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## REPORTING PRACTICES OF THE ENVIRONMENTAL MANAGEMENT ACCOUNTING AND LEVEL OF DISCLOSURE PREFERRED BY STAKEHOLDERS – A STUDY ON CEMENT COMPANIES IN INDIA

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### ABSTRACT

*Environmental accounting is a vital tool for accepting the role played by the natural environment in the economy. The research article looks at the method in which companies report for issues other than immediate financial concerns. This includes environmental accounting and its application. The study identifies that the Indian cement industry complies with Kyoto protocol norms and several environmental disclosures resulting in exceptional performance in improving environmental pollution. Cement is the single most important and profitable product in the building material sector. Indian cement industry has a market of opportunities to be encashed but at the same time, Indian cement industry is experiencing a huge demand. Production of Cement releases CO<sub>2</sub> and brings change in the climate of the earth. Hence, despite its profitability, the cement industry faces many challenges regarding environmental concerns and sustainability issues. In order to minimize the impact of all of the above mentioned issues, it is clear that the cement and construction industry will have to adapt to be able to maintain and in this process a number of innovative and new practices have to be adopted. The objective of this research paper is to study the reporting practices of the environmental management accounting and level of disclosure preferred by stakeholders of cement companies and to classify the factors under which the Indian Cement companies can provide details of accounting information for a long time. It is important to see that the reporting of information is according to stakeholder's requirement. The accounting areas of reporting is explored so that the requirements of reporting in terms of financial character can be filled in which might lead to change in the practices under which the current financial statement provides financial information of sustainable activity as non-financial activity and its cost is usually shown as miscellaneous expenditure.*

### KEYWORDS

cement industry, environmental accounting, financial information, global environmental accounting reporting, sustainable reporting and corporate environmental accounting.

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### INTRODUCTION

**W**e make the world we live in and build our own Environment. Environmental pollution is the build-up and concentration of toxic levels of chemicals in the air, water, and land, which reduces the ability of the affected area to sustain life. Pollutants might be gaseous- ozone, carbon monoxide, liquid-discharge from industrial plants and sewage systems or solid land-fills or junkyards which in response causes global warming.

In broad-spectrum environment refers to surroundings of an object. Environmental accounting is a significant tool for understanding the role played by the natural environment in the economy. Environmental accounts presents data, which highlights both the involvement of natural resources to economic well being and the costs imposed by pollution on resource degradation. Due to lack of knowledge of environmental problems such as global warming, rapid changes in climate, glacier meltdown etc are commonly experiences in the present century for which both developed and developing nation may be held responsible. So in 21st century there is an urgent need of protecting our environment because environment is in charge for survival of human beings. The issue of environmental dependability and the sustainable industrial development has given birth to new branch of accounting i.e. environmental accounting.

Environmental accounting is on a development path. With increasing social focus on the environment, accounting fills an expectation part, to determine environmental performance only stressing on the economic and industrial growth. Unfortunately, India forgot the significance of environmental accounting and the result of such ignorance gave birth to unremarkable occurrence of Bhopal chemical leak (1984), tsunami in India (2004).

For proper performance of environmental accounting in India a great number of researches, planning, accounting standards and framework is necessary. The status of environmental understanding provides a vibrant business reporting in its environmental performance.

Environmental Accounting includes economic and environmental information for acquiring sustainable growth, maintaining a positive association with the community, and pursuing effective and efficient environmental conservation activities.

Financial performance can be defined as a subjective measure of how well a firm can utilize assets from its primary method of business and produce revenues (Mills, 2008). This term is also used as a common measure of a firm's in general financial strength over a given period of time, and can be used to match up to related firms across the same industry or to compare industries or sectors in aggregation.

Environmental Management Accounting may be defined as 'The management of the environmental and economic performance, through the development and implementation of suitable environment-related accounting systems and practices. While this may comprise reporting and auditing in some companies, environmental management accounting usually involves lifecycle costing, full cost accounting, benefits evaluation, and strategic planning for environmental management.' Environmental Management Accounting focuses on making internal business approach decisions. It is defined as "the recognition, compilation, analysis, and use of two types of information for internal decision making." The information required is one, the physical information, on the use, flows and facts of energy, water and other resources (including wastes). Secondly, the monetary information of environmental connected costs, earnings and savings. Environmental Financial Accounting is used to provide information required by external stakeholders on a company's financial presentation. This type of accounting allows companies to arrange financial reports for investors, lenders and other involved parties.

**REVIEW OF LITERATURE**

Heba Y.M. et al (2014) entitled 'Green Accounting – A Proposition for EA/ER Conceptual Implementation Methodology' have discussed about the idea and accepting on the environmental accounting education. This editorial explores the concepts of environmental accounting and the likelihood of increasing the applicability of the environmental reporting idea to be utilized by governments to make businesses more responsible for their externalities.

John Lintott (1999) argued that the environmental accounting evaluates a universal measure of wellbeing or growth, for guidelines to intend to maximize. Problems of monetary estimation are expected to lead to vast underestimation of environmental costs. Issues of difference and deficiency, necessary to a more healthy vision of sustainability, are ignored.

Joy E. Hecht (1999) entitled 'Environmental Accounting' Where We Are Now? In this study, the author discusses about the existing trends on the global environmental accounting in the international education systems. The author discussed some questions pertaining to why change, which indicators are useful, who is doing this, how to account etc.

The original book (1995) on Environmental Accounting for the Sustainable Corporation: Strategies and Techniques are written by a Canadian chartered accountant who has focused in environmental accounting for the last five years. The topic of environmental accounting assumes greater significance for the practicing accountant. Environmental reserves include pollution abatement technologies, reengineering of plants, products and processes so as to use again waste products; and environmental management systems, as well as an expanded environmental auditing ability published by the National Public Accountant.

Odum Howard T. (1924) his book entitled 'Environmental Accounting Energy and Environmental Decision Making' discussed the environmental management maximizes economic strength with fewer check and error society that may get better efficiencies, innovate with less failures and adapts to modify more quickly. It also discussed the energy budget of the earth. It also discussed the nature of expenses on the energy and money etc.

United Nations Handbook of National Accounting, Studies in Methods Series F, No. 78 Integrated Environmental and Economic Accounting: An Operational handbook, United Nations discussed on increasing pressures on the environment and increasing environmental consciousness that have been generated the need to account for the various relations among all sectors of the economy and the environment.

From the above literature review, it can be concluded that the basic principle behind environmental management accounting is that organizations must internalize environmental costs. Presently these costs are externalized, and the society bears the impact of an organization's unfavorable activities on the environment owing to the reality it is a "public good". It is likely that once organizations are made responsible for these costs, they would be required to lessen the potentially harmful effects of such activities. As environmental management accounting requires organizations to predict the potential environmental impact of their activities and consequently estimation their contingent liabilities and create provisions for environmental risks. To compel businesses in performing accountability, disclosure of environmental management accounting information has become a key process.

**OBJECTIVES OF THE STUDY**

1. To examine the need and importance of environmental management accounting.
2. To identify the important sustainability factors on environmental, social and economic dimension for select cement industry in India.
3. To analyze the gap between the existing reporting practices and level of disclosure desired by stakeholders of cement companies.

**INDIAN CEMENT INDUSTRY**

Cement as a product plays a very important role in the development of a nation, as it is a vital raw material for concrete, which is a key raw material in key sectors like infrastructure, construction, commercial and residential real estate. Internationally, cement contributes about 5% of the total CO<sub>2</sub> emissions. Cement sector causes environment contamination problems, and the pollutants of the cement sector produced the unpleasant impact on air, water and land. Throughout the last decades, the discharge of dust from cement factories has been increased disturbingly due to expansion of more cement plants. The escalating concentration of cement dust pollutant and several gaseous air pollutants are readily recognized as being the reason of damage to a variety of type of vegetation. In India, the cement sector is one of the outstanding contributors to conventional as well as GHG emissions. Carbon dioxide creates universal warming and it increases global emissions of carbon from fossil-fuel combustion and other smaller industrial sources.

A variety of parameters like eco-logical rucksack, eco logical foot print, carbon foot print, coal foot print and water foot print can be implemented for finding out the environmental accounting.

To minimize the impact of environmental issues, cement and construction industry will have to become accustomed to stay sustainable and adopt a number of innovative and new practices. The cement companies in the past have been recognizing their sustainable practices but there is too little commitment to disclose the financial information related to these activities. Only a few have discretely recognized this amount in the Profit and Loss account in the form of green belt development or horticulture expenses. A few companies have reported this as "any significant accounting or reporting policies" or 'extraordinary items' in the annual report. This shows that in India, quantitative /financial reporting on Environmental issues is still at the infancy stage. The annual reports show that most polluting companies disclose more environmental information than the entities in the less polluting industries.

As a practice regarding environment disclosure, the companies regarding environment offer descriptive information in the annual reports. This development is increasing over the years. However, the companies that disclose financial information on environmental issues do not provide any item-time wise break up of expenditure or its accounting treatment in these reports. But at the same time some companies provided complete information by means of charts and tables on pollution levels or emission of pollutants. The majority of companies disclose only qualitative/descriptive information on the environment in the annual report. Though a few companies have started reporting quantitative /financial figures on the issue, the information provided is generally brief and lacks specific details. Moreover, there is no consistency in this kind of reporting (Andreson & Skjott –Larsen, 2009).

**HYPOTHESES**

H1: There is a difference between the sample companies in terms of accounting reporting.

H2: There is a significant difference between the item wise disclosures by the selected cement countries in India.

**RESEARCH METHODOLOGY**

This chapter analyses the methods to be used for conducting the study on result about the benefits and uses of environmental management accounting for firms. Moreover, the research attempts to carry out an in-depth investigation of environmental management accounting system and the need to draw a framework to increase and put into practice an environmental management accounting system within an organization. The data is primarily collected from various secondary sources pertaining to this topic from different books, articles and several web sites relating to environmental management accounting and the working of cement sector in India. The data collected is analyzed for the application of environmental management accounting practices in the Indian cement industry.

**DATA ANALYSIS**

Secondary data is used for the research article, which is collected from the financial reports of the cement industries under study and also from the internet. As cement is considered the single most important and profitable product, it becomes essential to analyze the production and consumption of cement in India over the years.

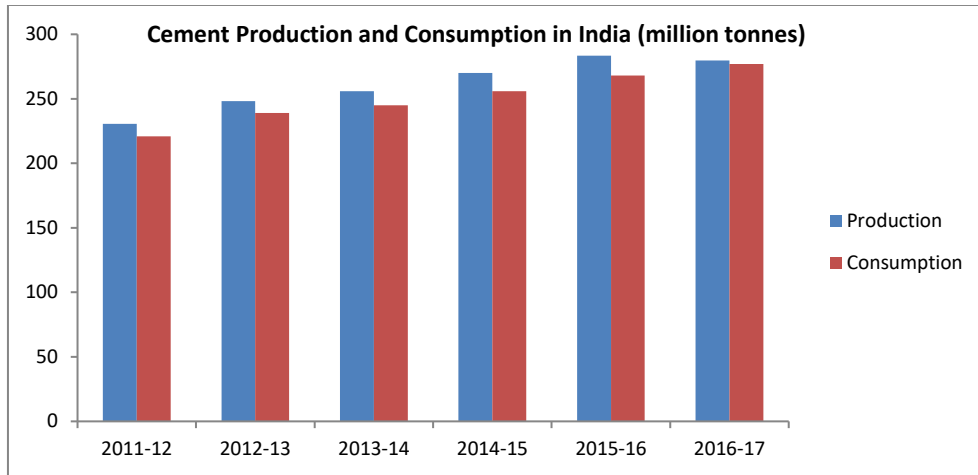
The table below shows the production and consumption of cement (in million tonnes) in India for the period 2012- 2017

TABLE 1

Year	Production	Consumption
2011-12	230.49	221.00
2012-13	248.23	239.00
2013-14	255.83	245.00
2014-15	270.04	256.00
2015-16	283.46	268.00
2016-17	279.81	277.00

Source: Business Standard, Ministry of External Affairs, (Investment and Technology Promotion Division)

GRAPH 1



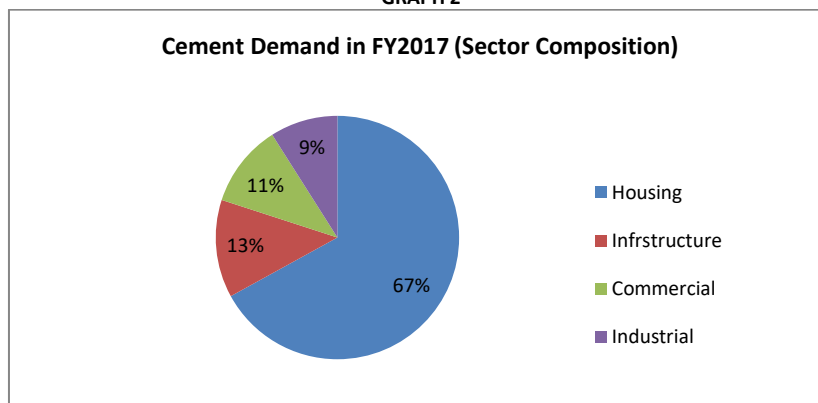
From the above Table 1 and Graph 1 it is seen that the total production of cement in India for the study period is increasing from 2012 to 2017. There is a huge demand for the commodity and as can be seen from the above graph the consumption is almost equal to the production.

