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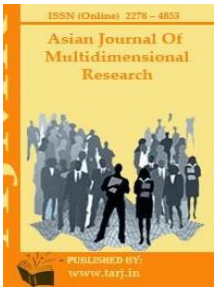

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SUPPORTIVE ROLE OF NGOs IN GOVERNANCE

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ABSTRACT

The multifarious functions of the government have grown into complexity. It has become handicapped in managing all of them effectively. Moreover, government is unable to look after the people in all aspects of the life. In such a situation, it is expected that Non-Governmental Organizations (NGOs) can play a significant role in governance. Everybody knows that there is lot of corruption in the administration and the prominent leaders of the country have several times accepted it. Government alone cannot meet all the requirements/needs of the people unless and until people participation in the governance is ensured. And NGOs have their own role to play in bridging the gap between the government and the people. Our country is facing major problems like poverty, unemployment, illiteracy, increasing rate of the crime and dissatisfaction of people with the working of the administration. Inability of the government in addressing all these problems may be the root cause.

KEYWORDS: *Administration, Government In Addressing, Participation, Requirements.*

INTRODUCTION

The multifarious functions of the government have grown into complexity. It has become handicapped in managing all of them effectively. Moreover, government is unable to look after the people in all aspects of the life. In such a situation, it is expected that Non-Governmental

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Organizations **(**NGOs) can play a significant role in governance. Everybody knows that there is lot of corruption in the administration and the prominent leaders of the country have several times accepted it. Government alone cannot meet all the requirements/needs of the people unless and until people participation in the governance is ensured. And NGOs have their own role to play in bridging the gap between the government and the people. Our country is facing major problems like poverty, unemployment, illiteracy, increasing rate of the crime and dissatisfaction of people with the working of the administration. Inability of the government in addressing all these problems may be the root cause. As it does not have such a spirit of social service as the NGOs have. We have the example of the Bangladesh's Muhammed Unush who did well in micro finance and got the prestigious Nobel Prize. And Deep Joshi, founder of the PRADAN, has repeated the same thing and won Ramen Megshesh award, recently. So the government should not only think about the involvement of NGOs but should make it sure that NGOs having better infrastructure have due place in governance. The NGOs of good reputation may be involved in the process of awareness generation, identification and selection of beneficiaries, policy formulation, planning, programming, implementation, monitoring and evaluation. Their involvement can prove useful in dissemination of knowledge and information. Their supportive role can be improved by imparting them the required training for building capacity thereof.

Our country has a great tradition of social service. Our Rishis (sages) used to live as part of the community and bring about social transformation around them by leading examplery lives. Raja Ram Mohan Rai introduced the concept of social service in India through women welfare and to establish social harmony in the society. He established Brhama Samaj which had worked for eradication of rooted social evils like sati pratha, castism etc. Later on so many social reformers followed the Raja Ram Mohan Rai. Swami Vivekananda was the only person who initiated the social service in Hindu Monasticism and founded the Ramakrishna Mission with the ideal –one's own salavation and service to humanity‖. At present this organisation has branches all over the country and abroad, is involved in social service activities in several remote tribal areas. Many pre-independence and post independence period Gandhian organisations came into existence with the ideal of Grama Swaraj as pronounced by Mahatma Gandhi. Later during the seventies, a few committed, well educated youth, disillusoned by the inadequacy of government programmes to bring about effective social changes went to remote tribal and rural areas of India and established voluntry organisations to start innovative programmes for empowring the poor. However during the decade, there has been a mushrooming of voluntary organisation in large numbers as a means of making money.[1]

NON-GOVERNMENTAL ORGANIZATION (NGO)

Non-governmental organization (NGO) is a term that has become widely accepted as referring to a legally constituted, non-government organization created by natural or legal persons with no participation or representation of any government. In the cases in which NGOs are funded totally or partially by governments, the NGO maintains its non-governmental status and excludes government representatives from membership in the organization. Unlike the term intergovernmental organisations, "non-governmental organization" is a term in general use but is not a legal definition. In many jurisdictions these types of organizations are defined as "civil society organizations" or referred to by other names.[2]

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International non-governmental organizations have a history dating back to at least 1839. Rotary, later Rotary International, was founded in 1904. It has been estimated that by 1914 there were 1083 NGOs. International NGOs were important in the anti-slavery movement and the movement for women's suffrage, and reached a peak at the time of the World Disarmament Conference. However, the phrase "non-governmental organization" only came into popular use with the establishment of the United Nations Organization in 1945 with provisions in Article 71 of Chapter 10 of the United Nations Charter for a consultative role for organizations which are neither governments nor member states. The definition of international NGO (INGO) is first given in resolution 288 (X) of ECOSOC on February 27, 1950: it is defined as "any international organization that is not founded by an international treaty". The vital role of NGOs and other "major groups" in sustainable development was recognized in Chapter 27[8] of Agenda 21, leading to intense arrangements for a consultative relationship between the United Nations and non-governmental organizations.

Rapid development of the non-governmental sector occurred in western countries as a result of the processes of restructurization of the welfare state. Further globalisation of that process occurred after the fall of the communist system and was an important part of the Washington consensus.

Globalization during the 20th century gave rise to the importance of NGOs. Many problems could not be solved within a nation. International treaties and international organizations such as the World Trade Organization were perceived as being too centred on the interests of capitalist enterprises. Some argued that in an attempt to counterbalance this trend, NGOs have developed to emphasize humanitarian issues, developmental aid and sustainable development. A prominent example of this is the World Social Forum which is a rival convention to the World Economic Forum held annually in January in Davos, Switzerland. The fifth World Social Forum in Porto Alegre, Brazil, in January 2005 was attended by representatives from more than 1,000 NGOs. Some have argued that in forums like these, NGOs take the place of what should belong to popular movements of the poor. Others argue that NGOs are often imperialist in nature, that they sometimes operate in a racialized manner in dominant countries, and that they fulfill a similar function to that of the clergy during the high colonial era. The philosopher Peter Hallward argues that they are an aristocratic form of politics. However, this philosophy would suggest that organizations of indigenous peoples are not represented, which is untrue. Whatever the case, NGO transnational networking is now extensive and there is wide scope of its intervention. [3]

Apart from NGO, often alternative terms are used as for example: independent sector, volunteer sector, civil society, grassroots organizations, transnational social movement organizations, private voluntary organizations, self-help organizations and non-state actors (NSA's).

Non-governmental organizations are a heterogeneous group. A long list of acronyms has developed around the term NGO.

These include:[4]

- BINGO is short for business-oriented international NGO, or big international NGO;
- CSO, short for civil society organization;
- DONGO: Donor Organized NGO;
- ENGO: short for environmental NGO, such as Global 2000;

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- GONGOs are government-operated NGOs, which may have been set up by governments to look like NGOs in order to qualify for outside aid or promote the interests of the government in question;
- INGO stands for international NGO; Education charter international is an international NGO
- QUANGOs are quasi-autonomous non-governmental organizations, such as the International Organization for Standardization (ISO). (The ISO is actually not purely an NGO, since its membership is by nation, and each nation is represented by what the ISO Council determines to be the 'most broadly representative' standardization body of a nation. That body might itself be a nongovernmental organization; for example, the United States is represented in ISO by the American National Standards Institute, which is independent of the federal government. However, other countries can be represented by national governmental agencies; this is the trend in Europe.)
- TANGO: short for technical assistance NGO;
- GSO: Grassroots Support Organization
- MANGO: short for market advocacy NGO

There are also numerous classifications of NGOs. The typology the World Bank uses divides them into Operational and Advocacy: The primary purpose of an operational NGO is the design and implementation of development-related projects. One frequently used categorization is the division into relief-oriented versus development-oriented organizations; they can also be classified according to whether they stress service delivery or participation; or whether they are religious or secular; and whether they are more public or private-oriented. Operational NGOs can be community-based, national or international.

The primary purpose of an Advocacy NGO is to defend or promote a specific cause. As opposed to operational project management, these organizations typically try to raise awareness, acceptance and knowledge by lobbying, press work and activist events.

USAID refers to NGOs as private voluntary organisations. However many scholars have argued that this definition is highly problematic as many NGOs are in fact state and corporate funded and managed projects with professional staff.[citation needed] Furthermore it has often been argued that USAID is in fact a key arm of American imperialism and that it sets up and supports NGOs in order to further imperial agendas. NGOs exist for a variety of reasons, usually to further the political or social goals of their members or funders. Examples include improving the state of the natural environment, encouraging the observance of human rights, improving the welfare of the disadvantaged, or representing a corporate agenda. However, there are a huge number of such organizations and their goals cover a broad range of political and philosophical positions. This can also easily be applied to private schools and athletic organizations.

GOVERNANCE

Governance means the process of decision-making and the process by which decisions are implemented (or not implemented). Governance can be used in several contexts such as corporate governance, international governance, national governance and local governance. So governance is the process of decision-making and the process by which decisions are implemented, an analysis of

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governance focuses on the formal and informal actors involved in decision-making and implementing the decisions made and the formal and informal structures that have been set in place to arrive at and implement the decision.[5]

The World Bank defines governance as[6]

"The exercise of political authority and the use of institutional resources to manage society's problems and affairs".

The Worldwide Governance Indicators project of the World Bank defines governance as[7]

"The traditions and institutions by which authority in a country is exercised. This considers the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies and the respect of citizens and the state of the institutions that govern economic and social interactions among them".

According to the UNDP[8]

"Governance has been defined as the rules of the political system to solve conflicts between actors and adopt decision (legality). It has also been used to describe the proper functioning of institutions and their acceptance by the public (legitimacy). And it has been used to invoke the efficacy of government and the achievement of consensus by democratic means (participation)".

HOW TO INVOLVE THE NGOS IN GOVERNANCE?

ROLE IN POLICY FORMULTION

Involvement of NGOs in policy formulation at centre, state and local level will ensure people participation in decision making process. It will create the democratic paltform to the administration and satisfaction to the common masses. As NGOs are very close to the commoon people so they know the ground realities and problems of the people.

STRATEGIC OBJECTIVE

To ensure the participation of NGOs in policy formulation process at all levels of the government.

ACTIONS TO BE TAKEN

BY GOVERNMENT

- Categorise three types of NGOs for centre, state and district level respectviley as per their size, experience and reputation.
- The NGOs to be involved in policy formulation must be secrutnised on the level of their sincerety, honesty, working sphere and capability.
- In Planning Commission there may be an advisory panel on NGOs to advise in certain matters.
- Invite NGOs of repute to contribute in policy formulation.
- Commissions appointed by the government to seek recommendations on policy issues should have the adequate representation of social reformer or NGOs.

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- Assess the on-going policies properly and suggest appropriate alternatives/substitutes for necessry modifications.
- Collect first hand information and contribute to the process of policy formulation by providing requisite authenticated data and information.
- Ensure that there is no biased approach in highlighting the facts and flaws.

POLICY IMPLEMENTATION COLLABORATION WITH NGOs

As the state's responsibilities have increased manyfolds and there is shortage of proper infrastructure in government organisations. Therefore, the government is unable to implement, all the policies and programmes thereunder with sincerity, dedication and the spirit required. So services of NGOs can be taken for such tasks because they are close to the people and have the spirit of social service.

STRATEGIC OBJECTIVE

Seek co-operation of NGOs in effective implementation of the policies and programmes.

ACTIONS TO BE TAKEN

BY GOVERNMENT

- Make necessary provisions for seeking co-operaton of NGOs in implementation of the policies and programmes.
- Provide required funds to motivate and involve NGOs.
- Arrange training for capacity building of NGOs.
- Direct District Administration to create condusive atmosphere for better involvement of NGOs.
- Create good rapport with NGOs.
- One NGO must be attached with District Administration to implement the schemes, programmes and the ouput of that NGO must be evaluated at the regular interval.

BY NGOs

- Find out the dserving beneficaries.

SUPERVISION, MONITORING AND EVALUATION

It is known to all that government officials work apathetically and have nexus which affect the working of government organisations, ultimately the targets of government programmes are not fully achieved. The policies framed for the people may be watched by NGOs. They can render services for supervision, monitoring and evaluation.

STRATEGIC OBJECTIVE

Assign the responsibilities of supervision, monitoring and evaluation to NGOs for achievement of desired results.

ACTIONS TO BE TAKEN

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BY GOVERNMENT

- After divided state in the divisions, each division should be under control of international NGO for the evaluation of the working of the NGOs at district lavel. Such type of NGO should be at least two at state level.
- This job should be given to high repute NGOs like UNO, Transprency Internationl etc.
- Report submitted by the all district officers must be evaluated by NGO randomanly.

BY NGOs

- Develope the mechanism of social audit.
- Alert the people about the activities of the government
- Awrae the people regarding possible consequences of the policies, schemes and programmes and suggest to overcome the negative aspects of the same.
- Get the feedback of implemented policies, schemes and programmes.
- Suggest suitable measures on running policies, schemes and programmes.

AWARENESS GENERATION AMONG THE PEOPLE

For the success of thr democracy it is very important to aware comon masses regarding policies, schemes and programmes initiated by the government. It would be possible when people themselves will take interests to have familiar with the government activities. And how will people be awared? it is the NGOs that can make the people known about the government activities.

STRATEGIC OBJECTIVE

Promote NGOs in awareness generation campaign about the policies, schemes and programmes made by the government.

ACTIONS TO BE TAKEN

BY GOVERNMENT

- Necessary steps should be taken in this regard.
- Requisite infrastructure may be provided to the NGOs such as money and other materials.
- Joint work with public relation department and NGOs must be ensured.
- Seminars may be organised by the universities or other capable research agencies on the awrareness generation among the common people.

BY NGOs

- Special campaign of awareness regarding policies, schemes and programmes may be started.
- May ensure the involvement of NSS, NCC, VLC etc. in awrareness generation movement.
- Participation in the meetings of Gram Panchyats for making the people familiar with the policies, schemes and programmes.

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CAPACITY BUILDING OF THE NGOs

It should be mandatory to provide requisite training to the NGOs to perform their task. It can be done with the help of reputed international agencies that have already rich experience in this connection.

STRATEGIC OBJECTIVE

To build up the capacity of NGOs as per societal requirements.

ACTIONS TO BE TAKEN

BY GOVERNMENT

- Collaboration of reputed international NGOs/agencies like UNDP, Red Cross, Transparency International.
- Make fund availbale for further research in this connection to the universities.
- Training may be provided in the universities.

CONCLUSION

No doubt, NGOs are the necessity of the day to be a part of the governance as government is incompetent to provide all kind of services to the people. There are a large number of NGOs working for the welfare of the society. All of them are not well reputed, but have the connection with politicians. There are so many NGOs that are established by the politicians and owners of the multinational companies. Among them, few NGOs are working for the nobel cause otherwise they work for the interests of the owners. So it is necessary to have proper evaluation of the NGOs before taking them in the process of governance. They will give requisite output and prove as an important third sector, if the NGOs are sincere, dedicated and really non-profit organisations.

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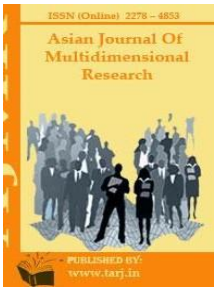

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ANALYSIS OF AWARENESS AND PERCEPTION OF PEOPLE TOWARDS INVESTMENT IN GOLD AT GR. NOIDA CITY

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ABSTRACT

Gold is nowadays becoming very important part of portfolio of investors in India. People are now aware with the returns and benefits gold is giving against other financial products on investment portfolio in India.

Although investors are allocating some of its portion of investment in Gold but there are still large no of people especially in semi urban area those who do not use gold as a mode of investment. This paper is an attempt to analyse the perception of the people regarding investment in Gold and analyzing their awareness level for investing in Gold.

