perception of the public about their relationship with the police.

OBJECTIVE OF THE PAPER

a) To study public perception of police comparing the opinion of urban and rural citizenry.

RESEARCH METHODOLOGY

Universe and scope of the study: The present study has investigated the perception of the people of Ambala Police District drawing the respondents on the basis of area; Urban and Rural. The scope of the study is to assess the perception of the public about the police in the domain of interpersonal relations between the police and the public.

To draw the responses an Interview Schedule has been devised and used. A Sample of 263 respondents has been randomly drawn from the rural areas (137) and from urban areas (126).

TABLE 1: YOU AVOID INTERACTION WITH THE POLICE.

	Q1						
	Agree		Undecided		Disagree		Total
Ambala-Rural	60	43.8%	11	8.0%	66	48.2%	137
Ambala-Urban	52	41.3%	5	4.0%	69	54.8%	126
Total	112	42.5%	16	6.1%	135	51.3%	263

Computed from Primary Data $p\text{-value} \leq 0.05$ is significant denoted as*, $p\text{-value} \leq 0.01$ is significant denoted as**, $p\text{-value} > 0.05$ is not significant denoted as ns.

Overall analysis of the data of Table 1 indicated that majority of respondents (51.3 percent) did not avoid interaction with police whereas noticeable proportion of respondents (42.5 percent) avoided interacting with the police. A negligible proportion of respondents remained undecided on the issue.

Further, on making comparison of urban and rural public, it was evident that more of the respondents (43.8 percent) than respondents of Ambala-Urban police district (41.3 percent) avoided interaction with police.

Finding: + Majority of the respondents of Ambala-Urban expressed that they did not avoid interaction with the police.

Observation: The accepted trend in our society is to avoid interaction with police till there is no alternative but to involve police. Therefore, a common man avoids police as far as possible. The finding is opposite to the observation.

TABLE 2: YOU AVOID BECOMING A PARTY TO THE POLICE INVESTIGATIONS.

	Q2						
	Agree		Undecided		Disagree		Total
Ambala-Rural	66	48.2%	20	14.6%	51	37.2%	137
Ambala-Urban	56	44.4%	17	13.5%	53	42.1%	126
Total	122	46.3%	37	14.0%	104	39.5%	263

Computed from Primary Data $p\text{-value} \leq 0.05$ is significant denoted as*, $p\text{-value} \leq 0.01$ is significant denoted as**, $p\text{-value} > 0.05$ is not significant denoted as ns.

Overall analysis of the data of table 2 indicated that more of respondents (46.3 percent) confirmed that they avoided becoming a party to the police investigations.

However, some of the respondents (39.5 percent) opined that they did not avoid becoming party to the police investigations. A negligible proportion of respondents (14.0 percent) remained undecided on the issue.

Further, on making comparison between urban and rural respondents, it was evident that more of the respondents (48.2 percent) of Ambala-Rural police district avoided becoming a party to the police investigations in comparison to Ambala-Urban police district (44.4 percent).

Finding: No clear trend of responses; however, more of respondents of Ambala-Rural avoided becoming party to police investigations.

Observation: Police has such a fearful image in the minds of Public that people avoided becoming party to police investigations. They are scared of going to the police station or court to record their statement.

TABLE 3: YOU ARE SATISFIED WITH DUTY COMMITMENT OF POLICE OFFICIALS OF YOUR AREA.

	Q3						
	Agree		Undecided		Disagree		Total
Ambala-Rural	42	30.7%	15	10.9%	80	58.4%	137
Ambala-Urban	39	31.0%	25	19.8%	62	49.2%	126
Total	81	30.7%	40	15.2%	142	53.9%	263

Computed from Primary Data $p\text{-value} \leq 0.05$ is significant denoted as*, $p\text{-value} \leq 0.01$ is significant denoted as**, $p\text{-value} > 0.05$ is not significant denoted as ns.

Overall analysis of the data of Table 3 indicated that majority of the respondents (53.9 percent) were not satisfied with duty commitment of police officials of their area. However, some of the respondents (30.7 percent) were satisfied with duty commitment of police officials of their area. A negligible proportion of respondents (15.2 percent) remained undecided on the issue.

Further, on making comparison, it was evident that the respondents of Ambala-Urban (31.0 percent) and of Ambala-Rural police district (30.7 percent) were satisfied with duty commitment of police officials.

Finding: Majority of the respondents of Ambala-Rural was not satisfied with duty commitment of police officers.

Observation: Police is on duty 7×24 but their duty nature differs as per the situations. Sometimes, they appear awfully busy and other times they appear to be on ease. Generally, people are not satisfied with duty commitment of the police officers.

TABLE 4: THE SCARE OF POLICE STOPS YOU FROM HELPING THE VICTIMS.

	Q4						
	Agree		Undecided		Disagree		Total
Ambala-Rural	73	53.3%	14	10.2%	50	36.5%	137
Ambala-Urban	60	47.6%	14	11.1%	52	41.3%	126
Total	133	50.5%	28	10.6%	102	38.7%	263

Computed from Primary Data $p\text{-value} \leq 0.05$ is significant denoted as*, $p\text{-value} \leq 0.01$ is significant denoted as**, $p\text{-value} > 0.05$ is not significant denoted as ns.

Overall analysis of the data of Table 4 indicated that more of respondents (50.5 percent) agreed that scare of police stopped them from helping the victims. However, some of the respondents (38.7 percent) stated that they were not scared of police while helping the victims. A negligible proportion of respondents (10.6 percent) remained undecided on the issue.

Further, on making comparison, it was found that the respondents (53.3 percent) of Ambala-Rural police district opined that scare of police stopped them from helping the victims in comparison to Ambala-Urban police district (47.6 percent).

Finding: Majority of the respondents of Ambala-Rural felt that scare of police stopped them in helping the victims.

Observation: People, in general, are scared of Police and as a result they do not take initiative/s to help the victims and leave the victim alone to suffer. Though, Government has issued directions to the concerned authorities not to bother or harass the helper/s.

TABLE 5: YOU FIND THE POLICE TOO AGGRESSIVE WHILE DEALING WITH THE PUBLIC.

	Q5						
	Agree		Undecided		Disagree		Total
Ambala-Rural	95	69.3%	14	10.2%	28	20.4%	137
Ambala-Urban	79	62.7%	13	10.3%	34	27.0%	126
Total	174	66.1%	27	10.2%	62	23.5%	263

Computed from Primary Data $p\text{-value} \leq 0.05$ is significant denoted as*, $p\text{-value} \leq 0.01$ is significant denoted as**, $p\text{-value} > 0.05$ is not significant denoted as ns.

Overall analysis of the data of Table 5 indicated that significant majority of respondents (66.1 percent) found the police too aggressive while dealing with the public.

However, a few of the respondents (23.5 percent) disagreed with the view point. A negligible proportion of undecided responses (11.2%) were recorded on the issue.

Further, on making comparison of the two groups, it was evident that the respondents (69.3 percent) of Ambala-Rural police district found the police too aggressive while dealing with the public as compared to Ambala-Urban police district (62.7 percent).

Finding: Majority of the urban and rural respondents found the police too aggressive while dealing with the public. However, more of respondents of Ambala-rural were found the police aggressive.

Observation: The duties and functions of the police are of such type that while maintaining the Order in the Society the police have to assume aggressive posture. Thus, impression about the police is that it is aggressive in nature.

TABLE 6: OFTEN YOU AVOID REPORTING THE CRIME INCIDENCE TO THE POLICE.

	Q6						
	Agree		Undecided		Disagree		Total
Ambala-Rural	79	57.7%	9	6.6%	49	35.8%	137
Ambala-Urban	44	34.9%	14	11.1%	68	54.0%	126
Total	123	46.7%	23	8.7%	117	44.4%	263

Computed from Primary Data $p\text{-value} \leq 0.05$ is significant denoted as*, $p\text{-value} \leq 0.01$ is significant denoted as**, $p\text{-value} > 0.05$ is not significant denoted as ns.

Overall analysis of the data of table 6 indicated that identical proportion of respondents (46.7 percent) agreed and 44.4 percent respondents disagreed that they avoided reporting the crime incidence to the police.

A negligible proportion of undecided responses (9.7 percent) were recorded on the issue.

Further, on making comparison, it was evident that the respondents (57.7 percent) of Ambala-Rural police district avoided reporting the crime incidence to the police as compared to the respondents of Ambala-Urban police district (34.9 percent).

Finding: Majority of the respondents of Ambala-Rural avoided reporting the crime incidence to the police.

Observation: Generally the public avoids reporting crime incidences to the police as they fear that they may not be dragged in the issue. More so, the investigation and legal procedures followed by police are very cumbersome and time consuming.

TABLE 7 YOU FIND THE POLICE ARE CITIZEN CENTRIC.

	Q7						Total
	Agree		Undecided		Disagree		
Ambala-Rural	53	38.7%	36	26.3%	48	35.0%	137
Ambala-Urban	57	45.2%	28	22.2%	41	32.5%	126
Total	110	41.8%	64	24.3%	89	33.8%	263

Computed from Primary Data $p\text{-value} \leq 0.05$ is significant denoted as*, $p\text{-value} \leq 0.01$ is significant denoted as**, $p\text{-value} > 0.05$ is not significant denoted as ns.

Overall analysis of the data of Table 7 indicated that more of respondents (41.8 percent) found that police was NOT citizen centric. However, some of the respondents (33.8 percent) found the police citizen-centric. A Negligible of undecided responses (24.3 percent) were recorded on the issue.

Further, on making comparison, it was evident that the respondents (45.2 percent) of Ambala-Urban police district endorsed the viewpoint that that they found the police citizen centric as compared to the respondents of Ambala-Rural police district (38.7 percent).

Finding: No clear trend of responses was available on the issue; however, more of respondents of Ambala-Rural were of the view that police were not citizen-centric.

Observation: Police, world over is trying to keep face of Citizen-centric but the realities are different. In developed countries the police exert hard to be citizen friendly but in developing nations like ours the police have double face. To deal with hard criminals, the police often have to be harsh.

TABLE 8: YOU FIND THE POLICE HAVE HUMAN APPROACH TOWARDS PUBLIC.

	Q8						
	Agree		Undecided		Disagree		Total
Ambala-Rural	48	35.0%	28	20.4%	61	44.5%	137
Ambala-Urban	52	41.3%	30	23.8%	44	34.9%	126
Total	100	38.0%	58	22.0%	105	39.9%	263

Overall analysis of the data of Table 8 indicated that significant majority of respondents (38.0 percent) **agreed** they did not think the police had human approach towards public. However, a few of the respondents (39.9percent) stated that police had human approach.

A negligible of undecided responses (15.5 percent) was recorded on the issue.

Further, on making comparison, it was evident that the respondents (41.3 percent) of Ambala-Urban police district found the police had human approach as compared to Ambala-Rural police district (35.0 percent).

Finding: No clear trend of responses was seen; however, more of respondents of Ambala-Rural expressed that police lacked human approach.

Observation: Police have to maintain Public Order and while doing so often have to wield force, there police often are accused of lacking human approach.

TABLE 9: YOU THINK ONLY POLICE ARE RESPONSIBLE FOR THE STRAINED RELATIONS BETWEEN TWO.

	Q9						
	Agree		Undecided		Disagree		Total
Ambala-Rural	43	31.4%	21	15.3%	73	53.3%	137
Ambala-Urban	31	24.6%	22	17.5%	73	57.9%	126
Total	74	28.1%	43	16.3%	146	55.5%	263

Computed from Primary Data p-value ≤ 0.05 is significant denoted as, p-value ≤ 0.01 is significant denoted as**, p-value > 0.05 is not significant denoted as ns.*

Overall analysis of the data of Table 9 indicated that significant majority of respondents (55.5 percent) disagreed that only police were responsible for the strained relations between two. However, a few of the respondents (28.1 percent) agreed that police were responsible. A negligible proportion of respondents (16.3 percent) recorded undecided responses on the issue.

Further, on making comparison, it was evident that the respondents (57.9 percent) of Ambala-Rural police district endorsed that police were not only responsible for the strained relations between two followed by Ambala-Urban police district (53.3 percent).

Finding: Majority of the respondents asserted that only police were not responsible for the strained relations between the two. However, more of respondents of Ambala-Rural denied that police alone were responsible for the strained relations.

Observation: Often, Police are held responsible for the strained relations between the two. But it is not the fact as relations depends on reciprocity. Police having power in its kitty so is considered as the initiator.

TABLE 10: POLICE CARE FOR THE HUMAN RIGHTS OF THE PEOPLE WHILE DEALING WITH THEM IN SITUATIONS.

	Q10						
	Agree		Undecided		Disagree		Total
Ambala-Rural	34	24.8%	26	19.0%	77	56.2%	137
Ambala-Urban	33	26.2%	22	17.5%	71	56.3%	126
Total	67	25.4%	48	18.2%	148	56.2%	263

Computed from Primary Data $p\text{-value} \leq 0.05$ is significant denoted as*, $p\text{-value} \leq 0.01$ is significant denoted as**, $p\text{-value} > 0.05$ is not significant denoted as ns.

Overall analysis of the data of Table 10 indicated that significant majority of respondents (56.2 percent) stated **that** police don't care for the human rights of the people while dealing with them in situations.

However, a few of the respondents (23.3 percent) agreed that police did care for the human rights.

A negligible of proportion of undecided responses (15.7 percent) was recorded on the issue.

Further, on making comparison, it was evident that the respondents of both Ambala-Urban police district (56.3 percent) and Ambala-Rural police district (56.2 percent).

Finding: Majority of the respondents stated that police did not care for the human rights and the responses of both urban and rural respondents were nearly identical.

Observation: Human rights are supposed to be respected by one and all & police are the guardians of Human rights but often it has been seen that protector becomes violator. While dealing with criminal's police hardly care for the Human rights rather at times common man's rights are also thrown to the winds.

FINDINGS:

- 1) Majority of the respondents of Ambala-Rural felt that scare of police stopped them in helping the victims.
- 2) No clear trend of responses; however, more of respondents of Ambala-Rural avoided becoming party to police investigations.
- 3) Majority of the respondents of Ambala-Rural was not satisfied with duty commitment of police officers.
- 4) Majority of the respondents of Ambala-Rural felt that scare of police stopped them in helping the victims.
- 5) Majority of the urban and rural respondents found the police too aggressive while dealing with the public. However, more of respondents of Ambala-rural were found the police aggressive.
- 6) Majority of the respondents of Ambala-Rural avoided reporting the crime incidence to the police.
- 7) No clear trend of responses was available on the issue; however, more of respondents of Ambala-Rural were of the view that police were not citizen-centric.
- 8) No clear trend of responses was seen; however, more of respondents of Ambala-Rural expressed that police lacked human approach.

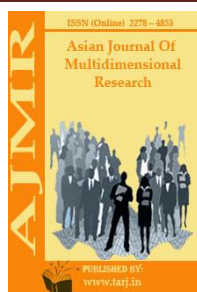
- 9) Majority of the respondents asserted that only police were not responsible for the strained relations between the two. However, more of respondents of Ambala-Rural denied that police alone were responsible for the strained relations.
- 10) Majority of the respondents stated that police did not care for the human rights and the responses of both urban and rural respondents were nearly identical.

Conclusion: Ambala-Rural had poor opinion of Police as compared to Ambala-Urban.

WEBSITE RESOURCES

(<https://powerthatbeat.wordpress.com/2012/08/24/what-is-public-perception/>)

(<https://www.nap.edu/read/4982/chapter/18>)



BANCASSURANCE AND WAYS OF ITS DEVELOPMENT IN THE CONDITIONS OF INNOVATIVE ECONOMY

Imomov Umidjon Gayratjonovich*

*Tashkent Financial Institute,
Department of Insurance Business
Yashnabad district, Tashkent, UZBEKISTAN
Email id: imomov-umidjon@mail.ru

ABSTRACT

The article examines the current state, development prospects and factors of interaction between commercial banks and insurance companies in the conditions of an innovative economy. One of the most important areas of the financial system of Uzbekistan shows the shortcomings of the relationship between insurance companies and commercial banks. Problems of strengthening the relationship between them and also reform and development. It was noted that bank insurance is one of the main components of the public finance system. The article gave recommendations, comments based on international experience. During the reporting period, the necessary infrastructure in the field of science and technology formed a certain intellectual and technological potential. Despite the existence of an extensive economic literature on the consideration of various aspects of the development of banc assurance, a number of issues need further study. In fact, these financial institutions should streamline and regulate a single system. These regulators should not interfere with each other.

KEYWORDS: Bank Insurance, Integration, Bank, Financial Market, Conglomeration, Innovation, Life Insurance, Margin

INTRODUCTION

21st century - a century of innovations, information and computer technologies. Innovative Economy - a type of economy, which is based on flow of innovations, and is constantly improving technology in manufacturing and exporting high-tech products with very high added value and the technologies themselves. In innovative economy, it is assumed that the main profit is created by intellect, innovators, scientists, information technologies, rather than material production (as in industrial economy). Some researchers (Alvin Toffler, F. Fukuyama, Daniel Bell, J.Naisbitt) believe that the most developed countries in the world today are the most innovative economies that provides economic dominance of the country. Currently, the countries with innovative economy and developed venture, an essential component of the innovative economy, include the United States, Germany, Japan, Australia, Canada, Sweden, Finland, Singapore, Israel and other countries.

In modern conditions, the widespread use of the achievements of world science and innovation becomes a crucial factor in the dynamic and sustainable development of all spheres of life of society and the state, building a decent future for the country. During the reporting period, the necessary infrastructure in the field of science and technology formed a certain intellectual and technological potential. However, systemic problems, and insufficient use of existing capabilities and capacities for the development and implementation of innovative ideas and technologies hamper the effective implementation of the planned reforms and accelerated innovation development of the country.

METHODOLOGY

After independence, the radical changes have taken place in the economy of Uzbekistan. In particular, as a result of a series of economic reforms in the insurance market, there have been created different types of insurance companies that operate in various areas of insurance. Economic and legal framework necessary for the creation and sustainable development of the insurance market are being created. Insurance, which is an integral part of the financial system of any state, plays an important role in ensuring the competitiveness and sustainability of the national economy. Therefore, our Government attaches great importance to the formation and development of the insurance market.

Relevance of the topic is that it is difficult to imagine the development of society, especially the development of the financial system, without the development of relations between insurance companies, commercial banks and other financial institutions. Currently, due to the destabilization of the political and economic situation in the world economy, it's especially important to ensure the economic security through the establishment of a reliable system of cooperation between banks and insurance companies. The process of integration of banks and insurance companies in the country's economy provides not only the accumulation of domestic investment and resources, but also the stability of the entire financial system. This process can favorably affect the standard of living. Another important aspect is the unsatisfactory relationship between banks and insurance companies. This makes it difficult not only for the two sides but also for the rest of the business sector. In the process of accelerated globalization, the integration of banks and insurance companies is crucial. Urgent problem today is to prepare qualified personnel who are well aware of the insurance industry for the development of insurance [1, p.10].

The diversity of theoretical and methodological problems of research has led to the existence of banc assurance currently various points of view on the process and ambiguous approaches to the analysis of its features. As a scientific field, banc assurance has spread thanks to the work of scholars such as D.D. Cummins, J. H. Skipper, T. Hess, A. Yasuoka.

Russian scientific research community of the problem represented by the works of A.V. Gavrilenko, E.A. Fedosov, A. Zhurov, L.V. Chhutashvili, et al.

Our domestic scientists Kh.A. Shennaev, I.Kh. Abdurakhmonov, M.A. Mirsadikov are also engaged in the development of questions related to the peculiarities of bank insurance and the ways of its development. These scientists paid special attention to theoretical aspects and techniques of state regulation of banc assurance in the Republic of Uzbekistan. Despite the existence of an extensive economic literature on the consideration of various aspects of the development of banc assurance, a number of issues need further study. Differences remain in mutually beneficial relationships, as well as in the quantitative and qualitative composition of factors that prevent the transition of the banc assurance to the path of development. And the experience of banc assurance is not yet fully understood.

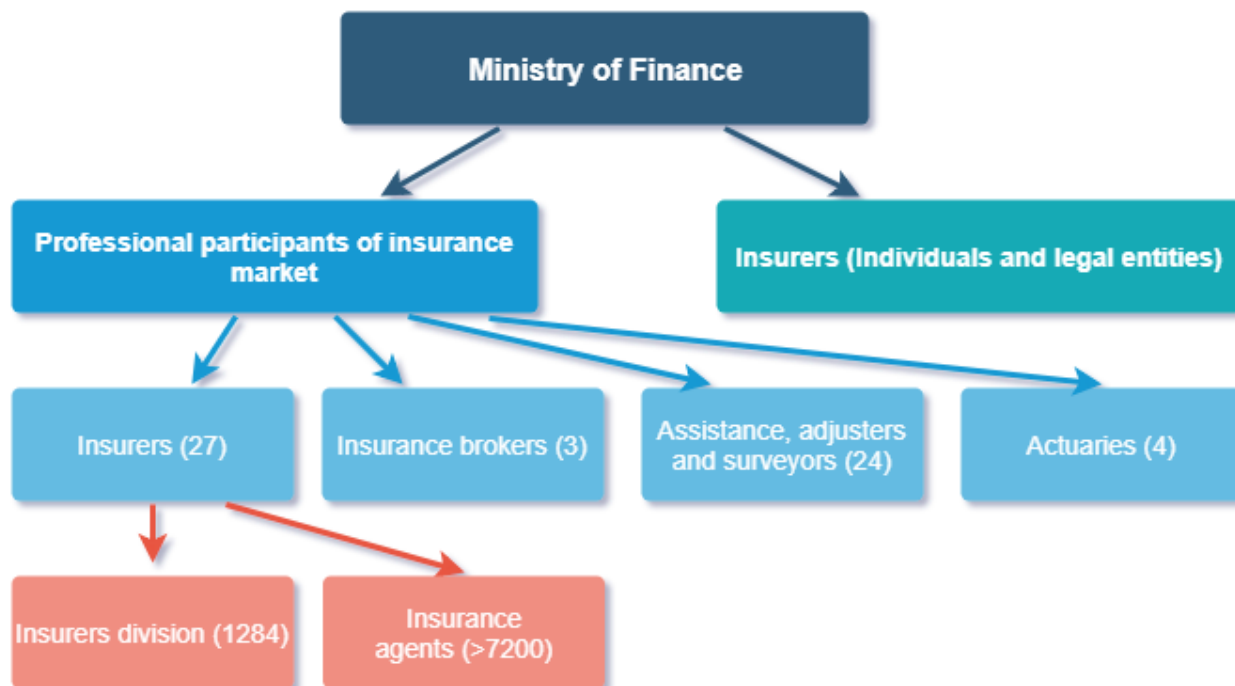
For the first time the term “bank insurance” appeared in France in the late 70s of the twentieth century as the definition of selling insurance services through a banking network [2, p. 48-54]. In the economic literature, the concept of “bank insurance” is understood as the integration of banks and insurance companies for the implementation of insurance and banking products, the merging of sales channels and customer base, as well as insurance against the risks of the banks themselves [3, p. 4-8]. Later, in the Netherlands, Great Britain and other Western European countries, the first stage of interstate banks and insurance companies occurred in 1967-1985 [4, p. 32].

In 1985, Britain and France signed the first strategic alliance with the insurance companies. Standard Life has invested in the Bank of Scotland, and the insurance company GAN acquired Credit Insurance and Commercial. At the same time in France in 1980, Banque Nationale de Paris Paribas, became a subsidiary of the insurance company Natío Vie. This integration of banks and insurance companies, in practice, proved to be justified. In France, Paribas team has an outstanding advantage. In Western European countries, the rapid development of banc assurance occurred in the period from 1986 to 1995, and 1996–2007 was the dynamic development of banc assurance.

Banc assurance is currently developing rapidly in the global financial market. Banc assurance is known as the current single business or a partnership between banks and insurance companies. As a result, the insurance company sells its insurance products through the bank.

Below in the first picture [5], we present to your attention the insurance market of the Republic of Uzbekistan.

Figure 1: the structure of the insurance market of Uzbekistan

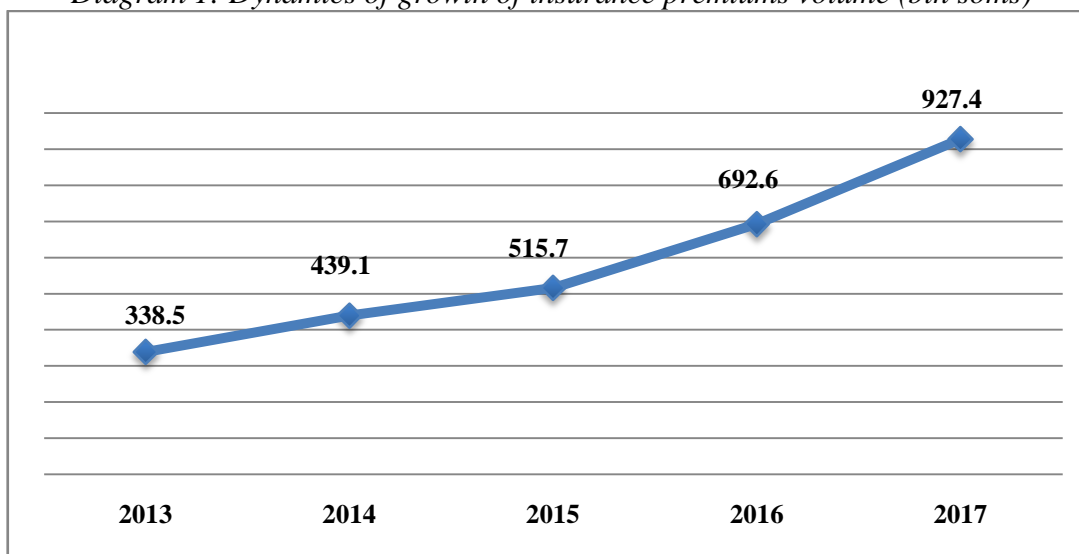


Source: <https://www.mf.uz>

As of December 31 2017, 27 insurance companies were registered in the entire country, of which 23 have been working in the sector of general insurance and 4 in the life insurance industry. In particular, a newly created insurance company "Agros Hayot" Ltd. received a license for insurance activity in the voluntary and binding form.

In 2017, the insurance market of the republic, compared with 2013, increased by 2.7 times, reaching a mark of 927.4 billion soms of collected insurance premiums (see Diagram 1) [5].

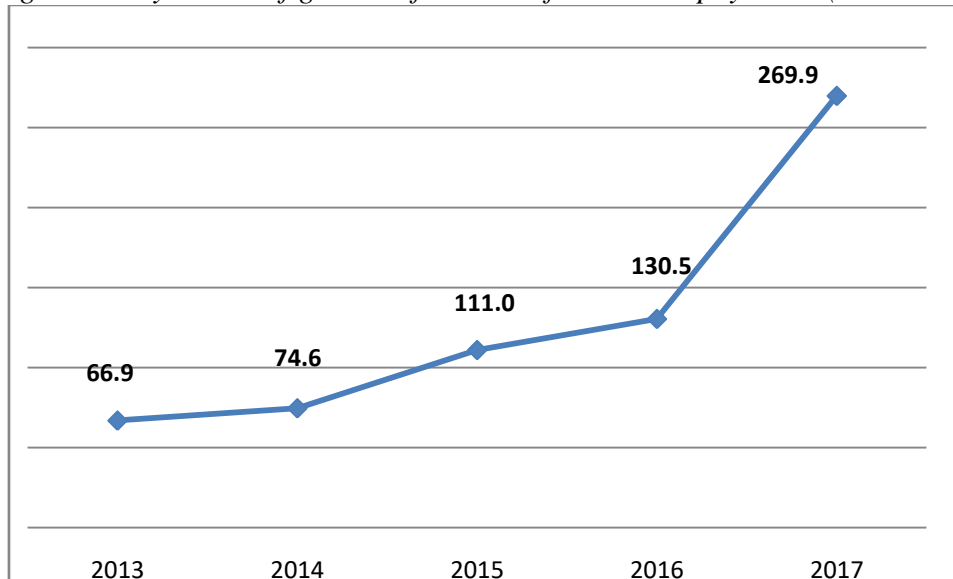
Diagram 1: Dynamics of growth of insurance premiums volume (bln soms)



Source: <https://www.mf.uz>

The total amount of insurance payments for all types of insurance in 2017 increased by 4 times compared with 2013, from 66.9 billion soms to 269.9 billion soms(see Diagram 2) [5].

Diagram 2: Dynamics of growth of volume of insurance payments (billion soms)



Source: <https://www.mf.uz>

The reason for such a sharp rise in insurance claims, as compared to 2016 year (207%) were the payments of agricultural risks.

Despite the strong competition, one of the promising areas of cooperation between insurance companies and banks is their joint provision of financial services to these customers. The role of the financial supermarket in the development of banc assurance is critical. A financial supermarket is a business model of a retail bank aimed at providing a wide range of banking and non-banking financial services (operations with securities, insurance, etc.) in one place. International experience shows that financial supermarkets mainly built on the basis of commercial banks and insurance companies. These structures are widespread in Western Europe and in recent years in the Russian Federation.

The first financial supermarkets appeared in Europe in the 1970-1980s, and in the USA and Japan in the late 1990s. Today they are the most developed in the Benelux, Southern Europe, USA and Japan. The immediate examples are Post bank & HDI Versicherung (Germany), Caisses d'Epargne & CNP (Ecureuil Vie, France), Delta Lloyd & ABN AMRO (Netherlands). When creating financial supermarkets, as a rule, market leaders unite (for example, the merger of Citibank with Travelers Group), and brand synergy takes place. A characteristic feature of a financial supermarket and a prerequisite for its implementation is the presence in the highest management bodies of a sufficient number of managers who are not just familiar with the banking and insurance business, but are thinking and building a business development strategy along a convergent path. Besides, banking and insurance structures should be closely integrated to form a single distribution channel of financial services. More integrated models provide a great opportunity to optimize costs and increase efficiency of operations, but the complexity of the processes of growth could have a negative impact on the profitability of the business outcome and the likelihood of a successful outcome of the entire transaction as a result of loss of

control. Fully integrated form of bank insurance is realized through an organization in which all financial services are developed and are issued under a single brand, there is a single promotion of services and management [6,p.45-48]. More integrated models provide a great opportunity to optimize costs and increase efficiency of operations, but the complexity of the processes of growth could have a negative impact on the profitability of the business outcome and the likelihood of a successful outcome of the entire transaction as a result of loss of control. Fully integrated form of bank insurance is realized through an organization in which all financial services are developed and are issued under a single brand, there is a single promotion of services and management [6, p.45-48]. More integrated models provide a great opportunity to optimize costs and increase efficiency of operations, but the complexity of the processes of growth could have a negative impact on the profitability of the business outcome and the likelihood of a successful outcome of the entire transaction as a result of loss of control. Fully integrated form of bank insurance is realized through an organization in which all financial services are developed and are issued under a single brand, and where there is a single promotion of services and management [6, p.45-48]. Fully integrated form of bank insurance is realized through an organization in which all financial services are developed and are issued under a single brand, there is a single promotion of services and management [6,p.45-48].

The insurance market of Uzbekistan, has all the prerequisites for the full implementation of banc assurance, thus it will provide a solution to the multiple problems and deficiencies. We should also mention the following drawbacks and problems in the development of relationships:

1. The banks are not acting as insurance agents in mutually beneficial ways, and in fact it can bring additional income to the Bank;
2. Poorly developed cross-sectoral mechanisms for mutually beneficial insurance companies and commercial banks;
3. Inability to fully analyze the essence of the character, the essence of insurance and contracts with the bank;
4. Lack of understanding of insurance legislation and certain defects and errors made in the payment of insurance premiums;
5. Financial risk identification, order of payment, identification of the sum insured and the insurance premium;
6. Predictors of illicit relations between bank employees and insurers due to unhealthy competition among insurers;
7. Captive insurance is the main type of insurance in Uzbekistan, because of this there is an illegal relationship between banks and insurers;
8. Unhealthy competition among insurers;
9. The following factors hindering the development and obtaining the highest quality insurance services for bank clients when receiving loans:
 - lack of insurance services on site (bank)
 - non-acceptance by the bank of an insurance policy of an insurance company trusted by a bank customer;

- unreasonable delay in the process of issuing a loan, if an insurance policy was provided by a non-captive insurance company;
- price of insurance services and questionable insurance conditions (text in “small print”)

10. The need to optimize the process of considering the insurance case in the event of an insurance case with the insured object;

11. Improving the insurance culture not only of the population, but also of employees of the financial sector, including employees of insurance companies.

Before we solve these shortcomings, let's try to find the causes of these problems.

As mentioned above, in Uzbekistan, the reason that banks cannot act as insurance agents is Article 4 - “Banking Law”. According to this article, banks are not allowed to carry out intermediary activities.

So the problem is obvious. So why is there such restriction? We decided to show the main causes.

The main reason is the fragmentation of the financial system of the country. Regulators of each direction of the financial system are different from each other and do not function as one participant in the entire financial system.

Each regulator has its own independent power. The central bank regulates banks and their activities, and the Ministry of Finance is an insurance company, that is, there is no single common regulator. In fact, these financial institutions should streamline and regulate a single system. These regulators should not interfere with each other.

Within the framework of the banking activity arises more cash flows in the form of insurance premiums. Since we consider the effective management of these flows, the members of each of the financial system are very necessary. Because, in our country, banks cannot act as insurance agents, they do not receive an official income of these cash flows, but it does not mean that the cash flows stay without the owner. Officials banks do not pay attention to these cash flows, because they have no legal rights to receive income in accordance with the law. But at the same time, lower-level bank employees are not indifferent. These facts, of course, lead to a variety of illegal activities. In practice, such attempts have already occurred. Because banks cannot act as insurance agents in the country, not to lose the cash flows they also open up their own insurance companies. These insurance companies called captive. Upon receipt of the loan customers must obtain an insurance policy against captives, and the other policy of insurance companies not held tight control. Insurance companies cannot work independently. Since banks are the founders, they must reckon with the banks and comply with their terms. Insurance contracts and policies is also structured in accordance with the requirements of the bank where the main objective is not qualitative risk insurance, and increase profitability insurance subsidiary. This, of course, leads to a collapse in healthy competition and customers' confidence in insurance. Quality insurance services naturally deteriorates.

In the framework of banking activities, additional cash flows arise in the form of insurance premiums. Since we consider effective management of these flows, the members of each financial system are very much needed. Since, in our country, banks cannot act as insurance agents, they do not receive official income from these cash flows, but this does not mean that cash flows remain without an owner. Bank officials do not pay attention to these cash flows

because they do not have legal rights to receive income from these cash flows. But at the same time, the downstream employees of the bank are not indifferent. These circumstances, of course, lead to various illegal actions. In practice, such attempts have already taken place. Since banks cannot act as insurance agents in our country, in order not to lose cash flows, they also open their own insurance companies. Such insurance companies are called captive. When obtaining a loan, clients must issue an insurance policy from captive companies, while other insurance policies are not strictly monitored. Insurance companies cannot work independently. Since banks are founders, they are obliged to reckon with banks and comply with their conditions. Insurance contracts and policies are also structured in accordance with the requirements of the bank where the main goal is not quality risk insurance, but an increase in the profitability of subsidiary insurance companies. This, of course, leads to a collapse in healthy competition and customer confidence in insurance. The quality of insurance services naturally deteriorates. Without free, healthy competition, we cannot talk about any development or quality of insurance.

We talked about the above-mentioned regulatory bodies. There are two functions of these regulators:

- Protecting the rights of consumers of financial services.
- The development of the financial market.

Let us imagine these regulators as birds and their two functions as the two wings. If one wing is longer, and the other is shorter, the bird cannot fly any flight will be short and tragic. It is therefore desirable to develop these two wings simultaneously and in equal terms.

Both of these functions should be on an equal basis. Providing consumer protection is not difficult. It is only necessary to regulate the market and the rights will be protected. But then there will be no development. On the other hand, to quickly develop the market you just need to forget about the rights of consumers and give free rein to the business. But in the end, the deceived consumer will not return to the market for a fraudulent and uncontrolled service.

In this regard, it is appropriate to mention the words of the US president Benjamin Franklin, "Those who desire to give up freedom in order to gain security will not have, nor do they deserve, either one." It is not necessary to make a choice; we need to develop both directions.

The above circumstances have a negative impact on the image, status, activities of insurance companies, and insurance market as a whole.