TABLE 2: CEMENT DEMAND FY17 (SECTOR COMPOSITION)

Sector	% Demand
Housing	67%
Infrastructure	13%
Commercial	11%
Industrial	9%

Source: Annual Report 2016-17

GRAPH 2



From the above table 2 and Graph 2 it is seen that the demand of cement in the housing sector is the maximum (67%) followed by Infrastructure (13%), Commercial 11% and Industrial 9%.

**SUSTAINABILITY REPORTING FACTORS**

For the purpose of current research paper, a sample of 10 cement companies in India is taken to understand the sustainable accounting practices and find out the areas in which companies are reporting sustainable accounting. The table 3 below shows area covered under various factors of sustainability development taken from the annual report of the selected cement companies in India. Various environmental, social and economic factors have been considered.

**TABLE 3: AREAS COVERED UNDER DIFFERENT FACTORS RELATING TO SUSTAINABILITY**

Environmental Factors	Social Factors	Economic Factors
Energy	Community investment	Accountability/ Transparency
Water	Working condition	Corporate Governance
Greenhouse Gases Emission	Human rights and fair trade	Stakeholder value
Hazardous and non-hazardous waste	Public Policy	Economic performance
Recycling	Diversity	Fuel and Material
Agro based Livelihood	Safety	Training
Mine development	Education	Financial Performance
Waste Heat Recovery	Health and Family Welfare	
Concrete Recycling	Anti-corruption	
Packaging	Women Empowerment	
	Self Help Groups (SGHs)	

28 variables related with sustainable accounting reporting practices were selected with 10 cement companies as a representative sample among cement companies in India. The annual reports and sustainability report of various sample companies were analyzed to identify their sustainability reporting. For this purpose, the information received is divided into 3 parts i.e., non-disclosed (1), non-Financial disclosure (2) and financial disclosure (3). The best way of reporting this sustainable information is to report for all the above items financially (3). As per the objectives of this paper, first it is analyzed that whether there is a difference between the sample companies in terms of accounting reporting. For this purpose, one sample T test is being used for the data collected from the sample cement companies. The descriptive of the data are shown in Table 4.

**TABLE 4: DESCRIPTIVE STATISTICS OF EXISTING SUSTAINABLE REPORTING PRACTICES OF INDIAN CEMENT COMPANIES**

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
ACC	28	2.00	1.00	3.00	2.1265	0.1285	0.71611	0.513
AMBUJA	28	2.00	1.00	3.00	2.5908	0.0875	0.49909	0.249
BIRLA	28	2.00	1.00	3.00	1.9122	0.1272	0.70904	0.503
JK	28	2.00	1.00	3.00	2.1265	0.1189	0.66510	0.442
ULTRATECH	28	2.00	1.00	3.00	2.6905	0.0764	0.44016	0.194
SHREE	28	2.00	1.00	3.00	2.4836	0.1258	0.70190	0.493
DALMIA	28	2.00	1.00	3.00	1.9836	0.0936	0.53152	0.283
PRISM	28	2.00	1.00	3.00	1.8408	0.1363	0.75723	0.573
OCL INDIA	28	2.00	1.00	3.00	1.9836	0.1672	0.92061	0.848
INDIA Cement	28	2.00	1.00	3.00	1.8765	0.1320	0.73437	0.539
Valid N	28							

Source: Annual Reports of the cement companies under study

Above Table 4 shows that there is a significant difference between the reporting patterns of sustainability of the different cement industries under study, as the value of standard deviation of the reporting varies between 0.4 to 0.9. The results of t-test are presented in the Table 5 below.

**TABLE 5: ONE SAMPLE T-TEST**

Test Value = 3						
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval Of the Difference	
					Lower	Upper
ACC	-4.991	27	0.000	-0.63000	-1.11140	-0.48560
AMBUJA	-2.678	27	0.008	-0.28751	-0.50300	-0.06740
BIRLA	-6.654	27	0.000	-0.94692	-1.28500	-0.66760
JK	-5.425	27	0.000	-0.75500	-1.01260	-0.48740
ULTRATECH	-2.007	27	0.062	-0.18757	-0.35200	0.00550
SHREE	-2.719	27	0.009	-0.40286	-0.68780	-0.10680
DALMIA	-8.233	27	0.000	-0.90186	-1.12170	-0.66900
PRISM	-7.024	27	0.000	-1.00571	-1.43310	-0.73180
OCL INDIA	-5.012	27	0.000	-0.92086	-1.26360	-0.53010
INDIA Cement	-6.748	27	0.000	-1.00500	-1.31850	-0.69950

Source: Annual Reports of the cement companies under study

Inference: One sample Test of various cement companies shows that only in one company similar pattern of reporting is adopted ( $t=-2.007$  and  $p=0.062>0.05$ ), while in rest of the companies the difference in reporting of sustainable accounting reporting is significant (as  $p=<=0.05$ ). This is also evident by the mean difference, as the difference from the mean in case of ULTRATECH Cement is minimum (-0.18757) while is more in other companies and highest difference were found in Prism Cement company (- 1.00571).

t-test was also used to identify the differences between the reporting of sustainable variables in selected cement companies. This test was used to find out whether the item-wise reporting of selected variables were similar among the different companies or not. The data collected for the above t test was divided into same 3 parts i.e., non-disclosed (1), non-Financial disclosure (2) and financial disclosure (3). The best way of reporting this sustainable information is to report for all the above items financially (3). As per the objectives one sample t- test is being used for the data collected from the sample cement companies. The descriptive of the data were shown in Table-6.

TABLE 6: DESCRIPTIVE STATISTICS OF ITEM WISE DISCLOSURE OF SUSTAINABLE BY INDIAN CEMENT COMPANIES

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Energy	10	1.00	2.00	3.00	2.7825	0.13317	0.42314	0.179
Water	10	1.00	2.00	3.00	2.2825	0.15259	0.48455	0.235
Greenhouse Gases Emission	10	2.00	1.00	3.00	2.0825	0.23317	0.73936	0.547
Hazardous & non-hazardous waste	10	2.00	1.00	3.00	2.0825	0.23317	0.73936	0.547
Recycling	10	2.00	1.00	3.00	1.8825	0.27673	0.87710	0.769
Agro based Livelihood	10	2.00	1.00	3.00	1.6825	0.29984	0.95018	0.903
Mine Improvement	10	2.00	1.00	3.00	2.1825	0.24928	0.79031	0.625
Waste Heat Recovery	10	2.00	1.00	3.00	1.7825	0.24928	0.79031	0.625
Concrete Recycling	10	2.00	1.00	3.00	1.3825	0.22095	0.70071	0.491
Packaging	10	2.00	1.00	3.00	2.3825	0.22095	0.70071	0.491
Community investment	10	1.00	2.00	3.00	2.4825	0.16651	0.52855	0.279
Working condition	10	2.00	1.00	3.00	2.2825	0.21328	0.67645	0.458
Human rights and fair trade	10	2.00	1.00	3.00	2.2825	0.21328	0.67645	0.458
Public Policy	10	1.00	2.00	3.00	2.2825	0.15259	0.48455	0.235
Diversity	10	2.00	1.00	3.00	2.2825	0.21328	0.67645	0.458
Safety	10	1.00	2.00	3.00	2.3825	0.16314	0.51790	0.268
Education	10	2.00	1.00	3.00	1.9825	0.29798	0.94431	0.892
Health Welfare	10	1.00	2.00	3.00	2.4825	0.16651	0.52855	0.279
Anti corruption	10	2.00	1.00	3.00	1.9825	0.25804	0.81800	0.669
Women Empowerment	10	2.00	1.00	3.00	1.3825	0.22095	0.70071	0.491
Self Help Groups (SGHs)	10	2.00	1.00	3.00	1.4825	0.26858	0.85134	0.725
Accountability/ Transparency	10	1.00	2.00	3.00	2.7825	0.13317	0.42314	0.179
Corporate Governance	10	0.00	3.00	3.00	2.9825	-0.00016	0.00150	0.000
Stakeholder value	10	0.00	3.00	3.00	2.9825	-0.00016	0.00150	0.000
Economic performance	10	0.00	3.00	3.00	2.9825	-0.00016	0.00150	0.000
Fuel and Material	10	1.00	2.00	3.00	2.6825	0.15259	0.48455	0.235
Training	10	2.00	1.00	3.00	2.2825	0.21328	0.67645	0.458
Financial Performance	10	0.00	3.00	3.00	2.9825	0.00000	0.00000	0.000

Source: Annual Reports of the cement companies under study

Table 6 shows that there is a significant difference between the item wise disclosures by the selected companies. Corporate Governance, Stakeholder Value, Economic performance and Financial Performance are among the variables in which no differences were observed, as the standard deviation is 'zero', while in case of Agro based Livelihood the standard deviation is highest (0.95018). t test values were further calculated for calculating the mean difference, results of which were shown in Table 7.

TABLE 7: ONE-SAMPLE TEST OF ITEM WISE DISCLOSURE OF SUSTAINABLE REPORTING BY INDIAN CEMENT COMPANIES

Test Value = 3						
95% Confidence Interval of the Difference						
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Energy	-1.485	9	0.1695	-0.2000	-0.4771	0.1031
Water	-4.568	9	0.0025	-0.7000	-1.0211	-0.3529
Greenhouse Gases Emission	-3.842	9	0.0055	-0.9000	-1.4033	-0.3729
Hazardous & non-hazardous waste	-3.842	9	0.0055	-0.9000	-1.4483	-0.3707
Recycling	-3.958	9	0.0045	-1.1000	-1.7019	-0.4721
Agro based Livelihood	-4.318	9	0.0035	-1.3000	-1.9541	-0.6199
Mine Improvement	-3.192	9	0.0125	-0.8000	-1.3398	-0.2342
Waste Heat Recovery	-4.796	9	0.0025	-1.2000	-1.7398	-0.6342
Concrete Recycling	-7.221	9	0.0015	-1.6000	-2.0757	-1.0983
Packaging	-2.699	9	0.0255	-0.6000	-1.0757	-0.0983
Community investment	-2.985	9	0.0165	-0.5000	-0.8525	-0.1215
Working condition	-3.265	9	0.0115	-0.7000	-1.1583	-0.2157
Human rights and fair trade	-3.265	9	0.0115	-0.7000	-1.1583	-0.2157
Public Policy	-4.568	9	0.0025	-0.7000	-1.0211	-0.3529
Diversity	-3.265	9	0.0115	-0.7000	-1.1583	-0.2157
Safety	-3.659	9	0.0065	-0.6000	-0.9449	-0.2291
Education	-3.339	9	0.0095	-1.0000	-1.6499	-0.3241
Health and Family Welfare	-2.985	9	0.0165	-0.5000	-0.8525	-0.1215
Anti corruption	-3.858	9	0.0055	-1.0000	-1.5596	-0.4144
Women Empowerment	-7.221	9	0.0015	-1.6000	-2.0757	-1.0983
Self Help Groups (SGHs)	-5.567	9	0.0015	-1.5000	-2.0834	-0.8906
Accountability/ Transparency	-1.485	9	0.1695	-0.2000	-0.4771	0.1031
Fuel and Material	-1.949	9	0.0825	-0.3000	-0.6211	0.0471
Training	-3.265	9	0.0115	-0.7000	-1.1583	-0.2157

Source: Annual Reports of cement companies under study

One sample Test of various sustainability factors shows that only three factors were having a similar pattern of reporting i.e., Energy (t=-1.485, p=0.1695 >0.05), Accountability/Transparency (t=- 1.485, p=.1695>0.05) and Fuels and Material (t=-1.949 and p=0.0825>0.05), while on rest of the variables the difference in reporting of sustainable accounting reporting factors were significant (as p<.05)

**CONCLUSION**

Cement consumption is one of the major factors, which are behind the growth of the country, but manufacturing of cement is always creating carbon and other factors, which damage the environment due to which these companies are called as environment hazardous companies. To convert these environmental hazardous companies sustainable, compulsory regulations are required in terms of disclosure under accounting and reporting related to sustainable issue in proper format i.e., in terms of financial character which effect and convert them into sustainable. Environmental Sustainable Accounting is helpful for these companies in this regards. The current study has undisclosed the fact that Sustainable Accounting reporting factors taken from company annual reports, which were examined, by taking sample of top 10 Indian cement companies resulted that except one company Ultratech Cement, uniform reporting pattern was not observed. Also the reporting of most of various sustainability variables were found to be unusual except Energy efficiency, accountability, use of sustainable fuels and material. Hence, it can be finally concluded that unless there is a uniform accounting reporting system for sustainability practices, comparison between different companies will not be possible. Hence, it can be proposed that a framework of sustainable accounting reporting must be developed which provide a details of similar factors on sustainable reporting should be done by in Indian Cement companies.