KEYWORDS: *Gold, Investment, Portfolio Analysis, Gold Bonds.*

INTRODUCTION

Since a long period of time, gold has been considered as a most precious metal to buy predominantly in the form of Jewellery. Purchasing of gold is not new and this is as old as much the age of gold. People in earlier times were used to purchase gold on every auspicious occasion, not for the purpose of investment, rather to buy and hold it. This is a common tendency in Indians that they buy the gold for the sake of buying and that's why India is the largest consumer of gold worldwide(As per WGC), but as the economy of a country grows, new avenues for investment grow and now gold has also become an important option to be chosen for investment . Now buying the gold on auspicious occasions is a traditional concept rather people are looking at gold as an option for investment. In Indian financial system, banks and other financial institutions are more concerned in promoting the investment in gold. In fact, GOI has also introduced a gold related scheme in its recent general

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budget so that the, gold prisoned can come into the market. According to research. More than 16,000 tonnes of gold has been hold by Indian households mostly in the form of Jewellery. The market value of this can be somewhere around 27.2 Lakh Crore means nearly double the foreign exchange reserves hold by our central bank. As the perception of people towards gold has changed, the Indian financial has evolved many ways to invest in gold. Following are some important forms of investment in gold-

1. Gold bars
2. Gold Bullion Coins
3. Collectible Gold Coins
4. Gold Certificates
5. Gold ETF's
6. Gold Stocks
7. Gold Futures

THEORITICAL FRAMEWORK

GOLD AS AN ASSET CLASS

Nowadays gold has become an important avenue for investment and occupy a place in the portfolio of investors. It has been treated now as a hedge against inflation. Portfolio diversification is a key to reduce the risk. Investment in gold provides a high liquidity to the holder and the investment in gold can earn a handsome retina at a lesser degree of risk. This is the reason why, gold has become the most attractive avenue for investment. But everything in the world has certain pros and cons and gold is not the exception, there are certain problems and drawbacks associated with the investment in gold like fear of theft, loss by damages etc. And the most important is the quantity of investment which an investor gets against the cost of investment which sis higher in gold investment that is why, everyone in a country is not able to afford this yellow metal how salaried persons and a big class of investors (having small savings) may not be able to buy the gold because of its high prices and scarce nature. So, to bring the gold in the circumference of small investors, Indian financial system has evolve many ways to invest in gold, indirectly. There are many good reasons initiating investment in gold. We have complied a no. of reasons that are capable of guiding one's investment decision in gold. Few of them are given as below.

1. **HEDGE AGAINST INFLATION:** At the time of economic meltdown, ne of the most likely action taken by all governments around the world, is to increase the supply of money into the economy so that the liquating and demand can be infused into the markets. But this over supply of money resents in inflation and simultaneously there is a devaluation in the value of currency and if someone is holding his wealth tied up in cash then there is a significant deterioration in one's net worth in real terms.

   But why we talk about gold, it provides the excellent protection against the inflation because why the value of a currency defines, the value of investment in gold rises. So if someone is having a good investment in gold, then the losses incurred as a result of inflation can be effect to some degree, by the increased value of one's gold investments.

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2. **DIVERSIFICATION OF PORTFOLIO:** For the purpose of reducing the portfolio risk, it is very essential to have the diversified investments. So nowadays, gold has occupied an important place in the portfolio of investors. Why the stock market falls, there is a high probability that the value of gold increases. With a good proportion of investment in gold, one can protest himself/ herself against the falling markets.

3. **RISK:** Investments in gold does not carry much risk as compared to other avenues, at least in our county. Seldomly we see deflation in the value of gold. So one can appreciates its capital and simultaneously can reduce risks while making investments in gold.

4. **LIQUIDITY:** This is the investment biggest benefit associated with the gold. One can appreciate its value of investments as well as can convert it gold it cash at any time. Many banks and NBFC's are offering loan against gold and one can also sale its gold into open market

5. **CURRENT INCOME:** Ana investor can also generate it current income while making invest ments in those securities which are backed up by gold like GOLD ETF's. Gold options, gold futures etc. This income generally creates in the form of dividend.

6. **CONVENIENCE:** Investment should be flexible in nature i.e. entry and exit from an investment should be smooth aver hassle-free. Gold scores very high her. With the beginning of Gold ETFs in India. One can hold the gold for the short term. Instead of keeping a large cash balance, one can make investments in gold EFT's for earning returns without any blockage of funds.

FORMS OF INVESTMENT IN GOLD

Investments in gold may take the following forms:

1. **PHYSICAL GOLD:** This is the most traditional way of investing in gold. This is the most common way. The people are comfortable with. Physical gold can be purchased in the following two ways-

2. **JEWELLERY:** The oldest way of accumulating the gold on various auspicious occasions like wedding. Festivals, gifts etc. But Jewellery are most likely considered as' consumptions' rather investments because it is only an expense for deriving pleasure and for symbolizing wealth.

3. **GOLD BAR/ COINS:** This is another way of investing in physical form of gold. One who is having the ample cash balance can invest in gold bars and gold coins which are easily available at different banks and jewellery shops. The value of these gold bars/ Coins tends to go up in the long sun and can protect one's portfolio in the wake of inflation.

4. **GOLD ETF'S:** This is a recent creation in the trading field of Indian Stock market. An ETF resembles a mutual fund whose trading takes place on a stock exchange like other stocks. Gold ETF's is a type of fund that invest one's money in pure gold. By following this way. One can dominate to buy and store gold physically. Gold ETF's are basically designed to track the price of gold in the market.

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Gold EFTS's exist in a variety of other forms also, like ETC (Exchange traded commodities), CEFs (Closed-end fund) or ETS's (Exchange –traded Notes).

5. **GOLD MINING STOCKS AND GOLD MINING FUNDS:** This is another indirect way of investing in gold. In this avenue, the investment is not in gold but in gold mining companies. If the prices of gold rises, then the producer's of gold will naturally benefit. Investments in gold stocks may be

6. **GOLD OPTIONS & FUTURES:** These are the derivatives having the gold as the underlying asst. This option provides the short term speculative opportunities on the future gold prices. But this requires a lot of indeed knowledge about the movements of market. The markets are more complex and volatile; therefore such investments are more suitable for experienced and sophisticated investors. The big advantage with the derivatives is that the investor can control a large sum of investment with a small and limited amount of money. But disadvantage is this that options expires within a short period of time. Gold derivatives may bring a big future; it may also all in an instant.

7. **OTHER FORMS:** Digital Gold currency, E-gold Gold Accumulation plans (GAP) Gold Bullion Pensions, Allocated Gold a/cs, unallocated gold a/cs, Scrap gold etc.

RESEARCH METHODOLOGY

OBJECTIVES OF THE RESEARCH

In order to study the Awareness and perception of people towards investment in Gold following objectives were made:

1. To analyse the investor awareness level and factors affecting towards investment.
2. To know the differing perception of people towards investment in Gold.
3. To analyse the different types of investment options available in Gold.

DATA SAMPLING

A descriptive research design was adopted to do the survey with the help of questionnaire. The study used non-convenience sampling. There were total 134 questionnaire filled by the existing investors out of which 100 investors were aware of different gold investment options and instruments available in the market. The responses of these 100 investors were further analyzed inorder to achieve research objectives.

The primary data was collected by direct interview method by approaching the investors and secondary data was collected through various books, websites, company records etc.

DEMOGRAPHIC CHARACTERISTICS

The study was concentrated on awareness level among different age group of the investors. The selected sample respondents were asked to fill their appropriate answer for the questions given. The demographic data presented in Table 1 indicates that most of the respondents fall into age category of 35-45 years as it was indicated

TABLE1: DEMOGRAPHIC CHARACTERISTICS

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	Characteristics	No. of the respondents	Percentage
	Total No of Respondents	100	100
Age	Below 25 years	9	9
	25-35 years	26	46
	35-45 years	53	33
	Above 45 years	12	12
Sources of Income	Salary	40	40
	Business	48	48
	Others	12	12
Annual Income	Less than 120000	19	19
	120000to 240000	30	30
	240000to 360000	23	23
	360000 to 480000	12	12
	More than 480000	16	16

by 53% respondent in sample. 26% of the respondents belong to 25-35 years and the respondents in the age group of above 45 years accounts for 12% and remaining 9% of the respondents fall in the age group of below 25 years. From this above table we could observe that 35-45 years People have lot of interest and more investment in Gold. Analysis also indicates that as many as 40 percent of the respondents were highly dependent monthly salary. Further, 48 percent of them have income sources as Business and profession and only 12 percent of them having earning from other sources like house rent, bank deposit interest, pension & etc. When we analyze annual income of the respondents 30% of them fall under category of Rs 1,20,000 to 2,40,000 per annum, 23% of Rs 1,20,000 per annum, 16% of the people have more than Rs 4,80,000 income per annum and the annual income of the rest of the 12& of the people fall between 3,60,000 to 4,80,000 per annum.

AWARENESS AND INTEREST TO INVEST IN GOLD

Although there are many options to invest in gold but it is not very favorite among the investors. Therefore an attempt was made to know the awareness and interest to invest in Gold investment instruments. The received information indicates that 74.6 percent of the respondents were well aware of Gold investment and different option and instruments available for investment in gold.

TABLE 2: AWARENESS AND INTEREST

Opinion	No. of the respondents	Percentage
Yes	100	74.6
No	34	26.4

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Total	134	100

INFORMATION SOURCE OF AWARENESS

There is too much general form of information sources in the financial service segments. People still tend to associate with major sources like Personal knowledge (own decision). Advertisement (all Print, audio-video media), apart from this, people especially take decision with people's experiences as well as experts of the respective field, hence they consider Investment consultant, Friends and relatives recommendation as effective information of source of awareness. It can be noted from the Table 3 that 30% of the respondents are aware about Investment in Gold by investment consultant's advice. This is followed by 28% of the respondents getting awareness, who were influenced by friend's suggestion and previous experience. 23% of them are saying that advertisement is a big source of awareness. On the other hand, a very meager (19%) percentage of the respondents feel and consider that personal knowledge (own decisions) is the best information source for futuristic investment.

TABLE 3: SOURCE OF AWARENESS

Opinion	No. of the respondents	Percentage
Personal knowledge	19	19
Investment consultant	30	30
Advertisement	23	23
Friends suggestions	28	28
TOTAL	100	100

PURPOSE OF INVESTMENT IN GOLD

An attempt was made to assess the purpose of investment in Gold from the public who reside at Greater Noida (table 4). The received information indicates that majority of the respondents (31%) maintain investment in Gold to meet future expenses like children's education, marriage, land and building purchase. Regular return was cited by 29% of the people. Another 15% and 10% of the respondents point out that the purpose of investment was safety and just one type of diversified investment.

TABLE 4: PURPOSE OF INVESTMENT

Opinion	No. of the respondents	Percentage
Regular return	29	29
Safety	15	15
Capital appreciation	10	10
Met future expenses	31	31
Diversified Investment	15	15

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TOTAL	100	100

INVESTMENT OPTION OF THE RESPONDENTS

In the following table an attempt was made to analyze the consumers expected investment option in Gold. For this purpose, the study was conducted with two major investment options; the opinion of the consumers, investment option was analyzed by simple percentage analysis based on their priority. Greater part of the investors, 71% of the respondents, is investing in gold because of its regular higher return.

TABLE 5: INVESTMENT OPTION

Opinion	No. of the respondents	Percentage
Return	71	71
Safety	29	29
Total	100	100

RESPONDENTS PREFERED GOLD INVESTMENT TYPES

An attempt was made to find out the preferred Gold investment of the selected sample, as it provides the reason for the choice of different investment types over other ordinary investments. Hence, questions were framed to study their preference in different investment options in gold and the selected respondents were asked to fill the in the questionnaires. Respondents who preferred Investment types were classified into two four categories (1) JEWELS, (2) Gold ETF (3) Gold BARS and (4) Gold Coins. We were sure that preference rate may vary to each and every customer so that table 6 inferred that 49% of the respondents preferred to invest in JEWELS, 16% of the respondents invested in Gold ETF ,24% of the respondents invested in Gold Coins and 11% of the respondents invested in Gold BARS.

TABLE 6: INVESTMENT TYPES

Opinion	No. of the respondents	Percentage
GOLD ETF	16	16
JEWELS	49	49
GOLD BARS	11	11
GOLD COINS	24	24
TOTAL	100	100

CRITERIA FOR CHOOSING PREFERED GOLD INVESTMENT

Specifically in Gold Investment Direct Legal ownership, safe custody, liquidity and market value are having major impact on the respondents buying behaviors well as we hope that some other factor may slightly influence each and every individual investor. It could be observed from the above table 7 that 34% of the respondents prefer right type of gold investment, market value 33% of the investor

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use liquidity convenience of a particular instrument of investment. 10% of them consider that safe custody as best criterion of choosing proffered instrument and rest of the 23% of the respondent feels that Direct, Legal ownership is a criterion for choosing the Gold instrument.

TABLE 7: CRITERIA FOR CHOOSING PREFERRED GOLD INSTRUMENT

Opinion	No. of the respondents	Percentage
Direct, Legal Ownership	23	23
Safe Custody	10	10
Liquidity	33	33
Market Value	34	34
	100	100

PERCENTAGE OF INCOME INVESTED IN GOLD

An attempt was made to know the percentage of income invested in Gold (Table8). The analysis indicates that 59% of the respondents opines every year they are spending less than 10% per month in financial series specifically in Gold, 26% of the investors are allocating 10% -30% of their monthly income, 13% of the respondents are spending 30%-50% of the monthly income and only meager (2%) of the investors are spending more that 50% of their monthly income in Gold. From this we could observe that investment fund is low because people are getting aware of different type of investment like banks, postal saving, share trading, silver trading (commodity trading, Mutual Funds & etc.

TABLE 8: PERCENTAGE OF INCOME INVESTMENT IN GOLD

Opinion	No. of the respondents	Percentage
Less than 10%	59	59
10% to 30%	26	26
30% to 50%	13	13
More than 50%	2	2
	100	100

RELATIONSHIP BETWEEN INVESTMENT REASON AND INVESTMENT AMOUNT

NULL HYPOTHESIS (Ho): There is no significant relationship between the investment reason and Investment amount.

ALTERNATIVE HYPOTHESIS (Ha): There is a significant relationship between the investment reasons and investment amount.

TABLE 10: RELATIONSHIP BETWEEN INVESTMENT REASON AND INVESTMENT AMOUNT

Particulars/ month	Safety	Return	Liquidity	Convenience	Total
Rs. 5, 000 to 10,000	4	2	0	0	6
Rs. 10, 000 toRs. 30,000	6	25	0	3	34
Rs. 30,000toRs50,000	2	22	2	0	26
Above Rs. 50, 000	4	18	12	0	34
Total	16	67	14	3	100

Chi-square test $=\sum (O-E)^2/E$

Degree of freedom=9c-1)(r-1)=(4-1)(4-1)=9

Calculation Value=55.7548

Table value of Chi-square at 5% for 9 degree of freedom=16.919

INTERPRETATION

The table value is less than the calculated value. Therefore null hypothesis is rejected. So there is a relationship between investment amount and investment reason.

SATISFACTION LEVEL OF GOLD INVESTMENT

TABLE 10: RELATIONSHIP BETWEEN INVESTMENT REASON AND INVESTMENT AMOUNT

Factors	H.S	S	No idea	DS	H.D.S	No. of Res	Total weight	Mean
Forms of Investment	0(0)	252(63)	0(0)	74(37)	0(0)	100	326	3.26
Rate of Return	40(8)	280(70)	60(20)	4(2)	0(0)	100	384	3.84
Risk	165(33)	236(59)	0(0)	14(7)	1(1)	100	416	4.16
Convenience	100(20)	192(48)	69(230)	6(3)	6(6)	100	373	3.73
Liquidity	155(31)	220(55)	12(4)	14(7)	3(3)	100	404	4.04
Appreciation	175(52)	232(58)	3(1)	8(4)	2(2)	100	420	4.20

FACTOR'S SATISFACTION

FACTORS	Highly Satisfied	Satisfied	No Idea	Dissatisfied	Highly Dissatisfied
VALUE	5	4	3	2	1

INTERPRETATION

From the above table it is clear that Appreciation gets first rank, Risk gets second rank, Liquidity gets third rank, Rate of return gets fourth rank, Convenience gets fifth rank, and Forms of investment gets last rank.