Let's get back to the issues and solutions. Below we will provide the following recommendations to solve the above problems:

- ✓ Commercial banks in our country, as we mentioned above, must act as insurance agents. Commercial banks in the role of insurance agents would bring additional profit. Banks can receive additional income by offering insurance services and selling insurance policies to their customers. This is the most complete and legitimate way of cooperation.
- ✓ Training of qualified personnel in the field of insurance and banking. We need to train highly qualified professionals in the insurance and on the banking sector of the country. It should be noted that the lack of knowledgeable staff in these two areas are also undermines the relationship.
- ✓ The existing regulatory framework for insurers and banks should be carefully studied, and also completely revised in order to bring it to the conditions of the modern economy. All insurance companies operate on the basis of the Civil Code and the Law on Insurance

Activities of the Republic of Uzbekistan, which were adopted more than 15 years ago, which is a lot.

- ✓ The continuous development of bilateral relations;
- ✓ And, of course, mutual trust;
- ✓ Currently in Uzbekistan there are over 30 banks and 27 insurance companies. Captive insurance is one of the leading areas among insurance companies. The leading banks of Uzbekistan, such as the National Bank, Ipak Yuli Bank, Orient Finance Bank, Kapitalbank, Xalq Bank, Agrobank, Hamkorbank, have opened their insurance companies and cooperate exclusively with them. This is also a unilateral violation of healthy competition.
- ✓ Commercial banks traditionally require insurers to invest free funds in deposit accounts of banks. They only think about their own interests, and the interests of the client are relegated to the background, which is the biggest mistake of doing business. Banks should choose an insurance company on the basis of such factors as quality of services, optimal tariffs, timely implementation of the terms of insurance contracts offered by the insurance company.
- ✓ Insurance companies and banks should work together to improve the insurance and banking culture of the population. To do this, the timely service and timely payments in the event of an insurance case, the optimization of the required documents, and of course competitive prices for insurance services are required.

If we consider these proposals in more detail and, we can eliminate the above issues, and we hope that this will bring good results in the near future.

Banc assurance also offers a number of advantages, both for the commercial banks and to insurance companies. Here are some benefits that are useful to all parties:

- Banks' income will increase, and will create new jobs.
- Banc assurance offers customers more and more financial services. In addition to banking services, it also uses insurance services.
- The strengthening of relations between banks and customers. Statistics and practice have shown that the various services provided by the service, increase customer interest and confidence.
- Insurance companies raise the image and position of the banks.
- Commercial banks will have a highly qualified staff.
- Clients will use insurance and banking services more often, because it is convenient for them to immediately receive both banking and insurance services in one place.

The priority areas of cooperation between insurance companies and commercial banks are:

- Risks associated with banking activities: pledged property insurance (insurance of the mortgaged property), credit insurance, bank guarantee insurance.
- Investment management: the purchase of shares in other companies, contributions to the deposit.

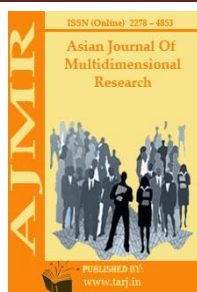
Taking into account the above, we can conclude that the bank insurance is one of the essential and advanced types of insurance, which is one of the key points in the financial system. This is not a simple form of insurance. The development of the insurance market, of course, depends on reliable and honest relationships between banks and insurance companies. Contract tactics, a high level of management, ongoing relationships with managers, risk management and insurance

are the key to business continuity and economic security. Reforms in the financial system are likely to occur in the near future, and eliminates the aforementioned drawbacks.

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THE ESSENCE OF INVESTMENT ACTIVITY IN THE AGRARIAN SECTOR AND ITS FACTORS

Khusanov DurbekNishonovich*

*Doctorate,

Tashkent State Financial University

Candidate of Economic Sciences, UZBEKISTAN

Email id: husanov.durbek@mail.ru

ABSTRACT

The article deals with a wide range of measures are implemented on a regular basis, liberalization of the economy in order to ensure sustainable development of the agricultural sector. Most of the farmers operating in the country can be included in the first and second categories. This indicates that the development of investment processes is a priority. In this direction, many activities have been undertaken in the country, and the number of farming enterprises grows sharply from year to year. The development of private farms depends on microfinance organizations. The main opportunity to increase investment activity is the sharp decline in the area of agricultural crops, the availability of all the necessary conditions for the growing agricultural production. Thus, in the subsequent stages of the structural and institutional reforms in the agrarian sector, it is necessary to continue the work on establishing and expanding sustainable cooperation between the enterprises, actively involving small businesses and private entrepreneurship in this process. Ensuring sustainable development of the agrarian sector requires regular increase of the scale of the measures in the conditions of economic liberalization.

KEYWORDS: *Investment, Asset, Real Investment, Financial Investment, Agriculture, Investment Activity.*

INTRODUCTION

One of the most important tasks is to ensure balance between sectors in the economy of the country. In particular, the role of the agrarian sector in ensuring the country's food security and its formation is remarkable.

As noted by the President of the Republic of Uzbekistan Sh.Mirziyoev, the issues of agricultural reform and food security will undoubtedly remain one of the most important tasks for us. First of all, great attention is paid to the consistent development of agro-industrial complex and its multi-profile farms, whose locomotive, that is the driving force [1].

Thus, the implementation of these measures is one of the most urgent tasks of today: structural and organizational reform in line with the requirements of modernization of the industry on the basis of cooperative activities of various infrastructure entities serving the stability of agriculture, increasing its economic activity and promoting its development. no exaggeration.

In particular, the experience of developing agricultural production in advanced foreign countries, particularly in the country, is characterized by insufficient funding, low production capacities, low investment attractiveness and attractiveness for small commodity production entities, and for other reasons, it is extremely difficult to effectively organize modernization processes in their activities indicates that the Specifically, although the proprietary and property relations in farming and dehqan farms comply with market economy requirements, practitioners have shown that their current size can be achieved by implementing technical and technological re-equipment measures, which will serve as a basis for expanded reproduction in the conditions of individual lump sum operations and financial vulnerability, Sustaining production efficiency is a complex process. Thus, in the subsequent stages of the structural and institutional reforms in the agrarian sector, it is necessary to continue the work on establishing and expanding sustainable cooperation between the enterprises, actively involving small businesses and private entrepreneurship in this process. It should be borne in mind that the development of cooperative relationships is one of the most important factors in the sustainability of enterprises and industries, the development of new products and, most importantly, creation of new jobs, increasing employment and income.

Ensuring sustainable development of the agrarian sector requires regular increase of the scale of the measures in the conditions of economic liberalization. One of the most important activities and priorities is the creation of an investment-friendly investment environment, process, capacity, activity and attractiveness of a complex agricultural mechanism. The Decree PF-5134 signed by the President of the Republic of Uzbekistan Shavkat Mirziyoev on 4 August 2017 envisages the cardinal improvement of the Ministry of Agriculture and Water Management. The main opportunity to increase investment activity is the sharp decline in the area of agricultural crops, the availability of all the necessary conditions for the growing agricultural production. An important factor in increasing investment activity is to ensure the priority development of farms in the future.

To fulfill this task effectively, a profound study of the present situation is required. This article is devoted to this issue.

LITERATURE REVIEW

Theoretical-methodological foundations of the issues of socio-economic development and financing of agriculture are foreign theorists. Specifically, European scientists have conducted research on their theoretical and methodological bases for the effective use of investment Max

Weber [2] and contemporary researchers Karen E. , Steve Padgett Vásquez, Jaap Jean Schröder, Dunstan Gabriel Msuya, Mohamed Ali Mohamed, Tilman, D., Cassman, K.G, Matson, P.A, Naylor, R. and Polasky, S, Kotschi, J, Gerbens-Leenes, P.W and Nonhebel, S., Oleson, J.E. and Bindi, M. [3-10]. Theoretical-methodological foundations of the issues of socio-economic development and financing of agriculture have been studied by foreign scientists L. Tsefu, Ts.Fan, L.Chjoular in their researches on the basis of Chinese experience of agricultural development strategy [11], I N.Buzdalov on agricultural development reforms in the Russian Federation [12], the specific method of development of I.Sandu on the basis of integration of agriculture, science and education [13], I.G.Ushachev conducted research on the importance of scientific research in the development of agriculture and their introduction into the state program [14]

A.Abduganiyev, a local scientist, on the role and importance of agriculture and its economy, [15], A.Juraev, about the country's economic reforms in agriculture, [16], planning agricultural, dehqan and private farming activities , R.Husanov, R.Husturodov [17], Q.Akhimov, N.Shushmatov. [18] S.Umarov, [19] S.Tukhtayeva, [20] B.Shakhriyarov, [21] GNMahmudova [22] and others.

RESEARCH METHODOLOGY

The purpose of this article is to develop and promote investment activity in the agrarian sector. Investments vary as follows: 1) fixed assets (capital) - capital investments or real investment; 2) Securities - Portfolio investments; 3) public, private and foreign.

However, in the present stage of agrarian reforms based on these studies, it is important to study theoretical and practical research of the problems of attraction and efficiency of investments into agriculture of the Republic, and the lack of adequate study of the scientific problems arising in the context of the rapid development of the current economy, the basis of the study.

Particular attention should be given to the formulation of investment policy in the agricultural economy under conditions of market economy:

- Selection of competitive projects on the tender will ensure the creation of a market for investment projects in agriculture;
- Economic feasibility of agricultural investments. Determining the socio-economic consequences of the natural and economic factors of the economy, taking into account the realities of the economy; because in most cases the funds allocated for the project will not be sufficient to fulfill the planned activities, as the result will not be achieved; which will result in long-term investment projects;
- Attraction of foreign investors and their investments in agriculture; for this purpose it is necessary to develop private and private property for all agricultural products.

Investing activities are multilevel, primarily due to the different levels of investing activities. Therefore, consideration of the factors affecting investment activity also requires compliance with multi-disciplinary approach.

We believe that four levels of investment activity in the agrarian sector can be distinguished:

- regional level;
- Agrarian network level in the region;

- level of agrarian industry

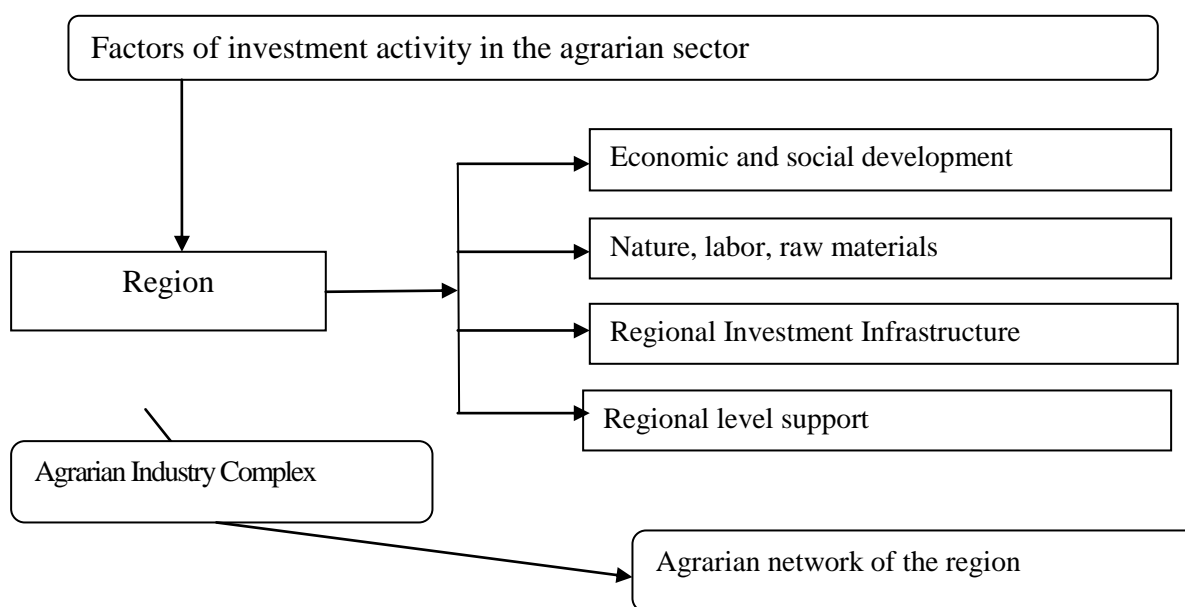


Figure 1 – Factors in the level of investment activity in the agrarian sector

The most important factor is the priority development of dehqan and private farms in increasing the investment activity. This is because an investment environment in which the mutual interests of the investor-investor corresponds to the market principles are fully compliant with the interests of the user. The investment demand is dehqan farms of the subject, which are the most important source of income by attracting investors, if they need investment funds, and in the second place.

Stage-by-stage implementation of the new investment mechanism has been implemented in our country. From this point of view, it is theoretically important to analyze the investment activity in several stages, in the light of the process of liberalization of the economy in all sectors of the economy and the formation of market relations.

Increasing the investment activity can be compared with the extent to which they are proportionate to their external factors, based on the study of the state of the domestic capacity, capacities and level of investment requirements. The level of development of farming, in particular, farming activities, varies according to their types and can be divided into 3 categories.

The first group is farmers who need financial and financial resources that are in the process of establishing independent primary management and strengthening their activities.

The second category is farmers with a certain degree of practical experience and who are able to benefit from their financial results and reach a reasonable profit but are unable to provide themselves with investment.

The third category, having the most advanced scientific and technical achievements, has the intensive development, has the necessary material means, has the practical experience of attraction of domestic and foreign investments partially to the production of high quality and

environmentally friendly products, farms that are able to provide themselves with substantial financial resources through internal resources.

Most of the farmers operating in the country can be included in the first and second categories. This indicates that the development of investment processes is a priority. The strategy of increasing the investment activity should be based on the characteristics of those two different categories of farms. Firstly, the establishment of an economic strategy to increase the investment activity through the involvement of private farms in the resource market and the development of profitable business, and secondly, to develop and implement targeted investment programs to support farmers who lack or have limited internal resources to develop new practices and production. It is necessary to put into practice.

In applying the two priorities in practice, there is a need for a sectarian approach from the point of view of categories of farmers. In agriculture, we believe that in raising investment activity, priority should be given to mobilizing existing local resources directly in the industry and in the economy.

- human capital;
- social capital;
- natural capital;
- physical capital;
- financial capital.

In agriculture, the majority of farms with the most prominent farms have the opportunity to fulfill their government orders and provide them with financial resources for the production of basic agricultural produce, such as cotton and grain, to create a more comprehensive source of income and resources to improve their livelihoods a lack of investment.

One of the ways to solve this problem is to expand and develop microfinance institutions in rural areas. In this direction, many activities have been undertaken in the country, and the number of farming enterprises grows sharply from year to year. The development of private farms depends on microfinance organizations.

The macroeconomic policy of attracting investments in agriculture The improved macroeconomic policies and the legal and organizational and economic mechanisms, while the extent of agricultural production at the regional level is inadequate, the effectiveness of direct investment in the micro-productivity will not be achieved. Therefore, the sources of funding for their investment are reflected in the diversity of agricultural, natural-economic, location, specialization and social conditions (Figure 2)

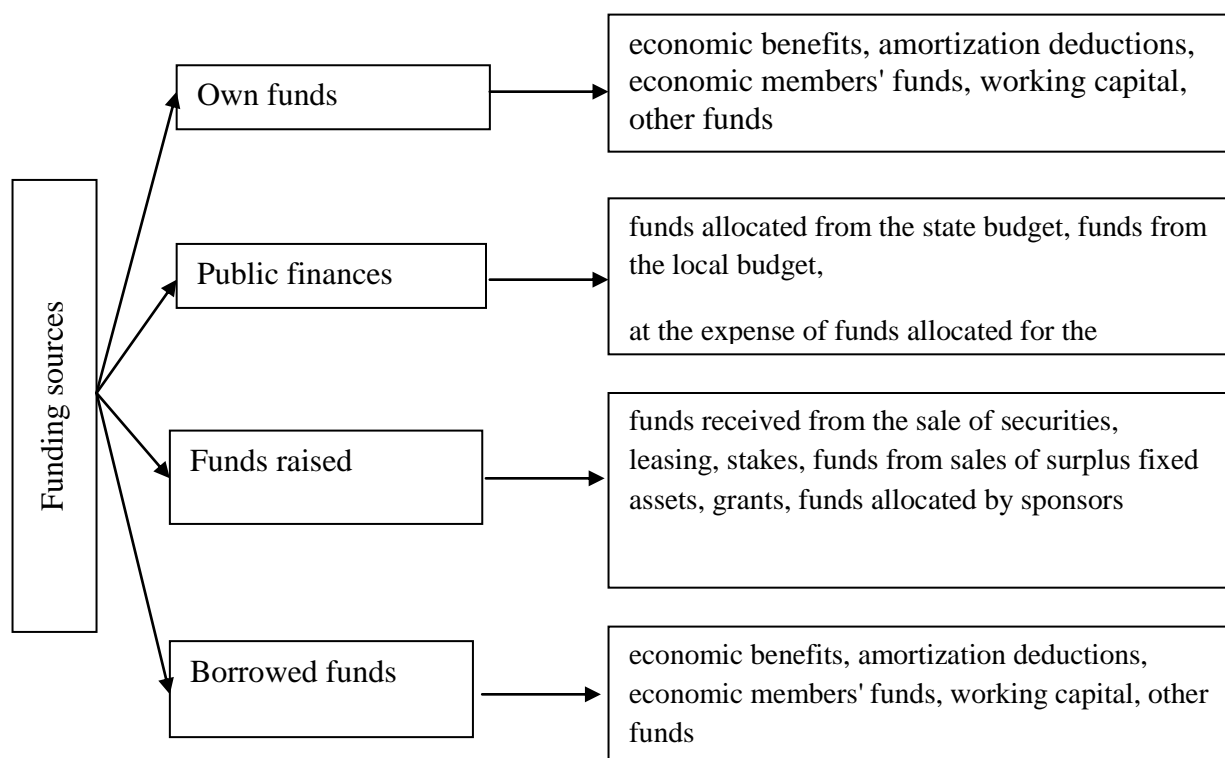


Figure 2 Sources of Financing Investment Activities

In the process of development of agricultural enterprises, while the investment activity from four sources is mainly provided by public funds and borrowed funds, its own funds and foreign borrowing remain at a low level due to the low solvency and limited capacity of households in economic activity. Agro-industrial entities create their own sources of resources in their investment capabilities, generate a time-consuming period for the depletion of depletion allocations and other internal resources and reducing their debt, and ensures the continuity of the production process.

MAIN PART /ANALYSES

Under the initiative of the head of the state, special attention is paid to the attraction of investments of foreign countries and international financial institutions with the aim of further development of the agrarian sector of our republic, modernization of agriculture, improvement of infrastructure facilities, improvement of reclamation status of irrigated lands, water supply of producers of agricultural products.

It should be noted that for the period of 2003-2015 from the credits and grant funds of foreign countries and international financial institutions, Within the framework of 36 investment projects totaling US \$ 760.4 million. more than 1,165 different hydraulic structures, 262 km of irrigation networks were built, 274 km of interurban collectors, 745 km of internal farms and 553 km of closed drainage systems were reconstructed.

In addition, more than 800 farmers and agricultural businesses have allocated more than \$ 75 million of soft loans to more than 1,500 hectares of intensive gardens and vineyards, greenhouses for over 200 hectares, with a total capacity of more than 5,000 tonnes of agricultural products

processing and packaging shops, refrigerated warehouses with a total capacity of more than 25,000 tons were commissioned, and more than a thousand agricultural equipment was procured. According to the preliminary data, the total volume of agricultural, forestry and fishery products (services) in 2017 will reach 69 504.2 billion sums or 102.0% of the corresponding period of 2016, including in agriculture and animal husbandry, 68,906.7 billion soums (101.9 percent), forestry - 117.9 billion soums (101.6 percent), and fisheries - 479.6 billion soums (126.8 percent).

In particular, high growth rates were observed in Surkhandarya region (106.6%), Navoi (104.1%), the Republic of Karakalpakstan (103.8%) and Fergana (103.3%) provinces. In the provinces of Khorezm (100.1%), Tashkent and Kashkadarya (100.8%), the lowest rates were observed. The share of Samarkand region in the total volume of agricultural, forestry and fishery products (services) of the country was 13.1% and was the leader in terms of regions, with the Tashkent and Andijan regions accounting for 12.1% and 10.7% in the Republic of Karakalpakstan (2, 8 percent), Sirdarya (4.2 percent) and Jizzakh (4.9 percent) regions [25]

TABLE 1 TURKEY'S GROWTH TRENDS IN GROSS DOMESTIC PRODUCT IN 1995-2017

Indexing	1995 y.	2000 y	2005 y.	2010 y.	2015 y.	2017 y.
Share of agriculture in gross domestic product	28,1	30,1	26,3	18	16,6	17,2

According to the table, the share of agriculture in GDP in 1995 was 28.1 percent, in 2017 it was 17.2 percent, ie about 11 percent. Indeed, such a tendency was caused by the reduction of agricultural land by means of ensuring the wellbeing of the population in the country and the construction of new settlements in the countryside. While analyzing for years, the trend of this share trend has tended to decline over the past few years, but its level of activity has dropped in 2005-2015. Only in 2017 the absolute level of activity increased by 0.6 percentage points.



Picture 3. The share of agriculture in GDP is absolute

CONCLUSIONS AND SUGGESTIONS

One of the two strategies to achieve sectoral sustainability in the conditions of deepening and liberalizing of economic reforms in agriculture is to ensure the effective use of land and water resources by modern techniques, modernization of high-yield crops and productive livestock production. high quality products, and, secondly, the export potential of agricultural products

The introduction of the production of damaging foreign investment. For this purpose, attraction of foreign investments and investment activity in agriculture should be based on the following principles:

systematic improvement of legal, socioeconomic, organizational and institutional conditions ensuring broad involvement of foreign investments into agriculture;

- Development of legal and organizational and economic mechanisms of state regulation of the organization, support, benefits and implementation of foreign economic activity of farmers and dehqan farms;

- orientation of foreign investors to the sectors, regions and directly agriculture, where the sustainable development of agriculture and possibilities for producing competitive products;

- Improvement of the system of comprehensive rendering and propagation of agricultural entities to attractive and priority projects. Ушбу тамойилларнинг амалиётга жорий этилиши бевосита хорижий инвестицияларни қишлоқ хўжалигига кенг жалб этиш, тармоқнинг инвестиция фаолигини ошириш ва пировардида унинг барқарор ривожланишига эришишини таъминлашда муҳим омил бўлиб хизмат қилади.

One of the most important factors in solving agricultural problems in the priority development of farms is to further increase their investment activity. Investments remain an important prerequisite for strengthening the material-technical base of the sector and sustainable development of agrarian sector. Along with the implementation of institutional changes in agriculture, the creation of favorable conditions for large-scale investments in agriculture, as well as large-scale investment in the sector, should strengthen the foundation of a policy that is being implemented in the current reform phase.

Currently, the issue of providing qualified agriculture with active investment policy in the agricultural sector plays an important role in attracting investments. New knowledge and skills are needed to manage investment projects and programs, develop and evaluate business plans, find investors in crisis situations, and manage projects in a competitive environment, under conditions of inflation and market conjuncture. At the same time, the formation of staff by knowledge, skills, and expertise that are insufficient can adversely affect the development of the investment business.

In the investment policy, the following measures should be taken to provide the sector with qualified personnel:

- Expansion of training of specialists in investment and innovation in higher education institutions on economic, technical and construction businesses;
- targeted training of customers, managers and managers on investment projects and programs;
- Increasing the skills of managers of leading domestic and foreign enterprises to find partners in agricultural investment projects and filling business plans.

CONCLUSION

In order to increase investment activity in agriculture and forming favorable investment activity, it is necessary to solve the following tasks:

Development of institutional market infrastructure that ensures attraction of capital resources for investment in agriculture;

Development of the banking system of agricultural servicing and increasing the level of their capitalization;

Improvement of organizational forms of investment attraction; Improvement of participation of the state and investors in their substantiation and adoption of agricultural projects;

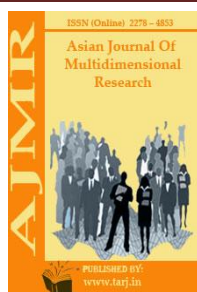
Organization of investment information-consulting and marketing support.

Establishment of Center for Investment Projects Implementation at the Ministry.

To transform the Social Development and Encouragement Fund of the Ministry of Agriculture of the Republic of Uzbekistan into the Fund for the Development of Material and technical basis of the Ministry of Agriculture and Water Resources of the Republic of Uzbekistan and introduction of innovative technologies into the Ministry of Employees' Empowerment Fund.

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TELEVISION IMAGES OF THE RE-CREATION OF INTELLIGENT DATA ANALYSIS METHODS AND ALGORITHMS

Norinov Muhammadyunus Usibjonovich*

*Tashkent University of Information Technologies,
Named after Muhammad al-Khorezmi,
Tashkent city, UZBEKISTAN
Email id: address: mnorinov@umail.uz

ABSTRACT

This paper analyses the major points of the television images of the re-creation of intelligent data analysis methods and algorithms. On this way, research analyses distinct points of the development while making both theoretical and practical research analyses. Finally, it concludes major outcomes and shortcomings of the topic for the further investigations. Most modern systems and communications and telecommunications to one degree or another use digital signal processing (DSP). DSP units have replaced many analog units and are more commonly used in the final processing stages. Many of the corresponding operations are non-linear, although they use as a basis orthogonal transforms, which are initially linear. These analysis methods allow us to evaluate the quality of the video codec without applying knowledge of the internal structure of the codec. The main advantage of this approach is the ability to automate the testing process. It is also widely used in the tasks of selecting contours in an image, emphasizing upper spatial frequencies. Like linear filters with finite impulse response (FIR) filters, nonlinear filters work in a sliding window. Local methods have broader functionality, in particular, they can take into account the characteristics of local areas, i.e. are more flexible in practical implementation.

KEYWORDS: *Television Images, Intelligent Data, Analyses, Methods, Algorithms*

INTRODUCTION

At present, the amount of revenue from video-information systems in the world market is estimated at 1.3 billion soums in 2013. Today, the average annual growth rate is 8.1%, and by 2018, net revenue from video information will be \$ 6.4 billion. The annual growth of expenditure on the use of mass media in the world amounted to 5.7%, compared with 1.6 trillion in 2011. And \$ 2.1 trillion in 2016. Worldwide television broadcasts will be \$ 7 billion in 2016. The price of online advertising is up by 20% annually. Over the past five years, it has been estimated that the percentage of income from TV broadcasting will increase by 23% in Brazil, India and China.³

In the Republic of Uzbekistan, comprehensive measures have been undertaken to address issues related to the enhancement of digital television image quality, the effective identification of deficiencies, detection of foreign characters, automatic identification and timely elimination. In this regard, it can be used to create an image filtering and clarity enhancement, intelligent image processing and image processing, digital television image processing, additive, impulse, and adaptive capture in image processing. a series of research on the creation of specialized software complexes for the improvement of methods of elimination of alarm disruptions tackles have been made.

The development of Fourier and Wilett algorithms and numerical models, digital television images, and the management of image processing on the basis of various digital television image filtering issues are of major importance throughout the world. One of the key objectives of targeted research, including research in the following areas, is to: - establish boundary conditions and criteria for television image processing; selection and classification of surveillance criteria for image quality evaluation; creating an image clarity control method when pixel intensity values are given; creation of image processing model algorithm; Developing control over television image clarity; drawing up methods and equations of linear and nonlinear filtering of images; eliminating image defects and improving quality through additive filtering; improving the methods of forming nonlinear differential equations and ensuring the clarity of the image; development of a method of adaptive anisotropic filtering of defects in the image; development of a adaptive method of management of cervical system using the matrix Chebishov series; Determine the criteria for evaluating the accuracy and effectiveness of shading processing; Develop an adaptive mechanism for clarity management to handle dynamic image sequences. The scientific researches in the field of scientific researches explain the relevance of this dissertation.

Decree of the President of the Republic of Uzbekistan dated April 17, 2012 No. PP-1741 "On the State Program of Technical and Technological Transfer to Digital TV in the Republic of Uzbekistan", from February 1, 2012 of N24 "About further development of computerization and information and communication technologies the Resolution "On Measures for Creating Conditions for Development" and the implementation of the tasks outlined in all normative and legal acts relating to this activity. The cure test works at a certain level.

LITERATURE REVIEW

The development and improvement of the methodology used mathematical modeling in solving methods of linear and nonlinear differential equations of digital television images in video information systems, the study of creating an adequate model of a specific process and the study of methods of determination using experiments to calculate the parameters of the level of activity

of the process brightness by filtering the elimination of additive defects pulsed and adaptive nature of the noise are devoted to the work of a number of scientists: Song-Hai Zhang, Shi-Min Hu, Ce ZHU, Ralph R. Martin, Dan Su, Philip Willis, Zhou Wang, Alan C. Bovik, Brian L. Evans, Jack Tumblin, Greg Turk, C. Tomasi, Erik Reinhard, Michael Stark, Peter Shirley, James Fervverda, Fredo Durand, Julie Dorsey, Suyash P. Awate, Ross T. Whitaker, David Tschumperle, Caroline Chaux, Jean-Christophe Pesquet, Aleksandra Pizurica, Vladimir Zlokolica, Wilfried Philips, Sheikh Md. Rabiul Islam, Xu Huang, Keng Liang Ou, Thou-Ho Chen, Yen-Hui Yin, Shi-Feng Huang, Yan-Ting Ye, Yusuke Monobe, Haruo Yamashita, Toshihary Kurosawa, Hiroaki Kotera, Heiko Schwarz, Detlev Marpe, Leo Grady , R.A. Vorobel, S.S. Bukhtoyarov, S.I. Kataev, M.I. Krivosheev, Yu.B.Zubarev, A.S. Selivanov, B.P. Khromov, V.P. Dvorkovich, V. .N. Bezrukov and other authors.

Issues related to the processing of television images in video information systems, the creation of computer graphics and animation, automated geometric design, are considered in the works of Shi-Min Hu, Ralph R. Martin, R.A. Vorobel, S. I. Kataeva, M. I. Krivosheev, B.P. Khromov, V.P. Dvorkovich, V.N. Bezrukov and others, a triad of methods for modeling the processing of digital television images “model-algorithm-program”, as well as methods of computer simulation and computational experiment, was developed modular and system software complex, achieved some positive results in their implementation in practice. Jack Tumblin, Greg Turk, David Tschumperle, Yu.B. Zubarev, A.Selivanov, S.S. Bukhtoyarov, C. Tomasi, Aleksandra Pizurica, investigated with the development of methods for filtering images of additive, pulsed and adaptive-Gaussian type. Zlokolica, Wilfried Philips, as well as the creation of various numerical models of filtration processes and image processing are devoted to the development of scientists of our republic, including, M.M. Musaeva, H.N. Zainidinova, R.N. Usmonova, M.M.Kamilova, T .F.Bekmuratov, T.Yuldasheva, B.K.Kurmanbaeva and other studies address the problems needed STI creation of various numerical models of filtration processes and improving the system of intelligent management of the image processing. At the same time, scientific research related to the creation of efficient algorithms for solving problems of simulation technology and filtering of digital television image processing processes in video information systems, using modeling methods and linear and nonlinear differential equations in solving problems related to digital television image filtering, multivariate computing on a computer with the purpose of determining the mechanical and geometrical parameters necessary to ensure the required level brightness and contrast of the image, allowing to increase the efficiency of management of digital television image processing processes in video information systems, the development of models of entropy coding of television images, contour separation during image segmentation, the formation of non-linear game tasks with increasing image brightness, creating effective methods for automatic determination and elimination image defects that create conditions for the development of effective methods for calculating problematic situation.

METHODOLOGY

The aim of the research is the development of methods, algorithms and raster models of filtering processes and improving the quality of television images in video information systems based on the use of mathematical models with partial derivatives.

OBJECTIVES OF THE STUDY:

- development of the Fourier, wavelet and discrete-cosine transformation mechanism based on the criteria and required marginal process conditions taking into account the features, forms and methods of television images processing in video information systems;
- development of a method for managing the process of ensuring the required level of image brightness and visual assessment of the quality of television images for given values of the average intensity of pixels;
- the creation of an algorithm for developing a mathematical model and a two-parameter nonlinear system of television image processing;
- development of a model for the entropy coding of processes for processing sequential dynamic television images and methods for extracting contours and image segments in video information systems;
- development of methods and algorithms for solving problems of eliminating image defects using partial derivatives of differential equations based on the theory of discrete and differential games of mathematical models of digital television image processing processes in video information systems;
- development of methods of linear and nonlinear filtering to improve the brightness of the image in computer processing of static and dynamic television images based on partial derivatives of differential equations and the formation of discrete and nonlinear differential game problems;
- development of a method for eliminating shifts, additive, pulsed and adaptive-gaussian defects using anisotropic filtering and separately-smooth image models

Main Part

Most modern systems and communications and telecommunications to one degree or another use digital signal processing (DSP). DSP units have replaced many analog units and are more commonly used in the final processing stages. At the same time, users are provided with both new additional features, and improvement of the characteristics of communication systems, expansion of their functionality is achieved. Many standard operations (spectral analysis, filtering, encoding and decoding, switching, routing, etc.) are performed by means of DSP with acceptable speed.

The most characteristic DSP operations used in communication systems are filtering, encoding-decoding, and compression. Many of the corresponding operations are non-linear, although they use as a basis orthogonal transforms, which are initially linear. Along with the Fourier transform, which for decades has been the main means of spectral analysis and filtering, other orthogonal transforms are increasingly being used, primarily the discrete cosine transform (DCT) and the discrete wavelet transform (DWT) [1; 5-6 sec.].

The task of building a universal coding method, which is effective for images of various types, is shown in [114; 1535-1537-c.]. In particular, it offers a switching coding scheme that combines the advantages of two coding algorithms: run length coding, which is very useful in coding image areas with small changes, and adaptive least squares predictive coding, which is highly efficient in coding areas with fast changes. What are the edges of objects. A simple but effective edge detector using only causal pixels is proposed to implement such a combined coder.

The problem of reducing the computational complexity of finding the best mode for each macro block in extensible video coding is studied in while offering a fast mode selection algorithm that provides a solution to this problem. For this, the mathematical expectation of the price distortion rate (RDcost) is statistically derived, the increase of which is created by skipping each mode when they are selected, and the encoder algorithm selects a mode from a small number of modes, which are determined based on the expected increase in RDcost. The results of experiments illustrating a significant reduction in the amount of calculations are considered.

Methods for objective analysis of video codec operation using only anodized sequences are shown in. These analysis methods allow us to evaluate the quality of the video codec without applying knowledge of the internal structure of the codec. The main advantage of this approach is the ability to automate the testing process. This allows you to measure the quality of video processing with a large number of different settings and test video or measure the quality in real time. Measurements provide accurate and reproducible data.

A large variety of methods and algorithms for image processing is caused by a variety of both solvable problems and applications, as well as technical means of obtaining visual information. However, often, many of them do not have a rigorous mathematical substantiation, and their use is explained by expediency based on the conditions of a particular practical problem.

Any of the procedures for processing and analyzing images contains in its structure a preprocessing stage, including smoothing, filtering noise, improving clarity and contrast. In addition, pre-processing of images includes correction of non-linearity of the sensor, brightness, contrast, elimination of geometric distortion, underlining objects of interest relative to the background. Often, at this stage, the correction of disturbances in the image caused by the defocusing of the optics, the blurring of the image as a result of the movement of the object, errors in the sensor, or in the transmission of image signals.

The image is a two-dimensional function $f(x, y)$, where x and y

- These are spatial coordinates, and the amplitude f at any point with a pair of coordinates (x, y) is called the intensity or gray level of the image at this point (the brightness of the point) [3; 104-105-s.]. If the variables x , y and f take values from a finite (discrete) set, then they speak of a digital image. Under digital image processing means their processing using personal computers (PCs). Note that a digital image consists of a finite number of elements (pixels), each of which is located in a specific place and has a specific value.

Depending on the method of representation in the PC, digital images are divided into: Vector and bitmap images. Vector is the image described as a set of graphic primitives.

A bitmap image is a two-dimensional array, the elements of which (pixels) contain information about the level of gray or color. In turn, raster images are divided into: binary, halftone, palette, full color.