Thus, there are a number of environmental issues linked to the cement sector, such as control of air pollutants (dust and gaseous emissions), lessening of green house gases (GHG), the control of fugitive dust and use of injurious wastes as alternate fuels and the preservation of natural resources. The Indian cement sector has revealed extraordinary performance in terms of improving air quality. Dust emissions are reduced and cement plants conform to the environmental parameters set by statutory bodies like Central Pollution Control Board of India. Government policies have energized and motivated the sector to take new measures to look after the environment and get better the lives of people working in the plant and living in close proximity. Environmental regulations operating in India that have given new direction to the cement sector in terms of environmental management

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**A STUDY ON WOMEN ENTREPRENEURS****S CHITRA****ASST. PROFESSOR****PSGR KRISHNAMMAL COLLEGE FOR WOMEN  
COIMBATORE****M. BHUVANESWARI****ASST. PROFESSOR****PSGR KRISHNAMMAL COLLEGE FOR WOMEN  
COIMBATORE****ABSTRACT**

*The study finds out that women entrepreneurship in India faces many challenges and requires a radical change in attitudes and mindsets of society. Therefore, programs should be designed to address changes in attitude and mindset of the people. It is important to promote entrepreneurship to improve the economic situation of the women. This can be made possible with the help of the education, as education is a powerful tool in bringing out the entrepreneurship qualities in a human being. Moreover, attempts to motivate inspire and assist women entrepreneurs should be made at all possible levels, proper training should be given to the women by establishing training institutes that can enhance their level of work-knowledge, risk-taking abilities, enhancing their capabilities. After setting up training institutes, there should be continuous monitoring, improvement of training programs so that they can improve upon the quality of the entrepreneurs being produced in the country. Undoubtedly, the women participation rate in the field of entrepreneurship is increasing rapidly. However, efforts need to be taken at larger scale to give the position in the field of entrepreneurship that they deserve. The actions & steps that have been taken by the government sponsored development activities have benefited only strata of society and more needs to be done in this area. Effective steps need to be taken to have entrepreneurial awareness and skill development to women.*

**KEYWORDS**

women entrepreneurs, women employment.

**JEL CODES**

L26, L29.

**INTRODUCTION AND DESIGN OF THE STUDY**

Entrepreneurship plays an important role in generating employment opportunity for societies, providing self-employment for those who start-up their own business and improving the economic status of the rural area as well. Now women are also interested to start their own business in both the rural and urban areas to overcome poverty, generate family income and developing standard of living. Women are participating in the agricultural business and trade without any social and other boundaries. A women entrepreneur is a woman or group of women who undertake to organize and run an enterprise.

Women are playing a significant role in the progress and development of the economy both in their home and outside the home also. This can be attributed to the increasing education level of women, gradual evolution of society, ability and a compelling desire to achieve something in life, in addition to the need of financial independence. These are the women who have broken away from the track and are exploring new avenues. Even though we see these women successfully operating their businesses now, we cannot ignore the problems they faced while starting up their ventures. One of the basic problems that all women entrepreneurs face is finance; women do not generally have property in their names so they cannot use them as collateral for obtaining funds from banks.

This report on the concept of women entrepreneurs; their traits in business, the problem faced by them when they set up and make some suggestions for future prospects for development of women entrepreneurs.

**STATEMENT OF THE PROBLEM**

The rural areas are industrially developing in which some of the entrepreneurs excel in small scale industry. Even though the government organizes women by various associations, they are not ready to undertake the business. As compared to men, women are less motivated to start business units due to some unwanted fear, lack of motivation. Thus, the study aims at undertaking the entrepreneurial development among women and highlights their motivational forces and relationship between socio-economic background of women entrepreneurs, motivational factors and their existing entrepreneurial skills.

**OBJECTIVES OF THE STUDY**

1. To study the socio-economic outline of the women entrepreneurs.
2. To understand the motivational and encouraging factors behind women entrepreneurs.
3. To critically examine the constraints faced by women entrepreneurs.

**SCOPE OF THE STUDY**

The study is confined to the women entrepreneurs who have mainly engaged in three types of enterprises such as manufacture, trade and service. It provides the details and status of women, motivational factors with their relation to the socioeconomic background of women entrepreneurs. It covers the entrepreneurial performance of women and the various constraints and problems encountered by them at various stages.

**METHODOLOGY OF THE STUDY**

Women entrepreneurs in and around Coimbatore are considered for the study.

**I. SOURCES OF DATA**

Data has been collected from two sources.

**1. Primary Data**

Primary data has been collected from women entrepreneurs by administering the help of questionnaire.

**2. Secondary Data**

Secondary data has been collected from various journals, books, magazines and online websites.

**II. SAMPLE SELECTION**

Random sampling method has been adopted to collect the data with structured questionnaire.

**III. SAMPLE SIZE**

A total of 120 samples have been considered for the research.

**IV. TOOLS USED**

- Percentage Analysis,
- Descriptive statistics,
- ANOVA,
- T – Test.

**V. PERIOD OF THE STUDY**

- The period of the study is June 2017 - Sep 2017.

**LIMITATIONS**

- The study is fully based on Women Entrepreneurs in Coimbatore city.
- The research is based on the response of 120 respondents. The result of the study and expectation cannot be generalized.

**REVIEW OF THE LITERATURE**

*Meenu Goyal and Jai Prakash, (5 September 2011)*<sup>1</sup> attempted to know “Women entrepreneurship in India – Problems and Prospects”. The primary objective of the study was to study the policies, programs, institutional networks and the involvement of support of agencies in promoting women entrepreneurship. The study was based on secondary data from the published reports of RBI. The author has included some suggestions for the growth of women entrepreneurs. The author has highlighted some of schemes introduced to those entrepreneurs and also has included the case study of a successful entrepreneur. The role of women entrepreneur in economic development has been recognized and steps have been taken to promote women entrepreneurship, said the conclusion.

The study was done by *Vijay Kumbhar (May 2012)*<sup>2</sup> on the topic “Some critical issue of women entrepreneurship in rural India”. The objective of the study was to identify the critical issues and various problems regarding the women entrepreneurship. The study was purely based upon secondary data collected through literature survey. He criticized some of those opinions and made analysis based on observation and experiences regarding women entrepreneurship. He identified many problems like economic life, skill problems, family support and courage and he therefore concluded it that there is a need for continuous attempt to inspire, encourage, motivate, co-operates and give awareness on a mass scale with intension of creating awareness among women.

**OVERVIEW OF THE STUDY****ENTREPRENEUR**

It is a process where one person getting himself self employed provides job to others also. The persons called “Entrepreneur”.

**WOMEN ENTREPRENEURSHIP**

Women entrepreneurs are those women who take the lead and organize the business or industry and provide employment to others. It signifies that section of female population who venture out into industrial activities. It may be defined as a confident innovative and creative woman capable of achieving self economic independence individually or in collaboration, generates employment opportunities for other through initiating establishing and running the enterprise by keeping pace with her personal family and social life.

**DEFINITION OF WOMEN ENTREPRENEUR**

Government of India is defined as “An enterprise owned and governed by woman having a minimum economic interest of 51% of the investment and giving at least 51% employment created for women in their enterprise” called women entrepreneurs.

**THE BASIC CONCEPTS OF RURAL ENTREPRENEURSHIP, WHICH IS APPLIED IN THE RURAL DEVELOPMENT**

- Best use of local resources in an entrepreneurial project by rural people to better distribution of the farm produce results in the rural society.
- Entrepreneurial occupation reduces discrimination and providing alternative employments against the rural migration in rural areas.
- To activate the basic system of ‘6M’-money, material, manpower, machinery, management and market to the rural zones.

**ENTREPRENEURSHIP DEVELOPMENT**

Entrepreneurship development means all those activities that aim at stimulating the individuals for becoming entrepreneurs.

**CHALLENGES FOR RURAL WOMEN ENTREPRENEURS**

The main challenges that women face in business are educational and work background, Balancing their time between work and family, Problems of raising start-up capital, Difficulty in borrowing fund, Thought-cut completions, endangered existence of small companies, Problems of availing raw-materials access to export market without intermediaries, as well as an overall psychological barrier on the part of banks, suppliers, and clients alike, are common challenges. In addition to this some of the challenges faced by rural women entrepreneurs are as follows-

1. Family ties
2. Lack of education
3. Lack of Raw Materials
4. Male Dominated Society
5. Problem of finance
6. Tough competitions
7. High cost of production
8. Low risk-bearing ability
9. Limited Mobility

**SCHEMES FOR PROMOTION AND DEVELOPMENT OF WOMEN****ENTREPRENEURS**

In order to promote progressively women enterprises in the MSE sector, various schemes have been formulated by this Ministry and some more are in the process of being finalized, aims only at the development of women enterprises in India.

- **Trade related entrepreneurship assistance and development scheme for women (TREAD)**

With the objective of encouraging women in starting their own ventures, government launched a Scheme, namely, (TREAD) Trade Related Entrepreneurship Assistance and Development during the 11th Plan. The scheme envisaged economic empowerment of women through the development of their entrepreneurial skills in non-farm activities. There are three major parts of the scheme;

Government of India has grant up to 30% of the total project cost to the Non-Government Organizations (NGOs) for promoting entrepreneurship among women. The remaining 70% of the total project cost is financed by the lending agency as loan for undertaking activities as envisaged in the project.

Up to Rs.1 lakh per program can be granted by govt. of India to training institutions / NGOs for providing training to the women entrepreneurs.

- **Micro & Small Enterprises Cluster Development Program (MSE-CDP)**

**a) Existing Clusters**

Cluster is described as a group of enterprises, normally 20 or more producing same/similar products/services. The Cluster Development Program being implemented envisages diagnostic study of identified clusters of traditional skill-based MSEs to identify suitable technologies and their providers and to facilitate adoption of available technology meeting the specific needs of the end users. The Cluster Development goals at improved competitiveness, technology improvement,



adoption of best manufacturing practices, marketing of products, employment generation etc. The scheme provides support for capacity building, common facilities, marketing etc. the delivery, absorption and diffusion of the identified technology from its producers to the recipient user/cluster of small enterprises.

#### b) Physical infrastructure

This Ministry implemented the IID Scheme to provide developed sites with infrastructural facilities like exhibition/display centers, telecommunications, drainage and pollution control facilities power distribution network, roads, water, raw materials, common service facilities storage and marketing outlets, and technological back-up services, etc. This scheme has been subsumed in the MS-ME-Cluster Development Program. All the features of IID Scheme have been retained.

To create physical infrastructure for women enterprises central grant of 40% of the project cost subject to a maximum of Rs.2 crores is available. The Ministry of MSME is trying to enhance the quantum of grant to 80% in a project of Rs.10 crores.

#### • Credit guarantee fund scheme

In May, 2000 The Government had introduced the Credit Guarantee Fund Scheme for Small Industries with the objective of providing credit to SSI units, particularly small units, for loans up to Rs. 25 lakhs with no collateral/ third party guarantees. The Scheme is being operated by the Credit Guarantee Fund Trust for Small Industries (CGTSI) set up jointly by the Government of India and SIDBI. In the case of women enterprises, the guarantee cover is up to 80% of the credit subject to maximum guarantee limit of Rs. 20 lakhs. The member lending institutions (MLI) availing of guarantee from the Trust have to pay a one-time guarantee fee of 1.5% of the credit facility (comprising term loan and / or working capital) allowed by the lending institution to the borrower and annual service fee of 0.75% per annum on the amount of credit facility extended by the MLI, which is covered under the scheme.