FINDINGS

- The study reveals that most of the respondent's age in 35-45 years and we could observe that middle aged people have a lot of interest and more investment in Gold as it was indicated by 53% of the respondents in the sample.
- The study disclosed that 48% of the respondents earn monthly income from their own business and profession and 30% of the respondents annual income falls between 1,20,000 to 2,40,000.
- The study also reveals that 30% of the respondents are aware about Gold investment by investment consultant's advice and recommendation.
- The received information indicates that majority of the respondents (31%) maintain investment in Gold to meet future expenses like children's education, marriage, land and building purchase etc.
- The study also unfolds that most of respondent's investment option is JEWELS and 495 of the respondents preferred to invest in JEWELS than any other options like Gold Bars, Gold Coins, Gold funds etc.
- A significant revelation of the study is that there is a significant relationship between investment reason and investment amount and it is clear that Appreciation gets the first rank than other satisfaction factors.

CONCLUSION

Understanding the investor and marketing of Gold investment instruments in India will be more challenging than consumer behaviour of industrial products because of changing economic scenario, revised regulatory regime and geographic factors etc. However India has seen growth in the gold investment in past 10-12 years as the gold has given highest return in all investment options. In the recent past the return on Gold investment is not as good as the expectations and does not provide any tax benefits or risk open. therefore investor should take investment decision in two ways-one is comparing the risk and expected yields and another way is sound planning, expert advices on the marketing of different gold instruments.

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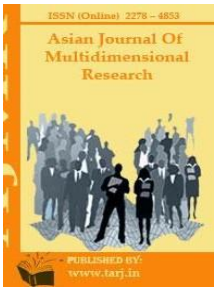

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NEED OF EMPLOYMENT AND ROLE OF MGNREGA IN RURAL AREAS

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ABSTRACT

Since the problem of poverty and unemployment is having serious impact on the economy of the state, there is an immense need of taking some concrete efforts to understand and evaluate this scheme with the help of financial prospective. In the semi-arid region to which the state of Maharashtra in India belongs, agriculture is a highly seasonal activity. During the lean periods, large numbers of rural households mostly remains under un-remunerative employment. The aim of the Mahatma Gandhi National Rural Employment Guarantee Act is to address this problem by providing guaranteed employment at a wage level sufficient to ensure a minimum level of subsistence. By reducing risks faced by poor households, and by constructing productive assets and infrastructure, the scheme also aims to have a longer-term developmental role.

KEYWORDS: *Economy, Financial Prospective, Employment, Development.*

INTRODUCTION

Since the problem of poverty and unemployment is having serious impact on the economy of the state, there is an immense need of taking some concrete efforts to understand and evaluate this scheme with the help of financial prospective. In the semi-arid region to which the state of Maharashtra in India belongs, agriculture is a highly seasonal activity. During the lean periods, large numbers of rural households mostly remains under un-remunerative employment. The aim of the Mahatma Gandhi National Rural Employment Guarantee Act is to address this problem by providing guaranteed employment at a wage level sufficient to ensure a minimum level of subsistence. By

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reducing risks faced by poor households, and by constructing productive assets and infrastructure, the scheme also aims to have a longer-term developmental role.

In India labor is an abundant factor and it is very difficult to provide gainful employment to the entire working population. There was a problem to expand the coverage of industries due to limitations on provision of the capital and at the same time the agricultural sector was having large number of laborers than needed. The rural areas in India were suffering heavily due to unavailability of the stable financial income prospect. In addition to this there was heavy pressure of population as well as the absence of alternative employment opportunities in the villages. Accordingly, the Government of India adopted planning as means of fostering development where the Five Year Plan expressed clearly the set of long term objectives. There was a major focus on rapid increase in the standard of living of the people along with emphasis on the weaker section of the society.

Therefore it is really important to study the ground levels in order to evaluate the effectiveness of this scheme on two critical factors i.e. employment and poverty. There are many economically backward regions in this state, where the scheme is providing the helping hand for pulling them into better economic conditions. However the present study is concentrating on the Tuljapur block to identify the factual situation related to the impact of this scheme on the economic status of the rural masses as well as the entire block.

STATEMENT OF PROBLEM

Generally there are two types of schemes basically designed for poverty alleviation out of which certain schemes which are self-employment- oriented; while others are wage-employment oriented. Economists have expressed diverse opinion regarding the utility and futility of these approaches. There have been a number of studies conducted in our country which aim at evaluating the performance of such schemes. The attempt has been made towards the vital factors of employment generation and its effect on the workers getting employment under the scheme. Certainly there was an enormous increase in the scope of employment scheme since the enforcement of the Mahatma Gandhi National Rural Employment Guarantee Act, but it is really a crucial task to undertake the study of evaluating the effects of the scheme in terms of status of the workers. The major focus of the study is on the financial performance of the scheme with the application of specific parameters so as to cover sufficient grounds of evaluation.

OBJECTIVES OF THE STUDY

To conduct the research work in the prescribed manner, the formulation of the objectives is an important aspect. Therefore the present study is considering the under mentioned objectives.

1. To study the role of this scheme to generate the employment in rural areas.
2. To analyze the timeliness of wage payments towards the workers under this scheme.

HYPOTHESIS

In the present study, the hypotheses are as follows:

I. Opinion about the generation of employment and economical sustainability is independent of gender, age groups and level of education.

II. Opinion about timely payment of wages under the scheme is independent of gender.

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RESEARCH METHODOLOGY

The research methodology is an important component to cover all the dimensions of the present research work. To explore the objectives of the present study, research methodology provides the required platform for the purpose of evaluating the variables in the better manner.

DATA COLLECTION

As per the need of the present study the required primary data collection is being done in a formalized structure. The design applied for selection of these sampling elements is stratified simple random sampling. The formal questionnaire is prepared for 400 workers obtained from this sample and this data is been used for conducting further statistical applications.

STATISTICAL TOOLS AND TECHNIQUES

To conduct the research work more precisely the statistical tools will be applied in the study. It will consist of the tools like tabulation, averages trend analysis, ratios and chi square test to provide appropriate results of the study.

LIMITATIONS OF THE STUDY

The present research work is specifically throwing a light on the selected area under Maharashtra Employment Guarantee Scheme, because of which this study is having following limitations-

a) The study area is limited to the Tuljapur block and the villages under its jurisdiction.

b) The period of this study will consider the five consecutive financial year's only i.e.2007-08 to 2011-12.

c) Information given by the respondents during the survey will be assumed as true.

THE EMPIRICAL ANALYSIS

I. OPINION ABOUT THE GENERATION OF EMPLOYMENT BASED ON GENDER

Hypothesis: Opinion about the generation of employment is independent of gender

X2 = 13.07 D.F = 4 α = 0.05 Table value= 9.48

Since calculated value (13.07) is greater than table value (9.48), so the hypothesis is rejected, and concluded that opinion about the generation of employment is depend on gender.

OPINION ABOUT THE GENERATION OF EMPLOYMENT BASED ON GENDER												
	Gender	**SA**	**A**	**N**	**D**	**SD**	**Total**	**O**	**E**	**O-E**	**(O-E)^2**	**(O-E)^2/E**
Opinion about generation of employmen	Male	8	162	46	28	0	**244**	8	7.32	0.68	0.46	0.06
	Female	4	88	26	36	2	156	162	152.5	9.5	90.25	0.59
	Total	**12**	**25**	**7**	**6**	**2**	**400**	46	43.9	2.08	4.33	0.10

t			**0**	**2**	**4**				2			
								28	39.04	-11.04	121.88	3.12
								0	1.22	-1.22	1.49	1.22
								4	4.68	-0.68	0.46	0.10
								88	97.5	-9.5	90.25	0.93
								26	28.08	-2.08	4.33	0.15
								36	24.96	11.04	121.88	4.88
								2	0.78	1.22	1.49	1.91
												13.07

II. OPINION ABOUT THE GENERATION OF EMPLOYMENT BASED ON AGE

OPINION ABOUT THE GENERATION OF EMPLOYMENT BASED ON AGE												
	Age groups	**SA**	**A**	**N**	**D**	**SD**	**Total**	**O**	**E**	**O-E**	**(O-E)^2**	**(O-E)^2/E**
Opinion about the generation of employment	18 to 25 Years	0	26	10	4	0	40	0	1.2	-1	1.44	1.20
	25 to 35 Years	0	70	26	12	0	108	26	25	1	1.00	0.04
	36 to 45 Years	0	92	24	30	0	146	10	7.2	3	7.84	1.09
	Above 45 Years	12	62	12	18	2	106	4	6.4	-2	5.76	0.90
		12	250	72	64	2	400	0	0.2	0	0.04	0.20
								0	3.24	-3	10.50	3.24
								70	67.5	3	6.25	0.09
								26	19.44	7	43.03	2.21
								12	17.28	-5	27.88	1.61

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0	0.54	-1	0.29	0.54	
0	4.38	-4	19.18	4.38	
92	91.25	1	0.56	0.01	
24	26.28	-2	5.20	0.20	
30	23.36	7	44.09	1.89	
0	0.73	-1	0.53	0.73	
12	3.18	9	77.79	24.46	
62	66.25	-4	18.06	0.27	
12	19.08	-7	50.13	2.63	
18	16.96	1	1.08	0.06	
2	0.53	1	2.16	4.08	
					49.83

Hypothesis: Opinion about the generation of employment is independent of age group

X2 = 49.83 D.F = 12 α = 0.05 Table value= 21.026

Since calculated value (49.83) is greater than table value (21.026), so the hypothesis is rejected and concludes that opinion about employment generation not independent of age group.

III. OPINION ABOUT THE GENERATION OF EMPLOYMENT BASED ON LEVEL OF EDUCATION

OPINION ABOUT THE GENERATION OF EMPLOYMENT BASED ON LEVEL OF EDUCATION												
	Level of Education	**SA**	**A**	**N**	**D**	**SD**	**Total**	**O**	**E**	**O-E**	**(O-E)^2**	**(O-E)^2/E**
Opinion about the generation of	**Up to SSC**	12	198	44	56	2	312	12	9.36	3	6.97	0.74
	HSC	0	32	22	6	0	60	198	195	3	9.00	0.05

employment	**Graduate**	0	14	4	0	0	18	44	56.16	-12	147.87	2.63
	Post Graduate	0	6	2	2	0	10	56	49.92	6	36.97	0.74
		12	250	72	64	2	400	2	1.56	0	0.19	0.12
								0	1.8	-2	3.24	1.80
								32	37.5	-6	30.25	0.81
								22	10.8	11	125.44	11.61
								6	9.6	-4	12.96	1.35
								0	0.3	0	0.09	0.30
								0	0.54	-1	0.29	0.54
								14	11.25	3	7.56	0.67
								4	3.24	1	0.58	0.18
								0	2.88	-3	8.29	2.88
								0	0.09	0	0.01	0.09
								0	0.3	0	0.09	0.30
								6	6.25	0	0.06	0.01
								2	1.8	0	0.04	0.02
								2	1.6	0	0.16	0.10
								0	0.05	0	0.00	0.05
												25.00

Hypothesis: Opinion about the generation of employment is independent of Level of Education

X2 = 25.00 D.F = 12 α = 0.05 Table value= 21.026

Since calculated value (25.00) is greater than table value (21.026), so the hypothesis is rejected and concludes that opinion about employment generation not independent of level of education.

IV. OPINION ABOUT TIMELY PAYMENT ON THE BASIS OF GENDER

Hypothesis: Opinion about Timely Payment is independent of Gender

X2 = 11.49 D.F = 1 α = 0.05 Table value= 11.49

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Since calculated value (11.49) is greater than table value (3.841), so the hypothesis is rejected, and concluded that Opinion about timely payment is depend on gender.

OPINION ABOUT TIMELY PAYMENT ON THE BASIS OF GENDER									
	Gender	**Yes**	**No**	**Total**	**O**	**E**	**O-E**	**(O-E)^2**	**(O-E)^2/E**
Timely payment	Male	74	170	**244**	74	59.78	14.22	202.21	3.38
	Female	24	132	**156**	170	184.22	-14.22	202.21	1.10
	Total	**98**	**302**	**400**	24	38.22	-14.22	202.21	5.29
					132	117.78	14.22	202.21	1.72
									11.49

FINDINGS

The major flagship program of the government is referred to MGNREGA and this scheme is having the wide coverage in India. It is required to note over here that the scheme is not only generating the employments but also producing the valuable community assets though its operations. It has been seen that since the wide spread of the scheme across the state, there is large section of the population in the rural area is relying on this scheme as the major source of employment and revenue generation. There are uneven opportunities of employment under this scheme depending on the geographical locations, seasonal nature and proper implementation of the work. However, the scheme is really serves to the rural workers in a considerable manner but there are various administrative and worksite factors required to be considered on the urgent basis.

CONCLUSION

Viewed in a wider outlook, MGNREGA signals a possible reshaping of priorities in India through a democratic determination to provide real livelihood opportunities for the rural poor. This scheme is a wage employment program, providing minimum wage employment to casual, unskilled labor, women, disabled especially during those days in which they are jobless or free from agriculture work. Gender has never been at the centre stage of the program as a policy but still due to its provision for women, MNREGA has emerged as a very powerful tool for women empowerment. This program of government has taken care of that corner which remained untouched from changes in society over the period.

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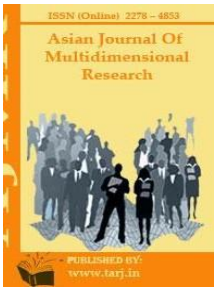

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RURAL WOMEN ENTERPRENEURSHIP AND SELF HELP GROUPS - ISSUES AND CHALLENGES

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ABSTRACT

The emergence of women entrepreneurs and their contribution to the national economy is quite visible in India. The number of women entrepreneurs has grown over a period of time, especially in the 1990s. Women entrepreneurs need to be lauded for their increased utilization of modern technology, increased investments, finding a niche in the export market, creating a sizable employment for others and setting the trend for other women entrepreneurs in the organized sector.

KEYWORDS: *Employment, Especially, Increased Investments, Women Entrepreneurs.*

INTRODUCTION

The rapidly changing socioeconomic scenario led to the emergence of women entrepreneurs. The New generation of women-owned enterprise is actively seeking capital for their businesses, using modern technology to find and create a niche in both the domestic and export markets, While women-owned businesses have the potential and capability of contributing much more, It I essential to formulates to invigorate, support and sustain their efforts in the right direction.

The emergence of women entrepreneurs and their contribution to the national economy is quite visible in India. The number of women entrepreneurs has grown over a period of time, especially in the 1990s. Women entrepreneurs need to be lauded for their increased utilization of modern technology, increased investments, finding a niche in the export market, creating a sizable employment for others and setting the trend for other women entrepreneurs in the organized sector. While women entrepreneurs have demonstrated their potential, the fact remains that they are capable of contributing much more than what they already are. Women's entrepreneurship needs to be studied separately for two main reasons. The first reason is that women's entrepreneurship has been

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recognized during the last decade as an important untapped source of economic growth. Women entrepreneurs create new jobs for themselves and others and also by being different. They also provide the society with different solutions to management, organization and business problems as well as to the exploitation of entrepreneurial opportunities. The second reason is that the topic of women in entrepreneurship has been largely neglected both in society in general and in the social sciences. Not only have women lower participation rates in entrepreneurship than men but they also generally choose to start and manage firms in different industries than men tend to do.