Image processing is not a one-step process, therefore, the main stages of image processing, carried out in order to improve its visual perception, can be represented in the form of a structural diagram shown in Fig. 1.1

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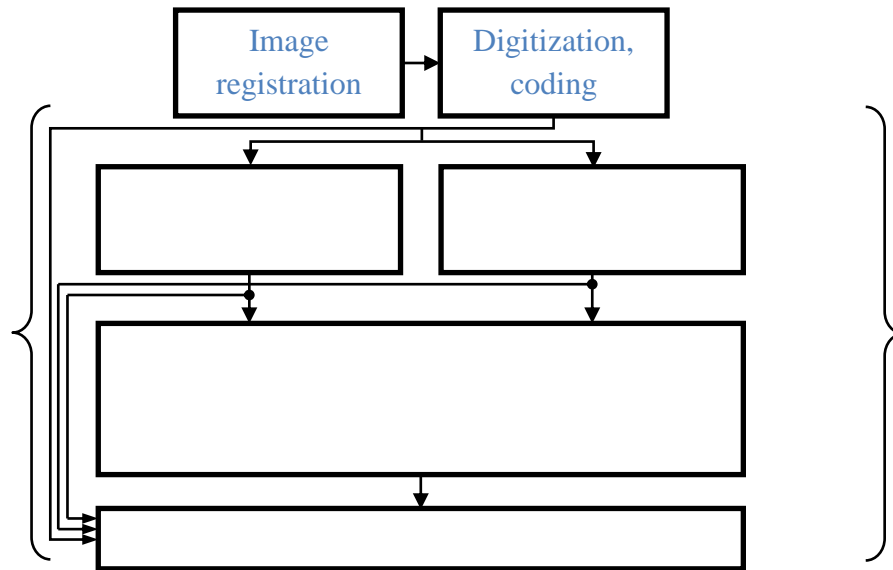


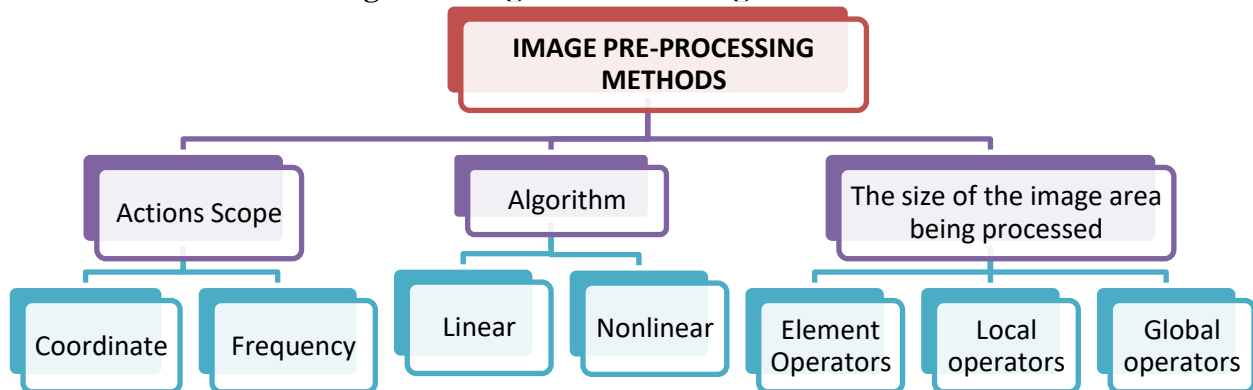
Fig. 1.1. The main stages of image processing for subsequent visualization

Image processing begins with the acquisition (registration) of images using an imaging system, except when the image is already represented in digital form. Important at this stage is the correct choice of the imaging system from the light flux and the most accurate selection of parameters for fixing an object of interest in the image (lighting, wavelength range, etc.).

Pre-processing is necessary to highlight poorly distinguishable details, or to emphasize the characteristics of interest in the original image. At the same time, geometric and coordinate transformations are performed to eliminate distortions introduced during the formation of images, and, in addition, local filtering.

The classification of image preprocessing methods depending on the scope, the algorithms used and the size of the image area being processed is shown in Fig. 1.2. The transition to the frequency domain in the implementation of processing algorithms is usually caused by the need to process images of large dimensions. In this case, the use of fast discrete orthogonal transforms (for example, fast Fourier transform (FFT)) is justified. As for the size of the processed image area, in this paper we will consider “windows” with the size of 3x3 and 5x5 pixels as the most optimal from the point of view of computational costs.

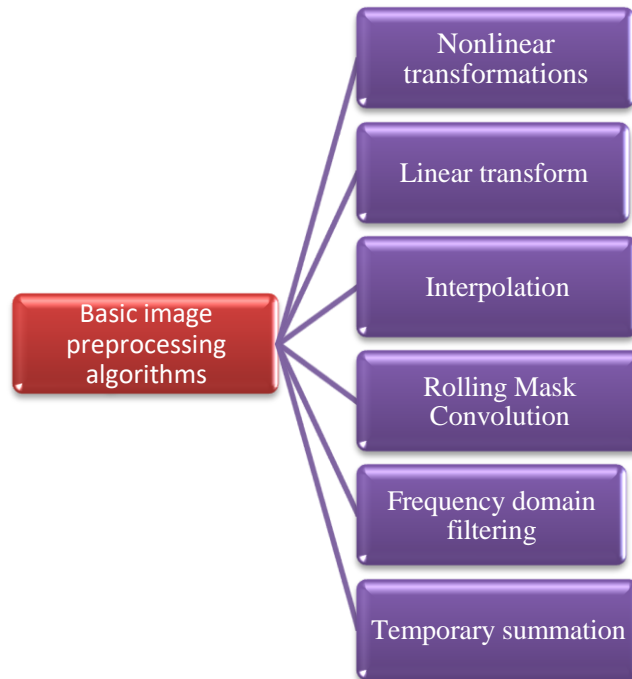
Fig. 1.2. Image Pre-Processing Methods



Linear filtering is widely used to suppress noise on image to compensate for uneven sensitivity blur effects in images. It is also widely used in the tasks of selecting contours in an image, emphasizing upper spatial frequencies. Like linear filters with finite impulse response (FIR) filters, nonlinear filters work in a sliding window. But, with linear filtering, a linear combination of signal samples is calculated, and with nonlinear filtering, non-linear transformations of signal samples are performed in the element mask of the filter defined by the filter.

Image pre-processing as a step in the process of improving the image quality includes a large set of elementary algorithms. The most common ones are shown in fig. 1.3. [12; 102-103-s.]:

Figure 1.3. Basic image preprocessing algorithms



Geometric transformations used to eliminate geometric distortions introduced, as a rule, at the stage of image registration. Are mandatory for the implementation of most image processing procedures.

Preliminary preparation of images includes several operations that form a certain “set”, and the choice of certain procedures is determined by both the specificity of the images and the technical requirements for the image processing system.

From the point of view of implementation, image processing methods are divided into two main classes: Local and global. The main difference is in the size of the area of the image being processed. The choice of approach depends on the specific problem being solved by the researcher. The advantage of methods for global implementation lies in the simplicity of their execution and speed. Local methods have broader functionality, in particular, they can take into account the characteristics of local areas, i.e. are more flexible in practical implementation.

Global image processing methods can be implemented either directly on the image field, or by means of spectra.

There are three main areas of application of global two-dimensional orthogonal transformations for image processing:

- to highlight the characteristics of image features;
- for image coding, when the spectral width decreases due to the rejection or coarse quantization of small transform coefficients;
- To reduce the dimension when performing calculations.

Such transformations include the Fourier, sine, cosine, wavelet, and Karunen-Loyev, Walsh, Haar, and Hadamard transforms. However, these transformations do not have the necessary versatility in solving a wide range of digital filtering tasks.

For transferring the original image to the frequency domain and its reconstruction, direct discrete transforms (PDP) and inverse discrete Fourier transforms (NFD) or other discrete orthogonal transforms are used. Filtering in the frequency domain consists in multiplying the Fourier transform of the image by the frequency response of the filter.

As an alternative to the FDP, it can solve image pre-processing, eliminate noise and interference, optimize Wiener filtering, improve the quality of visual image perception, select the boundaries of objects and their segmentation in order to classify and recognize patterns, analyze image spectra, calculate discrete convolution, correlation function and in other operations on spectra, discrete orthogonal Hartley, Haar, Walsh-Hadamard transforms have found the greatest use.

Discrete Fourier transform (DFT) is the basis for the implementation of many digital filtering methods. The advantage of the method is the possibility of using fast DFT algorithms, which allows realizing systems with real-time processing. The disadvantage is the need to limit the infinite spectrum when analog-digital conversion

CONCLUSION

According to the results of the doctoral dissertation research on the topic “Mathematical models of filtering processes and improving the quality of television images in video information systems” the following conclusions were made:

- 1.** The processing of digital television images in video information systems using the methods of creating mathematical models, expressions using linear and nonlinear differential equations based on game theory, analysis of the use of computer-aided computing algorithms and a set of programs determined the theoretical bases of the prospects and features.
- 2.** Creating methods for filtering the processing of static and dynamic television images based on differential equations, the validity of the mathematical correctness of their algorithms, the development of appropriate computational algorithms and software systems contributes to the automated management of the processes of improving the clarity of images at medium intensity pixels.
- 3.** Fourier transforms, discrete cosine and wavelet transforms based on the limitations of TV image processing, selected criteria and parameter classification contribute to the creation of methods for visual assessment of the quality of a digital television image.
- 4.** In the result of carrying out computational experiments and mathematical modeling of image processing processes on the basis of the theory of differential games, a solution was found to eliminate time-phase shifts and defects of adaptive, pulsed and additive-gaussian types in images.

5. Creating a mathematical model of television image processing in two-parameter nonlinear systems automates image management processes, eliminating shifts and time-phase defects by effectively using and researching the results of computational experiments, determining and filtering their types in images.
6. The development of a two-dimensional raster model of the state of an image of an object and algorithms for modeling disputed states during the processing of television images allows you to choose ways to ensure the required distribution of brightness of image pixels and the formation of non-linear game problems.
7. Improving filtering techniques for processing digital television images with phase-shifting and defect eliminates deficiencies in image transmission by optimizing them, taking into account the features of pulses in the spectral fields of images, applying adaptive-anisotropic filtering methods and models of separately-sequential images.
8. Creating a system for controlling the brightness of images using the Chebyshev matrix series, the adaptability of the control mechanism for image processing in a dynamic sequence allows us to develop an algorithm for evaluating the efficiency and accuracy in image processing.

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APPLICATION OF DIGITAL TECHNOLOGIES IN THE TREASURY SYSTEM OF UZBEKISTAN

Kuchkarov T.S*

*Associate Professor,
Tashkent University of Information,
Technologies named after Muhammad al Khorezmi,
UZBEKISTAN

ABSTRACT

The article discusses the use of information technologies in the treasury system of Uzbekistan. A review of the literature on the use of information technology in the treasury system is given. More particularly described the application of digital technology in the treasury systems e, explains the need to improve and causes Treasury information system. The article describes in detail the mechanisms of integration and information systems budget organizations receiving funding from the state budget, treasury oh oh oh Information Systems. It describes the mechanisms for applying digital technologies, digital signatures, passwords and login, information security in integration with the treasury information system

KEYWORDS: *Digital Economy, Digital Signature, Password And Login, Information System Of Treasury, Integration, Blockchain, Technology Reports, Payment Orders, Contracts, Documents In Electronic Form.*

INTRODUCTION

Accelerated penetration of digital technologies in life is becoming one of the characteristic features of the development of the future world. First of all, it is due to progress in the field of micro electronics and information technologies, telecommunications and other areas of science. Most of the developed countries of the world and international companies began to actively introduce digital technology in their work. At the World Economic Forum in Davos in 2016, the importance and role of the digital economy in the development of business and the economy throughout the world was emphasized. In the majority of the world, banking, financial, insurance, advertising, and other companies have begun to actively begin to use digital technologies in their operations. Thus, digitalization is an objective, inevitable process and cannot be stopped [1].

Uzbekistan, gaining independence in 1991 from the very start and are actively reforming and modernizing its economy. Over the years of independence in Uzbekistan since 1991 to 2018 brought about a radical transformation, and reforms in the management of the country's economy. Finances were reformed, separated banking and other sectors of the economy.

In the financial industry of the country, the use of modern advances in information technology and computerization has been implemented, modern local and global data transmission networks have been created covering the entire territory of the country. Uzbekistan has an extensive data transmission network built on the basis of a modern fiber-optic data transmission network. Ministry of Finance of Uzbekistan jointly with the participation of international experts modernized financial management system of the country. In 2005, a treasury system was first created and introduced in Uzbekistan using modern computer systems and software systems. Thanks to the measures achieved positive results in improving the financial management systems of the second republic. Financial calculations accelerated, the accuracy of calculations increased, control over the allocation and transfer of budget funds to budget recipients was established.

Despite the positive results achieved by the introduction of the treasury branch information system called the second, a substantial acceleration of payments, increased data accuracy, timeliness, and rapid delivery of budgetary funds to Get A tele these tools increase control of their delivery and other benefits, it remains an unresolved problem of control of the budget funds beneficiaries on the ground, the problem of the presence of a human factor in the implementation of budgetary organizations interrelation and treasury officials. Automation of the treasury system did not solve all the problems. The issues of frequent travel of accountants of budget beneficiaries to treasury bodies for the assignment and approval of payment orders remained unresolved. On purpose to purposely putting on statistics and tax reporting, electronic exchange and other issues. This took a lot of time and dependence on the human factor when working with their treasury by the bodies of accountants of budgetary organizations throughout the country. It was a brake on the effective development of the entire system. It was necessary to solve this problem for tens of thousands of accountants of budgetary organizations for routine work on daily coordination with paper documents by the treasury bodies, to remove the problem of the "human factor" participation in their mutual relations.

LITERATURE REVIEW

Scientific research by methodological aspects perfection informational systems execution state budget and treasury system are maintained leading scientific research centers and by universities the world, their including: World Bank (USA), the International Monetary Fund (USA), Harvard University (USA), Oxford University (UK), University of Cambridge (UK) and other research centers. The use of information technology in the treasury system is described in detail in the scientific works of many leading scientists (8-17). The use of information technologies in the management of financial systems and the treasury, and their application models are described in detail in a working paper compiled by experts from the IMF and the World Bank (1,2,3,4,5). Issues of the need to improve the integration of treasury information systems are discussed in the writings. Many scientists (6, 7,16).

Main part

Based on the analysis of the application of the latest achievements of information technology in the banking and financial activities in the developed countries (USA, France, England, Korea and other countries) concluded, that it is necessary to improve the relationship between the treasury bodies and budget organizations with the use of advanced information technology, with the use of digital technology. By developed technique of improving the information Treasury system used time Digital's latest achievements technologists first and the Internet.

From 2002-2010 at the Information and Computing Center of the Ministry of Finance of the Republic of Uzbekistan, with the participation of the authors, a single centralized software for budgetary organizations was developed - UzASBO (Uzbek automated accounting system for budgetary organizations), which in 2012-2013 was fully implemented in all budget organizations of the republic. UzACBO software for budgetary organizations allows accounting of all accounting entries of a budget organization, receiving and sending promptly to the treasury all the required reports, payment orders, contracts and other documents in electronic form, full accounting in the organization. Software has been constantly improved. In the course of its modernization and improvement, it developed and eventually it turned into remote software for budget organizations, where the central database and software are in the central treasury of the Ministry of Finance, all budget accountants enter into it remotely via password, login and electronic - digital signature.

The implementation of UzASBO software in all budget organizations of the republic was very difficult due to the constant leakage or displacement of personnel and the need for continuous training of new cadres of accountants. Therefore, the training and test software "UzACBO test" was developed, which allowed accountants unfamiliar with the program to remotely enter the test program and learn easily. The program used visual texts and tips, as well as software really close to this software package "UzACBO". Thanks to the use of this technology and digital signatures, more than 20 thousand accountants of budget organizations were able to easily and successfully train on entering the system and remote online training. This software learning system has become a reference book for new accountants from budget organizations.

Successful implementation of UzASBO software in all budget organizations of the republic allowed to get the following positive results:

- speed up the process of implementing the state budget;

- increase the effectiveness of state financial control in budgetary organizations by the state;
- increase the transparency of the state budget execution in budgetary organizations;
- reduce the expenses of budget organizations related to the Treasury;
- to increase the efficiency of obtaining information on the execution of budget documents by budget organizations from the side of the Treasury;
- Currently, software for budget organizations UzASBO is being improved and developed.

CONCLUSION

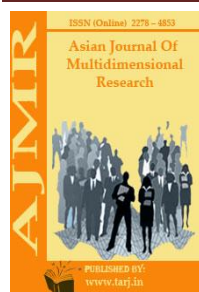
Thanks to the use of this technology in the treasury system of the republic, the time required for passing payment and financial documents has accelerated, all employees have increased responsibly for their activities, they managed to remove the presence of the “human factor” in the interaction of accountants of budget organizations and treasury employees. All interactions of budgetary organizations with the Treasury system began to take place operatively only through on-line connection through a computer network using electronic digital signature and information protection technology; the need for daily receipt of accountants of budgetary organizations to the treasury with various documents disappeared.

AT In the future, it is necessary to improve and develop the use of “digital technologies” in the financial industry, to develop “on - line” receiving and sending payments from the Internet and mobile devices and other payment systems to the treasury. It is necessary to improve the protection of information and the database of baths through the use of blockchain technology and other means. It will be necessary to organize the processing of the database using cognitive technologies.

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TOOLS AND TECHNIQUES FOR RECOGNIZING TEMPORAL EXPRESSIONS FROM TEXT: A SURVEY

Himani Kapur*; Ashish Girdhar**

*Research Scholar,
Kaithal, Haryana, INDIA
Email id: himanikapurnit@gmail.com

**Lecturer,
Thapar University, Patiala,
Punjab, INDIA
Email id: ashishgirdhar410@gmail.com

ABSTRACT:

Temporal expressions are words that convey temporal information such as a point, duration or recurrence in time. These expressions can be used in extracting the temporal information or in time-related question answering ,i.e. for answering “When” type of questions. Recognizing these temporal expressions from a chunk of text, by automatically annotating them is an increasing area of research. The temporal expressions have to be normalized. In other words, they have to be converted to some standard form in order to become understandable by algorithms. News articles have been taken up as the corpus for almost all of the recognition systems developed so far because these contain a plethora of temporal expressions. Using the manually annotated corpus, also called gold standard for computing the precision and recall values of available methodology, has been the technique to measure the accuracy. In this paper we present the various tools and methodologies adopted or developed in order to recognize the temporal expressions.

KEYWORDS: *Gold Standard, Precision, Recall, Recognition Of Temporal Expressions, Temporal Expressions.*

1. INTRODUCTION

A temporal expression (or timex) is a linguistic expression indicating a point in time, period, or recurring pattern in time (for example “May 2012”, “next month”, “3 hours”, “weekly”). Automatically annotating the timexes is a task comprising of identifying such expressions from the text which is termed as recognition and drawing interpretation from them which is known as normalization. The result of this is an annotation encoded as per the standardised representation of the timexes. Understanding temporal information is crucial for language processing applications including question answering [1], text summarisation [2], information retrieval [3] and knowledge base population [4]. In addition to these NLP areas, timex recognition has also been able to prove its worth in medical domain [5], [6], [7], [8] in recent times. Timex standard followed nowadays for annotating the expressions is TIMEX2 and TIMEX3. The rest of the paper is designed as follows: Section II discusses the temporal expressions in detail while in Section III the different tools and methodologies are discussed in detail. Section IV lists some factors which cause hindrance in the way of developing a temporal expression recognition system for Indian languages. In section V we conclude the survey paper.

2. Temporal Expressions

Temporal Expressions are those words in the chunk of text that indicate some information related to time. These expressions may be directly time related such as “he left *at 5:30 pm*” or may convey time indirectly as in the case of “he left *before you came*”.

<p>The meeting was on January 18th, 2014.</p> <p>The meeting was on <TIMEX tid="t1" type="DATE" value="2014-01-18">January 18th, 2014</TIMEX>.</p>
--

Fig. 1. Tagging as per TIMEX3 standards

Previously, recognition of these expressions from text was a sub problem of the Named Entity Recognition problem when the temporal expressions recognition was considered recognition of time entity. After few years the researchers thought of solving the problem separately and designing tools for recognition of time entities only. As per TIMEX2 standard, the time expressions identified can be of one of the following types:

1. Date :

Those expressions which denote a calendar date come under this category. These expressions include a calendar date specified directly such as December 8th, 1973(date) or expressions such as October, 1988(month) or 1999(year). It also includes vague expressions such as two months ago, a week later, etc.

2. Time:

Those time expressions that indicate a point in time which is less than a complete day come under this category. Examples include specific time in a day such as 3:00 pm, half past one in afternoon or a part of a day such as Thursday evening, etc.

3. Duration

Those time expressions that convey the length of a time interval fall under this category of timex. Examples include two months, 5 years, four hours, etc.

4. Set

Those time expressions that denote the e periodical aspect of an event come under this category. Examples include every Tuesday, twice a week, etc.

3. Methodologies and Tools For Recognizing Timex

Different methodologies for recognition of timex are:

3.1 Rule Based Methods

In this type of approach rules are written for recognizing timexes by the making use of the linguistic knowledge. The rules are written in the form of patterns and these patterns are used to detect the time expressions in text. The accuracy of this approach is dependent on the domain specific knowledge of expert developing the rules for this approach. Syntax of writing timex in a language play a major role in writing the rules for recognition of timexes. Below are some of the tools that employ a vast set of rules for recognition purpose.

HeidelTime [9]:

HeidelTime is a multilingual temporal tagger. It supports 11 languages: English, German, Dutch, Vietnamese, Arabic, Spanish, Italian, French, Chinese, Russian, and Croatian. It distinguishes between news-style documents and narrative-style documents (e.g., Wikipedia articles) in all languages. In addition, English colloquial (e.g., Tweets and SMS) and scientific articles (e.g., clinical trails) are supported. It uses regular expressions for extracting temporal expressions. For normalization of timexes, HeidelTime uses knowledge resources and linguistic clues. It is developed as a UIMA(Unstructured Information Management Architecture) component. UIMA is widely used for processing unstructured content such as audio, images, or text. Different components can be combined to create a pipeline of modular tools, and all components use the same data structure, the Common Analysis Structure(CAS). This allows to combine tools that were not originally built to be used together. Every temporal expression te_i can be viewed as a three-tuple $te_i = \langle e_i, t_i, v_i \rangle$ where e_i is the expression itself as it occurs in the textual document, t_i represents the type of the expression, and v_i is the normalized value. Type of te_i can be of four possible values, Date, Time, Duration and Set. The normalized value is the value of te_i represented in the TIMEX3 standard. The goal of HeidelTime is to extract for every temporal expression the expression e_i and to correctly assign the type and value attributes t_i and v_i , respectively. The extraction rules mainly consist of regular expression patterns. However, other features can be used as well, e.g., a constraint what part-of-speech the previous or next token has to have. Heideltime contains 3 types of resources: Rule resources, pattern resources and normalization resources. For example, a rule to detect expression like "November 2001" following rule is written in the rule resources file:

```
RULENAME="date_r7a",  
EXTRACTION="(%reMonthLong|%reMonthShort)(of)%reYear4Digit",  
NORM_VALUE="group(5)-%normMonth(group(1))"
```

Here, RULENAME is a unique name given to a rule; Extraction is the regular expression pattern to extract desired expression. It makes use of reMonthLong, reMonthShort, reYear4Digit as pattern resources. NORM_VALUE is the normalization Expression which make use of normMonth is the normalization resource.

Example of Normalization Resource:

NormMonth ("June") = "06"

NormSeason ("summer") = "SU"

DANTE [10]:

DANTE ((Detection And Normalisation of Temporal Expressions) by Paweł Mazur and Robert Dale which annotated using TIMEX2 standards. This system has 80 macros and 250 rules. Macro expansions are textually copied into the bodies of rules, and then the rules are compiled into Java code. It is implemented using GATE's JAPE grammar formalism. The system is developed for English language but the authors claim that DANTE can be made to work for other languages also as it has many language independent components in its modular architecture.

SUTime [11]:

SUTIME is a temporal tagger for recognizing and normalizing temporal expressions in English text. SUTIME is available as a Java Library and is a part of the Stanford CoreNLP pipeline. It can be used to annotate documents with temporal information. It is a deterministic rule-based system designed for extensibility.

SUTIME (i) builds up patterns over individual words to find numerical expressions; then (ii) using patterns over words and numerical expressions to find simple temporal expressions; and finally (iii) forming composite patterns over the discovered temporal expressions.

Its main features are:

- (i) Extraction of temporal expressions from text: Given tokenized English text, SUTIME findstemporal expressions and outputs annotations for further manipulation and interpretation. Its output includes annotations in the form of TIMEX3 tags.
- (ii) Representation of temporal objects as Java classes: SUTIME provides tools to map them to logical representations and data structures that are easier to handle programmatically.
- (iii) Resolution of temporal expressions with respect to a reference date: When processing natural language text, one often has to work with expressions that refer to a relative time (e.g., last Friday). Determining the actual date to which such expressions refer requires a reference date, on which the statement was made. SUTIME uses document dates as references.

Many other rule-based temporal taggers have been developed such as GUTime[12] which is available as a part of TARSQI toolkit, TempEx[13] which annotates using TIMEX2 standard and Chronus [14], etc. For recognition of temporal expressions statistical machine learning methods have been developed but normalization of the expressions after recognizing them, rules have to be developed [15]

3.2 Machine Learning Based Method

Detecting features which are to be used by the classifiers is an important step of this approach. Features such as if the first word is capital is helpful in recognizing time expressions such as *Monday, January 15th, etc.* However this can only work for those languages in which capitalization is used like English language and all the Indian languages like much of the Asian languages do not use capitalization to indicate a noun. Other feature for detecting the presence of temporal expressions in the text is the presence of numbers in a word. Most of the times this could work for temporal expressions like *4th February* and *26-11* but it independently this feature can also lead to incorrect results such as in text "*Rs 1000*". Nevertheless detecting features for the recognition of timexes is a crucial step of machine learning based method. Sometimes a POS tagger is used as a preprocessing step in order to capture some feature values. For instance POS tagger may be used in detecting all the Nouns and then from those tagged words, nouns implying time expressions can be detected. Classifiers based on statistical approach such as Hidden Markov Model (IdentiFinder by Bikel et al.[16]), Maximum-Entropy Model (ATT System by Jung and Stent[17]), Support Vector Machine (BIO token chunking by Bethard[18]) and Conditional Random Field[7].

Some tools developed so far the task of temporal expression recognition are summarized below.

TABLE 1 TEMPORAL EXPRESSION RECOGNITION TOOLS AND METHOLOGIES USED

Tool	Approach used	Languages supported	TIMEX standard used for annotation
HeidelTime[9]	Rule-based approach	English, German, Dutch, Vietnamese, Arabic, Spanish, Italian, French, Chinese, Russian, and Croatian	TIMEX3
DANTE[10]	Rule-based approach	English	TIMEX2
SUTime[11]	Rule-based approach	English	TIMEX3
GUTime[12]	Rule-based approach	English	TIMEX3
TempEx[13]	Rule-based approach	English	TIMEX2
Chronus [14],	Rule-based approach	English	TIMEX2
ATT System[17]	Maximum Entropy based Model	English	TIMEX3
BIO token chunking based system[18]	Support Vector Machine	English	TIMEX3
CRF based[7]	Conditional Random Field based	English	TIMEX2

4. Challenges In Annotating Timexes In Indian Languages' Texts

In order to annotate the temporal expressions in a text with their appropriate values and types, there are some challenges that should be dealt with:

1. Diverse forms of expressing time

The greatest difficulty regarding the morphological dependencies of developing the tagger, however is the large diversity of ways in which time can be expressed [19]. Schilder and Habel [20] distinguish the ways of expressing time expression as one of the following type:

- Explicit reference
- Indexical or implicit reference
- Relative reference

Explicit reference is used to refer to the time expressions which denote a calendar time explicitly. For instance 15th January, 1988 denotes a date explicitly. Expressions such as January, 1988 and 1988 denote the month and year respectively and no further knowledge is required for normalizing these expressions.

Indexical reference or Implicit reference is made to those temporal expressions which convey some kind of temporal information but it is not directly specified, e.g. New Year day, Independence Day of India, etc. These types of temporal expressions do not directly give any temporal information and some knowledge is needed to convert these expressions into their normalized forms.

While Mazur[19] consider relative expressions as a Implicit type of temporal expressions, Schilder and Habel[20] place these expressions separately. These expressions require the document publishing date or some another temporal expression in vicinity, in order to be normalized, e.g. yesterday, a day before incident, an hour later, etc are relative type of temporal expressions.

The major challenge is therefore related to the last type of temporal expressions since a language may contain numerous words for denoting temporal information. Moreover, in Hindi a single word, कल is used to denote yesterday and tomorrow which may cause confusions while normalizing.

2. Morphological dependencies

Another challenge which comes across in developing system for annotating temporal expressions from text is the dependency on the structure and syntax of the language for which the system is being developed. There are some languages for which different spellings exist for a particular word, e.g. Hindi, Punjabi. In addition, there may be more than one structure in which a temporal expression can be expressed, e. g. June 11th or 11th June. As mentioned above, all Indian languages do not use capitalization resulting in making it difficult to recognize the nouns.

3. Inability to construct exhaustive rule base

Because of the changing grammar rules, constructing an exhaustive rule base for detecting timexes is a tedious task. Also such a heavy rule base could make the application performance worsen. The continuously changing grammar of the languages also cause the rule base be updated each time, making the task even more complex.

4. Insufficient resources on web

For most of the Indian languages there is a little or almost no information available on internet about the grammar of these languages. Hence, the absence of this information on web hinders the development of the system to extract temporal information.

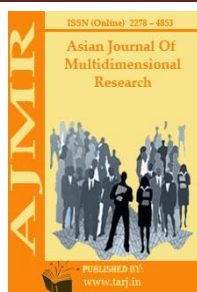
5. CONCLUSION

This paper lays out the details about the temporal expressions and explores the tools used for extracting them from text. Also the challenges that inhibit the development of a tool for extracting and recognizing the temporal expressions in Indian languages' text have been discussed in detail. While the recognition and normalization of temporal expressions can contribute in huge proportions to other areas of NLP, not much has been for annotation of timexes in Indian languages. Due to some problems inherent to Indian languages such as lack of capitalization the research has been going on at an extremely slow pace. For Hindi however research work has been going on[21]. Rule based approaches have been able to show greater accuracy levels than the machine learning approaches but large rule base limits their potential to be used as a sub solution of the problem of Named Entity Recognition.

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AN APPLICATION OF DATA MINING IN THE MODEL OF GPS BASED VEHICLE MANAGEMENT SYSTEM: A VEHICLE TRAFFIC SOLUTION FOR THE SMOOTH ROADMAP OF UPCOMING SMART CITIES IN INDIA

Dr. Santosh Parakh*; Dr. Kavita Suryawanshi**

*Head of Masters in Computer Application,
Department, VIIT, Baramati,
Dist. Pune, Maharashtra, INDIA
Email id: santoshparakh@gmail.com

**Associate Professor,
Dr. D. Y. Patil Institute of MCA & Management,
Akurdi, Pune, INDIA
Email id: kavita1104@yahoo.com

ABSTRACT

This paper embed the various data mining techniques in the GPS services into a system so that many problem related to transportation system can be resolved in real time by providing data and information into our own pre-set format and provide individual vehicle data such as location and velocity by using GPS, estimated time of arrival, the speed count, number of passengers and seat availability and these details can be sent to passengers by SMS using GSM technology. In the proposed roadmap of Indian context, Smart cities will be an important issue and till now none of the system is exists which provides all kind of a result we want for any types of vehicles. This research project is aimed to design with an embedded system which will use for tracking and positioning of vehicles with GPS. The initial data will be captured by GPS device. Again the captured data will be sent to one data cleaning device and finally it is considered as an input file for data parsing tool for analysis purpose. With the use of data parsing tool the next processing will be done. This project also uses sensors to detect the speed of vehicle, passengers present in the bus. The Microcontroller is programmed to control and display the information according to the received signal from the GPS and sensors placed satellite and the position of a satellite implies that the GPS receiver is on the surface of a sphere centered at the position of a satellite. Thus the indicated position of the GPS receiver is calculated and with the help of Data Mining technique, a Vehicle traffic jam solutions can be obtained optimally.

KEYWORDS: *GPS, Data Mining, GSM, Smart Cities*

1. INTRODUCTION:

Data Mining is the process of extracting information from large data sets through the use of algorithms and techniques drawn from the field of statistics, machine learning and database management systems. In Indian context, at the level of the smart city, the digital and physical cities can be linked by the Internet of Things, thereby forming an integrated cyber-physical space along with Artificial and Business Intelligence. In this space, the state and changes in the real world of both people and logistics will be sensed automatically in real time. Cloud computing handles the massive, complex computation and control in data management where data mining techniques with optimality algorithms plays very important role. Nowadays vehicle (BUS) is very important mode of transport to move from one place to other place. During the time of travel passengers face many problems such as seat availability, arriving time of bus and travelling time. The important objectives of this paper are:

1. Vehicle’s real time parameter such as speed, current bus location, number of passengers in bus, seat availability is gathered and used for benefit.
2. Improve the quality of transportation system.
3. Developing Automatic Vehicle Location system using GPS for positioning information and GSM/GPRS or information transmission.
4. Tracking the driver’s activity whether he/she is following the pre-define route and speed.
5. To send information about the location of vehicles (buses) to the passenger by SMS.
6. Getting the data into our pre-set format.

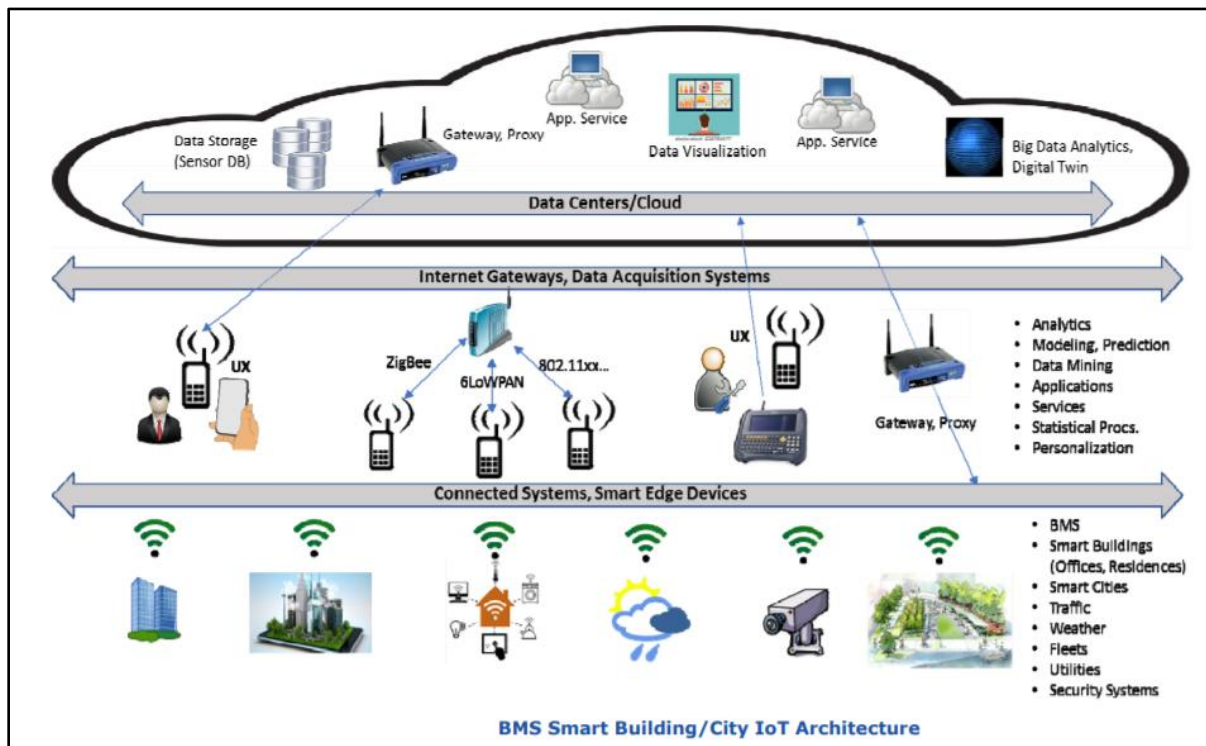


Figure 1.0: Overview of the System

Figure 1.0 highlights an important components of Smart City. All the digital world of a city is communicating to each other through a Cloud database where Traffic Management Systems plays extremely important role along with Global Positioning System. Data Analysis, Business Intelligence, Data Mining, Web Services, Smart buildings, Traffic Management System, Weather Forecasting System and Security Systems are the components of a Smart City Architecture. The initiative of building smart work was started on 1st of July in 2015 to connect people of rural areas with the high-speed internet networks to access any information needed. Three important elements of digital India are like creation of digital infrastructure, digital literacy and delivering services digitally all over the country. This project has been aimed to be completed by 2019. It is the programme which will benefits both, service providers and consumers.