#### At present, the Government of India has over 27 schemes for women entrepreneurs they are:

Assistance to Rural Women in Non-Farm Development (ARWIND) schemes

- Entrepreneurial Development programme (EDPs)
- Indira Mahila Yojana
- Indira Mahila Kendra
- Integrated Rural Development Programme (IRDP)
- Khadi And Village Industries Commission (KVIC)
- Management Development programmes
- Women's Development Corporations (WDCs)
- Marketing of Non-Farm Products of Rural Women (MAHIMA)
- Mahila Vikas Nidhi
- Mahila Samiti Yojana
- Mahila Vikas Nidhi
- Micro Credit Scheme
- Micro & Small Enterprises Cluster Development Programmes (MSE-CDP).
- NGO's Credit Schemes

## ANALYSIS AND INTERPRETATION

The analysis and interpretation of the study on "A study on women entrepreneurs" is based on a sample size of 120 respondents. The collected facts have been categorized, tabulated and the following statistical measure has been employed in executing the objective of the study.

- Percentage Analysis.
- Descriptive Statistics.
- ANOVA.
- t – Test.

#### PERCENTAGE ANALYSIS

Percentage analysis is carried out for all the questions specified in the questionnaire. This analysis illustrated the classification of the respondents falling under each category. The percentage analysis is used mainly for standardization and comparison. Charts depicted are in support of analysis.

#### DESCRIPTIVE STATISTICS

Descriptive statistics is carried out for the questions specified in the questionnaire. This analysis illustrated the level of constraints faced and the problems faced in promotional and operational activities. Descriptive statistics are statistics that quantitatively describe or summarize features of a collection of information.

#### ANOVA (ANALYSIS OF VARIANCE)

ANOVA is a statistical technique specially designed to test whether the means of more than two quantitative populations are equal and it is a technique of analyzing the variance explained by the dependent variable based on the selected independent variable. The independent variable is termed as group variable or factors. ANOVA has been used to find out whether the group means of the dependent variable differs significantly or not based on the classification of the independent variables.

#### t- TEST

t - Test has been used for judging whether there is any significant difference between the means of two samples.

#### PERCENTAGE ANALYSIS

**TABLE 1: EDUCATIONAL QUALIFICATION OF THE RESPONDENTS**

Educational Qualification	No. of Respondents	Per cent
Illiterate	5	4.2
Elementary	18	15.0
<b>Graduate</b>	<b>72</b>	<b>60.0</b>
Professional	25	20.8
<b>Total</b>	<b>120</b>	<b>100.0</b>

Source: Primary data

It is found from table 2 that, 60 per cent of the respondents are graduates, 20.8 per cent of the respondents are professionals, 15 per cent of the respondents are of elementary qualification and 4.2 per cent of the respondents are illiterates.

Hence, it is found that more number of respondents are graduates.

CHART 1

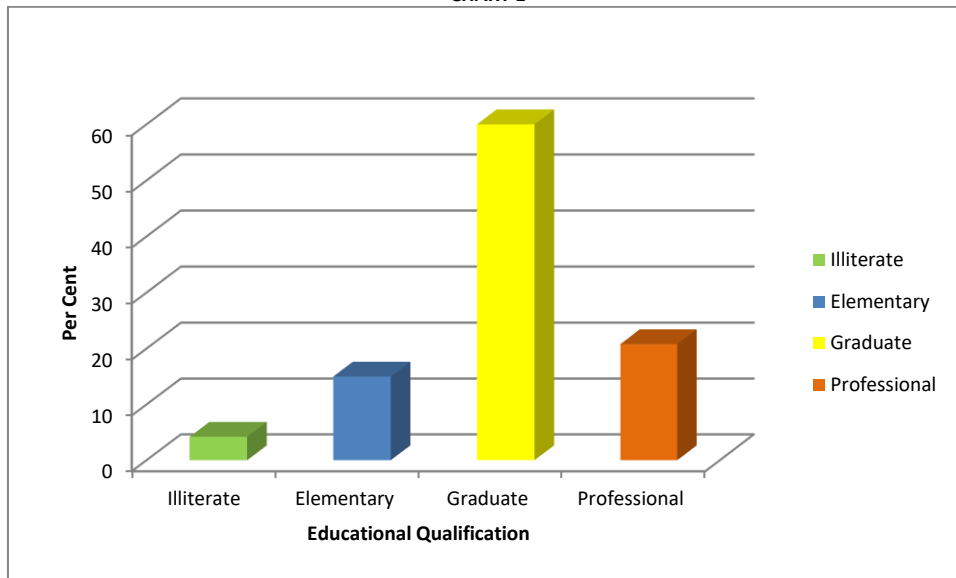


TABLE 2: MOTIVATORS IN STARTING THE ENTERPRISES

Motivators in starting the enterprises	No. of Respondents	Per cent
Husband	29	24.2
<b>Family members</b>	<b>71</b>	<b>59.2</b>
Friends	20	16.7
<b>Total</b>	<b>120</b>	<b>100.0</b>

Source: Primary data

It is found from table 11 that, 59.2 per cent of the respondents are motivated by family members, 24.2 per cent are motivated by their husband and 16.7 per cent are motivated by their friends.

Hence, majority of the respondents is motivated by their family members.

**MOTIVATORS IN STARTING THE ENTERPRISES**

CHART 2

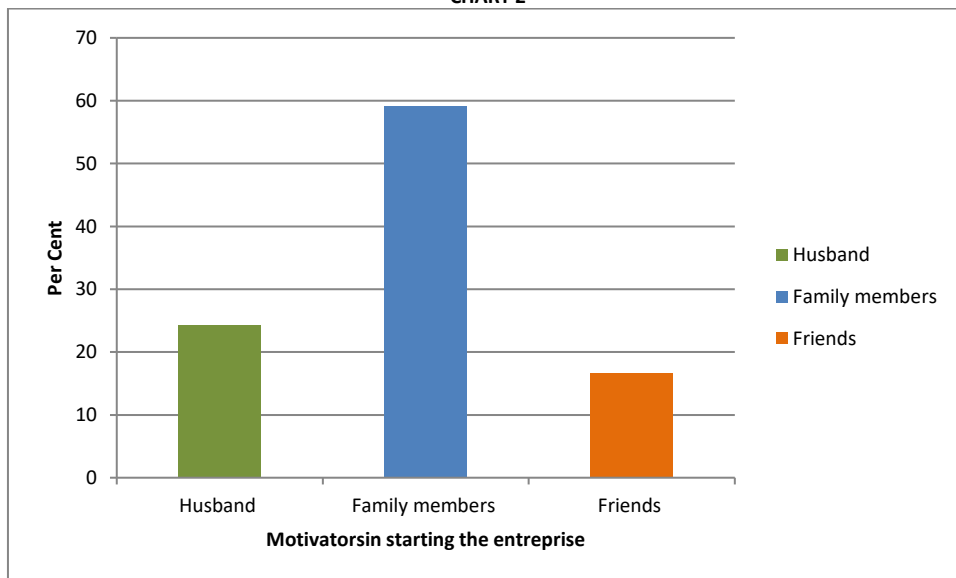


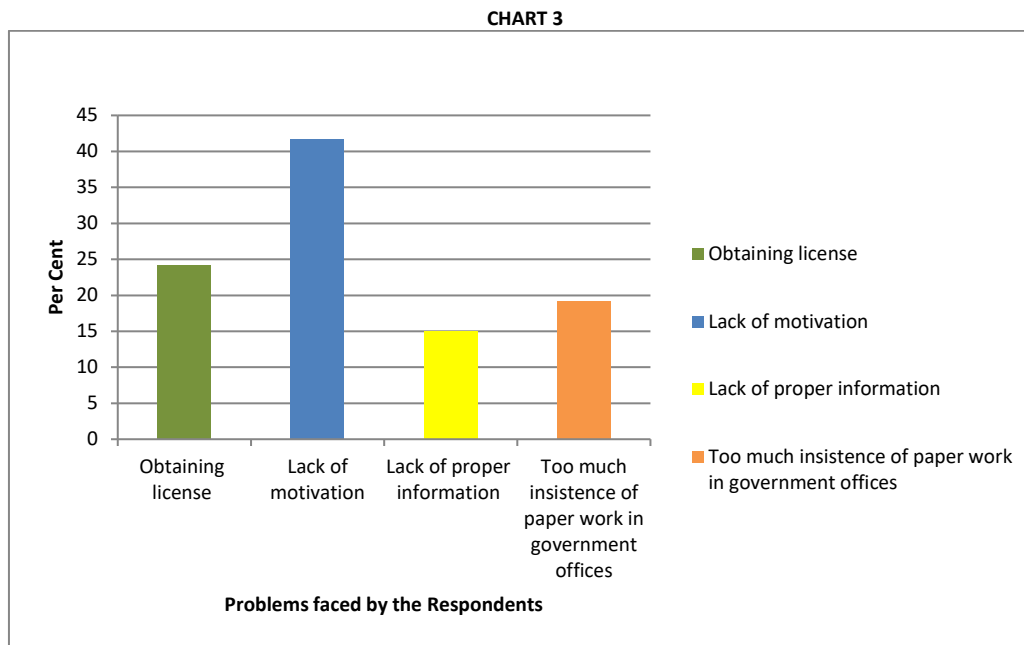
TABLE 3: PROBLEMS FACED BY THE RESPONDENTS

Problems faced by the respondents	No. of Respondents	Per cent
Obtaining license	29	24.2
<b>Lack of motivation</b>	<b>50</b>	<b>41.7</b>
Lack of proper information	18	15.0
Too much insistence of paper work in government offices	23	19.2
<b>Total</b>	<b>120</b>	<b>100.0</b>

Source: Primary data

It is inferred from table 16 that, 41.7 per cent of the respondents has experienced lack of motivation, 24.2 per cent experienced problem in obtaining licensed, 19.2 per cent experienced too much insistence of paper work in government offices and 15 per cent has lacked in getting proper information.

Hence, more number of the respondents is experiencing lack of motivation.



**DESCRIPTIVE STATISTICS**

Descriptive statistics is carried out for the questions specified in the questionnaire. This analysis illustrated the level of constrains faced and the problems faced in promotional and operational activities. Descriptive statistics are statistics that quantitatively describe or summarize features of a collection of information.

**TABLE 4: LEVEL OF CONSTRAINS FACED ON WOMEN ENTREPRENEURS**

Constrains faced	N	Minimum	Maximum	Mean	Std. Deviation
Lack of capital	120	1	5	3.90	.864
Lack of technical know-how	120	1	5	3.29	.824
Lack of confidence	120	1	5	3.27	1.159
Lack of network	120	1	5	3.18	.961
Lack of skilled workers	120	1	5	2.71	1.205
Balancing work and personal life	120	1	5	3.64	1.027

Source: Primary data

A five point rating scale ranging from 1 for very low, 2 for low, 3 for neutral, 4 for high and 5 for very high has been constructed to obtain the opinion of the respondents on their level of constrains faced. From the mean ratings primary data based upon the response of the respondents it is evident that most of them have **agreed** on the constrains faced namely, 'lack of capital' (mean 3.90), 'balancing work and personal life' (mean 3.64), 'lack of technical know-how' (mean 3.29), 'lack of confidence' (mean 3.27), 'lack of network' (mean 3.18), and 'lack of skilled workers' (mean 2.71).

Therefore, based on the neutral mean rating it has been concluded that most of the respondents have been **agreed** in facing constrains by women entrepreneurs.

**TABLE 5: LEVEL OF PROBLEMS FACED BY WOMEN ENTREPRENEURS**

Problems faced	N	Minimum	Maximum	Mean	Std. Deviation
Registration	120	1	5	3.69	1.002
Allotment of plot	120	1	5	3.32	.881
Technical Know-how	120	1	5	3.34	1.000
Long term finance	120	1	5	3.46	1.060
Government Red-tapism	120	1	5	3.43	1.143
Scarcity	120	1	5	3.43	.876
Transportation	120	1	5	3.36	1.098
High Prices	120	1	5	3.43	1.051
Low quality	120	1	5	3.18	1.228
Poor purchase Management	120	1	5	2.98	1.167

Source: Primary data

A five point rating scale ranging from 1 to 5 where 1 for very low, 2 for low, 3 for neutral, 4 for high and 5 for very high has been constructed to obtain the opinion of the respondents on their level of constrains faced. From the mean ratings primary data based upon the response of the respondents it is evident that most of them have been **agreed** about the various problems faced by women entrepreneurs namely, 'registration' (mean 3.69), 'long term finance' (mean 3.46), 'government red-tapism' (mean 3.43), 'scarcity' (mean 3.43), 'high prices' (mean 3.43), 'transportation' (mean 3.36), 'technical know-how' (mean 3.34), 'allotment of plot' (mean 3.32), 'low quality' (mean 3.18), and 'poor purchase management' (mean 2.98).