Development of the society is directly related with the Income Generation Capacity of its members with agriculture, as the key income generation activity the entrepreneurship on farm and home can directly affect the income of a major chunk of our population. The growth of modernization processes such as industrialization, technical change; urbanization and migration further encourage it. Entrepreneurship on small scale is the only solution to the problems of unemployment and proper utilization of both human and non-human resources and improving the living condition of the poor masses.

Richard [2001] in their book on entrepreneurship started that entrepreneurship is the dynamic process of creating incremental wealth. This wealth is created by individuals who take the major risks in terms of equity, time and career commitment of providing value to some products or services the product or service itself may or my not be new or unique but value must some how be infused by the entrepreneur by securing and allocating the necessary skill and resources. The delivery of micro finance to the poor is smooth; effective and less costly if they are organized into SHGs. SHG is promoting micro enterprise through micro-credit intervention. Micro enterprise is an effective instrument of social and economic development.

The micro finance is agenda for empowering poor women. Micro enterprises are an integral part of planned strategy for securing balanced development of the economy of the poor women. Rural women's participation in agro-based activities is much more than what statistics reveal. This is mainly due to the fact that most of the work done by the women at farm and home is disguised as daily chores. Mechanization and easy availability of labour provide more time to energetic women to engage themselves in self-employment or entrepreneur ventures. Rural women are having human and non-human resources to take up an enterprise need one an innovative mind and motivation. Entrepreneurship is the only solution to the growing employment among rural youth. It helps to generate employment for a number of people within their own social system. This is more beneficial for women in rural areas as it enables them to add to the family income while taking care of their own home and livestock centered task. Rural women possess abundant resources to take up enterprises. She has the benefit of easy availability of arm and livestock based raw materials and other resources.

Hence, she can effectively undertake both the production and processing oriented enterprises. Entrepreneurship development among rural women helps to enhance their personal capabilities and increase decision-making status in the family and society as a whole.

ENTREPRENEURSHIP DEVELOPMENT OF RURAL WOMEN THROUGH SELF HELP GROUPS

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Women comprise half of human resources they have been identified as key agents of sustainable development and women's equality is as central to a more holistic approach towards establishing new patterns and process of development that are sustainable. [Birendra Kumar Jha, 2009]**.** The contribution of women and their role in the family as well as in the economic development and social transformation are pivotal. Women constitute 90 per cent of total marginal workers of the country. Rural women who are engaged in agriculture form 78 per cent of all women in regular work Experience of NIRD action research projects reveal that, the operational aspects, such as the extent of enabling that goes into the community self help processes and sharpening the mind set of women.

Men and the project administrators are low or critical components that determine their extent to which empowerment may or may not take place. The role of micro-credit is to, improve the socio and economic development of women and improve the status of women in households and communities. The micro entrepreneurships are strengthening the women empowerment and remove the gender inequalities. Self Help Group's micro credit mechanism makes the members to involve in other community development activities. Micro credit is promoting the small scale business enterprises and its major aim is to alleviate poverty by income generating activities among women and poor. Therefore, they could achieve self-sufficiency.

Now-a-days economic development is one of the factors that have changed the entire scenario of social and cultural environment within the country especially for the women. The rural women are engaged in small-scale entrepreneurship programme with the help of Self Help Groups. Through that they were economically empowered and attaining status in family and community.

Rural women play a vital role in farm and home system. She contributes substantially in the physical aspect of farming, livestock management, post harvest and allied activities. Her direct and indirect contribution at the farm and home level along with livestock management operation has not only help to save their assets but also led to increase the family income. She performs various farm, livestock, post harvest and allied activities and possesses skills and indigenous knowledge in these areas. The women were empowering themselves technically to cope with the changing times and productively using their free time and existing skills for setting and sustaining enterprises. They were engaged in starting individual or collective income generation programme with the help of self-help group. This will not only generate income for them but also improve the decision-making capabilities that led to overall empowerment.

AREAS OF MICRO-ENTERPRISE DEVELOPMENT

Depending on number of factors ranging from landholdings, subsidiary occupations, agro climatic conditions and socio-personal characteristics of the rural women and her family member the areas of micro-enterprises also differ from place to place. The micro enterprises are classified under three major heads:

1. Micro Enterprise development related to agriculture and allied agricultural activities like cultivating to organic vegetables, flowers, oil seeds and seed production are some of the areas besides taking up mushroom growing and bee – keeping. Some more areas can be like dehydration of fruits and vegetables, canning or bottling of pickles, chutneys, jams, squashes, dairy and other products that are ready to eat.

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2. Micro-Enterprise development related to livestock management activities like diary farming, poultry farm, livestock feed production and production of vermi composting using the animal waste can be an important area in which women can utilize both her technical skills and raw materials from the farm and livestock to earn substantial income and small scale agro-processing units.
3. Micro – Enterprise development related to household based operations like knitting, stitching, weaving, embroidery, bakery and flour milling, petty shops, food preparation and preservation.

ADVANTAGES OF ENTREPRENEURSHIP AMONG RURAL WOMEN

Empowering women particularly rural women is a challenge. Micro enterprises in rural area can help to meet these challenges. Micro – enterprises not only enhance national productivity, generate employment but also help to develop economic independence, personal and social capabilities among rural women. Following are some of the personal and social capabilities, which were developed as result of taking up enterprise among rural women.

- Economic empowerment
- Improved standard of living
- Self confidence
- Enhance awareness
- Sense of achievement
- Increased social interaction
- Engaged in political activities
- Increased participation level in gram sabha meeting
- Improvement in leadership qualities
- Involvement in solving problems related to women and community
- Decision making capacity in family and community

Economic empowerment of women by micro entrepreneurship led to the empowerment of women in many things such as socio-economic opportunity, property rights, political representation, social equality, personal right, family development, market development, community development and at last the nation development.

SUGGESTION

Right efforts on from all areas are required in the development of women entrepreneurs and their greater participation in the entrepreneurial activities. Following efforts can be taken into account for effective development of women entrepreneurs.

1. Consider women as specific target group for all developmental programmes.

2. Better educational facilities and schemes should be extended to women folk from government part.

3. Adequate training programme on management skills to be provided to women community.

4. Encourage woman's participation in decision-making.

5. Vocational training to be extended to women community that enables them to understand the production process and production management.

6. Skill development to be done in woman's polytechnics and industrial training institutes. Skills are put to work in training-cum-production workshops.

7. Training on professional competence and leadership skill to be extended to women entrepreneurs.

8. Training and counselling on a large scale of existing women entrepreneurs to remove psychological causes like lack of self-confidence and fear of success.

9. Counselling through the aid of committed NGOs, psychologists, managerial experts and technical personnel should be provided to existing and emerging women entrepreneurs.

10. Continuous monitoring and improvement of training programmes.

11. Activities in which women are trained should focus on their marketability and profitability.

12. Making provision of marketing and sales assistance from government part.

13. To encourage more passive women entrepreneurs the Women training programme should be organised that taught to recognize her own psychological needs and express them.

14. State finance corporations and financing institutions should permit by statute to extend purely trade related finance to women entrepreneurs.

15. Women's development corporations have to gain access to open-ended financing.

16. The financial institutions should provide more working capital assistance both for small scale venture and large scale ventures.

17. Making provision of micro credit system and enterprise credit system to the women entrepreneurs at local level.

18. Repeated gender sensitisation programmes should be held to train financiers to treat women with dignity and respect as persons in their own right.

19. Infrastructure, in the form of industrial plots and sheds, to set up industries is to be provided by state run agencies.

20. Industrial estates could also provide marketing outlets for the display and sale of products made by women.

21. A Women Entrepreneur's Guidance Cell set up to handle the various problems of women entrepreneurs all over the state.

22. District Industries Centers and Single Window Agencies should make use of assisting women in their trade and business guidance.

23. Programmes for encouraging entrepreneurship among women are to be extended at local level.

24. Training in entrepreneurial attitudes should start at the high school level through well-designed courses, which build confidence through behavioral games.

25. More governmental schemes to motivate women entrepreneurs to engage in small scale and large-scale business ventures.

26. Involvement of Non Governmental Organisations in women entrepreneurial training programmes and counseling.

CONCLUSION

Women's entrepreneurship is both about women's position in society and about the role of entrepreneurship in the same society. Women entrepreneurs faced many obstacles specifically in market their product (including family responsibilities) that have to be overcome in order to give them access to the same opportunities as men. In addition, in some countries, women may experience obstacles with respect to holding property and entering contracts. Increased participation of women in the labour force is a prerequisite for improving the position of women in society and self-employed women. Particularly the entry of rural women in micro enterprises will be encouraged and aggravated. Rural women can do wonders by their effectual and competent involvement in entrepreneurial activities. The rural women are having basic indigenous knowledge, skill, potential and resources to establish and manage enterprise. Now, what is the need is knowledge regarding accessibility to loans, various funding agencies procedure regarding certification, awareness on government welfare programmes, motivation, technical skill and support from family, government and other organization. More over Formation and strengthening of rural women Entrepreneurs network must be encouraged. Women entrepreneur networks are major sources of knowledge about women's entrepreneurship and they are increasingly recognized as a valuable tool for its development and promotion. This network helps to give lectures, printed material imparting first hand technical knowledge in production, processing, procurement, management and marketing among the other women. This will motivate other rural women to engage in micro entrepreneurship with the right assistance and they can strengthen their capacities besides adding to the family income and national productivity.

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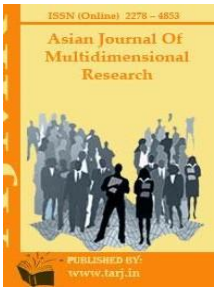

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SOURCES OF PRODUCTIVITY GROWTH IN INDIAN STEEL INDUSTRY: A MALMQUIST PRODUCTIVITY INDEX APPROACH

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ABSTRACT

The paper examines the sources of productivity growth in Indian steel industry using Malmquist productivity index approach for the period 2000-2011. The present study suggests that, the impact of policy changes on the sources of productivity growth of steel industry was negative by mean rate of (-) 2.70 per cent. It was mainly due to negative contribution of technical efficiency at (-) 15.90 per cent and positive technical change of 15.70 per cent. The negative sign in the both pure and scale efficiency have resulted in the deterioration of the technical efficiency in the Indian steel industry during study period.

KEYWORDS: *technical efficiency, deterioration, productivity growth.*

INTRODUCTION

India is the fourth-largest producer of crude steel (up from eighth in 2003) and is slated to become the second-largest steel producer by 2016. The large public and private sector players strengthen steel production capacity as result of rising demand. The market value of the Indian steel sector is expected to reach US$ 95.3 billion by 2016. Driven by rising infrastructure development and growing demand for automotives; steel consumption is expected to reach 104 million tonnes (MT) by 2017.

Steel production in India has increased at a compound annual growth rate of 7.9 per cent over 2009-2014 to record 81.54 mtpa. The industry capacity is expected to increase to 112.5 MT by 2016. Total domestic demand for steel estimated at 113.3 million tonnes per annum (MTPA) by 2016-17.

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Moreover, 301 memorandums of understanding (MoUs) have been signed with various states for planned capacity of about 486.7 MT.

The Government of India has also allowed 100 per cent foreign direct investment (FDI) under the automatic route in the steel sector. National Steel Policy (NSP) has been implemented to encourage the industry to reach global benchmarks. In addition, the government has also stepped up infrastructure spending from the current 5 per cent of gross domestic product (GDP) to 10 per cent by 2017. India is committed to investing US$ 1 trillion in infrastructure during the 12th Five Year Plan (2012–17), from US$ 428 billion in the 11th Five-Year Plan.

INVESTMENTS

Steel industry and its associated mining and metallurgy sectors have seen a number of major investments and developments in the recent past. According to the data released by Department of Industrial Policy and Promotion (DIPP), the Indian mining and metallurgical industries attracted foreign direct investments (FDI) to the tune of US$ 1,669.49 million and US$ 8,527.34 million, respectively, in the period April 2000–February 2015.

GOVERNMENT INITIATIVES

The Government of India is aiming to scale up steel production in the country to 300 MT by 2025 from 81 MT in 2013-14.The Ministry of Steel has announced to invest in modernisation and expansion of steel plants of Steel Authority of India Limited (SAIL) and Rashtriya Ispat Nigam Limited (RINL) in various states to enhance the crude steel production capacity in the current phase from 12.84 MTPA to 21.4 MTPA and from 3 MTPA to 6.3 MTPA respectively.

The Ministry of Steel is facilitating setting up of an industry driven Steel Research and Technology Mission of India (SRTMI) in association with the public and private sector steel companies to spearhead research and development activities in the iron and steel industry at an initial corpus of Rs 200 crore (US$ 31.67 million).

Some of the other recent government initiatives in this sector are as follows:

- An Inter Ministerial Group (IMG) has been setup in the Ministry of Steel for effective coordination and expediting implementation of various investment projects in the steel sector.
- A Project Monitoring Group (PMG) has been constituted under the Cabinet Secretariat to fast track various clearances/resolution of issues delaying the investments in the sector.
- To increase domestic value addition and improve iron ore availability for domestic steel industry, duty on export of iron ore has been increased to 30 per cent.
- Rates of custom duty on stainless steel flat products have been enhanced from 5 per cent to 7.5 per cent in the Union Budget for 2014-15.

REVIEW OF LITERATURE

There are increasing number of studies which suggest that the trade reforms promoted total factor productivity (TFP) in Indian manufacturing during 1980's' (Goldar, 1986; Ahluwalia 1991 and Chand and Sen, 2002). There is adequate reason to suppose that manufacturing sector responds to liberalization and the high growth rate during 1990's was due to continued structural reforms

including trade liberalization, leading to efficiency gains (WTO, 2001). This view has been supported by Krishna and Mitra (1998) and Unel (2003) who found that growth of TFP was higher in 1990's compared to the period upto 1990-91. Das (2004) reported that a positive impact of lowering of NTBs on manufacturing as well as intermediate goods sector promoted industrial productivity. Turning to the trends in productivity in the post-reform period, the evidence from empirical studies by researchers was ambiguous, though subjective evidence, especially of trends of recent years shows significant increases in productivity growth. Tata Service Limited (TSL), 2003) has reported a faster growth rate in TFP in Indian manufacturing in post-reform period as compared to pre-reform period. Despite ambiguity regarding acceleration in TFPG, evidence suggests that trade liberalization since 1991 had a positive impact on the TFPG in India Krishna and Mitra, 1998; chand and Sen, 2002; Das, 2004; Topalova, 2004). Balakrishanan et al., (2000) which reports reported a significant decline in the growth rate of TFP since 1991-92 in five manufacturing industries in India and they failed to find a link between trade reform and TFP growth in the nineties. Kathuria (2002) finds that productivity of foreign owned firms improved in the post-reform period and Indian owned firms which invested in research and development gained from productivity growth.

In case of steel industry, the study by Mehta (1980) used the Cobb Douglas production functions for some energy intensive industries including the iron and steel industry. His sample period encompasses the years 1953 to 1965. Productivity in the iron and steel sector for his time period grows at 8.8 per cent per annum. He further found that the capital deepening in the production process but could not conclude any clear trend regarding efficiency improvement. A study by Kumari (1993) estimated a Cobb Douglas and a CES production function for the Indian iron and steel sector used PE survey data for the period 1981-87. For both theoretical frameworks the estimates indicate growth of productivity, at a rate of 3.86 per cent per annum for the CD production function and at a rate of 4.2 per cent per annum for the CES production function setting. Schumacher and Sathaye (1998) studied the productivity, energy efficiency and carbon emissions in Indian iron and steel industry. The results showed that over the observed period from 1973-74 to 1993-94 productivity declined by 1.71 per cent as indicated by the Translog index and the Kendrick and Solow indices support this finding. The study by Dutta (2007) analysed the competition issues in Indian steel industry and used econometric estimation. The study suggested that the energy efficient technique by itself is not the sole determinant of profits of a company. This has to be considered in tandem with the cost incurred to adopt that technique. Only with the benefits being higher than the costs and expected result of a positive association between profitability and energy efficiency. A common feature of all these studies is that they fail to estimate the sources of productivity growth of Indian manufacturing as well as steel industry in particular. Rajan et al., (2008) find declining TFPG in Indian iron and steel industry probably due to inefficient utilization of factors of production particularly underutilization of labour unit in accordance with changing demand, together with sluggish growth in technical progress. Most of the studies on productivity in India have focused on the growth in TFP in Indian manufacturing. The study by Ray and Pal (2011) measured the productivity performance in terms of partial factor productivity and total factor productivity growth and tries to relate and adjust economic capacity utilization with total factor productivity growth in the Indian iron and steel industry for the entire period 1979-80 to 2003-04. The results on partial factor productivity of factors showed improvement in productivity of material, labour and capital. The result on the overall productivity showed declining trend during the post-reform period as

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compared to pre-reform period. It was observed that the liberalization process is found to have its adverse impact on total factor productivity growth. Given this ambiguity, the effect of trade reforms on total factor productivity growth is an empirical issue.