This research paper consists of GSM modem, level converter, microcontroller, Speed Sensor, passenger counter, display, power supply, GSM modem and data parsing tool. The data parsing tool helps us in getting the data and information into our required format. This paper embed the various GPS services into a system which is used for tracking and positioning of vehicle by using the global positioning system (GPS) and using sensors to detect the speed of vehicle, passengers present in the bus. The Microcontroller is programmed to control and display the information according to the received signal from the GPS and sensors placed in the bus. GSM modem is used to transmit and receive information. Mobile is used to get the information about bus. When the people are sending SMS to bus unit, the GSM modem in bus unit receives the SMS and signal is given to level converter and level converted signal is given to microcontroller, which is used to process the signal. GSM modem is used to send the information to the mobile. The overview of the system is shown in fig 1.1.

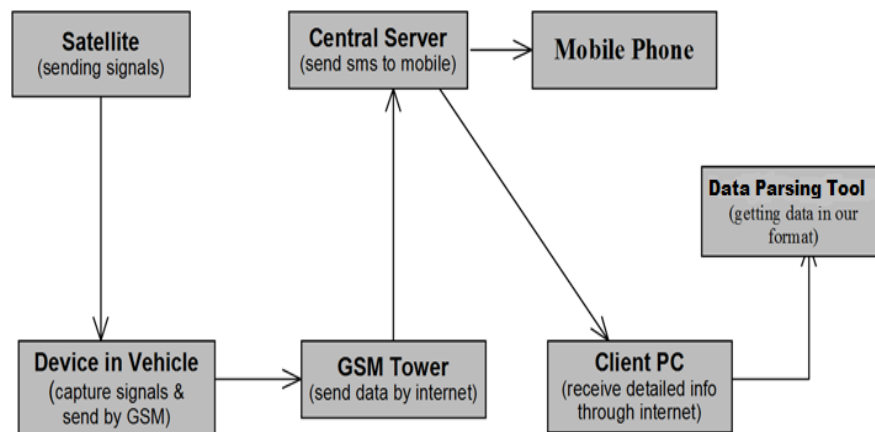


Figure 1.1: Overview of the System

2. POSITION CALCULATION THROUGH GPS:

To provide an introductory description of how a GPS receiver works, measurement errors will be ignored in this section. Using messages received from a minimum of four visible satellites, a GPS receiver is able to determine the satellite positions and time sent. The x , y , and z components of position and the time sent are designated as where the subscript i is the satellite number and has the value 1, 2, 3, or 4. Knowing the indicated time the message was received, the GPS receiver can compute the indicated transit time of the message. Assuming the message travelled at the speed of light, the distance travelled, can be computed. Knowing the distance from GPS receiver to a satellite and the position of a satellite implies that the GPS receiver is on

the surface of a sphere centered at the position of a satellite. Thus the indicated position of the GPS receiver is calculated.

3. GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS:

Global System for Mobile Communications is one of the widely used mobile standards. As the name specifies, it enables the mobile users to interact all over the world at any time. GSM was actually designed to be platform independent. Because GSM provides a common standard, cellular subscribers can use their telephones over the entire GSM area which includes all the countries around the world where the GSM system is used. In addition, the GSM provides user services such as high-speed data communication, facsimile and a Short Message Service (SMS). The GSM technical specifications are also designed to work with other standards as it guarantees standard interfaces.

The figure 1.2 tells about the concept how to deliver the SMS to the appropriate receiver mobile. According to this paper the information about the location of the vehicle which is trapped is received by the GPS receiver then it is send to the user by using GSM technology.

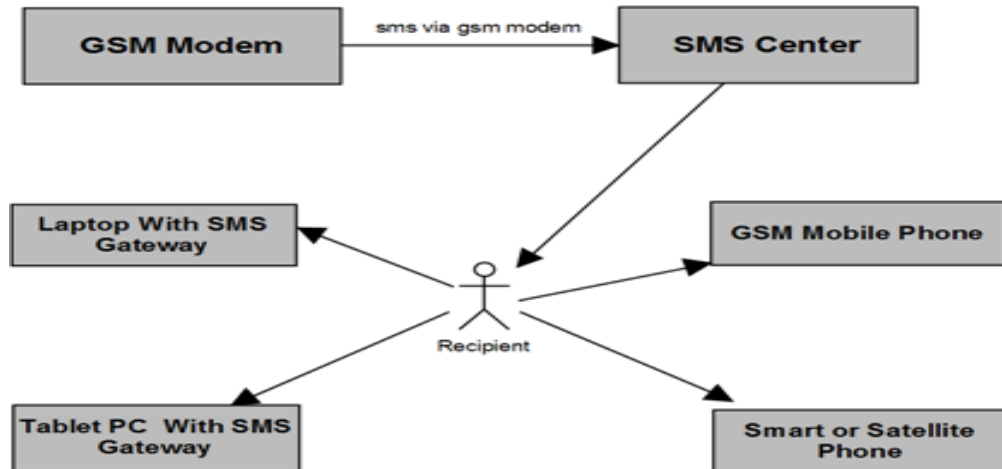


Figure 1.2: Delivering the SMS to the receiver mobile.

4. COUNTING PASSENGER USING SENSOR

To count the No. of passenger in bus, we setup a pair of sensors on the doors of vehicle (bus) i.e. on the front and back door which is connected to GPS device installed in vehicle. In this case we consider that the front door of bus will be used for passenger entry and rear door of bus will be used for passenger exit, if any passenger enters into the bus from front door then the set counter increases by 1 and if any passenger get out from the rear door of the bus then the set counter reduced by 1. Therefore, the sensors automatically are able to count the number of incoming and outgoing passenger in real time and data is sent to the database.

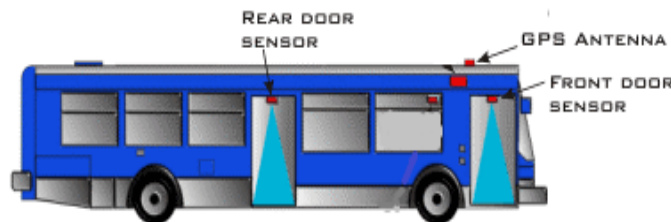


Figure 1.3: Sensor System on Bus

5. PROPOSED WORK:

The system being proposed makes use of the GSM and GPS technologies that allows the system to track vehicle and provides the most up-to-date information. The system tasks advantage of wireless technology in providing powerful management transportation engine. Overall system is partitioned into two major design units.

1. Vehicle unit
2. Tracking Server

This system is based on a stand-alone single-board embedded system that is equipped with GPS and GSM modems that is installed in the vehicle.

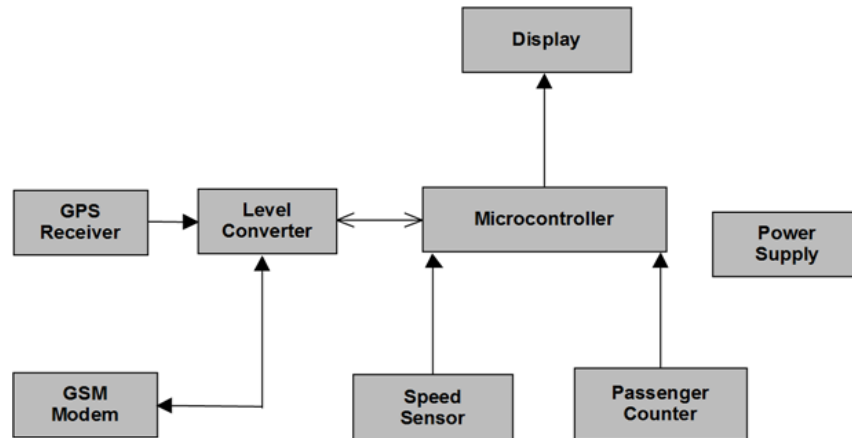


Figure 1.4: Block Diagram of Vehicle Unit

6. VEHICLE UNIT:

This is major part of the system and it will be installed into the vehicle. It is responsible for capturing following information for the vehicle

1. Current location of vehicle.
2. Speed of the vehicle.
3. No of passenger in vehicle(bus)

Vehicle unit is also responsible for transmitting this information to Tracking Server located anywhere in the world.

7. DATA TRANSCIEVER:

When all required information is extracted and processed, it needs to be transmitted to a remote. Tracking Server which will be able to display this information to the end user. For real time tracking of vehicle, reliable data transmission to remote server is very important. Wireless network is required to transmit

Vehicle information to remote server. Existing GSM network is selected to transmit vehicle information to remote server because of broad coverage of GSM network. It is also cost effective rather than to deploy own network for transmission of vehicle information. For data transmission over GSM network GSM modem is required. GSM modem can send and receive data SMS text messages and GPRS data over GSM network. Location data is transferred to microcontroller through serial interface. After processing of the data provided by GPS receiver, microcontroller

transmits this information to remote location using GSM/GPRS modem. Microcontroller controls the operation of GSM/GPRS modem through serial interface using AT commands.

8. SOFTWARE FLOW:

Microcontroller is acting as Central Processing Unit for Vehicle unit. All operations of the In-Vehicle Units are to be controlled by the microcontroller. Microcontroller needs instructions to operate the whole System. These instructions are provided to microcontroller by writing the software into microcontroller's flash memory. It reads the software instruction by instruction and performs the action as required by instruction.

9. TRACKING SERVER:

Tracking server maintains all information received from all Vehicle units installed in different vehicles into a central database. This database is accessible from internet to authorized users through a web interface. Authorized users can track their vehicle and view all previous information stored in database. Tracking server has a GSM/GPRS modem attached to it that receives SMS from Vehicle units and sends those messages to the server through serial port. Tracking server saves this information into database.

10. MANAGING DATABASE AND INTERFACE DESIGN:

Tracking Server maintains all information in a database. To display this information to users front end software is required that can display all information to the user. The system is being installed the Vehicle unit in his vehicle and also the administrator of the system who is managing Vehicle Tracking System. There may be a number of vehicles installed with In-Vehicle units therefore server must be able to manage and distinguish information sent by all In-Vehicle units. For this purpose information must be available to server about all vehicles that are installed with In-Vehicle units. Whenever In-Vehicle unit is installed, information about that vehicle is stored in the database. Web interface must also support this functionality. Since web interface will be accessible over the internet therefore access must be restricted to authorized users only. Therefore information about all users of the system must be stored in database.

11. DATA PARSING (GETTING DATA IN OUR OWN REQUIRED FORMAT):

The GPS device give the output in the simple text format, that contains time, position, and velocity data and other required data in the fixed width fields (not delimited) defined in the following table:

FIELD DESCRIPTION	WIDTH	NOTES
Sentence start	1	always '@'
Year	2	Last 2 digits of UTC year
Month	2	UTC month, "01"..."12"
Day	2	UTC month, "01"..."12"
Hour	2	UTC hour, "00"..."23"
Minute	2	UTC minute, "00"..."59"
Second	2	UTC second, "00"..."59"
Latitude hemisphere	1	'N' or 'S'
Latitude position	7	WGS84 ddmmmmmm, with an implied, decimal after the 4th digit

Longitude hemisphere	1	'E' or 'W'
Longitude position	7	WGS84 dddmmmmm with an implied, decimal after the 5th digit
Altitude sign	1	'+' or '-'
Altitude	5	Height above or below mean sea level in meters

Sentence end

The initial data captured by the GPS device is shown in the figure 1.5.

```

@0407031 12755 S2933200 E03017304 g017+01149 E0000N0000 U0033
@0407031 12756 S2933200 E03017304 g017+01149 E0000N0000 U0033
@0407031 12757 S2933200 E03017304 g017+01149 E0000N0000 U0033
@0407031 12758 S2933200 E03017304 g018+01149 E0000N0000 U0030
@0407031 12759 S2933200 E03017304 g018+01149 E0000N0000 U0027
@0407031 12800 S2933200 E03017304 g019+01149 E0000N0000 U0026
@0407031 12801 S2933200 E03017304 g019+01149 E0000N0000 U0026
@0407031 12802 S2933200 E03017304 g019+01149 E0000N0000 U0026
@0407031 12803 S2933200 E03017304 g019+01149 E0000N0000 U0026
@0407031 12804 S2933200 E03017304 g020+01149 E0000N0000 U0025
@0407031 12805 S2933200 E03017304 g020+01149 E0000N0000 U0024
@0407031 12806 S2933201 E03017304 g020+01149 E0000N0000 U0022
@0407031 12807 S2933201 E03017304 g020+01149 E0000N0000 U0022
@0407031 12808 S2933201 E03017304 g021+01149 E0000N0000 U0021
@0407031 12809 S2933201 E03017304 g021+01149 E0000N0000 U0021
@0407031 12810 S2933201 E03017304 g021+01149 E0000N0000 U0021
    
```

Figure 1.5: GPS data captured by the data logger.

The data we are getting at initial phase is very complex and difficult to understand, so by using data parsing technique, the initial data is simplified and arranged according to pre-set format by which one can get data in whatever format he/she wants.

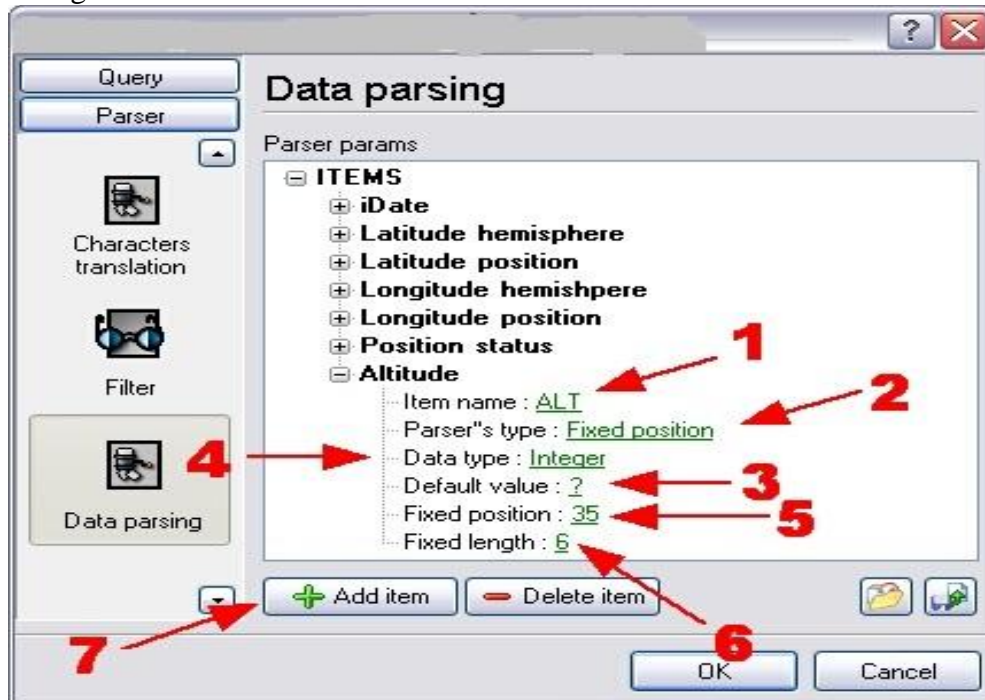


Figure 1.6: Data Parsing

12. CONCLUSION:

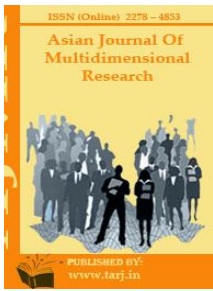
Using and implementation of this embed GPS system is very easy. By using this system the vehicle tracking will be completed with the help of data mining. The number of passengers inside the bus is found keeping infrared sensors in the footsteps. The seats available in bus will be found by number of passengers inside the bus and the information about the location, speed count, seat availability is informed to the passengers using SMS as every component of Smart city is connected centrally in Cloud database. The advantages of the system is that all the people will get traffic information easily, we can easily track the vehicle location as well as activity of driver. Implementation of this system will help to reduce the corruption and traffic problems in huge population country like India.

This system is quite hard to implement on all the buses especially in India as the condition of buses in India is not so good but it is not impossible. Proper system architecture long with well infrastructure can bust up systems easily. We can implement it on the buses which provide good facility and which are in good condition for example: low floor buses of Delhi, Shivneri buses, Shivashahi buses, Red Buses and many more. After that we can try to implement it on all the buses and help to provide this system to all.

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THE EAST - WEST ENCOUNTER IN RUTH PRAWER JHABWALA'S 'ESMOND IN INDIA'

Dr. Manisha*

*Assistant Professor,
Department of English,
Government College Aharwala (Bilaspur), INDIA
Email id: manishabharwan@gmail.com

ABSTRACT

*Being a European and writing about India Jhabvala is well acquainted with the European as well as Indian trends of literature. Subsequently her style of expression is a strange mixing of two trends of writing. However her position is unique because of her cultural segregation. Other than her Indian readers, as a writer she is profoundly aware of her Western readers as well. Jhabvala's literary world delineates three kinds of encounters cultural, social and spiritual. The East - West conflict here stems from cultural and social differences between India and Europe. The conflict inside the author's personality finds expression in the East-West encounter of culture - shocks. In the social context Indians and Europeans meet, fall in love and enter into conjugal relationship. But their family life may apparently be a failure as in **Esmond in India** due to their cultural differences. Jhabvala's situation as an outsider herself made her profoundly aware of cultural differences and influences, consequently her writings always force the reader to know about cultural influences. This aspect of her novels is manifested and at times focuses attention on the East-West encounter, evident itself in **Esmond in India**. Jhabvala considers herself to be an outside spectator and makes driving characters in her own image. She uses marriage as a significant instrument for investigating the manners, religion, beliefs of different classes of societies and of different culture.*

KEYWORDS: Conflict, Contrast, Relationship, Integrate, Culture, Encounter

INTRODUCTION

Jhabvala's novel *Esmond in India* deals with the conflict between East and West; more importantly than any other because of her own dilemma of living in an alien country. The hero of this novel Esmond Still wood, an English man is the male counterpart of the writer R.P.Jhabvala. Whatever Jhabvala feels about India during her stay here, Esmond also feels as a man and the decision of both of them is the same i.e. to leave India for good. Gulab, the most important

character of the novel is married to Esmond Stillwood, a European residing in India. Mrs Jhabvala for the first time introduces a foreign character in her novel and it is through him that she brings out the contrast between the East and the West. Jhabvala uses Gulab's marriage to Esmond to present the clashes between traditional and modern values in a more complex way than in her previous novels- because for the first time she presents the consequences of arranged marriage and introduces the added interest of across- culture marriage.

Esmond in India can be viewed as the expression of the author's inner dilemma: whether to belong or not to belong to India and if one wishes to belong, how to go about it. In *an Experience of India* she stays this central problem that bothers the Westerner, especially the sensitive Western writer who lives in India and who aim at concretizing her life in India in her literary work. The main characters in this novel try to cope with the experience, the world that is India. Mrs Jhabvala has externalized her personal predicament, the predicament of transforming her inner life according to the dictates of the outer life.

As a matter of fact the theme of the novel is the problem of integration. By presenting European character, Esmond, Jhabvala has presented her own difficulty in fully integrating herself to her adopted country India. She makes it apparent for the first that her initial enchantment and excitement about this mystic world, the East is wearing off. Now she has a deeper insight into this unknown society and is able to make it apparent through these two characters. Both the characters are highly exaggerated and it is the Gulab-Esmond relationship, which is at the heart of the novel and forms the main core of personal and familial tangles in the narrative. In the novel, Esmond is a teacher of art and history. He is greatly attracted towards Indian art and culture. While other Europeans left India after independence, Esmond continued to live here out of his deep appreciation of Indian culture. He married an Indian woman Gulab and had a son named Ravi from her. Both Esmond and Gulab lived happily for some time and both of them were satisfied with each other. Esmond earned his livelihood by giving tuitions of Indian art and culture to the fashionable ladies while Gulab looked after her home and performed the household chores. But soon we get the impression that Gulab and her European husband are not on very amicable terms. It also reveals the fact that Esmond and Gulab are poles apart as far as their habits of sleeping, eating and dressing are concerned. One instantly wonders as to what prompted Esmond to marry a girl like Gulab so untouched by European influence. Moreover she remains totally Indian even after being Esmond's wife for five long years. Perhaps here Mrs Jhabvala is determined to bring out the fact that Indian women can't change, they would remain what they are and Gulab, as it appears, is a true portrayal of Indian women as Jhabvala saw them. Esmond Stillwood feels embarrassed taking her out to social gatherings. She is also miserable when forced to meet and mingle with his friends. In the end, he leaves her alone and this process of estrangement suits them both: "He found that her absence was far more impressive than her presence."

He gives his English friends the false impression of Gulab as a real old fashioned Indian lady veiled, shy and sitting in a marble courtyard with the fountain splashing around, her maid singing love lyrics and serving her assiduously. He escaped social scrutiny by cleverly giving evasive or distant replies when questioned about his wife. The initial enchantment of Esmond for India and Indians has gone. He is totally fed up with his wife Gulab and seeks relief in the company of an English woman Betty. There was no romance about life in India, Esmond knew: only for tourists, he thought bitterly, who clapped their hands in delight over what was, he knew, only shabbiness and poverty to a point where the spirit yawned at the boredom and futility of it all. He finds

India to be too much to stomach and his decision to leave for England with Betty makes him feel young, free and sprightly. The novelist Ruth Praver Jhabvala herself came to India as a bride and thus got an opportunity to know and understand Indian culture. Very honestly, she tried her best to integrate herself to Indian culture and tradition. Her honeymoon with India continued for some time. But soon despair set in and she felt frustrated with the surroundings of India. She ultimately decides to leave India and settle in USA. Similarly her European character Esmond is an embodiment of Jhabvala herself as a writer. He suffers from continuous boredom. The enchanting land of India does not appeal to him. Ultimately Esmond decides to leave India. Thus, the novel *Esmond in India* brings out the inner reality of the novelist R.P. Jhabvala herself.

Esmond in India details the unhappy marriage between Esmond and Gulab and its eventual breakup. Jhabvala introduces a darker level into her writing. While *Esmond in India* is still a comedy Esmond's vicious nature makes it a rather dark one. Esmond's nature- a mixture of romanticism and cynicism- is supported by no ideal at all, not even the ideal of service to those closest to him. Esmond's marriage is a clear example of this nature:

“he had wanted an Indian son, a real piece of India, as he had wanted an Indian wife.” The marriage is a failure because neither he nor Gulab put any efforts into making it work, and its failure provides the battleground for the first of Jhabvala's many cross- cultural confrontations. Like James and Foster, turns from inter social confrontations to intercultural ones.

Esmond may understand Indian culture from a distance, as his lectures suggest, but he has no real tolerance or feeling for the Indian way of life, as shown in his refusal to allow Ravi to have his head shaved- a symbolic ceremony that Esmond now chooses to label a barbaric -custom or in his insistence that only English food be served in his home. Hence Jhabvala turns once again to food to draw contrasts between two characters; Gulab loves to eat the hot spicy food sent from her mother's house:

“She sat on the floor and ate with her fingers. She always did so, whenever Esmond was out, for that was the way she enjoyed her food most.”

When Esmond returns home for his lunch soon afterward, it is very different scene:

“He sat alone at his smart little dining-corner and ate his cheese salad. Everything on the table was colorful and modern- the bright table- mats, the painted drinking- glass, the earthenware plates of a rich dark green- so that it looked rather like a beautifully photographed full -page advertisement in an American magazine. It was very different from Gulab's spicy meal eaten on the floor out of brass bowls.”

Like so many of her European characters, Esmond feels himself trapped in and overwhelmed by India:

“He decided to go and see Betty. He always, whenever, he felt particularly oppressed by Gulab, went to see Betty. Her flat was so light, modern and airy; she herself so light, modern and airy. Being with her was almost as good as being in England which was the place where he wanted the most passionately to be.”

Like Professor Hoch before him Esmond sees himself as an expert on Indian culture. But again like Professor Hoch, Esmond is seen different by some of the Indians with whom he comes into contact:

“The servant wondered what the Sahib was saying; he could not even identify the language he was talking. Esmond, who rather enjoyed listening to himself speaking in Hindustani, gave him a long and sonorous lecture on his duties.”

This still deflating of Esmond continues when Jhabvala presents Esmond’s linguistic abilities through Western rather than Indian eyes; “of course he had been in India a long time and had an Indian wife and spoke such fluent Hindustani. He could really talk to these people like one of themselves.” This admiration for Esmond’s accomplishments voiced by a western lady is not, however, shared by her male compatriots, who see Esmond as a joke rather than an expert on Indian culture.

And Esmond’s deflation is complete when, after the “monumental tragedy” of the loss of his shoes from the steps of the Taj Mahal. Jhabvala places Esmond in front of the crowd like an Aunt Sally to have him knocked over by Betty, his English friend and lover, who laughs at the ridiculous figure standing before the magnificent monument.

And as Meena Belliappa notes, this incident “reveals how out of sympathy he is with the country on which he has amassed so much information.” We eventually see that as Edmond's true idea of Indian culture is to sit drinking tea and making polite conversation in Madhuri’s drawing room. But this is a hardly the real India and because he realizes this Esmond longs to return to England. Only Betty fully understands his disillusion and is capable of seeing his selfish nature.

Through Esmond, Jhabvala traces for the first time in her fiction the cycle, described in *Myself in India* she believes all westerners in India must go through. Edmond had clearly been at the first stage of the cycle- “everything Indian is marvelous”- when he married Gulab. During the five years between his marriage and the period of the novel, he has passed through the second stage - “everything Indians not so marvelous” - and has entered the final stage - “everything Indian abominable”.

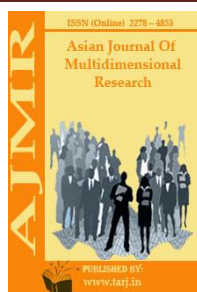
During the course of the novel we see how this stage rapidly overwhelms him and leads him to his decision to leave India forever. All this is reflected in his relationship with Gulab who for Esmond represents his India. Esmond reacts, finally, against everything he sees around him, the poverty, the dirt, the heat, all symbolized for the first time in Jhabvala’s fiction, by “the Indian sky- anunchanging, unending expanse of white -blue glare, the epitome of meaningless monotony which dwarfed all human life into insignificance.”

Instead he runs to the relative comfort of England,” where there were solid grey houses and solid grey people, and the sky was kept within decent proportions”.

This novel Esmond in India rings the note of the east -west encounter. Though Jhabvala wrote about the east -west encounter yet the central character in almost all her novels is India and Indian society. In her novels, India reacts heavily on her Western characters. She describes the experiences of westerners in India and their interaction with Indians. Her fiction undoubtedly revolves around the cross-cultural eroticism, desire and moral values. In *Esmond in India* Jhabvala typically creates characters, both Indian and European who have an uneasy relationship with their cultural heritage. She is believed by many critics excellent in recording their manners, desire and behaviour. Thus in Jhabvala’s novel *Esmond in India*, there is a deep penetration and multi-pronged analysis of the various facets of the life and living of the people of India as well as the people from the west.

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TENTACLES OF COLONIALISM IN THE NOVELS OF NGUGI WA THIONG'O

Dr Satinder Singh*

*Assistant Professor,
C R Kisan College Jind (Haryana), INDIA
Email id: gogikundu@gmail.com

ABSTRACT

As a writer of comprehensive nature and expanded vision, Ngugi wa Thiong'o is keenly aware of that the ghost of colonialism can be droven away by learning and knowing its nature, temperament and demeanour. Being a messiah of the black tribals in Africa particularly in Kenya, the novelist decides to awaken and enlighten the masses that the mighty colonial empire can be dashed and smashed to the earth if the natives are well acquainted with its social, cultural, political and conspiratorial structure and designs. That is why, Ngugi wants to retaliate and attack at the right time, at the right moment and in the right direction on this colossal colonial empire, and he deliberately starts from the critical realist phase, when he is content to criticize imperialism, and moves into the socialist realist phase when he becomes openly socialist, militant and confrontational. This means that his writing becomes a national and people-oriented literature in which he demonstrates the power of the masses as a force that can fight and bring an end to colonialism and capitalism.

KEYWORDS: *Retaliation, Revolutionary Regenerative, Venomous Fangs, Cancerous Roots, Educational Colonialism, Circumcision Dance, Missionary Educational System, Colonized Man, Nigerian Society*

INTRODUCTION

The depiction of retaliation, in the socio-cultural, philosophical and political vistas of Ngugi, is a major influence on his writings. In the fictions of his contemporaries this retaliation and violence tend to consume rather than liberate but in case of Ngugi it is positive and optimistic and it is known for its revolutionary regenerative nature. The primary concern of Ngugi is to change an existing unacceptable and oppressive social order whereas his retaliation does not assume the shape of destruction, sometimes it becomes destructive for the exploiters but mostly it is must for the masses for their construction in every vistas of life. As a writer of comprehensive nature and expanded vision, Ngugi wa Thiong'o is keenly aware of that the ghost of colonialism can be droven away by learning and knowing its nature, temperament and demeanour. Being a messiah

of the black tribals in Africa particularly in Kenya, the novelist decides to awaken and enlighten the masses that the mighty colonial empire can be dashed and smashed to the earth if the natives are well acquainted with its social, cultural, political and conspiratorial structure and designs. That is why, Ngugi wants to retaliate and attack at the right time, at the right moment and in the right direction on this colossal colonial empire, and he deliberately starts from the critical realist phase, when he is content to criticize imperialism, and moves into the socialist realist phase when he becomes openly socialist, militant and confrontational. This means that his writing becomes a national and people-oriented literature in which he demonstrates the power of the masses as a force that can fight and bring an end to colonialism and capitalism.

Ngugi wa Thiong'o raises his protest against the colonialism which was introduced to Kenya through its tentacles viz : cultural, economic and linguistic. These three venomous fangs of colonialism had cancerous roots which unhinged the Kenyan community and paralysed the whole social, religious, cultural and economic fabrics of the country. Colonialism entered in Kenyan society first in the form of religion and education then it overcame culture and economy of the nation. Ngugi begins his expository analysis of Kenya's socio-political problems in The River Between with religion and education where he draws attention to the existence of a canker in the society and suggests what must be done to avert the dangers.

Christianity becomes the guiltiest institution of capitalism during colonialism. According to Dul Johnson, "The Bible was relied upon to subdue the soul so that the body and the land could be more easily exploited."¹ Religious adherents were automatically recruited into the middle class in Kenya even before and after independence. Waiyaki in The River Between, Njoroge in Weep Not, Child and Kihika in A Grain of Wheat see Christianity as an instrument of destruction of the peace in the land but Waiyaki seeks a compromise between Christianity and traditional values. But for Kihika, Christianity becomes some truth in the religion not to wash and reconcile to the traditions but to use as a weapon to further his cause. That is why, the Bible becomes a revolutionary manifesto in the hands of Kihika.

Cultural-cum-educational colonialism is imposed on the Kenyans through the symbolic manifestation of Western ideology in the form of the Headmaster of the Siriana Mission in Weep Not, Child and The River Between. The first cleavage among the black people of Kenya comes to the surface when some tribals decide to follow Christian faith and to violate tribal's traditional ways of living. Kabonyi and Joshua are the model examples who embrace white man's tradition and culture in the novel The River Between. Chege, an elder of the village, finds this conversion harmful for the natives when he sees:

Kabonyi and Joshua were converted, he broke off their former relationship. These Christians would not come to any good, he always said. He saw more than any other could see. These followers of Joshua would bring so many divisions to the land that the tribe would die.

Were these Christians not now preaching against all that which was good and beautiful in the tribe? Circumcision was the central rite in the Gikuyu way of life. Who had ever heard of a girl that was not circumcised? Who would ever pay cows and goats for such a girl?²

As a result, Joshua becomes the undisputed spiritual leader of the new faith when he thunders in the church and it was always packed full at the time of his sermons. In fact:

Joshua had emerged from this trial much strengthened in faith. He now preached with even greater vigour. As the spiritual head of the hills, he enforced the Church's morality with energy. All the tribe's customs were bad. That was final. There could never be a compromise. (TRB : 84)

In his mission of spreading colonial Western culture and religion, Livingstone, the head of the Mission, adopts the "catch-them-young" policy. He trains young natives like Waiyaki, Kamau and Kinuthia, and sends them to villages where they engage themselves in the mission of spreading European values. Livingstone "had always liked the idea of training some Mission boys who could be sent out to spread the good news" (TRB : 55). Joshua is one such early candidate who is sent to spread the good news :

He, along with a few others, had been the first to be converted to the new faith. He was then a young man who ran from the hills and went to live with the white man in the newly established Mission.... The new faith worked in him till it came to possess him wholly. He renounced his tribe's magic, power and ritual. He turned to and felt the deep presence of the one God. Had he not given the white man power over all? He learned of Jesus –

Behold, a virgin shall conceive,
And bear a son,
And shall call his name Immanuel.

He realized the ignorance of his people. He felt the depth of the darkness in which they lived. He saw the muddy water through which they waded unaware of the dirt and mud. His people worshipped Murungu, Mwenenyaga, Ngai. The unerring white man had called the Gukuyu god the prince of darkness. (TRB : 29)

This convert rejects the Gikuyu customs and practices with a vehemence not seen even in the white man. The native convert disowns his own daughters Muthoni and Nyambura the instant they either incline to old faith or old customs.

According to Lingajara Gandhi, "At the start of the colonization process, the young men, caught in Western euphoria, begin to doubt and even reject the indigenous values and ways of life"³ After returning from Siriana, Waiyaki shows conspicuous changes in his attitudes, indicating the extent to which his mind is colonized by Livingstone's ideology. Earlier, whatever details regarding Gikuyu land and culture, Chege had related to him were like visions; but now he regards his father's ideas as an old man's illusions. Earlier, Waiyaki longed for circumcision, but after the Siriana trip he cannot participate in the circumcision dance and songs without embarrassment; he regards the whole ritual including dance and songs, which according to Jomo Kenyatta are part of the initiate's education in tribal customs, traditions and beliefs as an act of tribal frenzy – an expression that he has borrowed from Livingstone's ideology. One may recall a similar situation from Chinua Achebe's *Things Fall Apart* : Okonkwo's son Nwoye refuses to return to his father's ways once he is converted to Christianity.

The Headmaster in *Weep Not, Child* strongly believes in the supremacy of the white man's value and promptly imposes them on the young black boy, Njoroge. He believes:...that the best, the really excellent could only come from the white man. He brought up his boys to copy and cherish the white man's civilization as the only hope of mankind and especially of the black races. He was automatically against all black politicians who in any way made people to be discontented with the white man's rule and civilizing mission.⁴

In a colonial context, the keepers of native culture as well as the disseminators of superior culture impose great demands on youth. Hence, the role of the youth in any struggle against colonial oppression becomes pivotal. In Weep Not, Child, Njoroge's brother, Boro joins the Mau Mau. Such young ones, considered the biggest threat to the colonial government, become prime targets of its troops and the home guards. While the missionaries in schools are busy colonizing the young minds with Western civilization, the home guards in the forest are busy killing not only those who have turned into Mau Mau fighters but also those who are suspected to have joined the movement. This is why, Njoroge, a suspect, is expelled from school and brutally assaulted by the police for allegedly murdering a native collaborator of the colonial rule, laments: "They don't want an old man's blood.... They-want-the-young-blood" (WNC : 123).