Therefore, based on the neutral mean rating it has been concluded that maximum number of the respondents have **agreed** with the above given problems.

**ANOVA (Analysis of variance)**

ANOVA has been used to examine whether there has been significant variation between respondents' 'demographic and their level of constrains and problems faced' by adding the ratings given by the respondents for the statements relating to level of constrains faced. Higher the score more is the agreeability on the statements. The mean scores have been compared with the independent variables – demographic and constrain related factors, to know the level of variance of the respondents classified under different categories.

H<sub>0</sub>: The level of constrains faced do not vary significantly based on the selected demographic factors

The null hypothesis has been tested for each of the demographic variables separately and is presented in the table 4.1

TABLE 6: LEVEL OF CONSTRAINS FACED Vs. DEMOGRAPHIC VARIABLES

Demographic variables		Level of constrains score			Table Value	F	Sig. Sig. Sig.
		Mean	SD	No.			
Age	Up to 25 years	3.2931	.53574	29	2.68	.812	NS
	25-35 years	3.3374	.51436	41			
	35-45 years	3.4145	.58972	39			
	Above 55 years	3.1364	.54680	11			
Educational Qualification	Illiterates	3.2667	.48016	5	2.68	1.201	NS
	Elementary	3.1852	.50127	18			
	Graduates	3.3194	.58526	72			
	Professional	3.4933	.45511	25			
Residential Area	Rural	3.3594	.60480	32	3.07	.132	NS
	Urban	3.3385	.49510	64			
	Semi Urban	3.2847	.61479	24			
Number of years of running business	1 – 3 years	3.3291	.58675	39	2.68	.096	NS
	3 – 6 years	3.3442	.59463	46			
	6 – 9 years	3.3725	.36576	17			
	Above 9 years	3.2778	.50488	18			
Nature of business	Manufacturing	3.3292	.49425	40	3.07	.504	NS
	Trading	3.2581	.63950	31			
	Service Oriented	3.3844	.52946	49			
Form of ownership	Sole traders	3.3022	.56868	91	3.07	.608	NS
	Partnerships	3.4321	.46972	27			
	Company	3.4167	.58926	2			
Number of employees	1 – 5	3.2747	.58201	54	2.68	1.003	NS
	5 – 10	3.3571	.56604	28			
	10 – 15	3.5175	.41535	19			
	15 and above	3.2807	.52427	19			
Monthly turnover	1,000 – 10,000	3.4333	.61464	10	2.68	.661	NS
	10,000 – 20,000	3.3030	.55972	33			
	20,000 – 30,000	3.4103	.48643	39			
	Above 30,000	3.2544	.58219	38			
Motivators in starting the enterprise	Husband	3.3391	.50096	29	3.07	2.016	NS
	Family Members	3.3920	.52637	71			
	Friends	3.1167	.64685	20			

Source: Primary data

NS – Not Significant  $S^{**}$  – Significant at 1% level  $S^*$  - Significant at 5% level**LEVEL OF CONSTRAINS FACED Vs. DEMOGRAPHIC VARIABLES**

As per the age is concerned, the highest mean value is found for the age ranging between 35 to 45 years (3.4145). As per the educational qualification, the highest mean score is found for professionals (3.4933). With regards to area of residence the highest mean score is 3.3594 for the respondents residing in rural areas the highest mean score 3.3725 is found for the respondents running business for 6-9 years. With regards to nature of business and form of ownership the highest mean score is 3.3844 for service oriented and 3.4321 for partnership firms respectively. The highest mean score is 3.5175 and 3.4333 is found for 10-15 employees in a firm and monthly turnover of Rs. 1000 to Rs. 10000 per month. As per the motivators in starting the enterprise, the highest mean score is found for family members (3.3920).

The ANOVA results that there is no significant difference in the level of constrains faced based on the demographic variables such as age, educational qualification, residential area, number of years of running business, nature of business, ownership, number of employees, monthly turnover and motivators in starting the enterprise.

**Hence the null hypothesis is accepted in case of all the demographic variables.**

**Level of problems faced Vs demographic variables**

$H_0$ : The level of problem faced on promotional and operational factors do not vary significantly based on the selected demographic factors.

The null hypothesis has been tested for each of the demographic variables separately and is presented in the table

TABLE 7: LEVEL OF PROBLEMS FACED Vs. DEMOGRAPHIC VARIABLES

Demographic variables		Level of problem scores			Table Value	F	Sig.
		Mean	SD	No.			
Age	Up to 25 years	3.3931	.47953	29	2.68	.041	NS
	25-35 years	3.3585	.64845	41			
	35-45years	3.3513	.56095	39			
	Above 55 years	3.3364	.52014	11			
Educational Qualification	Illiterates	2.9200	.43818	5	2.68	2.021	NS
	Elementary	3.2167	.55757	18			
	Graduates	3.3806	.52879	72			
	Professional	3.5040	.65095	25			
Residential Area	Rural	3.3125	.48709	32	3.07	4.359	S*
	Urban	3.4844	.57077	64			
	Semi Urban	3.1042	.56912	24			
Number of years of running business	1 – 3 years	3.4179	.63074	39	2.68	.297	NS
	3 – 6 years	3.3109	.60561	46			
	6 – 9 years	3.4059	.36481	17			
	Above 9 years	3.3333	.48020	18			
Nature of business	Manufacturing	3.4500	.56205	40	3.07	.748	NS
	Trading	3.3387	.65405	31			
	Service Oriented	3.3061	.50679	49			
Form of ownership	Sole traders	3.3385	.55132	91	3.07	.456	NS
	Partnerships	3.4519	.62841	27			
	Company	3.2500	.21213	2			
Number of employees	1 – 5	3.2444	.60771	54	2.68	1.671	NS
	5 – 10	3.4821	.53059	28			
	10 – 15	3.5105	.60452	19			
	15 and above	3.3737	.38274	19			
Monthly turnover	1,000 – 10,000	3.5200	.70364	10	2.68	.464	NS
	10,000 – 20,000	3.3970	.57797	33			
	20,000 – 30,000	3.3564	.58839	39			
	Above 30,000	3.2974	.49891	38			
Motivators in starting the enterprise	Husband	3.4897	.61316	29	3.07	3.051	NS
	Family Members	3.3845	.53416	71			
	Friends	3.1000	.54193	20			

Source: Primary data

NS – Not Significant S\*\* – Significant at 1% level S\* - Significant at 5% level

**LEVEL OF PROBLEMS FACED Vs. DEMOGRAPHIC VARIABLES**

As per the age is concerned, the highest mean value is found for the age upto 25 years (3.3931). As per the educational qualification, the highest mean score is found for professionals (3.5040). With regards to area of residence the highest mean score is 3.4844 for the respondents residing in urban areas the highest mean score 3.4179 is found for the respondents running business for 1-3 years. With regards to nature of business and form of ownership the highest mean score is 3.4500 for manufacturing. With regards to ownership the highest mean score is 3.4519 for partnership business the highest mean score 3.5105 is found for 10-15 employees. With regards to monthly income the highest mean score is 3.3931 of Rs.1000- Rs.10000. as per the motivators in starting the enterprise the highest mean score is found as 3.4897 for husband.

The ANOVA results that there is no significant difference in the level of constrains faced based on the demographic variables such as age, educational qualification, number of years of running business, nature of business, ownership, number of employees, monthly turnover and motivators in starting the enterprise.

**Hence, the null hypothesis is accepted in case of all the demographic variables except the residential area of the respondents.**

**t - Test**

T-Test has been employed to examine for constrains faced by women entrepreneurs' has varied significantly among the respondents classified based on 'demographic variables' with the following null hypothesis:

Ho: There has been no significant difference in the level of constrains faced by the respondents classified based on demographic variables namely, marital status, family type and assistance requirement.

TABLE 8: LEVEL OF CONSTRAINS FACED Vs. DEMOGRAPHIC VARIABLES

Demographic variables		Level of constrains scores			Table Value	T	Sig.
		Mean	SD	No.			
Marital Status	Married	3.3874	.51912	74	1.64	1.379	NS
	Unmarried	3.2464	.58345	46			
Family type	Single (Nuclear)	3.3184	.53397	89	1.64	.507	NS
	Joint family	3.3763	.58842	31			
Assistance requirement	Needed	3.3841	.54077	46	1.64	.800	NS
	Not needed	3.3018	.55151	74			
<b>Total</b>		<b>3.3357</b>	<b>.55287</b>	<b>120</b>			

Source: Primary data

NS – Not Significant S\*\* – Significant at 1% level S\* - Significant at 5% level

**Marital Status**

There is no significant variation in the respondents' level of constrains faced when they have been classified based on marital status, thereby, accepting the null hypothesis.

**Family type**

The t value suggests that there is no significant difference in the respondents' level of constrains faced when they are classified based on their family type. Thus, the null hypothesis has been accepted with respect to the factor 'family type'.

**Assistance required**

The t value suggests that there is no significant difference in the respondents' level of constrains faced when they are classified based on the assistance requirement. Thus, the null hypothesis has been accepted with respect to the factor 'assistance required'

**Hence, the null hypothesis is accepted in case of all the above demographic variables.**

TABLE 9: LEVEL OF PROBLEMS FACED VS DEMOGRAPHIC VARIABLES

Demographic variables		Level of constrains scores			Table Value	T	Sig.
		Mean	SD	No.			
Marital Status	Married	3.3797	.61018	74	1.64	.422	NS
	Unmarried	3.3348	.48818	46			
Family type	Single (Nuclear)	3.3315	.58999	89	1.64	1.020	NS
	Joint family	3.4516	.48296	31			
Assistance requirement	Needed	3.4957	.50770	46	1.64	2.064	S*
	Not needed	3.2797	.58567	74			
Total		3.3788	.54411	120			

Source: Primary data

NS – Not Significant S\*\* – Significant at 1% level S\* - Significant at 5% level

**Marital Status**

There is no significant variation in the respondents' level of problems faced when they have been classified based on marital status, thereby, accepting the null hypothesis.

**Family type**

The t value suggests that there is no significant difference in the respondents' level of problems faced when they are classified based on their family type. Thus, the null hypothesis has been accepted with respect to the factor 'family type'.

**Assistance required**

The t value suggests that there is significant difference in the respondents' level of problems faced when they are classified based on the assistance requirement. Thus, the null hypothesis is rejected.

Hence the null hypothesis is accepted in case of all above demographic variables expect for assistance required.

**FINDINGS, SUGGESTION AND CONCLUSION****FINDINGS**

This chapter gives the summary of findings "A study on women entrepreneurs". Following are the inference derived from the analysis.

**PERCENTAGE ANALYSIS**

The result of the percentage analysis has been presented in the following statements. Necessitate aspect.

- 34.2% of the respondents are between 25-35 years.
- 60.0% of the respondents are graduates.
- 53.3% of the respondents reside in urban areas.
- 61.7% of the respondents are married.
- 74.2% of the respondents are from nuclear family.
- 38.3% of the respondents run business for 3-6 years.
- 40.8% of the respondents are engaged in service oriented business.
- 75.8% of the respondents are sole traders.
- 45% of the entrepreneurs are employed.
- 32.5% of the entrepreneurs make a monthly turnover of Rs. 20,000-30,000.
- 59.2% of the respondents are motivated by their family members to start the business.
- 61.7% of the respondents do not require any assistance.
- 25% of the respondents have started business for their ambition.
- 19.2% of the respondents are influenced by their knowledge in the potential market.
- 41.7% of the respondents have experienced lack of motivations.

**DESCRIPTIVE STATISTICS**

- Most of the respondents have been agreed with all the mentioned level of constrains faced.
- Most of the respondents have agreed the problems on promotional and operational factors.

**ANOVA****Level of constrains faced Vs demographic variables.**

- There is no significant difference in the level of constrains faced by the respondents in different age groups.
- There is no significant difference in the level of constrains faced by the respondents in terms of educational qualification.
- There is no significant difference in the level of constrains faced by the respondents with regard to residential area.
- There is no significant difference in the level of constrains faced by the respondents in terms of number of years of running business.
- There is no significant difference in the level of constrains faced by the respondents with regard to nature of business.
- There is no significant difference in the level of constrains faced by the respondents in different form of ownership.
- There is no significant difference in the level of constrains faced by the respondents based on number of employees.
- There is no significant difference in the level of constrains faced by the respondents in terms of monthly turnover.
- There is no significant difference in the level of constrains faced by the respondents based on motivators in starting enterprise.