The objectives of the present study need to estimate the total factor productivity change and its components of technical efficiency change and technical change. Also estimate the pure efficiency change and scale efficiency to find out the performance of efficiency change. There are studies simply estimated productivity growth at the sectoral and sub-sectoral level, there are also very few studies which have identified the sources of productivity growth in company wise. It is in this view the present study estimates the sources of productivity growth in Indian steel industry in relation to economic reforms and during the period under review.

DATA AND METHODOLOGY

DATA AND VARIABLES

The company level data were obtained from the electronic database PROWESS, and the sample consists of 53 Indian steel companies between 2000 and 2011, with a total of 491 observations[1]. The selected companies based on 90 per cent of market share in the year 2011.

OUTPUT

Gross value added, calculated by deleting total purchases of intermediate inputs from gross outputs, was taken as a measure of output, and was then deflated by the wholesale prices index of the steel industries, with the base of 1993-94 = 100.

CAPITAL

The PROWESS database provides total fixed assets net of accumulated depreciation, including capital work-in-progress and revalued assets, if any. The total fixed assets were deflated by the wholesale prices index of machinery and machine products, and thus real total fixed assets were included in the function as a measure of capital.

LABOUR

The PROWESS database does not provide employment details. To estimate the number of workers engaged in an steel industry, the average wage rate of the steel industry concerned was calculated from the ASI data for all years of the study. The average wage rate was estimated by dividing the total emolument of the steel industry by the number of workers in the steel industry. This average wage rate, obtained from the ASI data, was then used to divide the total wages and salary of steel industry, in order to estimate the number of workers in the steel industry[2].

MALMQUIST PRODUCTIVITY INDEX

The Data Envelopment Analysis (DEA) is a special mathematical linear programming model and test to assess efficiency and productivity. It allows use of panel data to estimate changes in total factor productivity and breaking it down into two components namely, technological change (TC) and technical efficiency change (TEC). TFP growth measures how much productivity grows or declines over time. When there are more outputs relative to the quantity of given inputs, then TFP has grown or increased. TFP can grow when adopting innovations such as electronics, improved design, or which we call ‒technological change‖ (TC). TFP can also grow when the industry uses

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their existing technology and economic inputs more efficiently; they can produce more while using the same capital, labour and technology, or more generally by increases in ―technical efficiency‖ (TEC). TFP change from one year to the next is therefore comprised of technological change and changes in technical efficiency. The TEC is further decomposed into pure technical efficiency change (PTEC) and scale efficiency change (SEC).

This study uses the output-oriented model of DEA-Malmquist to put much weight on the expansion of output quantity out of a given amount of inputs. Therefore, TFP index is a ratio of the weighted aggregate outputs to weighted aggregate inputs, using multiple outputs and inputs. Input and output quantities of industries are sets of data used to construct a piece-wise frontier over the data points. Efficiency measures are then calculated relative to this frontier that represents an efficient technology. The best-practice industry determines the production frontier, that is, those that have the highest level of production given a level of economic inputs. Points that lie below the piece-wise frontier are considered inefficient while points that lie on or above the frontier are efficient. Since many inputs are used, and shared outputs may be produced, the Malmquist approach was developed to combine inputs and outputs and then measure changes.

The Malmquist index measures the total factor productivity change (TFPC), between two data points over time, by calculating the ratio of distances of each data points relative to a common technology.

As per Malmquist Productivity Index (MPI) approach, the total factor productivity can increase not only due to technical progress (shifting of frontier) but also due to improvement in technical efficiency (catch-up). This approach has become quite popular because: (i) it does not require price data and therefore it is found suitable even if price data are not available or price data is distorted, (ii) it rests on much weaker behavioural assumptions, since it does not assume cost minimizing or revenue maximizing behaviour, (iii) it uses time serious data and provides a decomposition of productivity change into two components – technical change and technical efficiency change. The significance of the decomposition is that it provides information on the source of overall productivity change (Singh and Agarwal, 2006).

The measurement of the Malmquist productivity index is based on distance functions. For simplicity, $z^t = \left(x^t, y^t\right)$ and $z^{t+1} = \left(x^{t+1}, y^{t+1}\right)$, where x^t is the vector of inputs used in production and y^t is the vector of outputs. Now, for each time period t=1,…..T, the output distance function is defined as follows:

$$D^t\left(z\right) = \inf\left\{\theta : y^t / \theta \in P^t\left(x\right)\right\}$$

$$= \left[\sup\left\{\theta : y^t \in P^t\left(x\right)\right\}\right]^{-1} \qquad (1)$$

where superscript t and D^t denote that technology in period t is used as the reference technology. θ is scalar, and its value is the efficiency score for each production activity. It satisfies $0<\theta \leq 1$ for a non-negative output level, with a value of 1 indicating a point of the frontier, and thus a technically efficient production activity. This output distance function is defined as the reciprocal of the maximal proportional expansion of output vector y^t with the given input vector x^t in relation to the technology at t.

The Malmquist productivity index is defined as follows:

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$$TFP = M^t = \frac{D^t\left(z^{t+1}\right)}{D^t\left(z^t\right)} \qquad (2)$$

This formulation is called the output-oriented Malmquist productivity index in period t, $M^t\ (z^{t+1},z)$, where the technology in period t is the reference technology for two differing pairs of outputs and inputs. Alternatively, we can define M^{t+1} where the technology in period t+1 is employed as the reference technology.

Consistent with the study of Fare et al., (1994), the output-based Malmquist productivity index is defined as the geometric mean of two output-distance functions, in order to avoid selecting an arbitrary benchmark:

$$M\left(z^{t+1},z^t\right) = \left[M^t . M^{t+1}\right]^{1/2} = \left[\left(\frac{D^t\left(z^{t+1}\right)}{D^t\left(z^t\right)}\right)\left(\frac{D^{t+1}\left(z^{t+1}\right)}{D^{t+1}\left(z^t\right)}\right)\right]^{1/2} \qquad (3)$$

Equation (3) can be rewritten as:

$$M\left(z^{t+1},z^t\right) = \left(\frac{D^{t+1}\left(z^{t+1}\right)}{D^t\left(z^t\right)}\right) X \left(\frac{D^t\left(z^{t+1}\right)}{D^{t+1}\left(z^{t+1}\right)}\right)\left(\frac{D^t\left(z^t\right)}{D^{t+1}\left(z^t\right)}\right)^{1/2} \qquad (3`)$$

where the ratio outside the brackets measures the change in relative efficiency between t and t+1, and the geometric mean inside the brackets measures the shift in frontier. That is, the Malmquist productivity index can be decomposed into change in efficiency and change in technical progress[3].

In a previous empirical work, Fare et al., (1994) utilized non-parametric linear-programming techniques. As can be seen in (3`), we must solve four different linear programming problems: $D^t(z^t)$, $D^t(z^{t+1})$, $D^{t+1}(z^t)$, and $D^{t+1}(z^{t+1})$. Calculating the Malmquist index relative to the variable returns to scale technology. $D^t{}_j\left(z^t\right)$ for each industry, $j \in k = 1,.....,K$, one of the four different linear programming problems, can be stated as[4]:

$$\left[D^t\left(z^t\right)_j^{-1} = \max_{\theta,w} \theta\right] \qquad (4)$$

subject to $\theta\, y^t_{m,j} \le \sum_{k=1}^{K} w^t_k\, y^t_{m,k}$ m = 1,….., M (4a)

$$\sum_{k=1}^{K} w^t_k x^t_{n,j} \le x^t_{n,j} \quad n = 1,\ldots..,N \qquad (4b)$$

$$w^t_k \ge 0 \quad k = 1,\ldots.,K \qquad (4c)$$

where n = 1,….,N are inputs, m = 1,….,M are outputs, and w^t_k is an intensity variable indicating the production intensity of a particular activity. (Here, each industry is an activity). These intensity variables are used as weights in taking convex combinations of the observed outputs and inputs in

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both (4a) and (4b). From Equation 4, the reciprocal of the output distance function can be used to find the maximum of θ , which gives the maximal proportional expansion of output given constraints (4a)–(4).

For the other distance functions, the computation of $D^{t+1}(z^{t+1})$ is exactly the same as (4), where t + 1 is substituted for t. Two other distance functions require information from two periods, $D^{t}(z^{t+1})$ can be computed by replacing $y_{m,j}^{t}$ and $x_{n,j}^{t}$ in (4a) and (4b) with $y_{m,j}^{t+1}$ and $x_{n,j}^{t+1}$, respectively, and $D^{t+1}(z^{t})$ is the same as $D^{t}(z^{t+1})$, where the t and t + 1 superscripts are exchanged[5].

The output-oriented Malmquist indices of productivity change are computed using the data envelope approach discussed below. We used the computer software DEAP **(Coelli, 1996)** to calculate these indices.

The following tables presented estimated mean values are geometric mean of Malmquist indices viz; total factor productivity changes (TFPCH), decomposed into technical efficiency change (EFFCH) and technological change (TECHCH). TECHCH is further decomposed into pure technical efficiency change (PECH) and scale efficiency change (SECH). The companies are arranged in descending order of their Malmquist productivity indices (TFPC). The value of TFPC higher than unity reveals productivity growth and lower than one indicates decline in productivity. Percentage change in productivity is given by (TFPC-1) x 100. The same rule applies to other indices presented in the table.

The total factor productivity change can be decomposed as,

TFP change = Technical efficiency change (catching up effect)

x Technical change (frontier effect)

Further technical efficiency change decomposed as,

Technical efficiency change = Scale efficiency change x Pure efficiency change .

RESULTS AND DISCUSSION

ESTIMATES OF ANNUAL MEANS OF SOURCES OF TOTAL FACTOR PRODUCTIVITY GROWTH DURING 2001-2011

The Data Envelopment Analysis (DEA) methodology was applied to decompose the total factor productivity growth (TFPG) in Indian steel industry and its companies for the study period 2001-2011. Table-1 reports the estimates of total factor productivity growth and its components namely efficiency change and technical change and further efficiency change decomposed in to pure efficiency change and scale efficiency change in 2001-2011.

It is evident from the table 6 that during the study period there was a deterioration in total factor productivity growth of the entire steel industry. The changes in productivity due to deteriorating performance in the efficiency change (-15.90 per cent) whereas improvement in the technical change (15.70 per cent). From these result it could be inferred that it was the technical change which contributes more for the productivity growth in the Indian steel industry. The productivity improved at 2.80 per cent in 2001 the trend declined a negative growth of (-) 2 per cent in 2011. The table further evidenced that the technical change was 32.90 per cent in 2001 and the trend further

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significantly increased in 2011 whereas the technical efficiency change was negative at (-) 22.60 per cent in 2001 and the trend further deteriorated at (-) 77.80 per cent in 2011.

The productivity deteriorated in 7 out of 11 years of study period ranging from 2.8 per cent in 2001 to (-) 2 per cent in 2011. The productivity improvement in 2001 was due to technical regress of 32.90 per cent were as the efficiency declined at (-) 22.6 per cent. The primary reason for declining efficiency change was due to less than one in both pure efficiency change and scale efficiency change in 2001. From the table it could be noticed that both technical change and efficiency change was bellow one in one years which could be the reason for productivity deterioration or for slow productivity growth in Indian steel industry. The another intrusting to note that the result was either increasing technology and efficiency in 9 years. Both technology and efficiency improved in the year 2005 to the total factor productivity.

The result clearly indicate that the deteriorating performance of efficiency change was due to both declining in the scale efficiency (6.80 per cent) and pure efficiency change (9.80 per cent) during the study period. Further, it could observe that the negative returns to scale of the Indian steel industry in 2001-2011. There are four out of eleven years both pure and scale efficiency change have deteriorated during the study period. Whereas two out of eleven years evidenced improvement in the both pure and scale efficiency changes during the period under review. As a result, this improvement could not yield to increase the technical efficiency of the Indian steel industry.

There was an improvement in technical progress as reported in reform process initiated by the Government. As a consequence, the steel industry could adopt new and innovative methods of economic reform of production. This new methodology must be fully utilized to convert into productivity gain, while the negative growth in the efficiency change could not convert the technical progress into productivity gain. The inefficiency of the labour illiteracy of the Indian work force were the reason for the negative efficiency change which was the factor to pull down the productivity growth in the Indian steel industry.

ESTIMATES OF COMPANY MEANS OF TOTAL FACTOR PRODUCTIVITY GROWTH DURING THE STUDY PERIOD

Table 2 presents the estimation of Malmquist Productivity Index (MPI) for companies of Indian steel industry. The given MPI are the geometric mean of the fifty three companies for the study period (2001-2011). The industry as a whole witnessed the deteriorated change in the productivity growth during the study period and contributed mainly by technical change by 15.70 per cent.

Out of fifty three companies, fifteen companies productivity improvement while thirty seven companies recorded productivity deterioration during the study period. The maximum productivity growth was found in Stelco Strips Limited at 37.50 per cent and it contributed both efficiency change and technical progress of 17.40 per cent and 17.10 per cent respectively. Followed by Southern Ispat & Energy Limited productivity gain at 20.60 per cent and contributed of both efficiency change and technology progress of 5.50 per cent and 14.20 per cent during the period under review. It could be observed that these two companies productivity gain was due to high efficiency change.

There are thirty seven companies that underwent productivity deterioration during the period in the Indian steel industry. In case of Tayo Rolls Limited observed that maximum productivity worsen at

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(-) 16.70 per cent due to the poor result of efficiency change at (-) 27.40 per cent. There are two companies viz; Stelco Strips Limited and Southern Ispat & Energy Limited is the sole contributor of efficiency to the productivity gain. The result implies that these two companies saw productivity improvement mainly due to contribution of more than unity in both efficiency change and technology progress. The result suggest that, there were only two companies adopted the new technology or in other words utilisation of resources more efficiently during the study period. Also observed in the result of one company there is no change in the productivity improvement in during the period under review.

The change in the efficiency result was due to changes in both pure and scale efficiency. The technical efficiency deteriorated in 51 out of 53 companies as a result of (-) 15.90 per cent in the industry average. This declining trend was due to both decreasing of pure and scale efficiency change at (-) 9.80 per cent and (-) 6.80 per cent. In case of pure efficiency change was more than unity in six companies while nine companies in scale efficiency change. There are five companies reported that there was a unity in the pure efficiency change whereas no companies evidenced constant return to scale in the Indian steel industry during the study period.

The inference made in the above section reveals that out of 53 companies 37 companies productivity decline. While 26 companies evidenced productivity gain much above the industry average. On the whole the deteriorating productivity was due to improvement in technical change at 15.70 per cent along with negative efficiency change at (-) 15.90 per cent in the Indian steel industry. In other words the positive sign of technology along with negative sign of technical efficiency suggest that there is a declining total factor productivity growth. The result also suggested that the inefficient utilisation available new technology in the Indian steel industry after the introduction of economic reform.