In Petals of Blood as well as in Devil on the Cross, Ngugi presents that the Kenyan society is dominated by Western cultural values. The part of Kenyan society which is most affected by this plagues of cultural and linguistic imperialism is the new Kenyan elite who have been to Western schools. From this standpoint, we note that the Western style of education which was bestowed on Africans has its responsibility for the alienation of the African elite. Indeed, beyond any shadow of doubt, the colonial and missionary educational system consists of a series of sectarian rituals designed to condition African people to act in accordance with the dictates and wishes of the reigning hierarchy. That system of education is an unsuitable one which aims at producing people foreign to their own society and to themselves. Such is the case of Kenyan education in Ngugi's Petals of Blood and Devil on the Cross. In both novels, the Western style of education is copied in its form and content. Those who go to Western schools are fascinated by the English culture and way of life. These people who are the African elite master Western languages and they easily adopt Western ways of life. These elite members tend to under-estimate their African values while proudly praising Western values. It is on this trend that Gatuiria in Devil on the Cross, who is a university student, stutters like a baby when speaking his Gikuyu mother tongue without mixing it up with English words, while he speaks English fluently and purely. That is what, Ngugi explains in these lines from Detained :

In some schools, corporal punishment is meted out to those caught speaking their mother tongues; fines are extorted for similar offences. Men at the top will fume in fury at fellow Africans who mispronounce English but will laugh with pride at their own inability to speak a single correct sentence in their own African languages.⁵

It is worth pointing out that the Western schools have subverted the African people by imposing on them a system of education which has nothing to do with the hopeful enquiry men pursue in the world, with the world, and with each other. In other words, that system of education teaches the Africans nothing about their environment though this should be one of the most important goals of education. Instead, the education which is bestowed upon African people is one which would facilitate the colonization of the mind and cultural imperialism.

In Petals of Blood, it is found that some Africans rebelled against that form of education. This raises a strike at Siriana where Karega has led a strike just in order to reform the system of education. Munira asks Karega the reasons for the protest he has led at Siriana and Karega answers him in these words:

I don't really know... when the lawyer spoke, I seemed to get it... an inkling... but it eludes the mind...an idea... I mean, we were men... a communal struggle... after all, we were the school, weren't we? We imagined new horizons... new beginnings... a school run on the basis of our

sweat... our collective brains, our ambitions, our fears, our hopes... the right to define ourselves... a new image of self... all this and more... but it was not clear... only that the phrase African populism seemed to sum it all !⁶

Such a protest is just to show that there was nothing of that education which was meant to help African people to better cope with the difficulties of their daily life. It is needless to say that the imposed institutions and processes, such as the Western school and the Church, fail to harmonise with the particular world of the colonized man.

Apart from the cultural and linguistic colonialism, the more destructive and blood sucking branch of colonialism is economic. Under the economic colonism, the whole economy and agrarian is controlled and handled by the colonizer. Ngugi exposes the immorality of the colonial government that targets essential food grains for tax-hike, buying it cheaply from peasants and making huge profits by selling them at high prices. The village situation in Weep Not, Child is much the same. Pyrethrum, a cash crop, cannot be grown by all Africans. Only Jacobo, the rich landlord and chief of the Home guards is licensed to grow pyrethrum. The colonizer has established a system in which a few natives, like Jacobo are used – and it is not individual whites using these people, but the system – to deprive the natives of the land. This explains why such agents of the system become more hateful than the whites themselves, for they act not for themselves but for the whites, and convert the sacred land into a money-yielding commodity. It is in this sense that they are traitors to the land.

An important feature of the colonial system as visualized by Ngugi is the profane attempt to transform land into cash. This is why, the cash-crop growers in his fictional world, even when they are natives, are viewed with disrespect : “Blackness is not all that makes a man” (WNC : 21) we are told in Weep Not, Child : “A white man is a white man. But a black man trying to be a white man is bad and harsh” (WNC : 21).

As a novelist, dramatist, and essayist, Ngugi wa Thiong’o is among the best known post-colonial writers emerging from decolonized Africa. As a stern critic of colonialism and neo-colonial practices embraced by postcolonial African politics, he is keen promoter of the revolutionary power of culture by making himself, through his artistic and fictional world, the true embodiment of representation of the uprooted people. The deplorable condition of Nigerian society has been explored by Chinua Achebe, in the same way, of Kenyan society is represented by Ngugi. Both Achebe and Ngugi have deeply felt the helplessness of common humanity.

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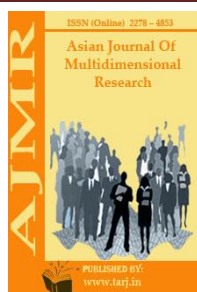
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INSIDE OUT OF PUNJAB MODEL JAILS: A CASE STUDY OF KAPURTHALA & FARIDKOT MODEL JAILS

Parvesh Kumari*; Dr Sandeep Kaur**

*Research Scholar,
Department, Police Administration,
P.U., Chandigarh, INDIA

**Assistant Professor,
Department, Public Administration,
SGGS College, Chandigarh, INDIA
Email id: sharma.14400@gmail.com

ABSTRACT

Prisons are very important and essential part of criminal justice system. Prisons, known as jails, hawalat, karagar and cells, were initially created to punish the law breakers and were situated in isolated places. Gradually, with the times, the concept of prisons underwent desired changes and these prisons have turned into reform houses for offenders and criminals. Awareness of Human Rights, World over, has given new dimensions to many of the institutions especially those which had something to do with the punitive actions against humans. Such institutions, now, try to protect the basic rights of those who have been booked on account of some violation and also ensure them bare minimum facilities. Based on the facilities provided inside the prisons, these jails have been placed in categories. Model or Modern jails have emerged out of such developments and ensure better treatment to the prisoners. Much is being said about the conditions prevailing in these jails and specifically about the model jails. In the present study, an effort has been made to examine the Model Jails of Punjab to bring out existing actual scenario.

KEYWORDS: *Jails, Inmates, Prison Model Act, Warder,*

INTRODUCTION

The term 'Jail' is popularly referred to as 'PRISON' which means a place of confinement or involuntary restriction on body generally checking the movements of a person, convicted for committing an offence or offences. The word Jail has been derived out of old French word jaiole¹ which means a cage. A **jail** is a place where criminals are kept in order to punish them, or where people waiting to be tried are kept.² The prison is an Ancient institution of punishment which was used by the Athens to chain a criminal or detain an offender. The Romans were first

among the Societies to use prisons as a form of punishment before them prison was more a place to detain the culprits than to punish them. The use of imprisonment as punishment is a relatively recent happening. Earlier, communities used to punish offenders through corporal punishments, fines, or banishment; people were kept in jail till punishment was carried out by way of fine or corporal punishment. Imprisonment as punishment came into vogue by the end of eighteenth century, thus is barely two centuries old.

In the earlier times, the communities were close-knit and people were scared of getting bad name by committing even the smallest of the crime as the entire family of the criminal was boycotted and the weight of stigma was too heavy to carry. The offenders were deliberately put to kind of humiliation by exposing them in a wooden frame to public mockery or ridicule, or by whipping them publically. In some part of the World, like UK and Scotland, there was practice to use ducking stools to punish the offenders by plunging them into water. Banishment was also used as a way of punishment. An offender was done to death only in rare cases when the offence was too serious. However, by the end of 18th century, the humiliation as method of punishment became less effective due to the reasons that communities became large thus less cohesive and social deviations became easy and more common leading to offences of different nature. The emergence of workhouses and jails are the result of non-payment of fines by the offenders and as a result keeping them incarcerated became the punishment in itself.

TYPES OF PRISONS

As have been stated earlier that prisons are designated place to house the offenders to keep them away from the society with a twin purpose of keeping the 'RASCALS OUT' and as 'PUNISHING THE OFFENDERS BY INCARCERATION'. The prisoners are detained in isolation, away from the society, for a fixed span of time and their freedom is curtailed during this period. Though there are different types of Prisons yet these all have the same purpose. Despite the fact the basic purpose is the same still these prisons are classified on different basis to house the offenders:

- I) Juvenile Prisons or Borstal Schools (Age based)-These are also known as Juvenile Detention Centres and such centres are meant to detain and reform the individuals under the age of 18* yrs. since the one who is not adult cannot be detained in general prison with Adults. Such offenders are housed in a place exclusively meant for juvenile. In India, juvenile homes detain the offenders who 16 years older; both under trials and convicted. There are provisions to detain separately the offenders below 14 years from that of offenders between the age group of 14-16 years.
- II) Women's Jails (Gender based)-This type of jails are meant to house or detain the women prisoners only and such prisons are mostly manned by women. There is only 1 women jail in Punjab located at Ludhiana.
- III) Central Jails (Crime and Security based)- Every state has its own rules to categorize the jail as central jail but there is one common feature of all the central jails that convicts sentenced for longer period (more than two years) of imprisonment. Other features are that these jails have more capacity to house the convicts and also provides for rehabilitation facilities. These are the maximum security jails to detain the dreaded type of prisoners. The state of Punjab has 9 Central jails.³

IV) District Jails (Crime, Area and Security based) - District jails serve the needs of the district in terms of managing the prisoners and are located at the district headquarters. These jails have better infra-structural facilities and better security arrangements than other jails within the state except central jails. These Medium security jails. There are 7 District jails in the state of Punjab.

V) Sub Jails (Crime, Area and Security based) - Sub jails are smaller prisons to detain the under trials and the convicts at the sub-divisional level within the districts. These jails are used transitional as the convicts are shifted to higher grade jails later and persons with small offences are let off after filing the preliminary action. These are jails with minimum of security.

There are 7 sub jails in Punjab.

VI) Open Jails (Minimum Security Prisons)-Open jails are meant for those prisoners who have exhibited good behaviour considering the prison guidelines.

These jails allow the prisoners to do agricultural activities such as preparing the land for growing vegetables, short term crops, and seasonal fruits depending upon the weather and local conditions. Such jails are housed in Agriculture farms and the inmates for the open jail are picked up by IG Prisons on the recommendations of Superintendent of the closed jail where he is undergoing the sentence. The prisoner should have agriculture background, good conduct, and should have served $\frac{1}{4}$ of their imprisonment in a closed jail. There is only 1 open jail in Punjab situated at Ludhiana.

VII) Special Jails (Hard Criminals based)-These type of jails are known as high security jails having special provisions to detain the hardened criminals or high risk criminals or habitual offenders who have been convicted for violent crimes, terrorism and insurgency. These jails are well fortified and have very tight security so that no escape from the jail is possible. There is No special jail in the Punjab state.

VIII) Other type of Jails (Purpose or Profession Specific) States have the power to create other types of jails which do not fall among any of the above discussed category.

Model Jails or Modern Jails

The concept of Modern/ Model jails has emerged towards the end of the 20th century as the prison reformists have been pushing the idea to do away with traditional jails, which were sans facilities and were more of dungeons. The impression to the common man was that jail life is no less than a hell. Of late, several developments in India ushered in change to bring modernization in the Prisons:

- a) Directions of the Supreme Court to improve the prevailing sub-human conditions in the jails.
- b) Growing Advocacy for the protection of human rights of the prisoners.
- c) Media and Social activists, often, highlighted the weaknesses and inadequacies of the prison administration.
- d) Focus of the various committees on the 'prison reforms'

In the light of above given reasons, the states have been directed to modernize the prisons and the Government of India has assured all financial and technical support to the states. In a bid to

modernise the jails, the Government of India directed the concerned Central agencies and State Governments to make serious efforts on the issue, thereby BPRD was assigned the responsibility in 1995 to look into the work regarding Jails. In 1996, the Supreme Court categorically stressed on the need of bringing uniformity in administrative practices of jail administration and also to improve the living conditions of the inmates. The need for such guidelines was also emphasised by the All India Committee on Jail Reforms (1980-83). Consequently, a Model Prison Manual Committee was constituted by the BPR&D with the permission of MHA in 2000. After series of discussions and deliberations of the working groups the committee came out with a 'Model Prison Manual for the Superintendence and Management of Prisons in India (2003).

The Manual consisted of 28 chapters dealing with all the areas related to jail administration:

- 1) Definition
- 2) Institutional framework
- 3) Headquarters Organisation
- 4) Institutional Personnel.
- 5) Custodial Management
- 6) Maintenance of Prisoners
- 7) Medical Care
- 8) Contact with outside World
- 9) Transfer of Prisoners
- 10) Execution of Sentences
- 11) Prisoners Sentenced to Death
- 12) Emergencies
- 13) Education of Prisoners
- 14) Vocational Training and work Programmes.
- 15) Welfare of Prisoners
- 16) Remission
- 17) Leave and Special Leave
- 18) Premature Leave
- 19) Prison Discipline
- 20) After-Care And Rehabilitation
- 21) Open Institutions
- 22) Under trial Prisoners
- 23) High Security Prisoners
- 24) Women Prisoners
- 25) Young offenders

26) Board of Visitors

27) Staff Development

28) Miscellaneous.

It has been a comprehensive document, based on National consensus by drawing the experts from cross section of jail administrators, to bring reforms and required changes in the jail administration which has been under the scanner of Supreme Court and other agencies to clean the mess in the management of jails. But it was found that there were some shortcomings in this manual, thus, it was thought to have comprehensive manual.

NEW MODEL PRISON MANUAL-2016

The lacunas of the Prison Manual-2003 needed to be addressed keeping in mind the misuse of certain provisions of leave and special leave and replacing these terms with parole or furlough with defined process to avail these. The Union Home Minister has approved the revised Model Prison Manual-2016 consisting of 32 chapters to bring uniformity in laws governing the jail administration.

Key Revisions in the Revised Manual:

- a) Access to free legal services for the weaker section.
- b) Additional provisions for the women prisoners.
- c) Rights of prisoners sentenced to death.
- d) Modernisation & Prison computerisation.
- e) Focus on after care services.
- f) Provisions for children of women prisoners.
- g) Organisational uniformity and increased focus on Prison Correctional staff.
- h) Inspection of Prisons.
- i) Other revisions.

These above mentioned aspects were covered under 4 new chapters.

Modern Jails in Punjab

For the present Study following Modern/Central jails of Punjab have been chosen:

- 1) Kapurthala Modern Jail
- 2) Faridkot Modern Jail

1) Kapurthala Model Jail: Set Up

Kapurthala town is situated near the Sports City, Jalandhar in Punjab. It is the administrative headquarters of Kapurthala District. "It was the capital of the Kapurthala State, a princely state in British India. The secular and aesthetic mix of the city with its prominent buildings based on French and Indo-Saracenic architecture self-narrate its princely past. It is also known as city of Palaces & Gardens."⁴

Kapurthala model jail is one of the different kinds of jail in Punjab with different facilities and is known as 'liveable jail.'⁵ "This jail is spread over the area of 70 with feature accommodation for convicts and kin, and libraries, educational facilities and shops for inmates. The Kapurthala

Model jail has been constructed in the year 2011 at a cost of Rs 118.45 Crore, with bio-metric facility, special suites, mobile jammers, X-ray scanners and the capacity to house 2728 prisoners.”

“The new jail also has the provision of accommodating family members of prisoners serving long sentences. Such families can stay for three-four days in the jail with their kin lodged inside the jail.

The special suites have been constructed in the jail; each suite will have a bedroom, a lobby, a kitchen and a bathroom. The jail has facilities like a 50-bedded multi-specialty hospital, administrative block, training center-cum-canteen and library blocks, central watch tower, dispensary, flour mill and workshops. The jail would also have educational facilities, fire-fighting system, solar water heater system, rainwater harvesting, sewage treatment plant, dual water supply system, and a large green central court with every ward. The new jail would have shops and other facilities, where prisoners and under trials could buy vegetables, sweets and other amenities.

The jail also have temple, gurdwara, and there would be parking for visitors near the entrance gate, inmates would get drinking water through an RO system and there would be family quarters and rooms for the staff in the hostel. Also, four layers of outer boundary and double strayed barrack.

The new jails would also have latest security arrangements like CCTV, prison management system and visitor management system.”⁶

There is one senior superintendent of police, working as a head of the jail. Then there is one deputy superintendent of police. Further, there are eight sub inspectors working as assistant superintendent of jails. Then there are thirty head warders and eighty three warders. Besides, there are 53 personnel of Punjab Ex-serviceman Corporation (P.I.S.C.O) and 50 guards of Punjab Armed Police are also deployed for better security.

Organizational set up Kapurthala Model Jail

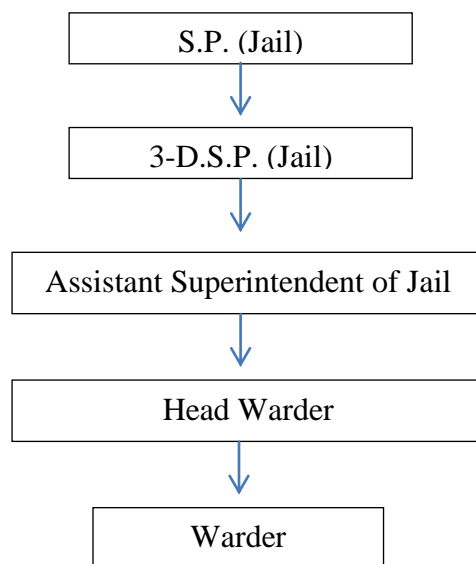


TABLE 1: DISTRIBUTION OF STAFF IN KAPURTHALA MODEL JAIL

SSP	1
DSP	3
Welfare Officer	1
Asst. Superintendent of Jails	8
Head Warder	30
Warder	80
PESCO	53
PAP	50
Total	223

Source: Official Record of Kapurthala Model Jail. (At the time of data collection)

Some of the facilities provided to the inmates of Kapurthala Jail:

- a) Four S.T.Ds
- b) Five Canteens
- c) Filter water tanks
- d) Spacious Barracks
- e) Attach washrooms
- f) Fan for each inmates
- g) Blood testing lab
- h) Education facilities
- i) Hospital facility with 24 hrs. availability of doctors
- j) T.V facility in all barracks
- k) Cultural activities and annual events
- l) Sports activities and annual events
- m) Gurdwara and Temple

Further, some special security arrangements of this jail:

- i) Eight security towers.
- ii) Ten to Twelve security personnel's keep on doing patrol 24hrs along with security wall.
- iii) The height of wall is thirty to thirty five feet
- iv) CCTV cameras

Inmates of Kapurthala Model Jail

TABLE 2: DISTRIBUTION OF INMATES: KAPURTHALA JAIL

Male	2654
Female	w175 c(+6)
Total	2829

Source: Official record of Kapurthala Model Jail, 2016-17

v) W: WOMEN---C:CHILD

2) Faridkot Model Jail: Set Up

Faridkot is a historical town named after famous Sufi Saint Baba Farid in Faridkot district. The town has a Municipal Council to run the local administration. It's a division with headquarter at Faridkot City consisting of three Districts Faridkot, Bathinda and Mansa.

Faridkot jail is also a model jail like Kapurthala with extra facilities. Faridkot jail is established in the month of November in the year 2011. This model jail is spread out in the area of 72 acre.

“The then chief minister had inaugurated this modern jail that has been constructed at a cost of Rs 113 Crore and is reportedly based on prisons in Spain on November 8. Spread across 72 acres, the Faridkot jail has about 13 barracks and can house around 2,072 inmates. The prison has its own power system, an inbuilt video conference system, water treatment plant, eight sheds where jail inmates will be imparted skills, library, kitchen, a 50-bed hospital and a dispensary. What sets it apart is that it has 96 quarters, 48 of which will be used by families of certain inmates who will be allowed to stay for a week”.⁷

Administrative Set Up: The Senior Superintendent of police headed the administration of this jail who was further assisted by one Deputy Superintendent of police and ten (10) Sub Inspectors working as Assistant Superintendent of jails. The jail had forty (40) head warders and ninety (90) warders. In addition, 53 personnel of Punjab Ex-Serviceman Corporation (P.E.S.C.O) and 50 officials of Punjab Armed Police were deployed for better security. The total strength of the staff posted in this jail was 246.

Organizational set up Faridkot Model Jail.

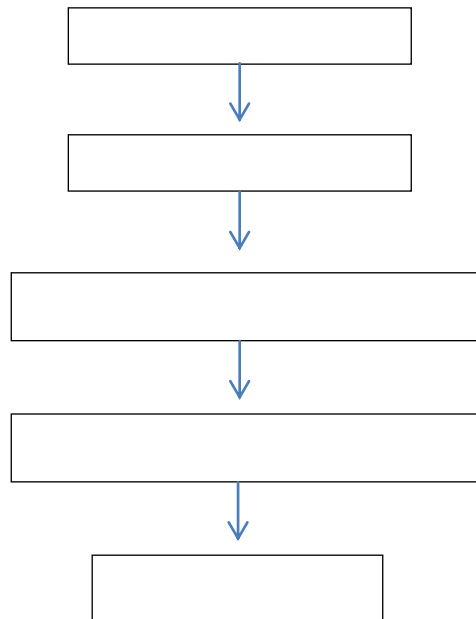


TABLE 3: DISTRIBUTION OF STAFF IN FARIDKOT MODEL JAIL

SSP	1
DSP	1
Welfare Officer	1
Asstt. Superintendent of Jails	10
Head Warder	40
Warder	90
PESCO	53
PAP	50
Total	245

Source: Official Record of Faridkot Model Jail. (ATDC)

Followings are some of the facilities available in the jail:

- a) Cameras attached with satellites
- b) Drug de-addiction center
- c) Hospital
- d) Six P.C.Os
- e) Gurdwara, Church, Temple and Masjid.
- f) Education facility from primary to secondary
- g) One welfare canteen
- h) Spacious barracks
- i) Attached washrooms with barracks
- j) Filter water
- k) Meditation and Yoga classes
- l) Sports activities and events
- m) Cultural activities and events
- n) Quarters built for inmates to spend some time with their families.

Inmates in Faridkot Model Jail

TABLE 4: DISTRIBUTION OF PRISONERS FARIDKOT JAIL

Male	1520
Female = 158 + 2 Transgender & 2 Children (Unaccounted)	160
Total	1680

Source: Official record of Faridkot Model Jail. At the time of Data Collection (ATDC)

It is quite evident from the existing facilities and provisions within these two Modern jails that both the jails have adequate infra-structure & facilities for the prisoners since both the jails are newly constructed at new sites involving total cost of Rs. 231.45 Crores. Both the newly constructed jails have tagged as State's First 'Liveable' Jails.⁸

After discussing the set up and the existing provisions of the two model jails now we focus on some important aspects of these two model jails.

PROVISIONS OF MODEL PRISON MANUAL-2003: SELECT ASPECTS IN SELECT JAILS.

In the present study, the researcher has focussed on the following selected Five(5) aspects of Select Jails; three of the covered aspects have been mentioned in the MPM (2003) and the last two aspects have been included considering their contextual significance.

- A) Maintenance of Prisoners.
- B) Medical and Health Care.
- C) Vocational Training and Working Programmes.

Other Important but Uncovered Aspects:

- D) Gang Wars & Prison Violence
- E) Cell Phones in the Cells.

A) Maintenance of Prisoners:

i) Food Provision: Food is necessity for every prisoner to survive and therefore adequate provisions have been made in Model Prison Manual (2003) and Punjab Prison Manual (1996). An average male prisoner needs appx 2000 to 2400 calories per day and an average female prisoner also needs appx 2400 calories. However, a pregnant and nursing female and a prisoner doing heavy work needs more calories (3100 calories). Required nutrients have been indicated in the manual- Page 62 of the jail manual 2003. The scale of diet is decided by the State government and cannot be changed except under the special circumstances that too with the approval of IG, Prisons on the recommendations of the Medical officer.

Every prisoner shall have three meals a day; a light meal in the morning before the beginning of the work, a midday meal; and an evening meal before the prisoners are rested.

On the occasions of festivals the prisoners may be served extra dish and similarly on the days of their fast they may be served dish of their liking. Variety in the food has to be ensured by issuing different pulses and vegies. It is required that all the grains should be properly cleaned before using or grinding. The flour and rice are properly sieved and stored. All the items meant for diet and even cooking like fuel will be weighed daily at the time of issuance by a responsible officer who is not below the rank of Assistant Superintendent. The quality of the ration will be checked by the Medical officer. Utmost care has to be taken by Superintendent and the Medical officer to keep vigil on the food supplies and food items.

The steel utensil to be used for cooking should be properly scalded and cleaned with boiling water.

There will be properly designed kitchen with enough space and provisions for cooking the food.

The food is to be served on timings fixed by the IG Prisons and the food is to be served hot and sufficient time (not less than 20 minutes) to be given to the prisoners to eat the food.

The cooked food will be inspected to ensure quantity, quality and proper cooking of the food. A prisoner will have the right to complain about any aspect of the food; quantity and quality and

the complaint must be looked into by the appropriate authority and be resolved and will also be recorded in the report book.

Actual Scenario: The realities were altogether different in the above discussed aspects of food and diet. The ration was not weighed daily rather it is given by estimation; each prisoner is given 480 gms of flour per day. The cooked food was inspected randomly. Poor quality of food had been reported in both the jails by the prisoners and Superintendent of Faridkot jail was suspended on the complaint of 600 hundred prisoners for serving them with poor quality food.⁷

ii) Clothing Provision: Earlier, every prisoner undergoing rigorous punishment or life sentence was required to wear prison clothing as prescribed by the rules but these rules stand amended now and no prisoner is required to wear distinct jail clothes.

Convicts are provided with sheets and bedding they bring of their own. Others who are under trials will only be supplied with clothing in case they make written request for the supply of clothes and bedding. While supplying the clothes and beddings, the climate conditions and local customs are given due consideration.

The used clothes & beddings before the reissuance will be fumigated and washed in hot water to provide bacteria-free clothes. Once allotted, the prisoners are supposed to wash their own clothes and beddings; only Central and District Jails will have the provision of laundry. The repair of torn clothes is also be done by the jail authorities and it is ensured during the weekly parade of the prisoners that their kit is complete. The clothes which are irreparable are used as rags to clean the kitchen or dusting of the barracks but if the clothes to be redundant are in bulk then these are sold in the waste material agents.

Actual Scenario: Convicts or under trials were not wearing jail clothes as per new norms rather were allowed to wear their own clothes which are provided to them by their relatives.

B) Medical and Health care Provision: All prisons offer some level of health care to its inmates. The prisoners have sick psyche even if they appear to be healthy. More so, due to non-availability of the work or program slots, often, they work half the time of the required work assignment which means they remain idle for longer period which leads to the deterioration of their health. The health hazards faced by the inmates are like old age problems, women related health issues like pregnancy, menses and other chronic ailments. The offenders because of their sexual practices, intravenous drug use and tattooing often fall prey to AIDS which involves stigma and high cost of care.

The provisions in the Manual (2003) are that there will be Hospitals in each jail; A type hospital with 50 beds and 8 Doctors catering to 7 specialities and B type with less than 50 beds 5 Doctors 4 specialities. (See table below)

TABLE 5: PROVISIONS OF HOSPITAL STAFF AS PER MANUAL-2003

	Officers	'A' Type	'B' Type
1.	Chief Medical Officer (in the rank of Civil Surgeon with Post Graduate Qualification)	1	1
2.	Assistant Civil Surgeons	7	4
3.	Staff Nurses	6	3
4.	Pharmacists	4	2
5.	Male/Female Nursing assistants	6	3
6.	Laboratory Technicians	3	1

	(to be trained in handling all equipment including E.C.G., X-ray and portable X-ray machines)		
7.	Psychiatric Counselors	2	1
8.	Junior Assistant	1	1

Source: Page 89, Model Prison Manual-2003.

TABLE 6: MEDICAL STAFF REQUIREMENTS WITH DIFFERENT SPECIALTIES IN TYPES OF HOSPITALS

	Specialty	'A' Type	'B' Type
1.	M.D. General Medicine	1	1
2.	M.S. General Surgery	1	1
3.	M.S. Orthopedics	1	-
4.	M.D. Dermatology	1	-
5.	M.D. Psychiatry (Mental and de-addiction cases)	1	1
6.	M.D.S. Dentistry	1	-
7.	M.D. Gynecology	1	1

Source: Page 89-90, Model Prison Manual-2003.

The Chief Medical officers/Medical officers are responsible to take care of health concerns of all the prisoners along with superintendence of their diet & food, hygiene and sanitation. The Chief Medical officer/ Medical officer will examine the sick prisoners every day and will inspect the prison weekly and will make full medical examination of all the prisoners every month. The Chief Medical officer/ Medical officer will take care of medical & health care needs of the prison staff.

A journal registrar will be maintained by the Chief Medical officer to record every visit he makes to the prison. He must enter in the journal; any problem with the food, any serious concern of health in the prison and any alarming increase of indoor or outdoor patients in the prison. There is provision of Assistant Civil Surgeon in the jails to be selected from the State Medical Services who virtually provide health care to the prisoners on day today basis. In case of death in the custody, the Chief medical officer will personally inspect the body so that he is in position to certify the death and its cause.

Actual Scenario: Both the jails had Hospitals within the campuses which are staffed by the team of Doctors, Nurses and Pharmacists. Faridkot jail hospital has 4 Doctors, 4 Nurses and 4 Pharmacists and Medical staff was available round the clock. Major emergencies are referred to city Hospitals. Medical officers were often accused for partisan treatment and delayed action in certain matters.

C) Vocational Training and Working Programmes Provision:

Vocational training programs should be differentiated from prison labour as the prison labour has been associated with punishment in a way since the inception of jails but vocational training has emerged of late (1960s -70s.) Many programs were initiated with a twin purpose of engaging the offenders purposely in the jails and preparing them for rehabilitation. Programs like typewriter repair, auto mechanics, data processing, electrician's apprentice, and commercial cleaning were

started. The best vocational model might be one that combines prison labour with job training to cut the cost on the training.

In fact, vocational training and work programmes are the essential features of the correctional programmes. The basic aim of such programmes is to promote discipline and work culture among the inmates to develop dignity of work and also to utilize the work skills of the inmates or to develop work skills among them. Not only such initiatives would help to curb idleness but will also help to build habits of concentration and steadiness in life thereby boosting the morale of the inmates.

The vocational training should form part of government policy on Prisoners. The focus should be on the kind of work or job which prepares the inmate for his life after the imprisonment.

The local Industries and Industrial institutes could be obtained in training the prisoners. The cost involved in such ventures be taken as investment in the correctional aspect of offenders and be readily borne by the Prison managements. Further, these programmes should be taken as an employment, giving work skills to the convicts or under trials along with suitable remuneration.

No female prisoner will be expected to work/employed outside the female barrack in any circumstances.

The chief Medical officer will examine the prisoners who are engaged in vocational training/employed and will ensure their good health. No prisoner will be allowed to work more than the hours he/she can sustain. In case of accident or injury or death compensation will be released only if the case is certified by the Chief Medical officer.

Actual Scenario: Both the jails had factories within the campuses to provide vocational and skills training to the prisoners with a twin purpose of keeping them engaged presently and prepare them for rehabilitation once the jail term was over. These factories were supervised by DSP (Factories) and training in power loom, stitching, flour grinding, soap making, candle making, handloom, khadi, carpets, marking, carpentry, & preparing liquids for disinfections

D) Gang Wars& Prison Violence:

Prison gangs are not unknown in the world of imprisoned criminals. These gangs emerges out of human psyche; like-mindedness and to be together to defend themselves. There is difference between the organised groups of inmates and jail gangs not only their operation but in their formation as well. The Prison gangs are there to stay and will always be there forever in response to the need of the individuals to group together for their survival. These Gangs have some peculiar characteristics like membership, a recognized leader, group title, common clothes with specific color and territorial jurisdiction of their own. Gangs within the jails impact the life of the prisoners, the administrators, and staff. In a way, gangs consume 80-90% the time of the jail administration. In the jails where gangs have political back up, things are really tough to manage rather gangs rule the roost as they decide what to eat, when to eat and where to eat, so much so they decide who will live or who will die.

The operations of a gang revolve principally around extortion, drugs, in-house prostitution, gambling, and protection. A gang's criminal activities are usually directed toward nongang members of the inmate population. Violence and the threat of violence characterize a gang's methods of operation. Gangs also try to corrupt staff members, although staff involvement is generally limited to the introduction of contraband.⁸

Their very presence requires special attention of the prison authorities. Sometimes jail staff is pushed to be participants in or potential victims of the prison gang culture; passively or actively they may be involved. The jail has to suffer on account aggressive activities of these gangs either they have to fall in line with them or they have to be the victim and have to undergo harassment, extortion, or physically or sexually abused. Prison gangs and disruptive groups present difficult problems for administrators. Gangs are known to perpetuate criminal activity, and they threaten violence and total disruption of an institution. Operating through force, intimidation, and secrecy, gangs' potential for destructive activity is recognized by most corrections officials.⁹

Thus, Gangs within the jails are known for the violence and disorder and force themselves on the jail administration in a way that "it is the tail which wags the dog."

These gangs have roots outside the jails as well.

Actual Scenario:

Kapurthala Modern Jail: The group clashes between different groups have been witnessed by the Kapurthala jail authorities. On 20th November, 2011, police firing incident was reported. One of the injured prisoners, Parwinder Singh, who was brought to the local civil hospital for treatment of bullet injuries, claimed that three prisoners were killed in the firing incident and many prisoners were injured, he told media in the hospital that trouble arose when a prisoner died in the hospital in the jail on 16th November, 2011, which agitated the prisoners, alleging negligence by the doctor, and prisoners ransacked the hospital building and damaged it and also set it on fire. The jail wardens and police fired at the protesting inmates, resulting in the bullet injuries to many prisoners and death of two prisoners.¹⁰ Official sources informed that one person was killed.¹¹

Further, Parwinder said that inmates also attacked at the Jail Superintendent and Deputy Jail superintendent and other jail staff when they tried to control the situation. However, the jail staff received minor injuries in the clash with the inmates.

On 30th October, 2013, inmates of Kapurthala thrashed the fellow prisoners and posted the video on the Facebook. Later, the case was registered by the police.¹²

On June, 2015, Deputy Superintendent of the jail was attacked outside the jail on the directions from the jail inmates since he intervened to protect police official from attack of two warring groups in the jail a week before.¹³

Thus, jail clashes between the prisoners were a common thing and were witnessed off and on. So much so a police officer was of the rank of DSP was attacked outside the jail by the accomplices of a gang who threatened him within the jail premises with dire consequences for his effort to save police cop from the in fight of the gangsters when he tried to separate two warring groups in Nov, 2015.

Thrashing of one group by another has become a common thing in these jails. Alone in the month of March, 2017, there have been three reported clashes between the two groups of inmates in Kapurthala Modern Jail:

- 19th March a clash took place between the two groups of under trials and the convicts.

- 23rd March another clash took place between the prisoners when five inmates were attacked by more than forty persons with rods within the jail area as they were coming back after taking the medical assistance.¹⁴
- 9th April yet another clash took place between the groups ending in injuries.¹⁵

Faridkot Modern Jail: The clashes between the prisoners are a common feature in Faridkot jail as well. Most of the times the small fights take place which go unnoticed or are ignored by the authorities. However, major scuffles are reported and cases are registered against the erring prisoners. Some of the reported incidents are:

- 21st April, 2013, the prisoners clashed with staff due to death of three prisoners in a week and 13 inmates were booked for the violence.¹⁶
- 16th April, 2014, another clash reported from Faridkot jail injuring six jail staff due to death of old prisoner who died of heart attack.¹⁷
- 25th Dec, 2015, a major clash between the two groups of the prisoners.
- 9th May, 2016, the murder of one gangster in the city triggered the clashes between the two groups in the jail.¹⁸
- 20th Sept, 2016, a clash was reported between three criminals in Faridkot jail.¹⁹
- 29th May, 2018, inmate of Faridkot jail shoots video and threatens to kill CM, Punjab.²⁰

The above stated facts speak volume about the violence or ruckus created by the prisoners within the jail premises.

E) Menace of Cell phones in Jails

The Cell phones or the Mobile phones are the major breakthrough in the information technology which has resulted into fast possible communication between the human beings. The growth and development in the technology has touched new heights as almost every individual is using this device with impunity. Its usage depends on user, his attitude and his designs and intentions.

Motorola was the first company to produce handheld mobile phone (1973) and it weighed 2 kg as against the latest smart phones weighing only 100 gm. Things have come long way as Smart phones are available which are lighter in weight and rich in features.

Phones in Jails: The presence of cell phones in the cells is illegitimate and illegal in every sense as these violate the very concept of imprisonment which is based on the principle of isolation of the offender from the main stream. But, it has been a fact that very often these are found in the possession of the inmates of jails. These phones are proving to be the effective tool of purporting the crime in the outer world while sitting in the jail. The jail breaks and the planning for such crimes from within the jails are possible only due to presence of these mobiles. It is openly known fact that inmates possess mobiles and have links with outer world. It is a problem faced by the prison administrations world over and India is no exception

It was a unstarred question in the Lok Sabha by one the parliamentarian to the Minister of Home Affairs whether it is a fact that there have been sneaking of mobile phones in Tihar jail (10th March, 2015). The Minister of State in the Ministry of Home Affairs answered that 33 cell phones were recovered from prison premises or the prisoners in the year 2014. Since the jails are

state subject, thus, states have been advised to check this menace by developing a suitable strategy.