**Level of problems faced Vs demographic variables.**

- There is no significant difference between the problems on promotional and operational factors with age groups.
- There is no significant difference between the problems on promotional and operational factors among the respondents in terms of educational qualification.
- There is significant difference between the problems on promotional and operational factors among the respondents with regard to residential area.
- There is no significant difference between the problems on promotional and operational factors among the respondents in terms of number of years of running business.
- There is no significant difference between the problems on promotional and operational factors among the respondents with regard to nature of business.
- There is no significant difference between the problems on promotional and operational factors among the respondents in different form of ownership.
- There is no significant difference between the problems on promotional and operational factors among the respondents based on number of employees.
- There is no significant difference between the problems on promotional and operational factors among the respondents in terms of monthly turnover.
- There is no significant difference between the problems on promotional and operational factors among the respondents based on motivators in starting enterprise.

**t – Test****Level of constrains faced Vs demographic variables.**

- There is no significant association in the level of constrains faced by the respondents in terms of marital status.
- There is no significant association in the level of constrains faced by the respondents based on their family type.

- There is no significant association in the level of constraints faced by the respondents based on the assistance requirement.

**Level of constraints faced Vs demographic variables.**

- There is no significant association between the problems on promotional and operational factors among the respondents in terms of marital status.
- There is no significant association between the problems on promotional and operational factors among the respondents based on their family type.
- There is a significant association between the problems on promotional and operational factors among the respondents based on the assistance requirement.

**SUGGESTIONS**

- Housewives as a potential source of entrepreneurship should be targeted by government and other agencies. Efforts should be made to locate entrepreneurial potentialities among housewives and opportunities should be provided to them.
- Financial institutions and banks should come forward to support and motivate them to start their business.
- Financial help should be provided to women entrepreneurs by government as well as non-government financial agencies as it removes their difficulty in procuring loans.
- Women entrepreneurs should be provided with special training and development programs for developing their innovative instincts.
- Skill based education can be given to young women which helps them to develop their skills.
- Women entrepreneurs should take some time to study the nature of challenges women face in business and possibly proper solutions to them before starting their business.
- Some challenges encountered by women entrepreneurs can easily be avoided if they would not mind to start their business from micro or small level and allow it to grow gradually into maturity stage.

**CONCLUSION**

Women entrepreneurship in India faces many challenges and requires a radical change in attitudes and mindsets of society. Therefore, programs should be designed to address changes in attitude and mindset of the people. It is important to promote entrepreneurship to improve the economic situation of the women. This can be made possible with the help of the education, as education is a powerful tool in bringing out the entrepreneurship qualities in a human being. Moreover, attempts to motivate, inspire and assist women entrepreneurs should be made at all possible levels, proper training should be given to the women by establishing training institutes that can enhance their level of work-knowledge, risk-taking abilities, enhancing their capabilities. After setting up training institutes, there should be continuous monitoring, improvement of training programs so that they can improve upon the quality of the entrepreneurs being produced in the country. Undoubtedly, the women participation rate in the field of entrepreneurship is increasing rapidly. However, efforts need to be taken at larger scale to give the position in the field of entrepreneurship that they deserve. The actions & steps that have been taken by the government sponsored development activities have benefited only strata of society and more needs to be done in this area. Effective steps need to be taken to have entrepreneurial awareness and skill development to women.

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5. Research Methodology – C.R.Kothari

**CASHLESS ECONOMY INITIATIVE IN INDIA: AN APPRAISAL**

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**ABSTRACT**

*Cashless economy is largely dependent on debit and credit cards, digital transactions and other alternative means of transactions. The use of cash is minimal for any kinds of transactions in this economy. The Government of India took various initiatives to make our country cashless so that all kinds of payments could be made by other than use of liquid cash and the government could keep track on these transactions. Our country is the second most populous country in the world and it ranks 79 (out of 179) in corruption and 130 in Ease of Doing Business (out of 189). As per the latest report of Income Tax Authority out of the total population of our country only 2 per cent people are paying income tax. So huge corruptions exist and it could be controlled only by moving towards a cashless society. If all transactions in business are made through bank or other digital means, then the government could easily keep track on the all kinds of transactions. Thus, none could easily cheat and evade tax. In the month of November, 2016 the government of India introduced demonetization scheme. The prime objective of the scheme was to put curb on the fake currency note circulation, control money laundering activity and also to identify the actual amount of currency in circulation. Most of the developed countries have already moved towards a cashless economy. The government of India has intended to move towards a cashless society where each and everyone will be able to actively participate in use of alternative means of payments in place of cash. It is expected that this initiative will facilitate in minimizing corruption in the economy. In the present paper, an attempt has been made to analyze various benefits and shortcomings of cashless economy and also to examine whether the cashless economy initiative taken by the government will make India a corruption free nation in near future.*

**KEYWORDS**

demonetization, cashless, corruption.

**JEL CODE**

G21

**1. INTRODUCTION**

The Government of India launched Digital India Programme with an aim of transforming the country into a digitally empowered society and knowledge economy. Digital India programme will ensure that the government services are available to the citizens electronically. The move towards a cashless economy is a part of Digital India programme. The government wants equal participation of every citizen in each and every government services so that everyone gets benefited by these services. The main reasons behind digitization of each and every sector is to make a corruption free India. In the manual system, there was a chance of biasness but in a digital economy, there is no chance of biasness, because in digitized economy everything is done by computerised system. As computer system works on some predefined programme so make changes in programme not such an easy task without prior approval of concerned authority. Cashless economy is largely dependent on debit card, credit card, internet banking, mobile banking, Unified Payment Interface (UPI), RTGS, NEFT, IMPS and normal fund transfer for any kinds of financial transactions. These are the various means by which people can make payments and make any transaction without use of liquid cash and by utilizing these channels of cashless payments, the government intends to move towards a cashless economy. So more and more financial transactions can be done through various means of payments other than use of liquid cash. If we look towards developed countries then we get an idea about the cashless economy. The most of the developed countries have already taken initiative to move towards a cash less economy and by adopting so they have been benefited a lot. The main objective behind moving to a cashless economy is to make everything more transparent. Transparency is the best way to minimise corruption. Without a proper system of transparency, the persons who engage themselves in illegal tasks cannot be identified. India is the second most populous country in the world after the china. But as per the recent report of the Income Tax Authority only 2 per cent people of total population are paying income tax. This tax payer consists most of the salaried employees. It shows that India is home of tax Evaders, which includes most of the small, and medium business houses. Due to lack of proper system to keep track on the business transactions the government fails to control them. At present most of the business transactions are done in cash. So it is very difficult for the government to keep track on such transactions. That is the main reason behind moving towards a digital economy and cashless economy so that the government could get actual tax revenue from the each and every person of our country and that tax revenue collection could be utilised for the overall development of our nation. Thus, we could compete with the developed nations in Trade, Commerce, Export, Education, Infrastructure and in other fields of business. In order to minimise the corruption in the indirect taxation system very soon, the government is going to make a major reform in Indirect Taxation by implementing a single set of tax in place of all the existing indirect taxes, which is popularly known as Goods and Services Tax (GST). In case of GST, filling of tax return will be done fully on online platform. So there will be no chance of tax evasion and as a result, it is expected that the tax revenue will be increased by 11 per cent of the GDP.



TABLE 1: COUNTRY WISE PERCENTAGE OF CASHLESS TRANSACTION AND TAX REVENUE COLLECTION AS A PERCENTAGE OF GDP

Country	Percentage Share of cashless transaction	Tax Revenue Collection as a percentage of GDP
Netherlands	60	39.80
France	59	47.90
Sweden	59	45.80
Canada	57	32.20
Belgium	56	47.90
UK	52	34.40
USA	45	26.00
Australia	35	25.80
Germany	33	40.60
Korea	29	26.80
Spain	16	37.30
Brazil	15	34.40
Japan	14	28.30
China	10	28.10
UAE	8	01.40
Taiwan	6	13.00
India	2	17.70
Saudi Arabia	1	05.30

Source: Wikipedia and Master Card Advisors Analysis

Table 1 shows that the higher the percentage share of cashless transaction, the higher the tax revenue collection as a percentage of GDP. This means that the developed countries where more the percentage of cashless transaction as a percentage of total transactions more the government control on the business, trade and commerce so lesser the chances of tax evasion, more the tax revenue collection of the government, more the investment in infrastructure development and overall development of the country and for that they are known as developed countries but in India more the cash transactions so lesser the track of government on the transactions of Business, Trade and commerce so more the opportunities of tax evasion so in order to increase the control the tax evasion government have to develop a strong Information Technology infrastructure to develop a digital platform for carrying all kinds of transactions by a digital means instead of manual to keep strong track on business transaction and that is only possible through moving towards a cashless economy. The movement towards a cashless society is a small step towards development. The Government wants to move towards a cashless society to make a secured, Hassle free, Tech savvy and corruption free India. The corruption can be minimized only by adopting the digital platform for every service whether in case of service provided by government or normal business.

## 2. AN OVERVIEW OF CASHLESS SYSTEM

Cashless economy does not refer to an outright absence of cash transaction in the economic setting but which the amount of cash-based transaction are kept to the barest minimum. It is an economic system in which transactions are not done predominantly in exchange of cash. It also not an economic system where goods and services are exchanged for goods and services (barter system). It is an economy in which goods and services are bought and paid for through electronic media or other than cash. Cashless economy does not mean total elimination of cash as money will continue to be means of exchange of goods and services in foreseeable future. It is a financial environment that minimise the use of physical cash by providing various means of alternative payment system instead of cash. The cashless economy policy of India is designed to provide a mobile payment services by breaking the tradition barriers hindering financial inclusion of millions of Indians and bring low cost, secure and convenient financial services to urban, semi urban and rural areas across the country. This has however become a problem to the layman, poor, uneducated and traders. Some e- transaction websites defined cashless society as one where no one uses cash, where all purchases are being made through debit card, credit card, charge card, mobile banking, net banking, fund transfer or by cheque and by direct transfer from one account to another. In other word we can say that this requires a widespread use of computer and information technology in the financial system. As per the census 2011 only 6.3 percent household have computer and only 3.1 percent household having computer with internet connection so in order to make our country cashless and tech savvy our government have to develop a strong IT infrastructure without that dream of cashless India is not possible. The some of the western countries more than 95 percent transactions are done without exchange of physical cash and this has greatly reduced the cost, corruption and money laundering. In India today, it is the opposite- as majority of transaction are done by exchange of cash. In India more than 98 percent transactions are done by exchange of liquid cash so here huge corruption exists. In India in order to move towards a cashless society and to discourage the use of cash a limit is set on monthly deposit of cash and withdrawal. An account holder can deposit and withdrawal only three times in a month after that he will have to pay a charge of Rs- 50 plus service tax per transaction in case of govt. bank but in case of private bank it is 150 plus service tax. This system has been mainly developed to motivate the people for the use of electronic means of payments for conducting any kinds of transaction. In recent days government also provide special rewards by way of cash back for online transactions so that more and more people could become habituated of this kinds of services.

What is anticipated by implementation of this policy is that instead of large withdrawals for effecting payments for goods and services, such money will be kept in banking system so that payments are made through Debit card, Credit card, Mobile banking, Net banking, UPI, Point of Sale (POS) Terminals, Phone banking, various kinds of mobile wallets, E-wallets that provide means of payment along with the special discount on spending and that cash back can be further used on next spending and payments through this wallets more easier than other means of payments. There is lots of payments system available at present of making any kinds of payments against purchase and these payments systems are very easy, less time consuming, anywhere accessible, much secured and very fast but one thing that require is a little bit habit and regular use and basic knowledge of computer operation.

## 3. OBJECTIVES OF THE STUDY

1. To identify the various Cashless means available in India.
2. To discuss various advantages and disadvantages of Cashless transactions.
3. To show how various countries of the world benefited from cashless economy

## 4. METHODOLOGY

This is a descriptive study. The data for the present study were collected from secondary source like, Websites, Journal, Newspaper, articles and several reports.

## 5. CASHLESS MEANS OF PAYMENTS

1. **Cheques:** It is the oldest means of exchange other than liquid cash. One can make payments against his spending, purchase of goods and services by account payee cheque or bearer cheque. In case of bearer cheque, the seller can get payments over the counter but account payee cheques get credited in account of the seller or receiver.
2. **ATM:** ATM cards are also called as plastic money. These cards are used for making various kinds of payments like utility bill payments, fund transfer, mobile recharge, DTH recharge, online shopping, electricity bill payments, telephone bill payments, school fees, college fees etc. This is the safe, secured, hassle free means of cashless payment, There is no need to carry liquid cash, and there is no chance of theft, loss, pick pocketing.