TABLE – 1 ESTIMATES OF ANNUAL MEANS OF SOURCES OF TOTAL FACTOR PRODUCTIVITY CHANGE IN INDIAN STEEL INDUSTRY

Year	TFPCH	EFFCH	TECHCH	PECH	SECH
2001	1.028	0.774	1.329	0.868	0.892
2002	1.025	0.847	1.210	0.881	0.962
2003	1.009	1.238	0.815	1.177	1.052
2004	0.944	0.659	1.433	0.832	0.792
2005	1.143	1.109	1.031	1.138	0.974
2006	0.996	0.956	1.042	1.062	0.900
2007	0.939	0.745	1.260	0.689	1.082
2008	0.800	1.769	0.452	1.188	1.488
2009	0.985	0.900	1.094	0.874	1.030
2010	0.891	0.998	0.893	0.887	1.125
2011	0.980	0.222	4.422	0.558	0.397

Steel Industry Mean	**0.973**	**0.841**	**1.157**	**0.902**	**0.932**

Source: CMIE: Centre for Monitoring Indian Economy PROWESS data base.

Note: All Malmquist index averages are geometric means.

TABLE – 2 SOURCES OF TOTAL FACTOR PRODUCTIVITY CHANGE IN SELECTED INDIAN STEEL COMPANIES

Companies	TFPCH	EFFCH	TECHCH	PECH	SECH
A C I Infocom Ltd.	0.942	0.877	1.075	1.000	0.877
Aditya Ispat Ltd.	1.039	0.883	1.176	1.000	0.883
Anil Special Steel Inds. Ltd.	0.950	0.812	1.170	0.820	0.990
Ashiana Ispat Ltd.	1.013	0.873	1.161	0.856	1.019
Avon Ispat & Power Ltd.	1.011	0.892	1.134	0.919	0.970
Beekay Steel Inds. Ltd.	0.997	0.837	1.190	0.877	0.954
Bhushan Steel Ltd.	0.893	0.773	1.155	0.952	0.812
Bhuwalka Steel Inds. Ltd.	0.947	0.834	1.135	0.885	0.942
Ensa Steel Inds. Ltd.	0.839	0.731	1.149	0.739	0.989
Essar Steel Ltd.	0.996	0.877	1.135	1.010	0.868
Gangotri Iron & Steel Co. Ltd.	1.017	0.865	1.176	0.828	1.045
Gontermann-Peipers (India) Ltd.	0.963	0.848	1.136	0.843	1.006
I P I Steel Ltd.	0.920	0.808	1.139	0.806	1.002
I S M T Ltd.	0.924	0.818	1.131	0.926	0.883
India Steel Works Ltd.	0.907	0.750	1.210	0.823	0.912
J S W Ispat Steel Ltd.	0.921	0.794	1.160	0.941	0.844
J S W Steel Ltd.	0.866	0.734	1.180	1.000	0.734
Jindal Steel & Power Ltd.	0.982	0.849	1.157	1.035	0.820
Kalyani Steels Ltd.	0.936	0.802	1.167	0.924	0.868
Kanishk Steel Inds. Ltd.	0.950	0.819	1.160	0.799	1.025
Mahindra Steel Service Centre Ltd.	0.881	0.758	1.162	0.758	0.999
Mahindra Ugine Steel Co. Ltd.	0.963	0.838	1.149	0.896	0.935

Marmagoa Steel Ltd.	1.044	0.927	1.126	0.940	0.986
Modern Steels Ltd.	0.961	0.835	1.151	0.868	0.962
Mukand Ltd.	0.984	0.807	1.220	0.901	0.895
Panchmahal Steel Ltd.	0.940	0.797	1.179	0.858	0.929
Pennar Industries Ltd.	1.052	0.925	1.137	0.946	0.978
Prabhu Steel Inds. Ltd.	1.111	0.978	1.136	1.027	0.952
Prakash Industries Ltd.	0.991	0.853	1.162	0.956	0.892
Prakash Steelage Ltd.	1.030	0.891	1.155	0.880	1.012
Rashtriya Ispat Nigam Ltd.	1.000	0.881	1.135	0.929	0.949
Rathi Bars Ltd.	0.999	0.824	1.212	0.808	1.020
Rathi Steel & Power Ltd.	0.976	0.835	1.169	0.916	0.912
Real Strips Ltd.	0.944	0.821	1.149	0.832	0.987
Remi Metals Gujarat Ltd.	0.908	0.782	1.162	0.897	0.872
Ruchi Strips & Alloys Ltd.	1.054	0.909	1.159	0.978	0.930
Shah Alloys Ltd.	0.851	0.710	1.199	0.796	0.892
Sharda Ispat Ltd.	0.973	0.836	1.164	0.849	0.985
Shivalik Bimetal Controls Ltd.	0.899	0.786	1.144	0.776	1.013
Shri Bajrang Alloys Ltd.	0.956	0.815	1.173	0.818	0.997
Sirhind Steel Ltd.	1.058	0.937	1.129	0.950	0.986
Southern Ispat & Energy Ltd.	1.206	1.055	1.142	1.128	0.936
Steel Authority Of India Ltd.	1.030	0.896	1.150	1.000	0.896
Steelco Gujarat Ltd.	0.986	0.849	1.162	0.875	0.970
Stelco Strips Ltd.	1.375	1.174	1.171	1.148	1.022
Sujana Metal Products Ltd.	1.015	0.877	1.157	1.025	0.855
Sunflag Iron & Steel Co. Ltd.	0.950	0.834	1.139	0.888	0.940
Surana Industries Ltd.	0.943	0.797	1.183	0.922	0.864
Tata Steel Ltd.	1.001	0.867	1.155	1.000	0.867
Tayo Rolls Ltd.	0.833	0.726	1.148	0.794	0.915
Tulsyan N E C Ltd.	0.903	0.783	1.153	0.853	0.919
Uttam Galva Steels Ltd.	0.989	0.851	1.162	0.979	0.869

Vardhman Industries Ltd.	0.929	0.817	1.137	0.848	0.964
Steel Industry Mean	**0.973**	**0.841**	**1.157**	**0.902**	**0.932**

Source: CMIE: Centre for Monitoring Indian Economy PROWESS data base.

Note: All Malmquist index averages are geometric means.

CONCLUSION

The Indian steel industry productivity varied during the period 2000 to 2011. It reveals the contradictory results at the aggregate and company level. On the whole, the impact of policy changes on the sources of productivity of steel industry was negative mean rate of (-) 2.70 per cent and this was mainly for negative contribution of technical efficiency at (-) 15.90 per cent and positive technical change of 15.70 per cent during the period under review.

Fifteen out of fifty three companies have shown productivity growth during the sample period. The highest annual productivity growth has been recorded by Stelco Strips Limited (37.50 per cent) followed by Southern Ispat & Energy Limited (20.60 per cent) and Prabhu Steel Inds. Limited (11.10 per cent). Productivity growth has been low in other Tata Steel Limited (0.10 per cent).

The positive growth of TFP was mainly due to the improvement in technological change. In contrast, technical efficiency change declined the TFP growth of the Indian steel industry. The reason for deteriorating efficiency change in Indian industries evidenced by the previous literature, technical efficiency is related to factors such as the skill of workers, managerial expertise, and input mix, among others. This means that India's manufacturing firms must enhance on-the-job training to lift the skill level of their workers, and hire high-quality mangers to put existing frontier production processes into practice. Additionally, the Indian Government should continue to promote the free market by deepening its deregulation process. Opening up the domestic market to foreign investment will enhance TE by bringing in advanced managerial techniques and tight monitoring by foreign ownership. Increased imports will also provide firms with foreign parts and components to improve their input mix. Thus, the Government should promote free trade to facilitate these changes (Madheswaran et al., 2007; Kim and Saravanakumar, 2012, Saravanakumar and Kim 2012).

The deteriorating performance in the efficiency is also caused by a regress in the both pure and scale efficiency at (-) 9.80 and (-) 6.80 per cent respectively in the Indian steel industry as a whole and the similar trend was observed in the company level. The highest regress in the scale efficiency was found in (-) 26.60 per cent in J S W Steel Limited and no pure efficiency change in the post-reform period. With regards to scale efficiency, value less than unity shows that most of the companies (44 out of 53 companies) are operating at decreasing returns to scale. A positive trend in pure efficiency is exhibited in 42 companies. Thus, the negative sign in the both pure and scale efficiency have contributed towards the deterioration of the technical efficiency in the Indian steel industry during study period.

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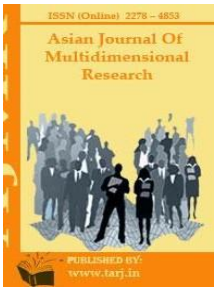

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COMPARATIVE STUDY OF ANTHROPOMETRIC MEASUREMENTS AND PHYSICAL FITNESS BETWEEN HARYANA URBAN AND RURAL SCHOOL BOYS

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ABSTRACT

Study was conducted to analyse the comparioson regarding linear measurements value of of height, trunk length, lower leg length and thigh length was more in rural school boys as compared to urban school boys in Haryana. The mean score of height, trunk length, lower leg length, thigh length of rural school boys is a significantly more than urban school boys. Rural school boys have greater height, trunk length, lower leg length and thigh length due to countryside atmosphere, pure diet and physical work in fields which enhance above parameters. Other parameters i.e. sitting height, total arm length, upper arm length, fore arm length and foot length do not show any statistically difference in mean values. The mean value of endurance and speed is lower in rural school boys as compared to urban school boys. The mean value of strength and flexibility in rural school boys is more than urban school boys. The reason that urban school boys has low endurance, speed, strength and flexibility is because urban school boys are more spoiled by recreational facilities which reduce their physical activities and make them lazy and lethargic. Whereas, on other hand rural school boys perform domestic activities and more physical work.

KEYWORDS: *perform domestic activities, statistically difference, flexibility.*

INTRODUCTION

Measurements of body size include descriptive information as height, weight and surface area, while body proportion describes relationship between height, length, circumference and diameter of various body segments. From public health perspectives strength, endurance, speed, flexibility and agility form components of physical fitness. Explosive strength may be defined as the ability of a sportsman to overcome resistance with high speed. Their exist significant effect of anthropometric

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measurements of urban and rural group it was reported that top ranking athletes belong to rural socio geographic group (Para et.al 1954). It was reported that different anthropometric variables influence performance of sportsman (Skille and Event 1953).

Current interests in anthropometric measurements, focuses on three areas: growth measure, body type and body composition. With the increasing awareness in sports and physical fitness much emphasis is laid down today on field of anthropometry. However, various anthropometric components vary in different socio-geographic groups. Physical fitness is considered as fundamental criterion in developing an efficient system of selection strategy. There are some evidence that support that the standard of living and luxurious life may influence physical fitness of an individual. Luxurious life may lower ones drive and willingness to work hard and in turn to reach high skill level in sports.

MATERIALS AND METHODS

In linear measurements height, length, trunk length, leg length, total arm length, upper arm length, fore arm length, lower leg length and foot length were measured using anthropometer. Among physical fitness component endurance was tested by performance in 600 yard run. Strength was tested by standing broad jump method. Speed was tested in 50 yard spirit. Flexibility was tested by reach and sit test, whereas agility was tested by zig-zag run method. For comparing various anthropometric and physical fitness components between rural and urban status t-test was utilized.

RESULTS

TABLE I. COMPARISON OF LINEAR MEASUREMENTS BETWEEN URBAN & RURAL HARYANA SCHOOL BOYS

S.No.	Variable	Urban Mean ±S.D	Rural Mean ±S.D	SED	T-test
1	Height	166.4±1.69	2.16±0.11	0.37	2.22*
2	Sitting Heights	85.4±2.66	85.4±2.17	0.626	0.015
3	Trunk Length	63.2±2.53	64.7±2.07	0.60	2.60*
4	Total Arm Length	74.06±1.07	74.5±1.78	0.37	1.18
5	Upper Arm Length	33.3±2.19	33.4±2.05	0.55	0.25
6	Fore arm Length	41.8±1.87	41.06±1.83	0.48	1.54
7	Leg Length	98.9±1.97	100.7±1.25	0.43	4.32**
8	Lower Leg Length	48.6±1.82	49.8±2.37	0.55	2.18*
9	Thigh Length	50.3±1.11	50.9±1.17	0.30	2.21*
10	Foot Length	18.1±1.02	18.4±1.69	0.36	0.721

Significant at 5% level = 2.00 Significant at 1% level = 2.65 N-112

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Table I shows that the mean score of height, trunk length, lower leg length, thigh length of rural school boys is a significantly more than urban school boys. The t-values for these variables was significant at 1% and 5% level.

TABLE 2. COMPARISON OF PHYSICAL FITNESS COMPONENTS BETWEEN URBAN AND RURAL SCHOOL BOYS

S.No.	Variable	Urban Mean ±S.D	Rural Mean ±S.D	SED	T-test
1	Endurance (min.)	2.24±0.12	2.16±0.11	0.029	2.680**
2	Speed (sec.)	7.16±0.17	7.65±0.22	0.05	2.19*
3	Strength (mts.)	1.68±0.08	1.68±0.08	0.017	3.43**
4	Flexibility(cm.)	27.13±0.97	27.90±1.3	0.297	2.59*
5	Agility(sec.)	8.90±1.02	8.51±1.12	0.289	1.35

Significant at 5% level = 2.00 N-112

Significant at 1% level = 2.65

Table 2 indicates that endurance, speed, strength and flexibility is more in rural school boys than those of urban school boys. T-value for endurance and strength is significant at 1% confidence level whereas, t-value for speed and flexibility were significant at 5% confidence level. Agility was found to be statistically equal in both groups.

DISCUSSION

From the results obtained it was concluded that among linear measurements value of mean score of height, trunk length, lower leg length and thigh length was more in rural school boys as compared to urban school boys. Similarly leg length is more in rural school boys as compared to urban school boys but it was found to be significant at 1% level.

Rural school boys have greater height, trunk length, lower leg length and thigh length due to countryside atmosphere, pure diet and physical work in fields which enhance above parameters. Other parameters i.e. sitting height, total arm length, upper arm length, fore arm length and foot length do not show any statistically difference in mean values. The result of recent work was fully supported by the studies of other scientists who contributed to similar studies (Lau-back 1967 and Tannes 1964). Noe (1964) stated in his studies that urban group pursue wide variety of luxurious activities which reduce their physical fitness. mean value of endurance, speed, strength and flexibility is more in rural school boys is more than rural school boys. The mean value of endurance and speed is lower in rural school boys as compared to urban school boys. The mean value of strength and flexibility in rural school boys is more than urban school boys. The reason that urban school boys has low endurance, speed, strength and flexibility is because urban school boys are more spoiled by recreational facilities which reduce their physical activities and make them lazy and lethargic. Whereas , on other hand rural school boys perform domestic activities and more physical work.

CONCLUSIONS

1. Linear measurements value of mean score of height, trunk length, lower leg length and thigh length was more in rural school boys as compared to urban school boys.
2. Rural school boys have greater height, trunk length, lower leg length and thigh length due to countryside atmosphere, pure diet and physical work in fields which enhance above parameters.
3. Sitting height, total arm length, upper arm length, fore arm length and foot length do not show any statistically difference in mean values.
4. Mean value of endurance, speed, strength and flexibility is more in rural school boys is more than rural school boys.
5. The mean value of endurance and speed is lower in rural school boys as compared to urban school boys.
6. The mean value of strength and flexibility in rural school boys is more than urban school boys. The reason that urban school boys has low endurance, speed, strength and flexibility is because urban school boys are more spoiled by recreational facilities which reduce their physical activities and make them lazy and lethargic.