However, the state of Punjab took early initiative and passed an act called Prisons Amendment Act, 2011 to stop the inmates from using the cell phones. The Act provides for three years imprisonment and fine of R 40000/ (if not paid it may accrue another year imprisonment.)

Kapurthala Jail:

Kapurthala jail inmate startled the jail authorities by uploading his videos on the Facebook in Oct, 2013.²¹ The incident was enough to investigate the issue at its depth.

On May 4th, 2015, relatives were caught smuggling Sims in their jaws.²²

On April 11, 2016, in a joint raid conducted by the Punjab police and the jail authorities 11 mobiles and 7 Sim cards were found from the possession of the prisoners²³ and cases were registered against them under different sections. In all, 82 mobile phones were captured by the security officers from Kapurthala jail in the year 2016 alone.

Again on March 29th, 2017, a dozen mobiles were captured along with the chargers from the inmates of Kapurthala jail in a raid conducted due to the foiled attempt to break open the Gurdaspur jail by a thousand inmates.

On May 1st, 2018, five mobiles, Sim cards, dongle and mobile batteries were sized from 4 prisoners from Kapurthala jail.²⁴

On May 13th 2018, a raid was conducted by 100 cops to check the illegal use of mobile phones in the Kapurthala jail but no mobile was found in the possession of prisoners.²⁵

Faridkot Jail:

During a search operation, on 22 Jan,2013, the search party nabbed four mobile sets, four Sim cards from the Faridkot Jail.

On a raid, after the violence in the jail due to the death of a prisoner, the raid party, on 26 April, 2013, seized 2 phones from the under trials and the drugs were also seized.²⁶

On 2nd November, 2013 a day after a prisoner of Faridkot jail updated his Facebook account, police recovered three mobile from the inmates and registered cases against them.²⁷

Two of the prisoners of Faridkot jail posted their pictures from the jail campus which caused flutter among the authorities on 24th Oct, 2015.²⁸ This episode embarrassed the government as well. The claim of the Deputy Chief Minister that Punjab jails are high security jails was blown to pieces with this act of the criminals.

On July 10th 2017, a posse of 250 cops raided the jail late night and seized 14 mobile phones, many Sim cards and four adapters.²⁹ It appears that information of the raid was leaked as most of stuff was lying in the open or in the washrooms. The cases under relevant sections have been registered against the suspects.

On 5th Nov, 2017, in a surprise searches, police found two mobile phones from the prisoners. The authorities confirmed the news and investigating the matter as how these phones reached the prison. As many as 1547 mobiles were recovered from Punjab jails in 2017 alone.³⁰

The next day from the posting of live video of history-sheeter, Lakha on the Facebook (11th Nov, 2017), the police got into the act to book the offender and six others and captured two mobile phones.³¹

On 2nd December, 2017, a gangster made extortion calls from within the Faridkot jail establishing that mobile phone/s was accessible to the inmates. A micro phone was also recovered.³²

On May 9th 2018, the police seized four mobile phones and two chargers from various barracks in the district jail, Faridkot, in a massive search that continued till the wee hours of the next day. Earlier also, cell phones had been seized from the Faridkot jail.³³

Findings of the five select aspects on the basis of above discussion have been deduced in the following pages:

FINDINGS:

A) (i) Finding: The realities are altogether different in the above discussed aspects of food and diet. The ration is not weighed daily rather it is given by estimation; each prisoner is given 480 gms of flour per day. The cooked food is inspected randomly. Poor quality of food has been reported in both the jails by the prisoners and Superintendent of jail was suspended on the complaint of 600 hundred prisoners for serving them with maggot infested food³⁴.

(ii) Finding: Convicts or under trials are not wearing jail clothes as per new norms rather are allowed to wear their own clothes which are provided to them by their relatives.

Finding: Both the jails have Hospitals within the campuses which are staffed by the team of Doctors, Nurses and Pharmacists. Faridkot jail hospital has 4 Doctors, 4 Nurses and 4 Pharmacists and Medical staff is available round the clock. Major emergencies are referred to city Hospitals.

B) Finding: Both the jails have Hospitals within the campuses which are staffed by the team of Doctors, Nurses and Pharmacists. Faridkot jail hospital has 4 Doctors, 4 Nurses and 4 Pharmacists and Medical staff was available round the clock. Major emergencies are referred to city Hospitals.

C) Finding: Both the jails have factories within the campuses to provide vocational and skills training to the prisoners with a twin purpose of keeping them engaged presently and prepare them for rehabilitation once the jail term is over. These factories are supervised by DSP (Factories) and training in power loom, stitching, flour mill, soap making, candle making, khadi, carpets, carpentry, making disinfection liquids.

D) Finding: Violence and gang fights are common in both the jails and at times these fights end up in serious injuries and even deaths. The violence at times results in beating up the jail staff in case they try to intervene.

E) Finding: Mobiles and Sim cards are often seized from the prisoners of both the jails during the raids conducted by the jail authorities. Situation is getting worst as the inmates upload their pictures on Facebook. Assistant jail superintendent of Faridkot jail was rounded up for his alleged involvement in allowing use of mobiles in lieu of some favours.³⁵

CONCLUSION

On the basis of above findings, against the five aspects which have been examined using secondary data, it can be inferred that though both the modern jails have adequate infra-structure, since these were housed in new buildings, yet the 'living' inside these jails is suffering from many malpractices which could be seen within the premises. From 'food quality down to quality of life', the conditions are bad and technology is further adding to the problems. Both, inmates and jail administration, have their own stories to share. Rotten jail culture has no clemency. The fact is that these jails need suitable reforms considering the rights of the prisoners and duties of the jail staff. If inside out of modern jails is marred by the gross violations of norms, either committed by the prisoners or by the prison administration then conditions of other jails can be well imagined.

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EDUCATIONAL STATUS OF MUSLIMS' WOMEN IN INDIA: AN OVERVIEW

Dr. Afa Dul Mujiaba*

*Lecturer,
Department of Education,
Govt. Degree College Kalakote Rajouri,
INDIA
Email id: amsbukhari@gmail.com

ABSTRACT

“Education of boy is the education of one person, but education of girl is the education of entire family” are the words advocated by Pt. Jawaharlal Nehru, truly depicts the importance of education of women is reaping the benefits in future life. Foundation of child’s personality are shaped during first six years of life where influence of mother is great. For qualitative development of homes, the education of women is of great importance than that the men. Women play a significant role in building and strengthening the society. Women’s role in different activities of life has contributed to the evolution of values which account for all-round development. Muslims society constitutes nearly 15 percent population of our country but unfortunately they are backward educationally, economically and socially. They are caught in a vicious circle of poverty, illiteracy and ignorance. Large majority of the Muslims are isolated from the main stream of the society and hardly get the benefits of the developments taking place in our country. The Gopal Committee (1983) & Sacher Committee (2006) instituted by the government, declared Muslims as a most backward community in India. A central feature of this backwardness is their exceedingly poor socio-economic status and poor status of women education. The access of Muslim education at primary, secondary and tertiary as well as in professional courses is extremely poor as compared to other communities of our country. The drop-out rates are quite high among Muslim women. If those who manage to get an opportunity to higher education they lag behind with their counterparts in regard to quality education. Much has been said but little has been done to change the social, educational and economic status of Muslim minorities in our India. There are many factors which are responsible for the plight of Muslim minority and specially the backwardness in regard to education of women. In this paper an attempt has been made to analyze how education can improve the status of Muslims women in

Indian society. In this regard some measures have been cited in order to improve the status of Muslim women through education.

KEYWORDS: *Education, Muslims Women, Socio –Economic Status, Muslim Minority.*

INTRODUCTION

Education is a fundamental means to bring desired change in society, which is an accepted fact throughout the world. Education not only helps in the development of personality of the child but also determines his future. It is very important for both men and women. Men and women are just like the two wheels of a chariot. Women constitute almost half of the population in the world. But the hegemonic masculine ideology made them suffer a lot as they were denied equal opportunities in different parts of the world.

Education is the birth right of every Muslim men and Women. Islam puts considerable emphasis on its followers to acquire knowledge. The Muslim population of India is nearly 15 percent which is the largest minority population. The literacy rate among Muslim is nearly 59.1 percent. The Census of India (2011) revealed that the literacy rate of Muslim women is 53 percent which is less than the national average literacy rate of women i.e. 65 percent and the literacy rate of women of other minority communities i.e. Jain 90.6 percent, Christians 76.2 percent, Sikh 63.1 percent and Buddhist 61.7 percent. It clearly depicts that the educational empowerment of Muslim women is very much vital for building a competent community and also for creating an educationally empowered society. According to an ORG-Marg Muslim Women's Survey conducted in 2000-2001 in 40 districts spanning 12 states, the enrolment percentage of Muslim girl children is a mere 40.66 per cent. As a consequence, the proportion of Muslim women in higher education is only 3.56 per cent, lower even than that of scheduled castes (4.25 per cent). On all-India basis, 66 per cent Muslim women are stated to be illiterate. The illiteracy is most widespread in Haryana while Kerala has least illiteracy among Muslim women closely followed by Tamil Nadu. Muslim women are found to be more literate than their Hindu counterparts in the states of Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka and Tamil Nadu. The proportion of Muslim women who are illiterate is substantially higher for rural north India than for the entire country — more than 85 per cent reported themselves to be illiterate. Prime Minister Manmohan Singh established a committee in 2005 with its chairperson as Justice Rajinder Sachar. The committee was set up to study on Social, Economic and Educational Conditions of the Muslim Community in India. The data available shows that the Muslim minority population is lagging behind in all fields and women's particularly is in worst situation. One of the big obstacles in the field of Muslim women is the high dropout rate. The reason cited by the committee for the high dropout rate among Muslim girls is related with the non-availability of schools within easy reach for girls, absence of girl hostels, absence of female teachers and non-availability of scholarship as they move up the educational ladder. The committee has suggested several measures for improving the educational status of Muslim community, but still the problem is remain elusive due to non-implementation of such recommendations.

Researchers tried to investigate the problems and issues regarding the education of Muslim women in India and proved that Muslim women are still lagging behind. Kumari (1976) conducted a study to find out whether education played a significant role in raising the social status of Muslim women. The study revealed that very least proportion of women who got

admission in secondary and higher education got benefitted from the education. Durrani and Khan (1986) found that educated women have a better life than uneducated women. Saiyed and Narain (1990) reported that Muslim women are still facing obstructions in their educational advancement. Samiuddin (1997) concluded that status of Muslims women can change only through education. Similar study was conducted by Zainab (1997) and observed that the education of Muslim women is necessary for the progress of community and it is an important factor of change and modernization. Fatima (2001) reported that all the Muslim women realized that education is very important tool for better future of Muslim Women and development of self-confidence and mental capacity for improving their status in Indian society.

The review of related literature clearly indicates that enough research has been carried-out on the education of women, but it is very unfortunate that only countable number of studies have been conducted on the education of Muslim women in India. So there is a need to study the educational problems of Muslim women.

Educational Problems of Muslim Women:

- ★ Lack of schools and Colleges in the areas where there is a higher concentration of the Muslim population. Girls are enrolled in nearby schools and are not sent far off to study due to safety reasons.
- ★ In Urdu medium schools; buildings are in a dilapidated condition and without basic infrastructure like drinking water. Students sit on mats whether its summers or winters, toilets are in a bad condition or are unavailable, and the behavior of the teachers towards their students is very bad.
- ★ Co-educational institutions compel the Muslim women in many cases to leave the school.
- ★ In various regions Muslim girls are also forced to marry at a very early age and thus kept at home instead of in the classroom. They are taught that their only role is that of a wife and of a mother and are discouraged from seeking educational and professional opportunities.
- ★ The educational, economic, political and social backwardness of women makes them the largest group hindering the process of social change.
- ★ Inadequate education or no education is the most important factor contributing to the backwardness of our masses, especially Muslim women. The low literacy among women brings down the national literacy.

Role of Education:

- In the development of any country, primary education helps in creating basic skills, while higher education is important for providing the cutting edge. Higher education is considered to be one of the most important mean of empowering women with the knowledge. Skills and self-confidence are necessary to participate fully in the development process. Education for girl has gained wider role and responsibility all over the world. Today in the twenty first century one cannot afford to ignore the importance of education for girl any longer.
- Progress of society is possible only when its citizens are dynamic, resourceful, enterprising and responsible, without such citizens, progress of country cannot be achieved in any field. Education herein helps in creating such type of citizens.

- Education plays an active role in educating women's position and promoting their rights in society. With the spread of education among women, exploitation and oppression of women will be considerably reduced.
- Education of women is of paramount importance for the development of individuality. It is also an instrument for strengthening socially useful skills, habits and attitudes of common citizenship.
- Education does not merely mean the acquisition of knowledge or experience but it means the development of habits, attitudes and skills which help a person to lead a full and worthwhile life.
- It helps in economic growth, quality of life and quality of human resource.
- It also makes an individual to internalize the value and norm of the society and simultaneously offers the specific skilled persons to serve different functions in society.
- Education takes us away from traditional backwardness, darkness, poverty, misery and overpopulation to enlighten, prosperity and happiness.
- Education of rural women also assumes great importance to enable them to get the fullest benefit of globalization.

Madarsa Education:

It is a myth about Muslims that they refuse to opt for secular education and prefer only madrasa education and madrasa education makes them religious fanatics. This flies in the face of not just common sense but also statistics. No middle class family send their children to madrasas; it is only poor Muslims who cannot bear the expenses of education, send their wards to the madrasa. In fact, the cause of lack of secular education is poverty, not religion. According to Sacher committee (2006), Madarasa Should not be looked upon as alternatives to regular school as only 4% children been covered by them, but a compliment. These informal learning centres have definitely played an important role in providing religious education. However following steps are desirable:

- Work out mechanism for linking madarasas with higher secondary school board so that students wanting to shift to a regular/ mainstream education can do so after having passed from madarasas.
- Provide equivalence to Madarasa certificates for subsequent admission into institutions of higher education.
- Recognition should be given to the degrees from Madarasas for eligibility in competitive examinations such as civil services, banks, defence services and other such examinations.
- Modernization of Madarasas Scheme, 1990 should be carefully reviewed before it is expanded.

Suggestions:

The present condition of Muslim women in India clearly indicates that they need education first. Education helps the women to maintain high moral character and also warm them against the exploitation. Educated woman is more capable to manage her life in better way than illiterate does. In this regard the following suggestions have been made.

- ❖ Muslims are the largest minority and play important role in the development of a country. Initiatives should be taken by the Muslim leaders to make them aware about the importance of education so that they can understand their rights.
- ❖ Extensive programme of in-service training should be carried out by all minority schools including Madarasas to enhance the level of teachers and orient them towards modern methods of teachings. Muslim women teachers should be encouraged to avail the benefit of such programmes.
- ❖ Various schemes of the government have been launched to increase the literacy of girls from time to time. Awareness of such schemes is very important. Muslim educated people should take load in this regard.
- ❖ Women are given a required level of skill, education and training not only for their employment, but as necessary requirement for their independence, freedom and to become a fully developed social and cultural being.
- ❖ Government should open coaching and career guidance centers in rural areas.
- ❖ Reservation in employment opportunities should be given for Muslim women.
- ❖ Awareness camps in Muslim dominated areas should be organized by Government, NGOS and other social groups.
- ❖ Correspondence centers should be established in Muslim educational institutions and Muslim women must be encouraged to pursue their higher education through correspondence mode.
- ❖ Researches should also be conducted focusing on various issues of Muslim communities. These researches will help us to know the grass root problems of the Muslim communities. It is essential for planning the remedial steps in light of such researches

Summing up:

It may be concluded that the importance of education for Muslim women is necessary to achieve the goal of egalitarian society. Muslim woman has a desire to raise their living conditions but their circumstances and societal taboos do not allow them to do something new. The traditional thinking got changed that they should not be confined to home only but should also share the responsibilities of the society and should also participate in all spheres of life equally with men.

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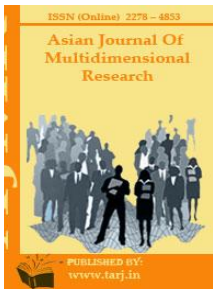
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GLOBALISATION, ITS IMPACTS ON MARGINALIZED SECTIONS OF INDIA

Shezad Ahmed*

*Research Scholar,
Department of Political Science,
Aligarh Muslim University, Aligarh, INDIA
Email id: shazadahmad83@yahoo.com

ABSTRACT

It is the emotion of human beings to modify themselves from the yoke of dependence. In this direction there were large problems emerged in the past because of various natural barriers surfaced in different parts of the world. But the selfless efforts always encouraged, to overcoming the entire obstacles that come in such ways. With the rise of technology, and development of science, the world emerged in the shape of a single village where it is possible for everyone to reach and work easily. Now it is no longer confined to limited part of the country. All the states of this world became boundary less. People by sitting one corner of the world can exchange their goods, culture and traditions to other parts of the world. This has made the scope of world economy broader. In this era of globalization, almost all the multinational companies shared their products to other parts of the world. In this way one side there is constant development enhancing, on the other side lot of countries drained their culture, skills, and attitude. People of each country put concentration on foreign product, which are easily available and cheap in cost but higher in value. This made each country depend upon the other country for its products. By rising globalization at its peak almost all the sections of people suffered more such as peasants, merchants, business men. Similarly India has also been going through this tough faces where people instead of possessing their own skills for generating its product they are relegating on foreign products. In this way one side there is a complete finishing of sovereignty of the country. On the other side it decreasing most people skill, Most of the traditional community had lost their work because their work does not fulfilled their needs, their finished product produced costly as compared to foreign products. My attempt on this paper is to discuss the relevance of globalization and its impact on many marginalized society particular talk about India's culture and traditions. This paper has been divided into five sections. First section deal with Literature review, Research Methodology, second section deals with Introduction, third section deals with historical background, fourth section deal with

marginality and impact of Globalisation on marginal section of India and Fifth section deals with finding of the paper, the referred for the future outcome and conclusion.

KEYWORDS: *Globalization, Relevance, Government, Threat to Sovereignty, Loss Workers Skill, Marginalisation.*

SECTION I

LITERATURE REVIEW

R. Aijaz 2015, in his work entitles ‘Social Marginalisation in Urban India and the Role of State’ clearly highlight the socio economic disparities of marginalised groups in Indi. The author also pay attention of government for positive reforms and institutional strengthen towards these marginalised section of India. ¹

Eddy Lee, Marco Vivarellie 2006 articulated his work entitle ‘The social impact of Globalisation in the Developing Countries’ the authors elaborated that of course globalisation increase world’ trades and employments but there is inequalities find in developing countries. The authors paid attention towards the marginalised section of society. ²

Zuzana Brixiova and Dalia Treigiene, 2011, marked paper, ‘Globalisation and Growth in Recent Research’ and expressed about the growth of the Globalisation, particular made focuses on worlds banks, IMF, World Bank. The author views that international organizations took initiative to help the developing countries so that these countries may get benefit from the globalisation but there are so many factors produced risks here. ³

RESEARCH METHODOLOGY

This paper encompassed, secondary sources, based on the study available through various research papers, published in different Journals, articles published, books, different websites and government’s reports. It also used, some historical method to analysis the past events, the shortcoming and achievements.

Statement of the Problem

In present time globalisation had reduced the world as a village where the physical boundaries no longer consider as barrier in communication and development. One side, it advanced the world in technological development, communication, and trades, on the other side there are lot of problems generated, one there is threat to the sovereignty of each country, second there is threat to culture of each country, third marginalised section of communities suffered more. As the finished products from advanced countries are coming just like in India it disturbs the local people’s skills and they are becoming jobless day to day.

Purpose of this paper

The main idea of this paper is to point out the following things;

- (a) To express the concept of globalisation in detail.
- (b) To justify the circumstances that pushed people to choose the beyond their political boundaries
- (c) To highlight the consequence of globalisation that threat the stability and sovereignty of any country particular like India

- (d) To highlight the challenges faced by weaker sections of people during the time of globalisation
- (e) To urge the government of each country to provide the special imputes to local people over the international people.

SECTION II

INTRODUCTION

Globalization is the word used to portray the increasing interdependence in the world's economies, cosmos cultures, and populations, it always facilitate cross boarder relationship among the countries by transferring the goods and services among the nations. In gloablsiation whole world become a village, where single information can be circulated within zero times. Globalisation is defined by many thinkers in different ways, Stephen Gill defined "*Globalisation as the reduction in transactions costs of trans boarder movements of capitals and goods thus of factors of production and goods*"⁴

G. Brainbant views "*the process of globalization not only includes, opening up of the world's trade, development of worlds communication, internationalization of worlds financial market, growing importance of multinational corporation, population, migration and more generally increase the mobility of the persons, goods capital, data and ideas but also infectious diseases and pollution.*"⁵

In nutshell, the political boundaries of all countries merged. There is free follow of goods, services, person's, and movement across the borders. Person sitting in one part of the world can share each and every thing with the person sitting in other parts of the world. This cause various problems generated. One there is threat to the political sovereignty of each country just like in India. Second there is fear of mixing world's culture. It may a great threat to the large sections of people who are living in minority just like in India so many sections of people who acquired minority in the country by possessing distinct culture and tradition had fears of losing their separate cultures. Another aspect that had been highlight by this paper is how Globalisation snatched people employment in rural areas, particular India where millions of people living in rural areas were busy in their traditional skills and performing their local task such as carpenters, cobblers, blacksmiths, weavers, traditional dish makers. When they made their product it sold on expensive rates because of hands made and low technology. On the other side the finished product manufactured by heavy industries circulated on low price so people have the opportunities to purchase the product selling in low price. In this large numbers of Individual have been excluded from the business. Now they are not able to perform any others tasks because of already possessing separate skills. In addition to this the government at national level adhere the international norms and laws which caused discontentment among large sections of people particular in India.

SECTION III

Historical Background

In ancient time people were living in different part of the world and there was no means of communication so there was no interdependence and no any trades. They believed in localism and decentralization. Most people remained settling throughout their lives in once place. the

resource were limited but were enough according to their needs. There was only way that migration take place when people felt the problems of natural calamities or when there they felt the shortage of resources either the population growth put pressure or they wanted to find the virgin party of any land where they could grow agriculture well. All those who wanted to expended empire, finding land nearby. They never spread transcontinental. State power confined to local chief who were either monarch or religious head. There was no any centralised administration or government.⁶

During first century a remarkable things occurred in the first time in the history some lavish product supplied from china to different parts of Europe and Asia continents such as in Rome. From there they got being travelled thousands of miles to other parts through silk roads. So this way pushed the local trade behind the curtain and urges the global trades. Although trade started but there were few people contribution to take the goods to final destinations. During seventeenth century to fifteenth century the circumstance followed more. As most of Muslim involved in trade of spices, and cloves from Middle East to other parts of Mediterranean and the areas around the Indian Ocean, trades which they course of time came under the domination of Muslim empire. At the time between 15th century to 18th century trade flourished more because European explorer connected each and west.⁷

As the time and situation changed the significance of every things proceeded. When the European colonization started growth in different part of the world the first waves for globalization emerged. During this time the steamship, rail road's and telegraph started progress in making people close to each others. This led to produce more economic cooperation. This is called the era of scientific Revolution.

At the end of 19th century British dominated the world through geographically and technologically. It is also called an era of industrial revolution as most of the countries British was dominated likewise in India. There was a big opportunities for each developing countries to provide her resources to British and took the advantage of finished products.⁸

But the term gained popularity after the Cold War in the early 1990s, as these cooperative arrangements shaped modern everyday life.⁹ In the second part of the Nineteenth century, expansion in the international trade of goods speeded up. The worldwide economy expended in aimed 19th and 20th centuries by an standard of almost 4% per year, which is approximately two fold as towering as enlargement in the national earnings of the industrial economies since the late 19th century. However, this growth was not permanent it changed with the passage of time. Four phases can be identified from the mid-19th century. As for the search of new market and exploitation of raw material, acquisition of new lands, this caused the large place migration in different part of the world, similar in India. In this way there were global financial crisis took place world wide around fifty million people migrated from Europe to other part of the world wide. It was difficult for European to find suitable market in America and Africa. They entered in third zone countries which were weak in economies.¹⁰

SECTION IV

What are marginal groups?

The 'Encyclopedia of Public Health' identifies marginalized groups as, 'To be marginalized is to be placed in the margins and thus excluded from the privilege and power found at the center'.¹¹The words marginalised always used to identify the obvious action and propensities of

human societies where they view unwanted or without any importance were excluded in the society. These people provided a limited number of opportunities and always considered them as less skillful people.¹²

What is Marginality?

Here the Latin monitors, what is marginality? *“‘Marginality’ is so meticulously undignified, for monetary well-being, for human pride, as well as for bodily safety. Marginal people can always be recognized by members of leading society, and will countenance irretrievable prejudice.”*¹³

The motives behind their exclusion were only to unfulfilled the need of existing society. Sometimes they are weak enough, sometimes the physically challenged, sometime they are culturally backwards. We must say a group that suffered under discrimination on the basis of colours , castes, religions, languages.¹⁴

Impacts of Globalisation on marginalised sections of India

The allusions of globalization for national development are many. Globalisation has brought interdependence and competition among the countries and their market economy. In Globalisation the movements of trades and goods are circulating as a result the domestic development are not determined by national policies and the market circumstance. In little exception it takes the interest of national people but in majority of cases it always adhere the policies law governed the international level. The circumstances of each country are different at each level. So if the country adhere the international policy regarding trades and services majority of the things are left away.¹⁵

In India majority of people are living in rural areas they are not well qualified as they work on top class factories when India opened foreign direct investment the skillful people met with the opportunities in jobs because number of industries made progress in technologies’ and number of lablour required decreased so this increase competition as a result many people got disengaged from their services. This had seen in various Indian industries such as pharmaceutical, chemical, and various cement industries

When Multi Corporation started their settlement in India most of the marginalised section had left to land less labors the data had increased from 35% in 1987 to 45% 1999 and 55 percentages 2005. Most of the weaker section people reduced to starvation or they got themselves suicide.¹⁶

In this way, Globalisation enlarged the gap among the large section. Some section of people encourage for better job opportunities while some section reduced to poverty, starvation and exploitation. When a multinational corporation set up their structure this also make a challenge to the local either to treat local people inferior and international people superior in skill. And the country governments only decides and work along with international norms, this led to challenge to produce also a challenge for the country India which had a sufficient pluralistic society, and making justification with the pluralistic society is wider tasks. For the purpose of direct investment and exploitation of natural resource the other developed countries often tried to search the country like India they often dispossessed the rural people from their areas and settle in new areas. In this way there is chance for environmental and health hazard for the people who have even difficult to survive.

When the market finished product circulating it touches beyond the boundaries likewise the product from Japan, China , South Korea and other European counties flow in India the . The

India's people who had their traditional skill often loss because the local things often selling expensive more than the things coming through imports in India. Because, the imported things, are often generated, through machine, while the local things are manufactured, with hands or low time taken technologies. So this kind of reaction creates social injustice and inequalities which sometime produce threat to the nation's peace and stability.¹⁷

SECTION V

Finding of the Paper

After a long discussion it is quite evident seen that majority of people have been ignored due to their incapacity, low skill, poor culture from the jobs in factories. Many multinational corporations prefer the outsiders in jobs and exclude vast majority of groups in employment. Due to low security and some Indian section prefer for menial jobs loss their health. This create wide gap between rich and poor. Rich day to day becoming richer because of the better opportunities while the poor becoming day to day poor because of the less, opportunities. There is need for more structural adjustment so that all treated equally and honorably.

Suggestions

The globalisation plays an important role for large section of society in the world. The position of each country differs from other country across the globe. In term India there is pluralistic society where it is possible to maintain equilibrium among all section of society.

First the business stakes holders should prefers the local product more so that people may remain engage in their traditional tasks.

Second, all stake holders should export such products that benefits Indian citizens in term of revenues and business growth

Third, the Government of India should welcome those industries according to the people's skill and interest that benefit gets almost all section of society in India.

Fourth, the Indian government should make such policy that protects the cultures and traditions and customs of each groups or community in the countries in the country.

Fifth the jobs should be demarcates in such a way according to skill so that all members of society grab the opportunity according to their skill and honour. No members should treat more on the basis of royalty and culture.

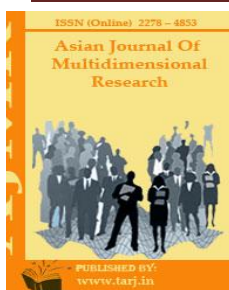
CONCLUSION

Globalisation is very important phenomenon. The world can't survive today without cooperation and coordination. Every things has some positive and negatives impacts, so the globalisation had some positive and negative aspects too. The national government at each level had to secure the interest of each sections composed in the society. While following the international norms the utmost importance should be done to secure local interest of people. So, all should meet, their dues in their lives. No one get deprived from their basic rights and privileges.

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BANK CREDIT AND ECONOMIC GROWTH IN INDIA

Dr. Ruchi Sharma*

*Assistant Professor,
PG Deptt. of Economics,
Chandigarh, INDIA
Email id: ruchieco@gmail.com

ABSTRACT

This paper explores the causal link between credit provided by the banks and economic development in India by taking the credit per capita as proxy for credit growth and income per capita for the growth of economy. The data for 1981-2018 has been put in Panel Data framework. To examine the link between credit and growth; Paderoni Panel Co-Integration Test has been used. A causal link that runs from credit to economic growth has been established using Granger causality test. Augmented Mean Group estimation technique studies the effect of independent variable (per capita bank credit) state wise on dependent variable (per capita income) and reports a statistically significant effect of credit on growth for all the Indian states. The findings are consistent with several afore research works which locate the causality running from bank credit to economic growth.

KEYWORDS: *Co-Integration, Causality, Consistent*

1.0 INTRODUCTION

The linkage between financial growth and economic development has gained significant attention in development finance. The financial system was considered to be an important agent by Schumpeter in the entire economic activity. Gurley and Shaw and McKinnon found out that financial intervention and economic growth are positively correlated. King and Levine by using various indicators of banking growth for different regions concluded that banking sector growth would stimulate economic growth. Jayaratne and Strahan (1996) found that bank lending resulted in higher growth when interstate branch restrictions were relaxed. Mishra (2009), Jedidia et al. (2014), Soedarmono et al. (2017), also identified the significant and positive effect of bank finance on economy.

Economic growth can be enhanced by ensuring an increase in the access to funds through a sound financial system. However, in both theoretical and analytical research, the finance - growth interrelationship has been extensively discussed.

Various researchers have investigated the finance growth nexus by using various econometric tests. There are different approaches as to how the financial development can lead to economic

growth. Levine and Zervos (1998), Acharya and Joy (2009), Raluca et al. (2015), Thierry et al. (2016) etc. found that a sound financial system enhances economic growth. Koivu (2002) studied the connection between financial development and economic growth for 25 countries for 1993-2000. He concluded that credit enhancement had not led to enhanced economic growth. Favara (2003), Levine and Beck (2004), Loayza and Ranciere (2006) found that in the short run the impact of finance on growth is negative, but in the long run impact of finance on growth is positive. The research has been focused on testing the inter relationship between finance and growth. Although financial development and economic growth are clearly related, the direction of this causality has been unresolved (Fitzgerald, 2006). The causality could be unidirectional or bi-directional. Unidirectional causality implies that financial growth can lead to economic growth and vice versa. Odedokun (1989), Zam and King (2007), Akpansung and Babalola (2008), Yemane (2009), Okafor (2016) etc. support the case of unidirectional causality.

The causality running from economic growth to financial development implies that the demand for financial services will grow as the economy expands. Muhsin and Eric (2000), Vazakidis & Adamopoulos (2009), Thierry et al. (2016) have concluded that economic development has a positive impact on financial development. Many researchers have stated the relation between finance and development to be bidirectional and tested the same in Granger causality framework. Greenwood and Jovanovic (1990), Demetriades and Hussein (1996) and Aurangzeb (2012) identified a positive bi-directional causal link between economic growth and financial development.

Several of the recent researches have done the cross-country analysis. It has a serious drawback as there are huge institutional differences among the countries. So generalizing the finance growth relationship may not give us reliable results. Therefore, present study is investigating the contributions of financial development (bank credit) to economic growth by using individual country's time series data. It is also found that few empirical studies are conducted for Indian economy. The main highlights of the present study is presented below

- (1) Unlike other studies where the pooled data of countries has been used, this study has pooled data of all the states and union territories of India from 1981 to 2018 to study the inter relationship between finance and economic growth.
- (2) Present study efficiently uses the data to produce results using panel unit root test.
- (3) The long-run panel co integration test and Granger causality test is also performed.
- (4) The fully modified OLS (FMOLS) and Dynamic OLS (DOLS) have also been applied.

The paper is split into five sections. Section 1 contains the introduction to study; Section 2 states the review of literature; Section 3 states the research methodology and furnishes the results based on various tests used and Section 4 sums up the study.

2. REVIEW OF LITERATURE

Financial growth is a key determining factor of development. As discussed in the introduction of this paper, the finance – growth nexus has been still unresolved. The different approaches to this nexus have been identified and the review of related literature has been presented below.

The first approach states that finance has a direct influence on growth. Gregorio and Guidotti studied the relationship between long-run growth and financial development by using two

different data sets. The results show a significant positive relation between finance and growth for middle and low income countries of Latin America. However a weak relationship for high income countries has been identified. Chakraborty (2008) examines the relation between financial development and economic growth for India for the period 1993-2005. He used an endogenous growth model and concluded that finance has a positive and significant impact on real growth rate of GDP. Akpansung and Babalola(2008) studied the impact of bank credit on economic development for Nigeria for the period 1970-2008. Granger causality test was used and a unidirectional causal relation was established .The study concluded that the credit provided by the banking sector had a positive influence on growth. Acharya and Joy(2009) have examined the relation between finance and economic growth for various states of India. The period 1981-2002 was taken for study. Fully Modified Ordinary Least Squares (FMOLS) and Panel Cointegration test confirmed long-run relationship between finance and growth.

Ben Jedidia et al.(2014) usedAutoregressive Distributed Lag approach to test the relationship between finance and growth in Tunisia. The empirical results show that the provision of credit to private sector affected the growth in a positive manner and also identified bi directional relation between two. Using panel cointegration approach,Bist (2018) identified long run cointegrated relationship between finance and developmentin sixteen low- income level countries for1995-2014.

The second approach is where researchers find evidence favoring the fact that unidirectional relation exists between finance and economic development. Mishra(2009) used Johansen Co integration test and identified the cause and effect relation between the finance and the economic growth in India for 1980 to 2008 . Granger Causality Test was used and it confirmed the fact that expansion of credit facilities promotesdevelopment.

Thierry et al. (2016) studied the causal link between credit provided by banking sector and economic growth in Cameroon. The period of 1969 to 2013 was used for study. Credit provided by banks was used as an indicator for development of finance and per capita GDP for economic development. The study identified a unidirectional causal relation from credit to growth on the basis Vector Error Correction Model.

The third approach is where the researchers identify Bi directional association between financial development and economic growth.Mukhopadhyay and Pradhan (2010) conducted a study for seven Asian developing countries by using multivariate VAR model. A bidirectional relationship was identified between economic development and financial growth.

The fourth approach is finance may not have any effect on growth. The study by Neusser and Kugler (1998) examined the data for OECD countries for 1960-1993 and found that credit does not lead to growth. Demetriades and James (2011) studied the interrelationship between growth of financial services and economic development for 18 Sub-Saharan African countries. The data for the period 1975 to 2006 was used for study. Panel co integration test showed the absence of long run association between the financial development and economic growth.

The fifth approach is finance may adversely affect the growth. The study was performed for 85 countries for 1960-1998. Favara (2003) concluded that finance is important for economic development at transitional levels of financial development . The panel data analysis did not provide any comprehensible evidence of finance leading to growth and rather identified a negative relationship bank credit and economic development.

Narayan and Narayan(2013)studied impact of the financial growth on development for 65 developing countries divided into various regional panels for the period 1995-2011.Generalised method of moments estimator model was used. For entire panel data set countries, it was identified that finance leads to growth. The result for the Middle East countries were different. The financial sector and the banking sector had no influence on growth.

Seven and Yetkiner (2016) studied the effect of financial growth on economic development. The link between banking growth, expansion of stock market and economic development was studied across low, middle and high-income countries. Panel regression showed that banking development in high income countries influenced economic growth negatively.

The studies so far differ in the identification of finance –growth relation.