3. **Mobile Banking:** It is latest and most important means of cashless payment because at present more than 50 percent people of our country are using mobile phone. That is why Indian government put more emphasis on mobile-based payment system. The user can make various kinds of payments against their spending and transfer funds to other account, other bank, to their creditors also.
4. **Net Banking:** It is used for accessing account from home or office for availing banking services like balance enquiry, fund transfer, opening fixed deposit, recurring deposit account, PPF account, purchase of demand draft and for various kinds of requests like cheque book request, ATM card issue and hotlist, interest certificate, TDS certificate and for closure of various Term deposit accounts.
5. **RTGS:** Real Time Gross Settlement is the most important means of instant fund transfer. The minimum limit is 2 lakh and maximum unlimited. One can avail this service of inter - bank fund transfer. It is fastest means of fund transfer where fund is transfer instantly.
6. **NEFT:** National Electronic Fund Transfer mechanism is a means of inter-bank fund transfer. There are no minimum and maximum limits in this system. Here transfer of funds is settled on gross basis so it takes more time than RTGS.
7. **IMPS:** Inter Bank Mobile Payment system is another important means of cashless payment. It is used for inter-bank fund transfer and is fastest means of transfer just like RTGS. The amount transferred gets immediately credited to the receivers account.
8. **UPI:** Unified Payment Interface is the latest mobile app which is used for accessing account of various bank accounts with a single application. It is used for fund transfer by using VPA (Virtual Payment Address) without knowing account number and IFSC code of the receiver. It can also be used for making payments on Point of Sale terminals using virtual address. The most important advantage of this application is that one can transfer fund without knowing account number and other sensitive information of the beneficiary. In this application, one can transfer fund by using mobile number and Aadhaar card number and the amount get credited to the Aadhaar linked account number. This application is very safe, secure, hassle free and convenient.
9. **E-wallets:** This is another cashless payment option. It can be used in purchasing products from grocery to airline tickets. In order to use E-wallets users need to have smart phone with active internet connection and wallets linked with debit card, credit card, or net banking or one can add money to their wallets from bank accounts and from these wallets the users can make payments and also can transfer fund to other wallets in a very simple way.
10. **Aadhaar Enabled Payments System:** It is one of the best cashless payment methods. AEPS is like micro ATM. It uses smart phone and finger – print scanner for transaction. In order to use this facility, it is mandatory to link your Aadhaar number to your bank account. One can use AEPS in order to perform Aadhaar to Aadhaar fund transfer, cash withdrawal, cash deposit without using voucher. This system is more useful for the illiterate people who do not know how to read and write and cannot fill up deposit and withdrawal vouchers. By using AEPS they can deposit and withdrawal and also make payments by putting thumb impression attached with Aadhaar card. AEPS is more secured than other means of payment as it uses thumb impression for authentication. So there is no chance of fraud.
11. **USSD:** Unstructured Supplementary Service Data is cashless payment option for those who don't have smart phone and internet connection. They can access their bank accounts through normal mobile phone by dialling \*99#. Then USSD system will provide various options. By following this user can make various transactions like balance enquiry, fund transfer. Only 17 per cent people are using smart phones and rest of the people are using normal phone. So this system will help normal phone users as they can make payments using normal phones. Thus through this system they can participate in cashless payment system and can make hassle free payments.
12. **Credit Card:** It is also an important means of cashless payments. In credit card bank provides short term interest free credit for 50 days. If the card holders pay their due within due date then no interest is charged but if they fail to pay the due within due date then the bank generally charges 3 per cent interest per month. Credit card is used for various kinds of bill payments and also for cash withdrawal up to the specified limit provided with the card on payment of some charges on withdrawal amount.
13. **BHIM App:** This is the latest UPI based application. It is used for making cashless payments. This is an android based application. This app can be used through smart phone. As per the census 2011 in our country only 3 per cent people have access to computer and internet but more than 17 per cent people have access to the smart phones. So our government put more emphasis on mobile based payment system. The main reason behind development of mobile based application is to wide access.

## 6. ADVANTAGES OF CASHLESS ECONOMY

The experts and the government officials have continued to the system in very colourful tone. For instance, The World Bank says that operating a cashless society in India is a strategy for fast-tracking growth in the nation's financial sector. If the World Bank says so, one expects that to be true. The various experts have pointed out specific areas in which cashless economy will enhance the quality of life. The benefits that are expected to derive from the cashless economy are mentioned below:

1. Cashless economy leads to digitization which is tech savvy and time saving
2. Online transactions are safe as they are done through a very secured network so minimum chances of phishing or hacking.
3. Cards and electronic gadgets are very easy to carry and safe to handle. We cannot carry huge amount in our pocket so cashless transaction is very safe.
4. A faster transaction reduces queues at Point of sale terminals, Banks, Ticket counters, Shopping malls and at various commercial places.
5. Cash collection process becomes simple as time spending in collecting, counting and sorting is eliminated.
6. The concept of Black money can be wiped off with the introduction of cashless economy.
7. Improvement of hygiene can be made possible by eliminating the bacterial spread through handling notes and coin.
8. This economy can also be useful for monitoring the transaction and enhancing the tax revenue.
9. With the introduction of cashless economy the circulation of cash more or less decreases.
10. The cost of printing currency notes and minting coins can also be saved.
11. Fake currency note issue can also be eliminated from the society.
12. The role of indigenous banker and various unorganised intermediaries will be eliminated

## 7. DISADVANTAGES OF CASHLESS ECONOMY

1. Sometimes this online system has some kinds of security related issues. So some people are reluctant to avail this kind of online cashless payment services.
2. Lack of awareness about the advent of cashless economy will make the whole process a lengthy one.
3. It may create a problem for the people who do not have knowledge about the technology
4. It will create more pressure on Banking system as the volume of transaction will increase, the whole working process will change and that will create a problem for the banking staff, as they have to adapt themselves in a new working environment.
5. Our country does not have adequate internet connection in all places. Without a strong network of internet connectivity, the benefits of cashless economy will not reach the majority of the people.

## 8. CONCLUSION

Though there are some drawbacks of cashless economy, the massive benefits which are expected to derive from it cannot be undermined. So it can be said that moving towards a cashless economy is very important for minimizing corruption and overall development of the country.

We have already observed in Figure 1 that the countries having more cashless transactions can earn much tax revenue. This can be made possible by the proper tracking of all transactions of the business. The accuracy level in the online system is more than that of manual. So there is less chance of error and through this system the government can obtain proper information about the business transactions and on the basis of this information the government can ascertain the actual amount of tax receivable from each and every business house. Thus, under cashless system tax evasion will become a very tough task.

It also helps in curbing the fake currency circulation in our economy as people pay through the cashless means. So there will be no need of currency note. As a result, there will be no chance of entering forged currency into our economy. In developed countries like USA, UK not as single case of fake currency is reported just because of the cashless system. From the morning to night they try to pay against their spending through cashless means except in certain cases. Fake currency circulation is very dangerous for any economic system because it destroys the whole economy by making the economic policy ineffective. If in an economy fake currency circulates then the monetary authority will not get information about the actual amount of money supply with the people of the society and the measures adopted by the authority will fail to achieve its goals.

The adoption of cashless system can enhance the growth and financial stability of the country as everything will be under control. This system will help in fighting against corruption and money laundering. One of the significant contributions of the cashless system is that it expects to reduce the risk associated with carrying cash. Since most of the transactions in cashless environment settle electronically, people will have less need to move around with cash and therefore loss of cash, theft and armed robbery will drastically reduce.

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## MICRO INSURANCE SCHEMES IN RURAL INDIA - A STUDY

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## ABSTRACT

*Micro insurance is of ultimate significance for protecting poor lives against accidents, threats and other types of risks. Micro insurance has been dominated by non-government organizations (NGOs) and by Insurance development regulatory authority (IRDA) in India; however, with the liberalization of Indian economy, private sector entre and Microinsurance has got momentum. The public sector Insurance Companies has emphasized on exploiting the potential of rural India as it provides enormous opportunity in the globalization era. This paper highlights the significance of micro insurance for the upliftment of rural poor's and mitigation rural poverty as well as focuses on the rural economic development in rural India.*

## KEYWORDS

IRDA, NGOs, microinsurance, poverty mitigation, rural economic development.

## JEL CODE

G22

## INTRODUCTION

While India's economy has been persistently growing, economic development has neither led to drastically lower poverty rates, nor been able to generate an expansion of the formal economy. According to the Unorganized Sector Workers' Social Security Bill, more than 94% of the working population still works in the informal sector. Poverty, in particular, persists in rural areas, especially amongst certain social and ethnic groups (the scheduled castes and scheduled tribes respectively). Women and children are particularly vulnerable, as they are less educated, are often paid extremely low wages, and work in very hazardous conditions. What happens when a poor family's breadwinner dies, when a child in a disadvantaged household is hospitalized, or the home of a vulnerable family is ruined by fire or natural disaster? Every serious illness, every accident and every natural disaster threatens the very existence of poor people and usually leads to deeper poverty. That's where "microinsurance" comes in. Microinsurance is specifically designed for the protection of low-income people, with affordable insurance products to help them cope with and recover from common risks. It is a market-based mechanism that promises to support sustainable livelihoods by empowering people to adapt and withstand stress. Two-thirds of human beings miseries in the most extreme poverty are women. Often living within \$1 per day, they are the most vulnerable. But will microinsurance actually help those living in poverty by contributing to sustainable livelihoods? We believe it can, and we decided to test the hypothesis in the real world. UNDP approached Allianz AG about working together on a market potential study to analyze the demand, acceptability and affordability of microinsurance products. They directly saw the value of working in this under-explored area. The studies clearly indicate that access to microinsurance by the poor and disadvantaged population can contribute significantly to the achievement of the Millennium Development Goals, particularly the goals of eradicating extreme poverty and hunger (MDG 1) and rural economic development.

## WHAT IS MICROINSURANCE?

**Definition:** Microinsurance is the protection of low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved. Low-income people can use microinsurance, where it is available, as one of several tools (specifically designed for this market in terms of premiums, terms, coverage, and delivery) to manage their risks.

"Micro-insurance is the protection for the low-income population against specific dangers in exchange for regular payments of proportional premiums to the probability and costs of the involved risks".

*Churchill*

In India, it is often assumed that a microinsurance policy is simply a low-premium insurance policy. This is not so. There are a number of other important factors. Low-income clients often:

1. Live in remote rural areas, requiring a different distribution channel to urban insurance products;
2. Are often illiterate and unknown with the concept of insurance, requiring new approaches to both marketing and contracting;
3. Tend to face more risks than wealthier people do because they cannot afford the same defenses.
4. Have small experience of dealing with formal financial institutions, with the exemption of the National Bank of Agriculture and Rural Development (NABARD) Linkage Banking Programme;
5. Designing microinsurance policies necessitate intensive work and are not simply a question of reducing the price of existing insurance policies.

## REVIEW OF EARLIER STUDIES

The present study embodies a brief review of the research done in the area of micro insurance. The purpose of reviewing the earlier studies is to economize the historical and present perspective of the present work and the related studies which have been taken cognizance of one or more variables includes in the study.

**Syed Abdul Hamid & Roberts & Paul Mosley (2010)** in the study shows that there is a positive impact of micro health insurance in the reduction of poverty among rural households of Bangladesh. Micro health insurance has a significant beneficial effect on food sufficiency of poor's and has a dynamic improvement in the health status of poor rural households.

**Gunita Arun Chandhok (2009)** the result of study indicates that there is a huge untapped market for micro health insurance and majority of population are aware and understand the importance of micro health insurance. Thus, micro insurance will go a long way in eradicating poverty. If the various micro insurance models are implemented effectively by Insurer, MFI's, SHG's, NGO's, Health institutions, Donors and Co-operatives the BPL population will lead a peaceful and secure life.

**Lena Giesbert (2008)** the results show that the potential demand for insurance in the survey area seems to be very high within 95% of the non-insured households showing a general interest to buy insurance. Most of the potential clients are interested in health, death, or old age insurance. So survey study says that micro insurance providers reach a high number of clients in the survey area but mostly to the richer people. The group of poor segments in society seems to be rather limited by micro insurance.

**VenkataRamanaRao (2008)** the study reveals that micro insurance is not an opportunity but a responsibility and to serve this responsibility good awareness campaign is needed. Micro insurance is offering real solutions to the billions of rural poor that raises the awareness of micro insurance as a key issue in coming future.