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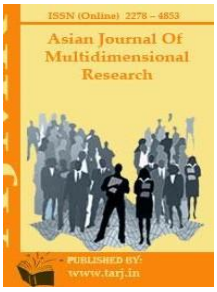

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EFFECTIVE POLICING – A HIGH TRAJECTORY NEED OF 21st CENTURY

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ABSTRACT

The insipience of 21st epoch has marked the florescence of the proliferating complexities, advancement in technology, availability of faster means which has ushered new menaces as cyber and organised crime, masterminds in illegitimate activities and threats to civic life. In furtherance of awareness regarding Human rights among citizenry, change in social attitudes, movement of people, technicalities of job and soaring expectations of public from police have posed new gauntlets before police which it has to encounter somas to ameliorate the quotidian functions. They are expected to begird social objectives and have to be pro-active to meet expectations of citizenry. Police personages are recognised as Nation's guardian who are resolved to give an efficient, law abiding and responsive enforcement machinery to its citizenry. They are now advancing to serve as the yardstick of licit governing bodies. Satisfaction of citizenry and good police-community interface are reckoned as imperative to goad the hanker to render their services effectively.

KEYWORDS: *Complete Policing, Police-Community Interface, Human Rights, Globalisation, Media, Transparency and Accountability, Political Masters.*

INTRODUCTION

The new professionalism can better encapsulate and depict the ever-expanding goal of today's police forces.....

Police is an umbrella term [1] and being cat's meow; a police personage is required to work like needle-nose pliers. They are possibly perceived as power wielders with an enforcement role. They enforce the law firmly and impartially without fear or favour, malice or vindictiveness.[2] Police is one of the prime agencies charged with responsibility of criminal justice. Police is a key functionary

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dealing with providing the solace and comfort to the people by looking in their matters. It is always in a state of predicament that the help of police is sought. They are ready to help the public in terms of protection, support, intervention, resolution and prompt response. Police may be regarded as pillar of every nation which provides it a strong base by maintaining peace and order. If a nation becomes able to maintain unity and integrity even during all the tumultuous circumstances, it is just due to the devoted services rendered by the police personnel. The police functions are known to have taken birth with the advent of civilization. The Police Act 1861 has authorised police personages with the execution of lawful orders and warrants precisely, prevention and detection of c rimes, prosecution of criminals, bringing justice to offenders and collecting the intelligence regarding the public peace.[3]

With the passage of time, new array of responsibilities went on adding to the root responsibilities such as managing people in disasters, protection against white collar crimes, tourism police and protection of most vulnerable groups of society as well as managing the grievances of citizenry. There is an absolute and gradual drift in the role of police personages. They are expected to deliver their core mission in the era of high public demand with special focus, passion and commitment. Their role has become even more emphatic and important. They are supposed to be friendly, corruption free, responsible, tolerant of ambiguity and pressure as well as empathy for others.[4] It is supposed to be time conscious, stress tolerant, mentally fit, robust and able to provide high quality potential at all levels as well as spheres as a model of conduct and discipline. In the present epoch, there is need of improvement in their rendition for discharging services and facing new challenges emerging from a wide spectrum of social and welfare laws. The rules of game are changing and police personages are required to act as complete policing.

COMPLETE POLICING

Complete Policing is the policing that is effective, lawful and humane. It is form of policing delivered by well managed and well resourced police agencies deploying technically competent officials.[5] This kind of behaviour is contingent upon compliance with great legal and humanitarian principles set out in international human rights and humanitarian law, contingent upon compliance with the detailed provisions of those branches of law, and with national law that embodies those provisions and contingent upon the development and perpetuation of an ethos supportive of human rights and high ethical standards within police agencies. The police personages have to encounter umpteen gauntlets in this 21st epoch. They have to work as Peel's enduring principle that the police are the public and the public are the police.[6]

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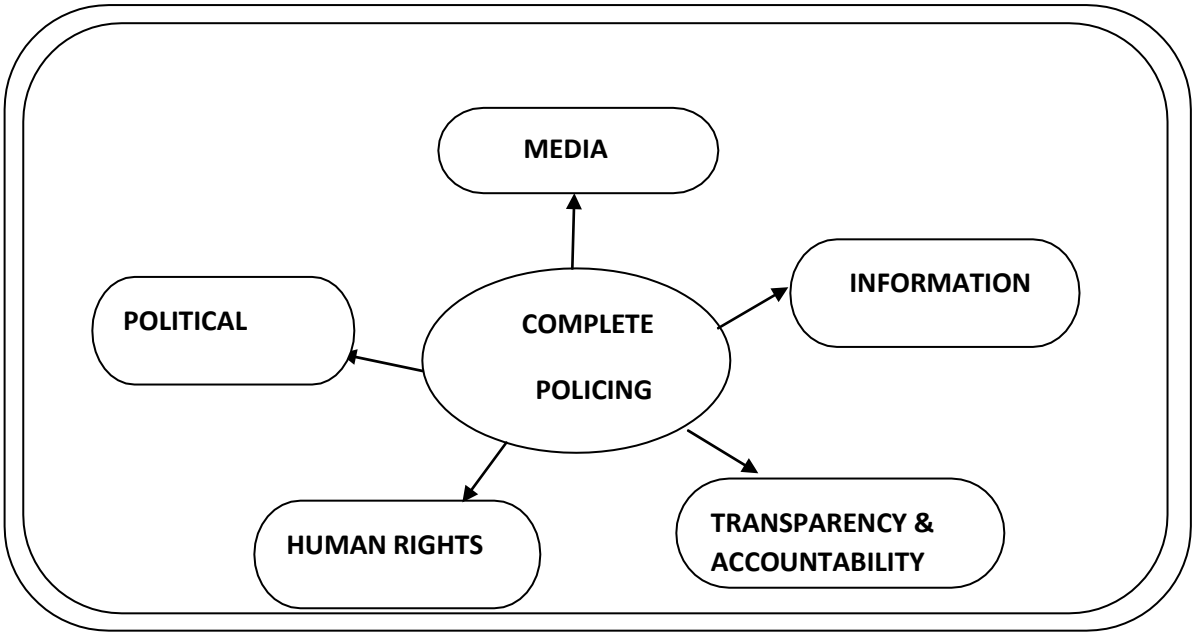
TABLE NO.1

MODERN CHALLENGING CONTEXTURE



A. MEDIA AND POLICE: We are living in the epoch of information society with rapidity of information transmission as its supreme trait. An event which occurs at one part of society is widespread via print or electronic media instantaneously. Media has a tremendous amount of power. It does not only determine what is newsworthy, they also determine the context in which the news is presented to public. Freedom of media is a principle that is embedded in both history and the constitution.[7] Social media can develop new models of policing that are adapted to our 21st centaury policing. Police have unique powers, unique responsibilities and unique relationship with public.[8] Social media is a means of communication and conversation which have always been at the centre of policing.[9] Its is more a way for police departments to take community policing into the networked age.[10] police has to tackle all the gauntlets regarding managing the cavalcades, strikes, dharnas, rallies and carry out the duties assigned binding themselves with the law and order. They have to work with pre- mentioned code of conduct so as to keep their image plausible before media and public because any act of violence and illegitimacy may fetch bad image in public and it takes a long while to salvage that. The actions of police sometimes generate negative media coverage. So they are required to work meticulously serving the public and at the same time hosting the media.

B. INFORMATION TECHNOLOGY: Globalisation ushered the advent of information technology across the nations. It has called for the continuous development, internet based commerce and technology, use of automobiles, telephones, fingerprint technology, and DNA profiling as few technological innovations. It is widespread among population and criminals. The increase mobility worldwide and new fangled technical ideas have facilitated new arrays of crime as internet-based child pornography, moral offences, exploitation, counter-terrorism and mushrooming white collar high-tech crimes call for a multi-agency approach to police protection. The work of police is more electronically based and knotty. The personages have

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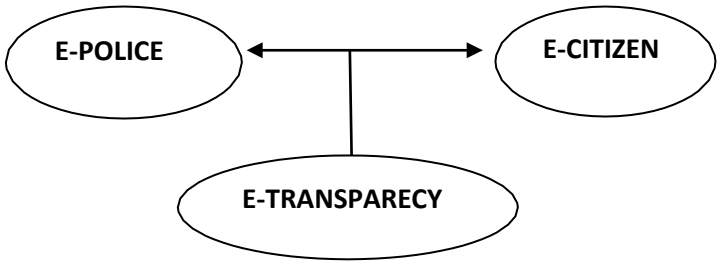
to be on their toes to sort out the complex matters in their quotidian operational life styles. They are supposed to be well acquainted with the use of updated technological aspects to battle and conquer them. It has posed a severe gauntlet before them as they have to be in touch with all the dynamic spectrums while dealing with other routine matters. Being in the world of ‒IT -ORIENTED‖ policing; E-Governance is adoption of new technology in the police administration. E-Police is a phenomenon to help everyone feel safe and secure.[11] Police personages are required to provide public with two data bases:

1. Providing information to public on the specialised police personages to provide a track of personages working their respective fields.
2. Providing a precise track of all criminals and criminal activities if big or small so as public could easily sought information when required.

The concept of E-police work in the challenging environment using police-community Interface.



A. AWARENESS AMONG PUBLIC: Globalisation again has ushered the aspects of self confidence, higher knowledge and awareness among public due to education widespread entrepreneurship and exposure to global communication system and trade. Police have to play a vital role as custodian of human rights. The Universal Declaration of Human Rights (1948) which enshrined 30 Articles for weal of human beings. The knowledge of international Conventions and Agreements, Fundamental Rights and Laws related to protection and security of all segments of society. Human rights are incorporated into laws, the police is expected to be their guardians.[12] The relationship between human rights and policing is characterised by three concepts: protection, respect and entitlement.[13] The recognition of such culture where most of the people know about their rights and have tools for their advocacy is one of the most pressing task presently faced by police personages. Most of them are fundamental rights of equal access to education, work, wages, minority groups and disables. They have to treat citizens with decency and uphold their civic rights in the process while upholding the law. Public has to be treated at par to maintain their dignity. Police have to maintain a balance between individual and collective rights. There is the exigency of incorporating the Human rights into law and policing to be the real saviour of public.

B. TRANSPARENCY AND ACCOUNTABILITY: In the empowerment milieu of contemporary society, police must work collaboratively with the members of many hierarchal levels and stakeholder centres especially to meet the change. By striving in proactively to stakeholder's services and satisfaction, the root obligations of crime prevention and control are easily and diligently pursued. The information which is in goodness of public must be shared as public is

very curious now to have a deep insight of services rendered by this machinery and police has to be answerable and accountable to them for everything that come under their purview. In order to meet this gauntlet and to gratify public many concepts as: Right to Information and Citizen's Charter help public to sought information on many matters from police. This is a big challenge because it is mandatory to provide information available to public within a specific period of time and it has to be appropriate. Moreover, Police personages are bound to be responsible for the steps taken by them to maintain peace in the environment. Community policing also act as a backbone to the system of maintain law and order in the present era. It is rightly said in this context that: To handle yourself (police) use the mind and to handle others (public) use your heart. [14]

C. **POLITICAL INTERFERENCE:** The biggest gauntlet of this century is the deep rooted involvement of political machinery in the governance of police administration. Political machinery intervene in the various spectrums of police functioning.[15] It is also recognised most important factor militating against the efficient policing of the country in the work of law enforcement by mostly politicians and others with links to government appointees.[16] Police machinery has to encounter many issues as transfers, suspensions, pressure, repercussions of interference, issue of illegitimate and irregular orders by Governments. Those who are yes men to the ruling political parties may survive else annihilate by them. When a political party comes in active work it appoints its own favourable officials who could render their services to them rather serving the public. This is a biggest challenge because the aware and educated people ant reason and response from police in their favour where as those leading the nation want the police personages serve them. The honest and loyal officers fall prey of them and have to face many complexities in their personal as well professional lives. Constitution has marked police machinery to serve the public as their guardian rather serving the political masters.

MALADIES DWELLING IN THE SYSTEM

The capability to work effectively to win over these gauntlets has added a new feather for cap in the police operations. But there are certain facts which hinder their effectual functioning i.e. police personages neglect their obligations and they lack in updated method to meet complicated crime situations. The interference of political masters acts as a stigma and the personages have to act as puppets for them as well as the higher authorities. It becomes difficult to deal with all aspects of maintaining peace and investigating and pausing crime along with that meeting people in day to day activities and disclosing the gleaning to them. This transparency sometimes proves harmful for the public as well. Yester years have witnessed the decline in moral and ethical value of service. They have neglected the spirit of service agenda far behind. Some personages deliver their services for making money only.

CONCLUSION

In the nutshell, police is popularly perceived as power wielder with the enforcement law. In order to develop police organisation to effectively recognise, relate and assimilate the global shift in technology, culture, workplace values, Government arrangements, policing philosophies and ethical standards. Regular training and cognizance techniques must be introduced in the service to keep them update and aware of dynamic aspects of society. They should work industriously and continuously to improve their image before public. Public must show faith in their working and

coordinate with them so that they could be able to render their services absolutely. They are the capstone to national security and are suppose to become the part of new regime. They have to be clear that they have to serve the nation by battling the gauntlets by reaching an acceptable balance between individual and the society. So, there is strong need to inject effective training techniques and trigger for a wider debate on enhancing the quality of policing in the economy if we have to flush the system of all evils.[17]

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11. Monika Pathak and Gagandeep Kaur, ‖Impact of E-Governance on Public Sector Services ‖, International Journal of Emerging Research in Management & Technology, Volume -3, Issue-4, 2014
12. From 1982, Canada has had its Charter of Rights and Freedoms embedded in its constitution. It confers on everyone freedom of conscience and religion, thought, belief, opinion and expression and the freedom of peaceful assembly and association. It also forbids discrimination on the grounds of race, national or ethnic origin, colour, religion, sex, age or mental or physical disability. These provisions have led to an expansion of government programs to ensure equality, even to the point of creating slopes in the curbs of sidewalks, and ramps at the side of steps to allow wheelchair access to streets and buildings. Since 1982, judicial interpretation has made it mandatory for the police to respect in minute detail the Charter provisions concerning the legal rights of individuals. Since these are largely exercised by accused persons, it has led to some

limitations on the discretion of the police and to changes in police practices. In some cases, it has also increased the costs of investigations. For example, the requirement to disclose evidence to the accused before trial means that police spend millions of dollars in photocopying transcripts of wiretaps and reproducing videotapes, photographs and other evidence to provide to the defence.

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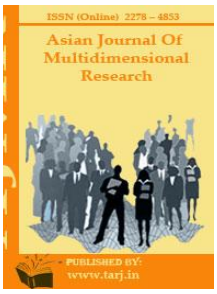

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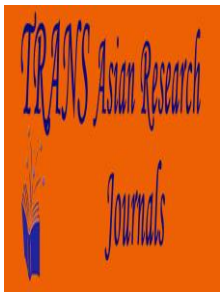

STUDY OF ANALYSES OF FOOD FOR QUALITY ASSURANCE

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ABSTRACT

Food analysis is generally including a wide variety of analyses, such as determination of water, fat, fibre, nitrite or nitrate and identification of microorganism contamination. Adulterated food has repercussions for the community and is a growing issue that adversely impairs human health and well-being. Thus, rapid and effective identification is vital for food safety and security to avoid various health problems. This study highlights the various steps, standards, components and ingredients analysed in food items and effect on health due to microorganism present in contaminated food stuffs.

KEYWORDS: *Food Analyses, Adulterated Food, Human Health, Microorganism Contamination, Food Safety.*

INTRODUCTION

Food analysis is an analytical process that is used to determine the composition, physico-chemical characteristics, structure, and sensory aspects of food, as well as the constituents of food. This information gives consumers a concept of a safe, nutritious, and desired food, as well as the capacity to implement foods that are fit for their diet at a reasonable cost. The aim of this chapter is to discuss the fundamental principles of analytical procedures routinely used to assess food quality.