The studies conducted so far differ from one another as far as the inter-relationship among finance and growth is concerned. Some researchers hold the view that finance may lead to growth although finance-growth causality may be unidirectional or bi-directional. Some hold the view that finance has minor influence on growth and some even identify that finance may adversely affect the growth. The studies conducted also differ from one another as far as the statistical tools are concerned. Tests of Vector Error Correction , Panel Cointegration, Granger causality test, Autoregressive Distributed Lag method etc. have been used. The current study is conducted in the direction whether finance affects the growth positively.The credit created by banks serves as a fuel for funding these developments in the process of economic growth, which is mainly innovation- oriented. So, the bank credit is an essential component of economic development. Banks play a vital role in ensuring a smooth flow of credit in the economy. The study is an attempt to analyse the finance –growth relation by making use of data on credit provided by banking sector and Gross Domestic Product of Indian states and union territories using panel co-integration.The data from 1981 to 2018 has been used. Taking the period of 38 years takes care of all possible changes in the economy. The period under study in fact covers four phases .1981-1991 can be termed as pre-reform phase.1992-2000 covers the period of first and second generation reforms.2001-2010 and 2011-18 can be termed as two decades of post reform phase. Most of the studies done earlier have taken few states only to study the finance –growth nexus. The present work has used the time series and cross –section data of all states andUTs.

3. Methodology

Levine et al. (2000) and Beck et al. (2000) ,Jordan Shan (2005) and Valpy FitzGerald(2006), Carlos (2012),Mehmet (2017) etc. used panel data analysis to study the linkage between growth of financial sector and development of the economy.

The present research is also based on Panel Data approach to study the influence of credit facilities provided by banks on growth of economy. Per Capita Net State Domestic Product at factor cost and Per Capita Credit by the scheduled commercial banks for the period 1981-2018 has been used have been used to conduct the various tests. A series of econometric tests have been conducted using Eviews 10.0 and State 15.At first, the unit root tests have been applied to check for the data stationary. Secondly, the cross section tests are conducted to check for the cross section dependence of data. Third, when it is found that the cross section dependence is

absent, then Paderoni Panel co-integration and Kao tests are used to identify long run relation in variables. Fourth, Granger Causality test has been used to see direction of causality. Fifth, FMOLS and DOLS estimators are used for the long-run estimates. Sixth, Augmented Mean Group estimate technique has been used to see the state wise impact of bank credit on per capita income.

Test of stationary

For checking the unit roots in panels; Levin–Lin–Chu, Shin W-stat, Fisher and Im Pesaran tests are used.

In the present research, significance level of 5percent is selected. However, at initial level ,the selected variables were not stationary. The unit root tests run on first difference of the variables however resulted in probability value of less than 5 percent.

Variable	Levin, Lin and chu Statistic	Im, Pesaran , Shin W-stat Statistic	ADF-Fisher Chi-square Statistic	PP-Fisher Chi-square Statistic
LNCPC(level)	1.18491	8.01923	8.7469	11.3898
LNPCI (level)	0.27332	8.05823	6.67357	9.52126
D(LNCPC)	12.7461**	13.6299**	314.409**	617.717**
D(LNPCI)	-23.042**	-29.7938**	749.2**	787.807**

The null hypothesis which was based on the existence of a unit root was rejected for the variables after taking the first differences and the selected variables were stationary and non-discriminatory of order one.

Cross –Section Dependence Test

Panel-data sets exhibit substantial cross-sectional dependence (Hoyos, 2006). To ensure that the results are unbiased and consistent, Cross-sectional dependence is required to be checked.

The hypothesis states

H₀: Cross-section dependence exists in panel data

H₁: Cross-section dependence does not exist in panel data

Test	Statistic	P-value
Breusch-Pagan LM	17473.43**	0.000
Pesaran scaled LM	539.0341**	0.000
Bias-corrected scaled LM	538.6017**	0.000
Pesaran CD	132.0427**	0.000

** denotes statistical significance at 5% level

On the basis of above findings , H_0 is rejected at 5% level of significance and H_1 is accepted.

Panel Co-integration tests

In order to find out whether a stable and long-run relationship exists between the chosen variables , Cointegration tests are conducted in line with the hypothesis that:

H_0 : Bank credit Per capita and Net State Domestic Product per capita are not co-integrated

H_1 : Bank credit Per capita and Net State Domestic Product per capita are co-integrated

Pedroni Co integration Test and Kao test confirm a long-run equilibrium association.

TABLE :3 PEDRONI RESIDUAL CO INTEGRATION TEST		
Alternative hypothesis: common AR coefs. (within-dimension)		
	Statistics	P-value
Panel v-Statistic	0.315169**	0.000
Panel rho-Statistic	-0.630335	0.000
Panel PP-Statistic	-2.433621**	0.000
Panel ADF-Statistic	-2.790920**	0.000
Weighted Panel v-Statistic	1.050657**	0.000
Weighted Panel rho-Statistic	-0.784525**	0.0042
Weighted Panel PP-Statistic	-3.079061**	0.0039
Weighted Panel ADF-Statistic	-3.879609**	0.0012
Group rho-Statistic	0.771924	0.1119
Group I PP-Statistic	--3.763531**	0.013
Group ADF-Statistic	-7.117902**	0.0005

** denotes statistical significance at 5% level

Table 3 above shows that, out of 11 diagnostic statistics 10 are significant and it provides strong evidence that all panels in the data are cointegrated.

Kao Residual Cointegration Test

TABLE :4 KAO RESIDUAL COINTEGRATION TEST		
	t-Statistic	P-value
ADF	-6.61598**	0.000
Residual variance	0.046813	

HAC variance	0.042385	
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Note: ** denotes statistical significance at 5% level

The t-statistic turn out to be significant at 5%. Null hypothesis is rejected and alternate hypothesis that variables are cointegrated is accepted.

Granger Causality Test

Dumitrescu-Hurlin (2012) has been used to test direction of causality.

TABLE: 5 GRANGER CAUSALITY TEST			
Null Hypothesis	W-Stat.	Zbar-Stat.	P-value
LN_PCI does not homogeneously cause LN_CPC	2.77882	1.58257	0.1135
LN_CPC does not homogeneously cause LN_PCI	3.63022	3.68497	0.0002

The results show that the causality runs from credit to growth. The null hypothesis LN_CPC does not homogeneously cause LN_PCI is rejected as p value issignificant.

Fully modified Least Squares (FMOLS) and Dynamic ordinary least squares(DOLS)

FMOLS and DOLS was used to estimate the regression. The equation $[LPCNDP_{it} = \alpha + \beta LPCC_{it} + E_{it}]$ has been used . In the equation, i refers to the Indian states. Natural logs of the variables under study have been used.

TABLE :5 FMOLS AND DOLS CO -INTEGRATION REGRESSION TEST		
Dependent Variable:LNPCI	Independent Variable:LNCPC	
	FMOLS	DOLS
Coefficient	1.169493	0.893851
t-statistic	298.037**	108.739**
R-squared	0.860384	0.879821

** denotes statistical significance at 5% level

The responsive co-efficient of credit as per FMOLS is 1.1694 and DOLS is .893851.It proves to be highly significant across different states and union territories of India. Elevated R square confirms sufficient descriptive strength of the model.TheFMOLS positive co-efficient of credit

1.16 shows that a unit increase in credit will increase the per capita income by 1.16 units approximately. The DOLS positive co-efficient of credit 0.89 shows that a unit increase in credit will increase the per capita income by .89 units approximately.

3.6 Augmented Mean Group Estimation

Augmented Mean Group (AMG) estimator used by Eberhardt and Bond (2009) provide both common and group specific estimations. Using this process, the individual coefficients can be estimated.

TABLE : 6 AUGMENTED MEAN GROUP RESULTS

State	Coef.
Haryana	0.925378**
Himachal Pradesh	1.05094**
Jammu and Kashmir	0.833696**
Punjab	0.857107**
Rajasthan	0.928354**
Delhi	0.85534**
Arunachal Pradesh	0.845866**
Assam	0.893187**
Manipur	0.873294**
Meghalaya	0.894624**
Mizoram	0.86228**
Nagaland	1.135761**
Tripura	1.096968**
Bihar	0.887121**
Orissa	0.917837**
Sikkim	0.858238**
West Bengal	1.097672**
Andaman & Nicobar islands	0.842199**
Madhya Pradesh	0.880171**
Uttar Pradesh	0.900836**
Goa	1.16857**
Gujarat	0.964127**
Maharashtra	0.817469**
Andhra Pradesh	0.950757**
Karnataka	0.883563**
Kerala	1.013391**
Tamil Nadu	0.9326**
Pondicherry	1.029745**
Chandigarh	0.95231**
Jharkhand	1.207449**
Uttaranchal	1.184586**

Chattisgarh	1.189133**
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Note: ** shows that the results are significant at 5%.

AMG estimates suggest a statistically significant and positive relation between per capita bank credit and the per capita Net State Domestic Product.

DISCUSSION

Present study uses the Panel Data Analysis to study the relation between credit provided by banks and economic development. Shin W-stat, Levin-Lin-Chu Fisher, Im, Pesaran tests have been used to check the unit roots in panels. After checking the stationary, the Breusch and Pagan

, LM test, Pesaran CD, Pesaran scaled LM tests have been used. The test results confirm absence of cross sectional dependence between the variables. Panel co-integration test confirms that Bank credit and economic growth hold long term positive relationship. The results are consistent with Leitão (2010), Duican (2015) who identify that domestic credit and economic growth are positively related. However findings are contrary to those with Levine (1997), Hassan et al. (2011) who concluded that finance adversely affects the economic growth. Mhadhbi (2014) and Ayadi et al. (2015) found that the interrelationship between credit and growth is not so strong.

In the present study, the responsive co-efficient of credit as per FMOLS and DOLS proves to be highly significant across different states and union territories of India. The results are consistent with Acharaya (2009) and Bist (2018) who have used the same technique. The present study finds unidirectional causality which runs from bank credit to economic growth using Granger causality test. The results are consistent with Thierry et al (2016) who also found the unidirectional causality between credit and growth. Ndlovu (2013) identifies one way causality but it runs from economic development to growth of financial services.

The result contradicts Eddien (2015) who find two way causality between credit and growth. Similar results are also obtained by Owolabi et al. (2013).

The relation between bank credit and economic development has important recommendations for policy formulations. An efficient and inclusive financial system in the country has a vital role in mobilizing the resources and boosting the productivity. The Reserve Bank of India and Government of India have used various policy measures to ensure sufficient availability of funds to high priority and neglected sectors. The enhanced flow of bank credit to the neglected regions can intensify the economic growth in the country.

5. SUMMARY AND CONCLUSION

The paper analyses the link between bank credit deployment and economic development. This study examines the level of banking expansion across the across the 35 states and Union Territories. Paderoni Panel Co-integration, Granger Causality Test and Augmented Mean Group Estimation techniques have been used by considering annual data for 1981-2018. A long run relationship between Bank Credit per capita and net state domestic product per capita has been established. The Granger causality test report uni-directional causality that runs from credit to growth. So credit provided by banks contributes to the growth of the Indian economy. Furthermore, increased penetration and use of the banking services can lead to enhanced

opportunities for the development of economy. The study provides valuable policy lessons for monetary policy authorities that bank credit will spur growth.

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POSITION OF WOMEN IN INDIA: MYTH AND REALITY

Dr. Rajvinder Kaur*; Mr. Harinderpal Singh**

*Assistant Professor,
Department of Public Administration
Punjabi University, Patiala, INDIA

**Student
PG Diploma in Human Rights,
Punjabi University, Patiala, INDIA

ABSTRACT

As we all are thoroughly conscious from the reality that, everywhere in the world 50% of population is constituted by way of woman. However in our U.S.A. Best, there may be lowering ratio of girl on the basis of the intercourse choice abortion. The situation of reducing intercourse ratio of male to female is a cause of unequal social popularity of girl with guys. On the other hand, in western nations lady's in truth are same with men however in India the scenario is not so, in fact it is just on paper that we offer equal popularity to girls in our country also. It's miles evident from our culture that one aspect we deal with girls as goddess inside the form of laxmi, Saraswati, Durga and really next moment all of the heinous and illegal offences being dedicated towards them like Rape, sexual, exploitation, kidnapping and most importantly now a days (female feticide). On the other hand we can say that everyone treats them like a slave who works without any wages.

KEYWORDS: *Constitution, Enactment, Enacted, Prevention, Mandatory.*

INTRODUCTION

Today as per our constitution we provide equal status to lady on the idea of equality precept. But to reap or benefit this equality Indian female must conflict for a long term. Our ancient generation is the witness of this inequality, for instance Draupadi, wife of five Pandavas become, used by them at the dice like items. Female had been extensively utilized for dance to thrill the kings and different male members of kingship, girl became also no longer having proper to speak loudly in home or public places, and those are some instances which indicates that in historical duration additionally female turned into no longer being treated similarly with men. Even she was no longer having right to take part freely in financial, social, political and private activities.

But in upward thrust of 20th century Mahatma Gandhi has begun countrywide motion for liberalization of girl. During that point only Rajaram Mohan Roy, Ishwarchandra Vidyasagar and lots of different social people started a motion for training of lady, prevention of sati system, restrain of polygamy marriages and many others. The end result of this changed into that, Parliament enacted legal guidelines for Sati prevention, Restrain of infant marriages, Dowry prohibition, equal rights of lady in assets and remarriages of widow and so forth.

After the independence of India, Parliament had made enough effort to give identical status to female with men via getting rid of inequality. For success of this purpose they've also created a company via making enactment for Hindu Marriages which define the age for marriage, prevent polygamy and make monogamy marriages mandatory. They have also enacted adoption legal guidelines so that any men or lady able to undertake the kid and also make legal guidelines for protection to spouse, kids, dad and mom and so forth.

POSITION OF WOMEN IN INDIA IN VARIOUS PERIODS:

Ancient period

Historical studies and the scriptures suggest that Indian woman loved a relatively high fame throughout the early Vedic period (2000 B.C. To a thousand B.C.), surpassing present day civilizations in historical Greece and Rome. The Aryans were against wars. The Rig Veda gives sufficient proof to show the idea of fairness of girl with guys as regards get right of entry to and capacity to accumulate the best understanding, even absolutely the expertise.

The Rig Veda had rendered the best social repute to certified lady of those days. However repute of lady fell within the later Vedic and Epic length. They had been never dealt with equally with guys or we will say that they were no longer enjoying same rights and privileges compared to men.

Even though the lady participated in each own family rite with men however they only played a function as a silent observer now not an active player. As according to Manu, men constantly enjoy unchallenged authority over their other halves. Infant marriages, Polygamy and Sati have been generic at that point. Still out of all these things girl at that time were respected by using the society. But, modifications into the reputation of lady introduced in 15th century. Saints and supporters of bhakti movement have been expounded and spoken approximately equality of female with guys.

Mugal Period

Unlike in the ancient Indian length, the location and status of female in the Mughal length was not quite excessive. Purdah and child marriage had become common. Besides those of the decrease training, female in Mughal duration did now not circulate out of their homes. The Muslims woman found purdah tons greater strictly than the Hindus. The delivery of a daughter became taken into consideration inauspicious, whilst that of a son become an occasion for celebration. Resulting from early marriage, there had been many widows in our society. Commonly, girl in Mughal duration have been no longer allowed to remarry. Polygamy become not unusual amongst rich society. Divorce changed into no longer commonplace a number of the Hindus, even as it was accepted each for Muslim guys and girl. However, female exercised exceptional impact at home and some of them helped their husbands of their occupations.

Although, the general function of girl in Mughal duration turned into low, there have been many Hindu and Muslim lady of first rate capability, whose reputes remain relevant these days like, significantly Rani Durgawati of Gondwana, Rani Karmawati, Mira Bai, Tarabai, etc. The various Muslim girls in Mughal length, Nur Jahan, Mumtaz, Chand Bibi, Jahanara, Raushanara, Zeb-un-nisa, and so on. Played a vital component inside the affairs of that point.

Women Status At Present Times

In historical and medieval length reputes of female is nearly lower than the male but the in scripture; theoretically it has given better status to lady. They may be provided with diploma of perfect home maker by way of the society, because Indian women have committed their whole lifestyles for welfare and health of their families. They are additionally praying by men or women within the form of goddess. Nonetheless no trade is there in their reputes. They may be handled inferior as it is. As we all recognise that, it's a human nature, in the event that they need a few effective things, they continually pray to goddess within the form of 'Devi' however, if the woman who exist in their life as mom, sister and wife, they do now not treat her like this or deal with like a slave of their circle of relatives, who works 24 hours for them without expecting whatever. This function come to be worse, whilst she gave start to lady child in knowledgeable or uneducated circle of relatives after devoting her all feasible efforts to her own family.

However the role and status of today's lady in India is notably modified in cutting-edge Indian Society. The population of lady is nearly half of the whole populace of India. A country or a network cannot be taken into consideration civilized where woman isn't always honored. Indian legal guidelines are being made without discrimination against girl, as a result Indian girl taking part in excessive role in our society. Girl these days occupy high ranking posts like I.A.S., I.P.S., also in our defense services. The contemporary Indian lady take part in numerous sports and video games like football, hockey, cricket, table tennis, lawn tennis and additionally in athletics namely Saniya Mirza, Sayana Nehwal etc. The current Indian girls serve as M.P., M.L.A, Governors and Ministers. Girl of latest instances like mom Teresa, Soniya Gandhi, Vijay Lakshmi Pandit, M.S. Subhalakshmi, Lata Mangeskar and our ex-president of India Pratibhatai Patil have finished international fame. Women have also executed excessive reputes within the areas of literature, tune and appearing.

Greater over girl are becoming a member of the sphere of science and generation also. In reality, there is no sphere of interest in which women are unsuitable or incompetent. In present day length of India, our legislator made diverse legislative enactments to save and shield girl from crime and offences like Dowry loss of life, 'girl Foeticide', Infanticide, cruelty and so on. And it offers the idea of Empowerment of woman. Therefore, 37 researchers on the stop of this bankruptcy have mentioned the parable and truth of lady Empowerment.

WOMAN EMPOWERMENT

Woman Empowerment no longer simplest point in the direction of their cloth development, however is oriented toward mere financial increase which generally plays an critical function inside the universal developmental strategy as has been conceived of within the case of different underprivileged instructions. Lady Empowerment must be construed as the overall development of their college of self-awareness, self-image and identity and the economic development which holds the keys to their actual development.

Girl Empowerment has ceased to be a local or national problem. United nations constitution, which drastically projected discrimination against woman as a hassle of generic alarm. So one can weed it out the charter in its preamble expressed to uphold essential Rights one is Human Rights and every other is equality among guys and girl. 44This sufficiently indicates the type of challenge of worldwide community espoused with reference to the ladies's proper in fashionable and their right to equality with men especially. The assertion affords that every one the rights and fundamental freedoms are to be had similarly to each guys and girl without any difference. Forty five therefore the ordinary assertion of Human Rights also performed very important role in defensive the rights of woman.

Need For Woman Empowerment

Gender fine and empowerment of women is recognized globally as a key detail to acquire development in all region. The constitution of united countries signed in 1943 is the first worldwide agreement that proclaimed gender equality as a essential proper. Ever on the grounds that there have been many convections, programmes and goals to help ladies conferring on them human rights which might be general, indivisible, interdependent and interrelated. On the way to sell development of girls and to protect their rights, the general meeting of U.N. Adopted, "Convection at the removal of all varieties of discrimination towards girls" on 18th December 1979, which came into pressure on third September 1981.

The convection additionally took note of precise problems confronted by rural ladies and their massive function in survival of their families. So all states to the convection agreed to take suitable measures to allow rural girls to participate and advantage from rural improvement. Despite many convections and time certain measurable desires, international statistics speak of deplorable country of ladies that may be a motive of concern.

MAJOR ISSUES FACED BY WOMEN TODAY:-

Ladies are concerned in all components of society, however some topics affect and touch ladies extra than others. From the electricity of the ladies's vote to reproductive rights and the pay hole, allow's test some of the primary troubles that present day girls face.

1. Sexism and Gender Bias

The "glass ceiling" is a popular word that women were striving to interrupt thru for decades. It refers to gender equality, broadly speaking within the body of workers, and superb progress has been made over time. It is not uncommon for girls to run agencies, even the biggest corporations, or maintain task titles within the top ranks of management. Many girls also do jobs that are traditionally male-ruled. For all of the progress that has been made, sexism can nevertheless be found. It is able to be greater subtle than it as soon as become, however it makes an appearance in all elements of society, from education and the team of workers to the media and politics.

2. The Power of the Women's Vote

Women do not take the right to vote gently. It could be sudden to examine that in latest elections, more American women have voted than men. Voter turnout is a large deal during elections and ladies do have a tendency to have a better turnout than men. This is true of all ethnicities and all age organizations in each presidential election years and midterm elections. The tide grew to become inside the 1980s and it has not proven signs of slowing down.

3. Women in Powerful Positions

The U.S. Has not elected a lady to the presidency but, but the government is packed with women who preserve high positions of strength. As an example, as of 2017, 39 women have held the workplace of governor in 27 states. It could even surprise you that two of these befell in the 1920s and it started out with Nellie Tayloe Ross winning a unique election in Wyoming after her husband's demise.

On the federal level, the ideal courtroom is in which ladies have shattered the glass ceiling. Sandra Day O'Connor, Ruth Bader Ginsburg, and Sonia Sotomayor are the three women who've had the honour of protecting identify as companion Justice in the kingdom's highest court.

4. The Debate Over Reproductive Rights

There is one fundamental difference among males and females: girls can give birth. This results in one among the biggest women's troubles of all of them. The talk over reproductive rights circles round beginning manipulate and abortion. Due to the fact that "The pill" turned into accepted for contraceptive use in 1960 and the best court took on Roe v. Wade in 1973, reproduction rights were a completely big issue. Nowadays, the abortion difficulty is the hotter topic of the 2 with pro-existence supporters vying in opposition to individuals who are pro-desire. With every new president and very best court docket nominee or case, the headlines get transferring again. Its miles, certainly, one of the maximum debatable subjects in america. It's also important to take into account that this is also one of the toughest choices any girl may additionally face.

5. Real-life changing realities of teen pregnancy

An associated issue for girls is the fact of teen being pregnant. It has usually been a depend of challenge and, traditionally, younger women are frequently hiding or hiding and are forced to go away their youngsters. These days we aren't harsh, but it faces our demanding situations. The coolest information is that the teenage pregnancy fee has declined continuously since the early 90s. In 1991, every one thousand teen ladies have become sixty one.Eight pregnant and through 2014, the range extended to most effective 24.2. Prevention and get entry to to start manipulate are of those factors which have given beginning to this drop. Nevertheless, as many teenage mothers recognize, an unexpected being pregnant can exchange your lifestyles, so it remains an crucial topic for the future.

6. Life Changing Realities of Teen Pregnancy

A associated difficulty for girls is the reality of teenage pregnancy. It has always been a subject and, historically, young ladies would regularly be kept away from or positioned in hiding and pressured to surrender their toddlers. We tend to not be as harsh nowadays, however it does pose its demanding situations. The best information is that youngster being pregnant rates have been in regular decline for the reason that early 90s. In 1991, sixty one.Eight in each one thousand teen girls have become pregnant and by 2014, that number dropped to simply 24.2. Abstinence schooling and get admission to to birth manipulate are of the factors which have brought about this drop. Yet, as many youngster mothers realize, a sudden pregnancy can alternate your life, so it remains an vital topic for the destiny.

7. The Cycle of Domestic Abuse

Home violence is any other pinnacle situation for ladies, though this trouble influences guys as properly. It is estimated that 1.Three million ladies and 835,000 men are bodily assaulted by

using their companions every yr. Even teenager courting violence is extra widespread than many might wish to admit. Abuse and violence do now not are available in a single form, both. From emotional and psychological abuse to sexual and bodily abuse, this is still a developing hassle. Domestic violence can show up to everybody, yet the most essential factor is to ask for help. There are many myths surrounding this difficulty and one incident can result in a cycle of abuse.

8. The Betrayal of Cheating Partners

On the private courting front, cheating is a problem. Whilst it is often no longer discussed outdoor of the house or a group of near buddies, its miles a problem for plenty girls. Though we often associate this with men behaving badly, it is not unique to them and a number of ladies cheat as properly. An associate who has sex with a person else damages the foundation of believe that intimate relationships are built on. Relatively, it is now not frequently pretty much the sex. Many women and men point to an emotional disconnect between them and their partners as the foundation motive regardless of the underlying motive, it's miles no less devastating to find out that your husband, spouse, or companion is having an affair.

9. Female Genital Mutilation

On an international scale, woman genital mutilation has become an problem of situation for many humans. The United international locations sees the practice of slicing a woman's genital organs as a violation of human rights and it's miles becoming a common topic of dialogue.

The practice is embedded in a number of cultures all through the arena. It's far a lifestyle, often with religious ties, this is supposed to put together a young girl (often younger than 15) for marriage. But, the emotional and bodily toll it is able to take is incredible.

STEPS FOR WOMAN EMPOWERMENT

1. The first step starts off evolved at a non-public degree. An character woman develops emotions of private energy, command and self-sufficiency over material and inherent picks she has to make.
2. In the 2nd step, empowerment takes vicinity on an interpersonal stage. Here a lady impacts the decision making electricity of any other lady through their contact and running collectively.
3. Inside the 3 step, they emphasize the dreams for social motion and social alternate. A network development programmes develops via a group effort. However there can be opportunity of backward linkages also. A network development programmes can lead to individual empowerment and interpersonal empowerment.

Meaning: The time period has also been used to indicate situations like violation of human rights, rights of citizen, rights of character in companies and establishments, and many others. There's, however, a fundamental distinction between the corpus and the psyche-which includes character with which the human type differ from the rest of species, residing inside the planet.

DOMESTIC VIOLENCE: -

Domestic violence is violent victimization of ladies, in the barriers of family; generally through guys or his own family to whom they are married or with whom they have got marriage like courting. Violence can be each bodily and mental. It shows threats or competitive behaviour

closer to her now not only to her physical being however in the direction of her self-admire and self-confidence.

Definition of domestic violence

Its miles essential to clarify the idea of home violence in opposition to women. Violence towards women in widespread is described as a force, whether or not overt or covert, used to wrest from a lady some thing. As a result rape, kidnapping, spouse-beating, sexual abuse, eve teasing, intellectual harassment, bodily touchers are all examples of violence against ladies. However, the prevailing task is involved with home Violence and therefore we shall restriction our take a look at to the concept of home Violence only.

Definition of home Violence can be vast or focused. It is very crucial to outline domestic violence from the perspective of responses. For shaped with the aid of a specific information of what constitutes home violence, whether it be felony reform or the supply of guide services and whether it is to be concept unlisted as an intra-family struggle or a criminal violation of rights.

The definition of domestic Violence as implied with the aid of regulation is specifically important because it defines requirements and accordingly impacts broader social belief of the trouble. Factors of the definition that want to be taken into consideration are, then, the bounds of dating among the culprit and the abused, the norms of ideal behaviour and the unique acts that constitute violence. The common information of domestic violence towards women is that it's far constrained to physical damage perpetrated on adult girls inside a conjugal relationship. At the same time as this theory might also seize a massive universe of the experience of girls, it's miles predicated on the assumption that women by and large live in nuclear households. However, there are sorts of living preparations starting from joint households to nuclear families, to single determine families.

Ladies may also be observed in a longtime dating or in the process of divorce or separation. Violence won't constantly be confined to present day husband but may also

Increase to boyfriends, former husbands and different own family members, inclusive of parents-in-regulation and in-laws. A definition of home Violence that covers these more than one dimensions might cause intervention that are greater together with the experiences of the women.

Domestic violence in India:-

Whereas at present women have proved themselves in almost each area of existence asserting that they may be no less than guys due to their hard work whether at home or operating locations. In the back of closed doors of homes all across our U.S.A., human beings are being tortured, beaten and killed. It's far taking place in rural areas, cities, cities and in metropolitans as properly. It's far crossing all social training, genders, racial strains and age organizations. Its miles turning into a legacy being surpassed on from one generation to any other. However offences against girls which reflects the pathetic fact that girls are simply not safe and at ease everywhere. In keeping with a contemporary file prepared with the aid of India's country wide Crime statistics Bureau (NCRB), against the law has been recorded in opposition to girls in each three mins in India.

What quantities to home violence against girls? -home Violence surely a human proper issue wherein it's miles very important to recognize what truly ends in act of domestic violence. The maximum not unusual reasons for women stalking and battering consist of:- exploitation of girls

for traumatic more dowry, discrimination of girls, alienation of women's self-obtained assets fraudulently, torture with the aid of husband. The outcomes of home violence assault on women, which will have an effect on victim as well as circle of relatives of the sufferer.

The government of India need to come out with a few greater stringent laws to shield the rights of ladies who're sufferers of violence of any type going on in the own family, in an effort to work because the safety measure to remove the crime.

DOMESTIC VIOLENCE IN PUNJAB:-

Domestic violence is a huge trouble inside the Punjab, however there hasn't been a law on it till now," says Mrs. Mumtaz Mughal, Resident Director of the Aurat foundation. "So while ladies visit the police station they are instructed to go back to their home and receive the violence."

With over 9000 mentioned cases in Punjab province every year, civil society corporations were unsuccessfully campaigning for regulation covering domestic violence for a decade. "at the provincial stage there has been a lack of political will on girls-associated rules," Summaya Yousef of girls's rights institution Bedari explains. "We didn't have the knowledge or the potential to apprehend the assembly and behavior honestly effective lobbying."

Westminster basis for Democracy (WFD) changed into able to help by way of giving women's rights groups' get right of entry to to the Provincial meeting of Punjab for the primary time. In preference to focusing on the assembly's small women's caucus, civil society groups had been given the possibility to interact with its male parliamentarians, permitting organizations like the Aurat foundation to foyer greater correctly for precise, targeted rules. Status committees have been engaged, specifically the meeting's social welfare and gender mainstreaming committees. Relationships had been also brokered with the assembly's secretariat, consisting of the Speaker's office and legislation department.

"We thank the Westminster foundation," Mrs. Mughal says. "They supplied a complete avenue to build linkages to the secretariat, converting the civil society method to construct a near link to the meeting and trade our engagement approach."

Together the CSOs, with technical help from WFD, placed forwards a draft bill. At this degree the relationships cultivated by the Aurat foundation and its allies have become important. Some MPAs inspecting the invoice closely in standing committee had been concerned that a provision which allowed uniformed police officers to enter the houses of at-hazard girls ought to breach privacy. Mrs Mughal become invited by using the committee to give expert recommendation— an extraordinary occasion, as external experts are not typically consulted at this degree of the legislative method in Punjab.

Mrs Mughal argued that women's security changed into paramount. "We guided our members that this isn't the difficulty of privateness because the kingdom is liable for the scrutiny and safety of any individual," she recalls. "We requested them that a girl safety officer – now not uniformed – may have the authority to visit the house." This change turned into prevalent and shaped a part of the invoice, which in the end surpassed into law on 29 February 2016.

This turned into a huge moment for all of the civil society businesses who had campaigned for the law for such a lot of years. "Regulation is step one in the direction of a simply society," Ms. Yousef says. "The regulation itself is an extended-time period technique, however it makes clear

that in case you hit or slap or control your wife or your daughter or your sister then you will be punished.”

Mrs. Mughal remembers sitting in the Speaker’s workplace with other CSO members and WFD’s u . S . Consultant as the Punjab safety of women against Violence Act 2015 have become regulation. It covers a number of offences, from stalking and cybercrime to emotional, monetary and psychological abuse, and provides for the implementation of residence, safety and economic court orders to protect ladies. “i was very glad and we were able to rejoice a massive achievement,” Mrs. Mughal says. “We had been thankful – however additionally conscious there are nevertheless some of challenges for us.”

Securing budgetary allocations for the development of Violence towards women facilities throughout Punjab’s 36 districts is set to be specifically difficult; each fees greater than 400 million rupees (£2.9 million). State investment has already been launched for one district in South Punjab, to be able to act as a pilot scheme as a part of the Act’s phased implementation. But because the Aurat basis and different organizations keep to marketing campaign on behalf of women going through domestic violence, they’ll use the relationships they have hooked up with politicians within the province’s assembly.

“We want to be selective in the problems we put forwards to the assembly,” Ms Yousaf says. “We’ve discovered we cannot find the solution to problems in isolation: from time to time we need the support of meeting participants, and on occasion they want our support to be briefed on issues. We complement each other’s paintings.” The home Violence Act is a result of that engagement – civil society and assembly contributors brought together through WFD. As this maintains it’s going to cause “exact governance”, Ms Yousaf says.

That is WFD’s goal in Pakistan, a rustic at the path to an inclusive democracy after 2013 noticed the primary ever transition of power among civilian governments on the federal level. By using operating to create powerful provincial assemblies that apply exams and balance at the federal kingdom, Pakistan can build strong parliamentary systems which advantage all residents. WFD seeks to help this by means of supporting the provincial assemblies generate better policy and represent companies of residents – consisting of girls – greater efficiently.

Inside the period in-between, inclined women’s lives are set to advantage from this engagement. As the point of interest turns to implementation of the new regulation, Mrs Mughal hopes progress may be made quick in order that the ones going through abuse “can stay in a violence-unfastened surroundings in her domestic”.

Ludhiana is fast turning into the rape capital of Punjab, with a median of two rapes being mentioned each week. The situation is a colour higher in the complete country with an average of three rapes every day.

That isn’t all! On a median, about 4 women within the state were molested every day, even as 4 others had been careworn at the pretext of dowry every day in Punjab.

The present day figures, tabled throughout the currently-concluded Monsoon session of the state meeting, revealed that Punjab Deputy chief Minister Sukhbir Badal’s “most secure state” is actually hazardous for the fairer intercourse of the state.

As in keeping with the information, a total of 597 rape instances had been said across Punjab, besides 826 instances of molestation, and 1,054 dowry cases all through 2015, till August 31.

Aside from this, there are an equal or possibly more range of instances that cross unreported due to numerous reasons.

The figures, though witnessed a dip from the preceding years, sends an alarm bell ringing over the situation in Punjab as some distance as womenfolk are concerned.

The data had been extra surprising with pretty much zero.3 in keeping with cent conviction fee inside the suggested rape instances. Out of the full 597 instances, the conviction became finished in best 29 instances. Besides, convictions were held in 11 instances out of overall 826 molestation cases, and simply 3 out of whooping 1,054 dowry cases.

Inside the current past, the kingdom has witnessed a rise in crime in opposition to women ranging from gang rapes or rapes to sexual harassment. The discern can be just the top of an iceberg as numerous different cases were either now not highlighted via the media or went unreported for various reasons.

The statistics reveals that as many as three,146 rape cases — three every day — had been registered in the beyond three years from 2012 until August 31 this 12 months. Shockingly, the conviction become held in just 595 instances — on the fee of zero.2 in line with cent.

In the course of the corresponding length, the state has witnessed a total of 9,102 cases of domestic violence, molestation, and dowry, in opposition to conviction in handiest 188 of them on the fee of zero.02 in step with cent.

THE IMPACT OF DOMESTIC VIOLENCE ON WOMEN

Home violence has a large effect on the fitness and well-being of ladies both inside the on the spot and long run, persevering with even after the relationship has ended. The mental consequences of violence may be as critical because the physical effects. Exposure to violence ends in poorer bodily health average compared with girls who have no longer experienced violence, and it increases the danger of girls growing quite a number fitness issues (world fitness company 2000). One Australian examine located intimate companion violence became the main contributor to loss of life, disability and illness in Victorian women elderly 15 to 44 (Vic fitness 2004).

Some Immediate Health Impacts May Include:

- bodily accidents - together with cuts, scrapes and bruises, fractures, dislocated bones
- listening to loss
- imaginative and prescient loss
- Miscarriage or early transport
- Sexually transmitted diseases
- Knife wounds
- Gunshot wounds
- homicide

FORMS OF DOMESTIC VIOLENCE:-

Domestic Violence is a pattern of Coercive techniques that can include physical, psychological, sexual, financial, and emotional abuse, perpetrated by one character against an intimate companions, with the goal of setting up and keeping strength and control. Home Violence occurs in all forms of intimate relationships, consisting of married couples, people who are courting, couples who stay collectively, human beings with youngsters in common, equal-sex companions, people who have been previously in a relationship with the person abusing them, and teenager relationship relationships. Abusive behaviors aren't signs that a person is indignant or out of control. An abuser makes a preference to exert power and manage over his or her associate. Abusive behaviors consist of bodily, emotional, sexual, social, and economic abuse.

1. **Physical Abuse:-** Physical abuse frequently starts with much less violent attacks including pushing. As the abuse keeps, but, it will become an increasing number of violent. Abusers often goal regions of the frame that are normally protected with clothing because the injuries are less in all likelihood to be seen to others. Acts of physical abuse consist of:

- Pushing
- Restraining
- Shaking
- Slapping
- Biting
- Punching
- Kicking
- Throwing objects at the sufferer
- Goal hitting
- Sustained beating
- Abuse deliberate to purpose the sufferer to miscarry
- The usage of guns
- Strangulation
- Homicide

2. **Emotional Abuse:-**

Emotional abuse is a tool utilized by people who want to make their partners sense scared, crazy, nugatory, or responsible for the abuse. The abuser's intention is control over the sufferer. Emotional abuse may encompass:

- Making jokes about the sufferer
- Insults
- Criticizing the victim's competence
- Ignoring the sufferer's emotions
- Withholding affection as a shape of punishment

- Blaming the sufferer for all problems
- Yelling on the sufferer
- Humiliating the sufferer in front of others
- Accusing the victim of being the abusive accomplice
- Threatening to take the youngsters away from the victim
- Threatening bodily violence
- Threatening suicide to punish the sufferer

3. **Sexual Abuse:-**

Sexual abuse is one of the least discussed, however maximum not unusual, types of home violence. Sexual abuse includes:

- Sexual jokes that make the victim uncomfortable
- Treating girls as intercourse objects
- Criticizing the victim's sexuality
- Using sexual jealousy as a device of manage
- Uncomfortable or undesirable touch
- Withholding intercourse as punishment
- Annoying sex
- Flaunting affairs
- Rape
- Sex after beatings
- Forcing the sufferer to witness or take part in sexual hobby with others
- Sexually assaulting the sufferer in front of the children
- Sexual torture

4. **Social Abuse:-**

Social abuse is used to isolate the victim from others inside the network. The fewer people the victim is hooked up with, the extra control the abuser has over the victim. Examples of social abuse encompass:

- Insisting that the couple spend all time together
- Discouraging the victim from seeing friends or own family
- Forbidding the victim to peer friends or circle of relatives
- monitoring the sufferer's mail or telephone calls
- Checking the odometer
- proscribing get right of entry to the automobile or car keys

- Telling others the victim is crazy or abusive

5. Financial Abuse :-

Abusers often try and set up financial manage over sufferers. Victims who are financially dependent on abusers have fewer sources for escape. Monetary abuse consists of:

- Making all economic decisions for the family
- retaining monetary secrets and techniques
- tracking the victim's spending
- Controlling the victim's get admission to coins
- Controlling the victim's get entry to checkbook or credit score playing cards
- Refusing to let the sufferer paintings
- Forcing the victim to show over income to the abuser

PROTECTION MEASURES AGAINST DOMESTIC VIOLENCE:-

- An utility can also be added by means of any character who has a material interest inside the well-being of a complainant e.g. Parent, social employee, instructor and many others.

2. In opposition to whom may you are seeking for a protection:-

It ought to be someone that you have a home courting with, e.g.

- A person to whom you are married, whether by way of civil or normal rites;

3. What ought to you do:-

A clerk of the court docket will can help you complete the essential paperwork and take you before a magistrate who will determine whether or not to furnish an period in-between safety order or now not.

4. Which courtroom need to you technique:-

Method a nearest courtroom wherein you stay or work. In case you had been compelled to depart your area of residence as a result of violence and you are now residing elsewhere quickly, you could method a court closest on your temporary house.

5. What is a testimony:-

A sworn statement is a assertion made under oath. It's far a punishable offence in a court docket of law to make a false assertion.

Domestic Violence: Critical Study of the Acts and Institutional Mechanism

The contents of this Act need to be understood in the Light of its evolutionary process. Women groups in India have time and again appealed to the government to enact more pro-women laws and ensure their proper implementation and accessibility to women in quest for justice. In 2001 the then BJP- led NDA coalition government finally responded to these protests by bringing up the Domestic Violence Bill 2001, which sought to fulfill the demands of the women's groups and plug in the existing loopholes.

This Bill failed to provide effective and meaningful steps to deal with domestic violence. Many positive provisions laid down in the draft bill submitted by the women's groups had been completely omitted or modified to suit patriarchal interests.

Women were provided with a right to protection order in this bill, but to obtain this the victim has to go through complicated procedures. This order does not provide urgent relief, which the victim needs most. The bill did not recognize extramarital or other relationship and violence within Natal homes.

1. Domestic Violence Act 2005:- The want to reply to violence against girls as the primary technique to make sure gender justice become recognized in 1992 through the CEDAW Committee via its fashionable advice 1992. Diverse guiding features of the PWDVA are as follows:

- A civil regulation- the PWDVA is a civil law directed toward imparting reimbursement and aid to the women and now not intended to penalize the culprit in the first instance.
- spotting that women's rights are violated now not most effective as wives, but also as mothers, sisters, daughters, stay in companions, it covers all such courting under the definition of "home dating".
- The civil alleviation under the Act are so designed as to stop the violence immediately and they're inside the nature of emergency comfort- "prevent Violence" orders.
- The regulation has in-built mechanism in location to ensure that a girl could have get admission to the justice machine as well as access to help systems.
- Act keeps in thoughts the fact that frequently for ladies it is probably less difficult to approach a NGO rather than the police or the courts.
- single window clearance machine in assisting ladies having access to the justice device- phase 26 of the Act lays down that the civil comfort can be claimed in any pending proceeding.

2. New Terminology in PWDVA:-

The PWDVA outline certain new terms along with "aggrieved man or woman", "domestic dating" and "domestic violence", and "Shared households" used within the Act. Bankruptcy II phase three of the Act defines home violence. The Act affords reasons of a number of the terms used inside the definition of home Violence. (a) "bodily abuse" (b) "sexual abuse" (c) "verbal and emotional abuse" (d) "economic abuse"

3. Privileges to Informant:-

Phase 4 (1) of the PWDVA states it in addition specifies that there may be no civil or crook liability on the informant in appropriate religion. Segment 4 consequently creates a social duty on individuals of the community at massive who've knowledge of an already dedicated act or in case of any probability of fee of domestic violence in destiny, to come forward to file a criticism on behalf of the sufferer which additionally implies that each one people have an responsibility to react against violence.

4. Law enforcement agencies:-

Phase five of PWDVA is a social enactment that creates numerous felony, social, judicial and administrative mechanisms to offer help to the victims of domestic violence. The supply creates

a social-ethical responsibility on judicial, law enforcement, prison scientific and social institutions to offer assistance to sufferers and survivors, informing them in their rights and securing instant remedy. The word “Shall” inside the introductory paragraph of this segment is a mandatory command, now not compulsory or aspiration. The impact of the usage of such strong language inside the Act is to create social obligation for the person’s acts.

5. Role of the Protection officer:-

Section nine, 30, 33 study with rules 8, 9 and 10 define the jobs and obligations of the protection officer, who acts as a bridge among court docket and the sufferer of home violence. Segment nine of the PWDVA defines the duties and features of the safety officials.

6. Provisions for relief:-

Phase 18 to 22 lay down the specific styles of comfort which might be to be had to sufferers of home violence, together with safety orders, financial alleviation, custody order, house order, and compensation order. Whilst phase 23 affords for intervening time ex-parte orders, phase 26 and 28 are critical provisions that might be placed to use to the fullest quantity, in getting to provide alleviation beneath the Act in any civil/crook/own family court and additionally to, lay their own methods in putting off packages below the PWDVA. Phase 12, thirteen, 14, 15 and 16 inside the Act outline some of the provisions and approaches for acquiring orders for comfort.

7. Right to residence:-

Section 17 laying out the proper of a female to reside in the shared household, is one of the most important and distinguished principles in PWDVA. The most essential essence of this enactment is phase 36 that the Act will be further to and now not in derogation of the provisions of another regulation at the moment in force.



POETICS OF NEGRITUDE AND THE POETRY OF LANGSTON HUGHES

Sanjeev Kumar*

*Assistant Prof of English
Govt PG College, Naraingarh
Distt Ambala, Haryana, INDIA

ABSTRACT

Langston Hughes has widely been acclaimed as the poet-laureate of African Americans. His creative genius lies in his inescapable bond with his ethnicity. His poems are expressions of his people's myriad experiences in a racist America where white was always right. The central element of Hughes' poetry, asserts Raymond Smith, is the "affirmation of blackness" (18). His concern for his people's identity through their acceptance of being black and a corresponding pride in it, and valorization of African history and heritage make him a poet of negritude. This paper attempts to map out myriad strands of negritude and how Hughes celebrates those strands in his poetry to lead his people in creating a place and space for them in a capitalist America and live a good life in a genuinely fraternal society.

KEYWORDS: *Components, Negritude, Langston Hughes, Affirmation Of Blackness.*

INTRODUCTION

Before the analysis of some of the more important poems of Langston Hughes, it is pertinent to comprehend the term 'negritude' and its associated components. Negritude is an "attempt to extend perception of the negro as possessing a distinctive 'personality' into all spheres of life, intellectual, emotional and physical" (Ashcroft 162). Negritude is the sustained existence in the African Americans of the identity formed by their primordial heritage that had apparently been suppressed by them and overlaid by a false stereotype forced on them by the unfavourable circumstances of slavery. As a term, negritude is supposed to have two implications: it may mean, argues Ronald Berman, "recognition of black identity, and a corresponding pride in that identity—or it could be a mystery of ever-more centripetal musing of African personality" (245-246). James A. Emanuel maintains that negritude is a "complex of traits, sensibilities, and historical consciousness peculiar to black Americans" (147). It is a "medium of reappropriation of the dignity of oppressed peoples," opines Celestin Monga (21). In other words, negritude is to look into the fullness of the past without shame or fear, to take pride in being black, and celebrating traditional African values and culture.

In “The Negro Speaks of Rivers”, Hughes maintains that the African American is aware of the historical consciousness of his American past and attempts to affirm and redefine his black personality and collective experience. The poem reveals that an African American considers Africa to be his spiritual and emotional homeland when he says:

I’ve known rivers ancient as the world and older than the flow of human blood in human veins.

My soul has grown deep like the rivers.

I bathed in the Euphrates when dawns were young

I build my hut near the Congo and it lulled me to sleep.

I looked upon the Nile and raised pyramids about it.

I heard that singing of the Mississippi when Abe Lincoln went down to New Orleans, and

I’ve seen its muddy bosom turn all golden in the sunset. (*Collected Poems 23*)

The poem, opines James A. Emanuel, is “a boy’s testament of love for his race” and draws our attention to the entire historical process of development through which the collective identity of the African Americans has been forged (150-51). It is a record of the contribution of the African Americans in the history of civilization both as natives in Africa and as slaves in the United States. The inner reserves of strength displayed by the African American in different phases of his historical existence gives his soul a character that can be apprehended only through a metaphor which calls it “deep like the rivers.” This soul will enable them to endure all hardships and secure for them a place in the making of civilization. Arnold Rampersad is of the opinion that the poem “blends aspects of existential gloom with the life-affirming spirit of the black race” (*Southern Review 705*). Through the repetition of the word ‘I’, which is the collective voice of the African Americans, the poet seeks to affirm his ethnicity’s role in history which has enabled it to develop strength to bear cheerfully the hardships forced on them in the present day by the racist whites.

“Negro”, Hughes’ another meaningful poem, poignantly displays the historical plight of a negro who has successfully borne affronts and maltreatment from white racists all over the world yet has survived. He recollects his suffering, pain and mental agony and says:

I am a Negro:

Black as the night is black,

Black as the depths of my Africa.

...

All the way from Africa to Georgia

I carried my sorrow songs.

I made ragtime.

...

The Belgians cut off my hands in the Congo

They lynch me still in Mississippi. (*Collected Poems 24*)

The poet does not fight shy to describe how he has been mistreated as a slave. His life has been a tale of suffering and sorrow. He, however, takes pride in being a black and draws strength from it. This, perhaps, forced Onwuchekwa Jemie to assert that this poem is “both a catalogue of wrongs against the black man over the centuries and a celebration of the strength by which he has survived those wrongs” (99).

Negritude, which includes in its dimensions the importance of a African American’s colour, and recognition of African heritage with a corresponding pride in it has another aspect, that is, durability. This means the African American’s unrelenting endurance of his sufferings, indignities and humiliations both as a slave and as a disadvantaged minority living in America. Negritude, thus, becomes an insignia of extraordinary resilience and moral toughness. “Mother to Son,” for example, depicts a black mother’s struggle in a racist America and how she endured subjugation with full equanimity:

Well, son, I’ll tell you:
Life for me ain’t been no crystal stair.
 It’s had tacks in it,
 And splinters,
 And boards torn up,
And places with no carpet on the floor –
 Bare.
 But all the time
I’ve been a-climbin’ on,
 And reachin’ landin’s,
 And turnin’ corners,
 And sometimes goin’ in the dark
Where there ain’t been no light. (*Collected Poems* 30)

Her life had been a tale of sorrow, yet, she admits, she kept on fighting and asserting herself. Through the character of the mother, there is an “affirmation of a people’s determination to reclaim their humanity,” argues George Houston Bass, “to celebrate their dignity, to grasp their own destiny and define it” (Bourne 99). A similar vein runs through “The Negro Mother” highlighting the African American mother’s endurance and staid character. She outlines the long dark journey she has travelled in a racist America:

Children, I come back today
To tell you a story of the long dark way
 That I had to climb,
 ...
Look at my face—dark as the night—

Yet shining like the sun with love's true light.

I am the child they stole from the sand
Three hundred years ago in Africa's land.

...

I am the one who labored as a slave,
Beaten and mistreated for the work that I gave— (*Collected Poems 155*)

As in "Mother to Son," this poem also reveals the parlous effects of slavery. She becomes the seed carrying her African heritage and its values and sensibilities. Hughes' stance, nevertheless, seems to have undergone a change from his earlier poems for he also shows the African American mother talking and nurturing the dream of American ideals also:

I was the seed of coming Free.

...

Stand like free men supporting my trust.

Believe in the right, let none push you back. (*Collected Poems 156*)

"The Negro Mother," in fact, asks her black progeny not to remain submissive forever. Although the poem gives ample space to the distinctiveness of African character, culture and a corresponding pride in it, there is suppressed anger and resentment against racism and subjugation prevalent in American society.

In "My People," Langston Hughes highlights the beauty and charm of his people. The poem has a cool and calm yet passionate tone when the poet says:

The night is beautiful,
So the faces of my people.
The stars are beautiful,
So the eyes of my people.
Beautiful, also, is the sun,

Beautiful also, are the souls of my people. (*Collected Poems 36*)

The poet seems to suggest that the colour and features of the blacks are their primordial heritage which collectively makes them particularly beautiful and enables them to feel pride in their collective identity. The cool stance that the poet keeps here adds to the resonance of the poem's meaning.

Another dimension of negritude, that is, durability finds forceful expression in "Still Here". This short poem depicts the African American's tolerance of manifold atrocities from the white racists believing in their racial superiority. The poet says:

I've been scarred and battered.
My hopes the wind done scattered.
Snow has frize me, sun has baked me.

Looks like between'em
They done tried to make me
Stop laughin', stop lovin', stop livin'—
But I don't care!
I'm still here! (Collected Poems 295)

Despite all the odds that life has inflicted upon the African American, he has the guts to carry on and be still there to stand and defeat racial discrimination. There is an assertion to negate all the evil forces that stop him from laughing, loving and living.

Hughes' poetry reveals that he has been historically conscious of the African American's American past which had been a sad tale of dehumanization and oppression. He "admired the word 'Black' when that word was less than a darling flag," maintains Gwendolyn Brooks and adds that he, "believed in the Beauty of Blackness when belief in the Beauty of Blackness was not the fashion, not 'the thing,' not the sweet berry of the community tooth" (12). As a firm believer in the aesthetic of negritude, Hughes regards Africa as the spiritual homeland of all the African Americans and writes about Africa in a vibrating and nostalgic tone. In "Africa," for instance, the poet presents an immersive image of Africa:

Sleepy giant
You've been resting awhile.
Now I see the thunder
And the lighting
In your smile.
Now I see
The storm clouds
In your waking eyes:
The thunder,
The wonder,
And the young
Surprise.
Your every step reveals
The new stride
In your thighs. (Collected Poems 441)

At the surface level, the poem evokes a palpable figure of Africa that is more than a living giant symbolizing strength and courage: it is splendid and a matter of self-esteem for the African Americans. At the deeper level, nonetheless, the "sleepy giant" may mean the passive tolerance of the African Americans in America and then their "new stride" may mean assertion of their rights and true identity. By and large, the poem fills the African Americans with a sense of fulfillment and confidence in being Africans and also gives them a sense of belongingness.

Langston Hughes' poems highlight the appreciation of the African Americans' African heritage and their corresponding pride in it. He is, says Edward Mullen, a "quintessential black poet" that is spontaneous and remained engaged in depicting black themes in his poetry along with creating diasporic and social miseries of his people (Quoted in Jackson 88). His continuous brooding on the psychology of his people created in him a desire to resuscitate his people's ethnic past which laid buried deep in their collective psyche and remained alive in a modified form in folk songs and tales. His poetry highlights the shared experience that had been reshaped by the historical experience of living under subjugation in America for centuries. As a devotee of an old, black American tradition of dissidence and valorization of an identity disdained by the slave trade and servitude, Hughes displays African Americans' African values very powerfully in his poetry.

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A STUDY ON ASSESSING NUTRITIONAL STATUS OF PREGNANT WOMEN

Gazala Nisar* ; Shafat A. Latoo**

*Researcher,
Institute of Home Science,
University of Kashmir,
Hazratbal, Jammu and Kashmir, INDIA
Email id: nisargazala@gmail.com

**Researcher,
Cluster University,
Department of Biochemistry,
Srinagar, J&K INDIA

ABSTRACT

The present study was conducted to assess the nutritional Status of pregnant women. A comprehensive questionnaire-cum-interview schedule was designed to collect information. Total samples of 40 pregnant women were selected. Purposive random sampling technique was used to collect the information from the respondents. 24-hrs dietary recall was used to assess nutrient intake of the respondents. Anthropometric measurements were carried out to calculate BMI. The results of the study revealed that mean BMI of the respondents was $22.21\text{kg/m}^2 \pm 3.01$, with majority i.e.40% of the respondents were having normal weight with BMI in the range of $18.5\text{-}22.9\text{kg/m}^2$, followed by 21.5% were overweight. Only 12.5% and 9.25% of the respondents were underweight and obese respectively. The respondents were taking inadequate nutrients in terms of calories, proteins, calcium and iron. The highest negative deviation from ICMR was with respect to calcium and iron. Respondents were taking more fat than the RDA. Mean dietary Iron intake of women was low i.e 11 ± 5.86 mgs and mean dietary calcium intake of pregnant women was 434.72 ± 265.56 mgs.

KEYWORDS: *Nutritional Status, Pregnant, Nutrient Intake, 24hrs Recall, BMI.*

INTRODUCTION

Pregnancy is an anabolic process and a woman's normal nutritional need become greater during pregnancy to meet the demands of the growing fetus and the maternal tissues related with pregnancy. Since the nutritional status of the pregnant woman is one of the major determinants

affecting pregnancy outcomes, good maternal nutrition is important for the health and reproductive performance of women and the health, survival, and development of their newborn. Therefore to have optimal maternal and perinatal outcome, nutrition in pregnancy should be well-sustained (**Adikari et al., 2016**).

Pregnancy is the state of carrying a developing foetus within the female body. It is also called the period of gestation. It starts from the moment of conception to birth. For human beings, the average length of a healthy gestation is 40 weeks. Pregnancy is often divided into three periods of three months each called trimesters (**Rolfes et al., 2009**).

Optimum nutrition in early stage of life is the foundation for long-term health. A healthy maternal nutrient intake/dietary pattern involving nutrient dense foods, along with adequate maternal body composition and supply of nutrients through the placenta reduces the risk of maternal, fetal and long-term effects in the developing fetus. While under nutrition is more prevalent in low-income countries such as that of India, malnutrition due to poor quality diet both in terms of quantity as well as quality is becoming a global health problem. Poor maternal nutritional status has been related to adverse birth outcomes especially in terms of birth weight of the newborn. However the association between maternal nutrition and birth outcome is much complex process and is influenced by many biological, socioeconomic and demographic factors, which vary widely in different populations of the World (**Villar et al., 2003**).

While balanced diet supports maternal health during gestation, delivery and breastfeeding and so is the proper nutrition during the period of gestation considered important for the wellbeing of both mother and fetus (**Paturiet al., 2008**), the resultant impact of maternal nutrition affecting the growth and development of the fetus and subsequent health outcomes in the offspring are proved beyond doubt.

Increased weight gain (obesity) leads to increased rate of hypertension (Toxemia as well as eclampsia) and diabetes mellitus during gestation. The need for surgery and other complications at the time of delivering a baby likewise increase. These pregnancies require intense monitoring during the course of gestation and are linked to increase the risk of birth defects among the infants, primarily because the fetus can grow very large. Inadequate weight gain, especially among underweight women (BMI <18.5kg/m²) often produces infants of low birth weight. Undernourished women often have borderline vitamin and mineral intakes, mostly iron as well as calcium and need to build up body stores. They should try to reach healthy weight (BMI 18.5-22.9 kg/m²) by the end of the first trimester of gestation (**Gordon and Wardlaw, 1999**).

OBJECTIVES OF THE STUDY:

1. To find out the Nutrient intake of pregnant women.
2. To assess the Nutritional status of the respondents by using BMI.

REVIEW OF LITERATURE

Optimal nutrition during the entire course of gestation, which includes adequate amounts of all of the essential vitamins, minerals, body building proteins and energy-providing macronutrients begins pre-conceptually, as the developing fetus depend solely on the transfer of nutrients from their mother (**Mahan and Raymond, 2017**).

Lowensohnet al. (2016) conducted a study to find out the role of different types of diets that helps in healthy fetal development as well as to recognize the role of diet before conception &

during the entire course of gestation. The study revealed that a maternal diet during the period of gestation which is rich in whole grains, fruits, vegetables and fish is extremely beneficial for the best pregnancy outcomes. High intake of fatty foods and sugar throughout the course of gestation can lead to higher rates of diabetes, metabolic syndrome and cardiac diseases, as such should not be included in the daily dietary pattern by the pregnant women.

Ho et al. (2016) conducted a study with the aim to review nutritional requirements during gestation. The article revealed that the nutrition intake during pregnancy should be both qualitative and quantitatively rich in order to improve the growth and development of fetus.

Rehman and Sing (2016) analyzed nutritional status of pregnant women in India. The objectives of the study were to know the socio-demographic profile of pregnant women, their nutrient intake through 24 hours recall & compare it with the standards (RDA). The study revealed that iron, calcium and folic acid intake of the pregnant women were much lower than the recommended dietary allowances (RDA) given by ICMR.

The Federation of International Gynecologists and Obstetricians (FIGO) recommendations, "Think Nutrition First" have listed the top 6 essential nutrients women need for future Healthy and Save motherhood. These include Folic acid, iron, iodine, vitamin B12, and vitamin D. It also highlights the role of antioxidants in pregnancy outcomes (**Hanson et al., 2015**).

Anthropometric measurements such as weight, head circumference, and height of newborn are widely assessed as major determinants of impaired fetal growth, intrauterine environment, and maternal nutrition. (**Zhang and Li, 2015**).

Zefru and Ayele (2013) reviewed various research articles related to intake of micronutrients supplementation such as calcium, iron and folic acid during gestation. Their study showed that majority of the research articles reviewed favored micronutrients supplementation to mother during all the three trimesters of pregnancy. Some studies also revealed that calcium supplementation during the course of pregnancy plays a significant role in prevention of pre-eclampsia. Many of the reviewed articles showed significant benefits of micronutrient supplementation during pregnancy in reducing the rate of low birth weight (LBW) babies, small for gestational age (SGA) birth as compared to usual iron folate supplements.

The nutritional status of women should be evaluated during preconception to optimize maternal health and reduce the risk of gestational complications, birth defects and chronic disease in their children in later years of adulthood. Proper nutrition should begin before gestation together with use of vitamin supplements such as folic acid. Ideally women who are underweight, overweight or obese should be seen for pre-pregnancy dietary counseling to optimize weight prior to conception and therefore reduce associated risks during gestation. A pre-gestational body mass index (BMI) > 25 kg/m² and excessive weight gain are risk factors for fetal macrosomia, birth trauma, C section, obesity and metabolic disorder in childhood (**Papachatziet al., 2013**). Instead, a pre-gestational BMI < 18.5kg/m² and poor weight gain are linked with Low birth Weight, increased risk of preterm birth and perinatal mortality and morbidity among the neonates (**Schieve et al., 2000**).

Madhavi and Singh (2011) conducted a study to know the nutritional status of pregnant women considering the variables such as age, socio-economic status (SES), family type, parity, weight and body mass index (BMI). It has been examined from the research that majority of women had inadequate protein and calorie intake during gestation. The prevalence of anemia was found to be

more among illiterate, moderately working women and having BMI $<18.5\text{kg/m}^2$. It has also been analyzed that anemia was found to be more common in women whose age at first pregnancy and marriage was less than 20 years and in second trimester of pregnancy.

Ahmad et al. (2008) conducted a cross sectional study to assess the food consumption pattern and nutrient intake of pregnant women residing in Iran. Dietary intake data were collected using 24 hours dietary recalls and a food frequency questionnaire (FFQ). Mean consumption of grains and dairies was much higher in rural pregnant women compared to their counterparts in urban areas. Pregnant women in urban areas consumed 140 g fruits compared to 248g consumed by rural women. There were no major differences regarding consumption of vegetables, pulses, fat and oils between these two groups. All women irrespective of their residence i.e. urban and rural consumed adequate amount of energy, protein, thiamine and niacin. Intake of vitamin B6, Folate, vitamin A as well as D, iron, phosphorus, calcium, magnesium and zinc was not sufficient in these women. Inadequate intake of vitamin C and riboflavin was also reported in urban pregnant women. Percentage of energy from carbohydrate, fat and protein was 66, 23, and 11 for urban pregnant women and 68, 20, and 12 for rural pregnant women respectively. Iron intake was much lower in urban women compared to rural women. The findings of this study indicated that rural pregnant women have better nutritional status than urban women.

Fowles (2004) stated that intricate relationship between maternal nutritional intake and birth outcomes emphasizes the need for consistent and thorough assessments of women's diet throughout the course of gestation & individualized nutritional education to endorse positive birth outcomes.

Nutrition plays a vital role in both maternal and child health. Poor maternal nutrition status is significantly associated with poor maternal and fetal outcomes. Apart from poor maternal nutrition, socio-economic status (SES), teenage pregnancy, short inter-pregnancy interval, gestational age (preterm as well as post term) and demographic factors also influence birth outcomes. (**Villaret et al., 2003**)

Joodet et al. (2002) conducted a study to find out the average daily food intakes of rural pregnant women belonging to arid, semi-arid and wet zones of Haryana State (Northern India). Intakes of cereals, pulses, vegetables and sugar by the respondents were significantly much lower than the Indian Recommended DietaryIntakes (RDI). The consumption of milk and milk products & fats and oils was significantly much higher than that of RDI. Green leafy vegetables and fruits were the most limited food items consumed by the pregnant women. Despite poor dietary intake by the pregnant women, their weights and heights were not much below the given standards. Only about one fourth of the respondents were underweight (BMI less than 18.5kg/

METHODOLOGY

This chapter is mainly devoted to the description of research procedures adopted for collecting data in the present study, which has been carried with the aim to obtain information on nutritional Status of pregnant women in .

The methodology undertaken in the present study is as follows:

Data Source and Collection

In the present study both the primary as well as secondary sources of data were used to obtain the desired information.

Primary Data

The sample was primarily collected from PHC Hazartbal of District Srinagar, J&K. Randomly 40 pregnant women were selected for the study. A structured questionnaire-cum-interview schedule was devised to collect the primary information from the subjects selected. The Questionnaire was prepared in accordance with the latest standards. A non-stretchable measuring tape and a digital weighing scale were also used to take height and weight of the respondents. Respondents were questioned on residence, literacy, family type, monthly income of the family etc.

Secondary Data

Data collected from secondary sources represented the information obtained from books, published research papers, medical and public health journals and latest information from internet etc.

Tools Used

The tool used in the present study was devised as per objectives of the study was essentially a questionnaire supplemented by an interview schedule. After a thorough and detailed study of the problem and the review of literature, a preliminary questionnaire was framed. This was pre-tested on 10% of the sample size to ensure the validity and feasibility and was then used in the study. The questionnaire was administered to the pregnant women through face-to-face interview.

Structure of the Questionnaire

In designing questionnaire simple language was used but still in some cases questions had to be explained in a local (Kashmiri) language in order to obtain appropriate information from the respondents. The questionnaire included various sections as follows:

- General Demographic Characteristics
- Anthropometric Assessment
- Dietary Assessment.

General Demographic Characteristics

This section included the general information of the respondents

Anthropometric Assessment

Weight, Height and BMI of the pregnant women was included in this section. Pregnant women were weighed as per standard procedure described and a record was maintained for each in the proforma.

Dietary Assessment

Question related to diet were included in this section. Besides 24 hrs dietary recall was used to ascertain information related to nutrient intake by the pregnant women.

Methods Used for Assessing Weight, Height and BMI of the Pregnant Women

The most widely used anthropometric measurements are those of height and body weight. These measurements can be made quickly, easily and accurately.

Weight

The weight of the subjects was measured with the help of beam balance scale or electronic weighing digital scale that is accurate to 100g. Before taking the weight, the scale was set accurately at zero. The subject should stand still in the middle of the weighing scale without touching anything and the body weight distributed equally on both the feet. The weight of the individual was taken with minimal clothing, without shoes and without holding any support. The respondent was made to step on the scale platform, facing away from the scale read out, with both feet on the platform and remaining still with arms hanging naturally at side and looking forward. The weight was read to the nearest of 0.1(1/10) kilogram.

Height

Height was measured by making the respondent stand with his back against the wall, on a flat hard surface using a non-stretchable measuring tape. The respondents were asked to remain bare foot, remove hair ornaments/braids etc. and wear minimal clothing in order to facilitate correct positioning of their body. The respondents were asked to maintain an erect positioning and kept shoulders in relaxed manner. The length was taken using a measuring tape from the mark to the base of the wall. The measurement was taken carefully without errors. The height was taken in centimeters and later converted into meters

BMI

BMI is an index of an individual weight in relation to height. It is defined as a person's weight in kilograms divided by the square of the person's height in meters (kg/m²).

Since the height of respondents was measured in centimeters, for the calculation of BMI, height was first converted into meters for getting body mass index of an individual. In the present study the BMI was calculated using the following metric formula (**WHO, 2000**).

$$BMI = \frac{\text{Weight (kg)}}{\text{Height (meter)}^2}$$

Data Analysis

For analysis of data in the present study microsoft used. After collecting the data, coding of the responses of the questions was imperative for statistical analysis. Every item of the questionnaire was coded and was entered into Microsoft-Excel sheet. The data thus generated was tabulated and presented as per the objectives of the study. The data was analyzed using percentage, mean and standard deviation

RESULTS

The present study was carried out to assess nutritional status of pregnant women in Kashmir. Analysis of data is based on demographic profile, Nutrient intake and BMI of the pregnant women.

Results thus obtained in the present study have been discussed as under:

TABLE 1: DISTRIBUTION OF RESPONDENTS AS PER AGE (N=40)

Variables	Category	N	%	Mean \pm SD
Age	20-25	18	45	24.17 \pm 2.53
	25-30	06	15	
	30-35	11	30	
	>35	4	10	

Table 1 reveals that the mean age of respondents studied was 24.17 \pm 2.53 years. Age wise distribution of the respondents shows that majority i.e. 45% were in the age group of 20-30 years, followed by 30% were in the age group of 30-35years. Only 15% and 10% were in the age group of 25-30 years and >35 years respectively.

TABLE 2: DISTRIBUTION OF RESPONDENTS AS PER MONTHLY INCOME (RS.) OF THE FAMILY (N=40)

Variable	Category	N	%	Mean \pm SD
Income	5000-10000	7	17.5	20165.24 \pm 14460.70 rupees
	10000-20000	14	35	
	20000-30000	8	20	
	30000-40000	6	15	
	\geq 40000	5	12.5	

Table 2 shows the distribution of respondents as per monthly income of the family. Average monthly income of the respondents was 20165.24 \pm 14460.70 rupees. Majority of the respondents i.e. 35% were having monthly income in the range of 10000-20000, followed by 20% were having monthly income in the range of 20000-30000. 17.5% were having monthly income in the range of 5000-10,000.

TABLE 3 DISTRIBUTION OF RESPONDENTS AS PER THEIR BMI (N=40)

Variable	Category	N	%	Mean \pm SD	Min.	Max.
BMI (kg/m ²)	<18.5 (Under weight)	11	27.5	22.21 \pm 3.01	14.34	40.51
	18.5-22.9 (Normal weight)	18	45			
	23-24.9 (Over weight)	6	15			
	\geq 25 (Obese)	5	12.5			

Note: **WHO 2004-** Body Mass Index (BMI kg/m²) for Asian population.

Table 3 reveals that the mean BMI of the respondents was 21.66kg/m² \pm 3.01, with majority i.e.40% of the respondents were having normal weight with BMI in the range of 18.5-22.9kg/m², followed by 21.5% were overweight. Only 12.5% and 9.25% of the respondents were underweight and obese respectively.

TABLE 4: NUTRIENT INTAKE (24HRS RECALL) OF THE RESPONDENTS (N= 40)

Variable	Category	Mean Intake \pm SD	SDI*	Min.	Max.
Nutrient Intake	Energy (kcal/d)	1880.66 \pm 387.74	2250	1000.22	2680.11
	Proteins (gm/d)	57.73 \pm 16.74	78	30.05	99.82
	Visible Fat(gm/d)	37.22 \pm 7.18	30	10	51
	Calcium(mgs/d)	434.72 \pm 265.56	1200	206.82	1600.00
	Iron(mgs/d)	11 \pm 5.86	35	5.64	44.11

*SDI (Suggested Daily Intake): Dietary Guidelines for Indians-A Manual, National Institute of Nutrition (NIN), Indian Council of Medical Research Hyderabad (2011).

Perusal of the table 4 indicates that the respondents were taking less amount of nutrients except visible fat from Suggested daily intake (SDI) given by ICMR as per 24 hrs recall. Mean intake of energy among them was 1880.66 \pm 387.74kcal/d, with a minimum intake of 1000.22kcal/d and maximum intake of 2680.11kcal/d. Mean intake of protein was 57.73 \pm 16.74gm/d. Slightly more nutrient intake than the SDI was seen with respect to visible fat. Mean intake of calcium was 434.72 \pm 265.56. Min. calcium intake among respondents was 206.82mg/d and maximum intake of 1600.00mg/d. Lowest mean intake among all the studied nutrient was with respect to daily intake of iron. Only 11 \pm 5.86 mean intake of iron was seen among the respondent.

MAJOR FINDINGS:

1. Mean age of respondents studied was 24.19 \pm 2.52 years. Age wise distribution of the respondents shows that majority i.e. 45% were in the age group of 20-30 years, followed by 30 % were in the age group of 30-35years.
2. Average monthly income of the respondents was 20165.24 \pm 14460.70 rupees. Majority of the respondents i.e. 35% were having monthly income in the range of 10000-20000, followed by 20% were having monthly income in the range of 20000-30000.
3. Mean BMI of the respondents was 22.21kg/m² \pm 3.04, with majority i.e.40% of the respondents were having normal weight with BMI in the range of 18.5-22.9kg/m², followed by 21.5% were overweight. Only 12.5% and 9.25% of the respondents were underweight and obese respectively.
4. Respondents were taking less amount of nutrients except visible fat from suggested daily intake (SDI) given by ICMR as per 24 hrs recall. Mean intake of energy among them was 1880.66 \pm 387.74kcal/d, with a minimum intake of 1000.22kcal/d and maximum intake of 2680.11kcal/d. Mean intake of protein was 57.73 \pm 16.74gm/d. Slightly more nutrient intake than the SDI was seen with respect to visible fat. Mean intake of calcium was 434.72 \pm 265.56. Lowest mean intake among all the studied nutrient was with respect to daily intake of iron. Only 11 \pm 5.86 mean intake of iron was seen among the respondent.

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