Food is investigated by scientists who work in a variety of sectors of the food industry, including ingredient providers, testing laboratories, governmental laboratory facilities, food manufacturers, and research organizations. Food analysis can be used for a variety of reasons, including the following:

• Government guidelines and regulations

• Specifications

• Nutritional labelling tags

• Authenticity

• Grading and certification of food

1. Government Recommendations and Regulations

Government regulations and guidelines are intended to maintain the general quality of food supply, to assure consumers that the food products provided by industries are safe and wholesome, to provide consumers with information about the nutritional content of food so that they can make an informed diet choice, and to promote a healthy and balanced diet, for a healthy and fair competition among food industries and to restrict financial fraud.

Various departments, such as Agmark, FPO, and fssi, are authorised for regulating the chemical content and quality of foods.

2. Standards

Government agencies are specified a number of standards which depend on the composition, quality, and inspection and labelling office specific food products. There are following types

- Mandatory
- Voluntary
- Mandatory standards: These are:
  - Standards of quality: Quality standards are established for canned fruits and vegetables, among other things. Food quality is determined by fulfilling minimal colour, texture, volume, and defect-free requirements.
  - Standard of identity: These standards govern the types and amounts of ingredients that must be present in various foods in order for any of them to be labelled with a specific name. There is a minimal or maximum concentration of a given component that must be present in some meals, for example, peanut butter must include less than 55 percent fat and ice cream must contain more than 10 percent milk fat. Chedder cheese must have a minimum of 50% milk fat and a maximum of 39% moisture.
  - Container filling standard: These food standards govern how the degree of fill is assessed as well as how filled a container must be in order to avoid customer fraud.
- Standards set on a voluntary basis:

The grading of food products is determined by their quality and is expressed as standard grade or superior grade. A variety of foods are evaluated according to their purity, including meat, dairy products, and eggs.

Although it is optional to include a food product's grade on the label, many food producers do so since superior grade items can be sold for a greater price. The government has established laboratories to which producers may send their items for testing and certification. The food producer requests and pays for this service.

3. Labelling of Foods for Nutrition

The government has passed several legislation relating to food nutritional labelling, making standard nutritional labels mandatory for almost all food products. Consumers have a choice over their nutrition because to these rules. One of the main objectives for this nutritional labelling is to state the total calorific value of the meal, as well as total fat, saturated fat, cholesterol, sodium, carbs, sugars, protein, dietary fibre, vitamins, and calcium. Nutrient content claims, such as low fat, low sodium, high fibre, fat free, and so on, may also be listed on the label. Some permitted health claims based on correlations

between specific food components and certain diseases, such as calcium and osteoporosis, sodium and high blood pressure, soluble fibre and heart disease, cholesterol and heart disease may also be described on the label. The information provided on the level can be used by consumers to plan a nutritious and balanced diet to avoid overconsumption of food components and ingredients which are linked with health problems and to encourage consumption of foods that are beneficial to health.

4. Authenticity

The quality of food ingredients dictates the price of certain foods asA packet of coffee may claim that the coffee beans are imported from Colombia. The label of an expensive wine claim that it was produced in a certain region using a particular type of grapes in a particular year.

There are many instances in the past years when manufacturers had made false claim about the authenticity of their products in order to get a higher price. Hence, it is important to have an analytical technique which can be used to test the authenticity of certain food component, to ensure that consumers are not the victim of economic fraud and that the competition among food manufacturer is fair.

5. Food Inspection and Grading

For routine analysis of the properties of food products, government has Food inspection and grading laboratories. Both government and food manufacturers need analytical techniques which provide the appropriate information about food properties. For this type of test the most important criteria is often the accuracy of the measurements and the use of an official method. The government has carried out a survey of many official analytical techniques developed to analyse the food and has specified the techniques which must be used to analyse a certain food component for labelling purposes. The technique should be simple, inexpensive to give accurate and reliable results of analysis of food product.

Food Safety

One of the most significant reasons for analysing foods, from both a consumer and a manufacturer's perspective, is to verify that they are safe. It would be economically devastating as well as disagreeable for the consumer if a food maker sold a harmful and toxic product. A food is unsafe if it contains harmful germs such as listeria and salmonella, poisonous chemicals such as pesticides and herbicides, or foreign objects such as glass, wood, metals, or insect matter. As a result, food manufacturers go to considerable extents to guarantee that these dangerous compounds are either absent or removed before the product is consumed. As a result, it's necessary to apply analytical techniques with high sensitivity, and those that can reliably detect even low levels of harmful substances. Food manufacturers and government laboratories routinely analyze food products to ensure and confirm the absence of harmful materials and whether the food production processes are operating correctly or not.

Food Analyses for Several Components

Foods are tested for a variety of potentially dangerous ingredients. Moisture content in vegetable oil, butter, ghee, honey, spices, and sauces, among other foods, is being investigated since it degrades the quality of these foods. Spices are also tested for impurities such as crude fibres. The purity and level of pollutants in butter, oil, and milk are determined by analysing the fat content in a sample. Sugars are another ingredient that is widely found in food, necessitating their analysis to check for contamination. For example, honey is tested for sugar concentration and industrial sugar presence.

Adulterants and Microorganism Contamination

- **Adulterants**

Adulteration is stated to be absent when a substance is in its purest form. That is, when something besides pure ingredients is mixed in with them, it is said to be contaminated with the stuff incorporated in. Adulteration is the intentional mixing of low-cost, low-value material with a higher-cost substance in order to enhance its volume, weight, or quantity. The materials used for adulteration are highly similar in appearance, colour, and other characteristics to the original substances, making detection by visual, smell, or routine analysis difficult.

It is mostly practised by unscrupulous people to make undue gain and profit. Therefore, the need for analysis of food to check adulteration arises.

Common examples of adulteration are:

1. Kerosene mixed with petrol to increase the volume of higher valued petrol.

2. Sugar added to honey which is much more valuable.

3. Vegetable ghee in pure ghee, and

4. Crude fibres or starch etc. in spices, etc.

- **Contaminants**

As opposed to adulteration, the contaminants can be said to be impurities getting mixed up in a pure substance due to wrong handling or processing etc. Thus, whereas adulteration is done deliberately, contamination is often accidental.

The examples of contamination can be:

1. Growth of fungi in food materials, and

2. Earth and stone particles in food grains and pulses etc.

Microscopic Examination of Food

The microbiological safety of food is very important to the food industry. All food-stuffs including dairy products and meals, meats, vegetables, herbs and spices have potential micro-biological hazards associated with them. There are many laboratories which use conventional common techniques such as using the selective broths and agar plates to identify the bacteria and moulds, which are responsible for food poisoning or spoilage. These techniques are slow, require a great care and are usually performed by an expert microbiologist.

Now-a-days, scientists have discovered many advanced tests and analyses for detection of microbes in a wide range of foods. These microscopic examinations are performed by adding enriched food samples to a microtiter plate. The plate is washed and a highly specific monoclonal antibody conjugate is added to it, which binds to microbe antigens forming an immune complex. This plate is washed again. The second washing removes any unbound conjugate. The presence/absence of microbe is determined by the addition of a colourless substrate, which produces a coloured reaction in the presence of that particular micro-organism. In this manner the result can be determined on a microplate reader at 450 nm and it can be read visually.

Common Microorganismof Food Stuffsand Disease Caused

There are some common micro-organisms found in food products, such as:

1. Salmonella

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2. Listeria
3. Zearalenone
4. Fumonisins
5. Ochratoxins
6. Aflatoxins
7. Mycotoxins
8. Deoxynivalenol
9. Trichothecenes

1. Salmonella: Salmonella are pathogenic bacteria, which are found in a wide range of foods. Salmonella are enteric organisms, occurring naturally in the gut of poultry and animals, therefore the livestock show no signs of illness or disease.

Disease

In human being Salmonella causes severe sickness and diarrhoea. In children, old people and immunosuppressed individuals the effect of Salmonella food poisoning (Salmonellosis) can be more severe leading to septicaemia, dehydration and even death.

2. Listeria: Listeria are pathogenic bacteria, which are found mainly in the environment, particularly in water and soil. Listeria are often found in dairy products such as cheese and yoghurt but can also be found in meat, pate, vegetables and salad Listeria are able to grow at low temperature of 4°C and therefore can survive even in food which has been stored in a refrigerator.

Disease

Listeria generally cause mild flu like symptoms in healthy adults but can have more serious effects on the foetus of pregnant women causing neonatal septicemia or abortion. Women are, therefore, advised during pregnancy to avoid eating soft cheese and pate.

3. Zearalenone: Zearalenone is an oestrogenic mycotoxin produced by a number of species of fusarium. Zearalenone readily colonise cereals such as barley, wheat, rice and maize during cool and wet growing seasons. Zearalenone has also been found in breakfast cereals, breads and animal feed products.

Disease

Zearalenone acts by mimicking the effect of the female hormone oestrogen, causing adverse effects on the mammalian reproductive system resulting in infertility.

4. Fumonisins: Fumonisins are a group of mycotoxins produced by various fusarium species, the most common being F. moniliforme and F. prdiferatum. There are three types of fumonisins commonly found in food: B_1, B_2, and B_3. The most important toxin in the group is Fumonisins B_1, the concentration of which usually exceeds that of B_2 and B_3 by a factor of three.

Occurrence

Fumonisins are commonly found in maize, maize-based products and rice. Examples of maize-based products include popcorn, cornflour, cornflakes and baby food. Fumonisins occur in different climates and can be found at high levels in commodities from USA, Canada, Africa and Europe.

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Disease

Fumonisins are known to be hepatoxic, nephrotoxic and carcinogenic to rats and mice. Fumonisins in feed can cause necrosis of the brain in horses, which is often fatal, and swelling of the lungs and thorax in pigs.

5. Ochratoxins: Ochratoxins are produced by various moulds of the genera Aspergillus and Penicillium. Ochratoxin A is the most important and most commonly occuring Ochratoxin, although ochratoxin B has also been found to occur naturally in food. Ochratoxin A occurs primarily when foods with a high water content are not properly dried, creating the ideal environment for the mould to reproduce. Ochratoxin A can be commonly found in cereals, coffee, cocoa, wine, spices, beer, barley. Due to Ochratoxin A occurring as a result of a common storage fungus, contaminated commodities are usually found in temperate areas such as Eastern, Western and Northern Europe, Canada and South America. Ochratoxin A is also commonly found in the viscera of animals that have consumed contaminated grains.

Disease

When present in animals, both acute and chronic lesions are observed on the organs, primarily the kidneys. Ochratoxin A also has teratogenic and foetotoxic effects in animals and some studies have also suggested that it may have immunotoxic and possibly neurotoxic effects.

6. Aflatoxins: Aflatoxins are produced by the food spoilage fungi Aspergillus flavus and Aspergillus parasiticus. There are approximately 20 related fungal metabolites, although only aflatoxins B_1, B_2, G_1, G_2, and M_1 are normally found in foods. Aflatoxins can be found in a variety of foods and agricultural commodities including cereals, nuts, herbs, dairy products, spices, and dried fruits. They are generally formed in tropical and sub-tropical climates, where growing temperatures are high and storage conditions can be humid. Aflatoxins are extremely stable and may remain in food stuff even after processing (such as roasting) and the removal of visible mould.

Disease

Aflatoxins have been found to have mutagenic, immuno suppressive and carcinogenic effects in both human and animals.

7. Mycotoxins: Mycotoxins are toxic metabolites produced by different species of the readily colonized crops in the field or after harvest, during storage. Mould growth can depend on a number of factors for example temperature, humidity, weather conditions during growth, harvest and insect activity. Mycotoxins have been found to contaminate a number of commodites including cereals, dried fruits, nuts, dairy products, animal feed, cocoa, spices, wine, beer and coffee. European and world-wide legislation is setting maximum limits for the range of mycotoxins in a variety of foods and feed commodities.

Disease

Mycotoxins can have both chronic and acute effects on human and animal health. They can be carcinogenic, immunosuppressive, embryotoxic, and mutagenic.

8. Deoxynivalenol: Deoxynivalenol, also known as DON or vomitoxin, is part of a group of related compounds known as Trichothecenes. Trichothecenes are formed by a number of species of the fusarium genera, including F. graminearum and F. culmorum. The main commodities affected by DON contamination are cereals, graminearum including grains such as wheat, buckwheat, oats, rice, maize and

barley. Due to its stability, DON has also been detected in a range of processed cereal products including breakfast cereals, beer, infant food, and bread. The formtion of DON in growing crops is dependent on climate and varies between geographical regions and parts of the year.

Disease

Digestion of DON contaminated commodities is known to induce vomiting particularly in pigs, feed refusal, weight loss and diarrhoea. Studies also suggest that DON may also have effects on the immune system.

9. Trichothecenes: Trichothecenes are the largest group of mycotoxins and are produced by fusarium moulds. There are over 40 different trichothecenes including deoxynivalenol (DON), nivalenol (NIV), diacetoxyscirpenol (DAS), fusareX (FX), T-2 and HT-2. 3-Acetyl DONand 15-Acetyl DON, derivatives of DON also existin nature. Trichothecenes occur in cereals including wheat, maize, barley, oats and rice and they are present in many different climates. In some parts of the world, such as the USA and Canada, DON and NIV are endemic.

Deoxynivalenol is one of the most common and prevalent among the trichothecenes.

Diseases

DON is also called vomitoxin due to the fact that it causes sickness in human and animals (for example swine will refuse feed containing DON). DON can also have adverse effects on the immune response and is considered to have the potential to predispose human and animals to other diseases. Trichothecenes received their notoriety in Russia following world War II due to the discovery of T-2 toxin that caused internal bleeding among human who ingested over wintered cereals in bread. T-2 and diacetoxyscirpenol (DAS) have also been found to be highly toxic if taken orally or through penetration of the skin, they can also cause mouth lesions and acute poisoning.

CONCLUSIONS

Food is a basic necessity for life, growth, survival, and maintaining a proper body function. Rising food demand leads both producers and consumers to search for alternative food sources with high nutritional value. However, food products may never be completely safe. The oxidation reaction may alter both the physicochemical and immunological properties of food products. There is a multitude of adulterated foods that portray adverse risks to the human condition. To maintain food safety, the packaging material is used to preserve the quality and freshness of food products. Food safety is affected by plenty of pathogens and by the consumption of adulterated food multiple foodborne illnesses may occur. Thus, above study conclude that food analyses for various components, strict implementation of the government recommendations and standards is vital for food safety and security to avoid foodborne illness in human beings.

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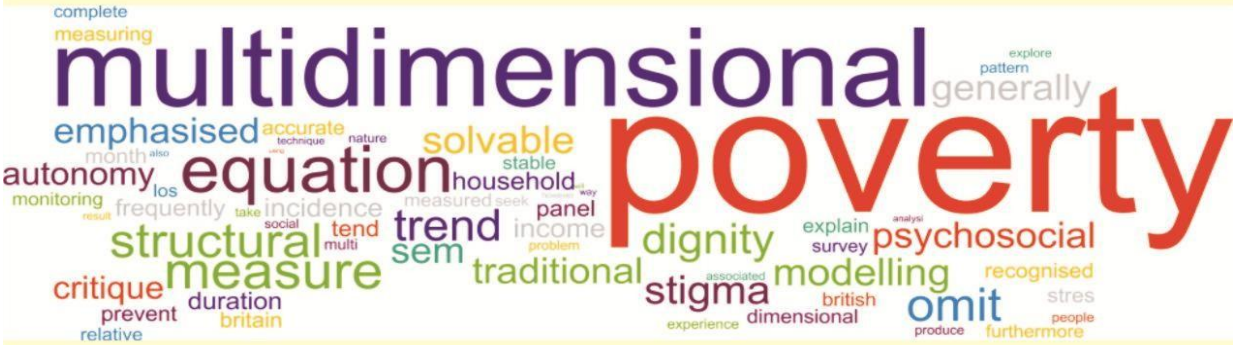

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