### NEED FOR THE STUDY

2.4 billion People around the world live on \$2 a day or less. They face daily hardships like poor nutrition, short life expectancy, poor education, and substandard housing. In the rural there is a death in the family, the cost of a funeral can amount to several months' wages. In rural areas, drought can cause crop failure that brings starvation and even death. It is estimated that only eighty million of the poor are now covered by some form of micro insurance. Most remain without access to this critical financial service. In India and China, where organizations are estimated to serve nearly 30 million micro insurance clients each, the percentage of poor lives insured covers below 3%. It comes as a surprise to many people, but microinsurance is an important tool in the alleviation of poverty. With microinsurance, the rural poor can mitigate those risks that would otherwise cause them to slide back into the poverty they seek to escape. Thus this paper tries to study the importance of Microinsurance for the lowest income group with the insurance products they need and demand.

### OBJECTIVES OF THE STUDY

In the study, following objectives have been tried to achieve:

1. To study the significance of Micro Insurance for the upliftment of rural poor's and mitigation of poverty in India.
2. To study the rural socio-economic development through micro insurance in rural India.

### THE MICRO INSURANCE STRATEGY OF THE GOVERNMENT OF INDIA

The government (including the insurance regulator Insurance Regulatory and Development Authority, or IRDA) plays a proactive role in providing insurance to the low-income market, the poor, and below the poverty line households through the following measures: - Introducing IRDA-enforced obligations for the private insurance industry to meet obligations toward "rural areas" and the "social sector" (implemented in 2002). Private insurers are required to sell a minimum level of insurance portfolio to respond to the development agenda by encouraging the design of products for low-income clients and thereby provide cover to neglected rural areas. Defining and regulating micro insurance through the IRDA Micro insurance Regulations, 2005. - Legalizing new micro insurance delivery channels ("micro insurance agents"), such as self-help groups (SHGs), NGOs, and MFIs through the IRDA Microinsurance Regulations, 2005.

### EVOLUTION AND STATUS OF MICROINSURANCE REGULATION

As in much of the developing world, India has a large number of informal quasi-insurance schemes: for example, households that pool rice. In addition to this, there are small schemes run by cooperatives, churches and NGOs that may pool their members' incomes to make an insurance fund against an exact peril: for example, funeral costs. In a few countries, there is specific legislation to regulate these schemes, e.g., the South African Friendly Societies Act. In India, no such law exists, and any individual or institution conducting insurance has to comply with the stipulations of, among other regulations, the 1938 Indian Insurance Act as amended. Compliance with this Act requires, among other conditions, over \$22 million of capital. All insurance schemes that do not comply with the Act operate outside it and in a legal vacuum. This includes all community-based schemes, and in-house insurance schemes run by MFIs, NGOs, and trade unions, in-house hospital schemes, etc. At present, the IRDA has not taken action against these schemes as the Authority does not consider them to be 'insurance' according to its definition—although the IRDA realizes that this legal vacuum could cause some problems. Furthermore, regulated insurers have expressed to the IRDA their dissatisfaction at needing to compete against non-regulated insurers that do not bear any regulatory expenses. The situation may change if regulated insurers place sufficient pressure on the regulator to act. Two possible scenarios may occur: either the development of specific legislation to cater for microinsurers or active closure of non-regulated insurers. The authors believe the best approach is the former.

As a number of unregulated microinsurance schemes are innovative and should be further studied, it could limit practical knowledge concerning microinsurance if they were to be closed down. The interests of the customers of these schemes must be protected. The development of exact legislation to support and supervise currently unregulated microinsurers is to be preferred. If the IRDA decides to make exact regulation to support currently unregulated micro - insurance schemes, e.g., in-house schemes run by MFIs, donors could support its development. Several unregulated insurance schemes are run by well -intentioned staff and confer positive social benefits in the areas in which they act. Indeed much of the innovation in microinsurance has emerged from unregulated microinsurers. Unregulated microinsurers may hold important funds on behalf of low-income clients. The risk of working with these unregulated organizations is that there is no legal framework that ensures that they meet minimum prudential standards and other professional insurance qualifications. In addition, they do not have a statutory ombudsman or other feasible means of enforcing consumer rights.

It would be useful to help found a consumer protection mechanism for clients of unregulated micro insurers. Should requests of support come from NGOs running in-house insurance schemes, donors should consider that these schemes are unregulated and carefully weigh up the costs and benefits of supporting such schemes. Two central regulations have shaped microinsurance in India. The first is a set of regulations published in 2002 entitled the 'Obligations of Insurers to Rural Social Sectors'. This is essentially a quota system. It compels insurers to sell a percentage of their insurance policies to de facto low-income clients. It was imposed directly on those new insurers that entered Indian insurance after the market was liberalized. The old public insurance monopolies had no specified quotas, but had to ensure that the amount of business done with the specified sectors "not be less than what had been recorded by them for the accounting year ended 31st March, 2002." With the exception of the social-sector target, the regulations do not specify the income levels of clients directly.

The regulation has also been the motor for significant novelty in the sector. To date, much of the innovation in microinsurance worldwide has derived either from donors, academics or MFIs working on the issue. In India, in their drive to meet their microinsurance sales targets, regulated insurers are developing innovative new products and delivery channels. They bring their considerable resources to this task. The impact of the quota is of course not all positive. There have been unverified reports that some insurers are dumping poorly serviced microinsurance products on clients solely to meet their targets. As soon as the targets were met, they immediately stopped selling microinsurance. This practice is difficult to regulate, as it is harder to police the quality of insurance sold and serviced to the poor than its quantity. It would certainly be socially unfortunate if the regulation resulted in a mass of poorly serviced products sold at a loss, to enable insurers to concentrate on their more profitable products. This would not be a meaningful instance of sustainable financial deepening, but more akin to charity, forced on insurers to allow them to do business in India. Without further research, it is not possible to reach a conclusion on the overall costs and benefits of the microinsurance quota system. It would be useful to conduct research on the quota system to see whether the benefits outweigh the costs and whether such a system would be useful policy in other countries. Because of the quota system, the largest and best-known intermediaries (NGOs, MFIs, etc.) are already taken and have existing relationships with commercial insurers that they are often keen to keep. The implication of this is that insurers will need to think more creatively about their products and relationships with the intermediaries if they hope to convince them to switch companies. Also, it implies that insurers should start exploring distribution models other than partnership. In this context, the decentralized local bodies, village and district councils (Panchayats Raj Institutions), and elected sector committees of village representatives could possibly play a larger role if a strong civil society existed. Furthermore, the intention of the Ministry of Labour in the state of Karnataka, to set up a board at the state level to jointly implement microinsurance, should be explored. The next central regulatory document is not yet an official regulation but a concept paper published by the IRDA in August 2004 entitled "Concept Paper on Need for Regulations on Micro-Insurance in India." While not a regulation, it nonetheless reflects the intentions of the regulator.

There is much that is commendable in the concept paper, but there are two significant concerns. They revolve around the implicit restriction of microinsurance to the partner's hip model, and the lack of product flexibility. Essentially the concept paper creates a framework for NGOs and MFIs to sell microinsurance. While there is nothing inherently limiting in this arrangement some of the clauses in the concept paper severely curtail the capacity of MFIs and NGOs to make products available that best meet their own needs and those of their clients. The definition of a microinsurance product proposes two seemingly arbitrary products: a life microinsurance product and a general microinsurance product with a specified minimum amount of cover, term of cover, age of entry and age of exit. Unless the product sold by the insurer meets these criteria, the product will not be classified as a 'microinsurance product' and therefore will not be able to qualify for some of the exemptions. Some of these conditions are out of sync with existing microinsurance products in India. For example, the concept paper sets a minimum amount of cover of Rs. 10,000. In client surveys undertaken by partner organizations of Friends of Women's World Banking, many NGOs found that their clients were not able to pay for such an amount of cover. They preferred less cover for a lower price. The 'Minimum Amount of Cover' requirement would exclude a large segment of the poor from the insurance market. In recent informal discussions with the IRDA, it has indicated that in the final regulations, a microinsurance product will be defined solely by the maximum amount of cover. An issue that remains is how a microinsurance product will be registered with the IRDA.

At present, an insurer wishing to introduce a new product on the market in India wants to go through a 'File and Use Procedure', separated into life and general products. Insurers have said that obtaining the relevant information and completing the essential forms can take several weeks. While this may be justified for complex insurance products with significant sums assured, with microinsurance and the low sums involved, such a long and complicated procedure does not seem necessary. At the present time in India many MFIs have met the needs of their clients by partnering with a variety of insurers. For example, Grama Vidiyal, an MFI in Tamil Nadu, provides life insurance through Bajaj Allianz AG and AMP Sanmar. The concept paper does not permit this. In Section 7a, it states that the microinsurance agent "shall work either for one life insurer or for one general insurer or for one life insurer and one general insurer." Section 7e sets caps on how much commission can be charged. These caps may affect the products that MFIs and NGOs are prepared to offer and will create barriers in selling to the poorest segments of the population. The cap set on commissions for servicing life policies is set at 20 percent while the cap set on servicing health insurance, which is much more luxurious to service, is set at 7.5 percent.

### RURAL UPLIFTMENT BY MICRO INSURANCE

70% of Indian population resides in the rural area but they have small insurance coverage. Therefore, it opens a huge chance for insurance marketers of micro-insurance products.

Micro-insurance is a form of finance considered to suit the requirements of rural people who do not have access to conventional forms of insurance. It consists of small premium policies on life, weather, accident, household, fire, cattle and motor insurance. The insurance wants of rural India are different from their urban counterpart and cannot be met by official insurance products. All insurance products in India attract a 10.36% service tax, but to increase incursion in rural sector and to make insurance within reach of the villagers, it is significant that this tax is done away with. "Up to 90 percent of the Indian population, or 950 million people, are excluded from the insurance market and represent a powerful missing market. The rural poor not only need insurance to be reasonable, but also to defend against high-frequency risks such as serious ill health, accidents, harvest failure or monsoon failure and fire. But insurance companies generally offer standardized products for a clientele that is relatively better off, urban and male, with some products for women. Many potential insurance risks are exactly to women, such as coverage for delivery expenses, female infertility treatment and injuries from internal violence. Other challenges for insurers are the heavy costs of covering the requirements of the rural poor and that micro insurance is difficult to allocate. Without suitable insurance services, the huge majority of the poor "do without," turn to patrons, the extended family or village moneylenders, or temporarily migrate for work. "Development of the micro insurance sector wants a longer-term perception that combines responsiveness to client priorities with market enlargement and financial feasibility," The use of ICTs (information and communications technology) in this process could also help to cut down on costs to rural micro insurance clients. Present coverage tends to be far more general for life insurance rather than non-life insurance for livestock, health and crops, confirming that most non-life products need to be "sold." The 2005 IRDA regulations legally acknowledged non-Government organizations, self-help groups and microfinance institutions as "micro insurance agents," considerably increasing the pool of permissible agents. The regulations also allow companies to offer both live and livelihood coverage, fix coverage limits and decrease procedural bottlenecks. The factors contributing to rising opportunities for micro insurance in India include healthy economic growth, which is rising income among rural households; a "silent revolution" of quickly expanding self-help groups comprised mostly of poor women, which has led to more entrepreneurial activity in rural areas; and increased media exposure, which can enhance marketing practices. Conservative estimates place the potential market size for micro insurance in India, both life and non-life, at INR62, 300 million to 84,300 million, or US\$1.4 billion to \$1.9 billion, the study said.

### POVERTY ALLEVIATION BY MICRO INSURANCE

Government hard work through the provisions of micro-finance opportunities to rural population is a step in the right pathway in addressing poverty between its growing populations though not enough, hence, adequate insurance is essential to defend these credit lines obtainable by micro-finance institutions and banks otherwise beneficiaries of such amenities may probably go back to poverty. Rural population is exposed to such risks as health, fire, burglary, death and family responsibilities which are able of removing assets acquired over time. Every society has dangers that should be avoided and low income people are forever weak to them. Low income people are more uncovered to such risks than the rest of the population and most times cannot deal well with the calamities. These classifications of citizens therefore need insurance more than anyone else because they lack fallback positions whenever there is a loss. Rural people take loans from micro-finance institutions and whenever there is sickness or accident and they are hospitalized the next thing will be to use such loans collected to pay for hospital bills and return to poverty once again. Poverty and vulnerability reinforce one another forming an ever-growing downward spiral, not only the exposure to risks results in considerable financial losses but vulnerable families suffer the continued uncertainties about when and how loss may occur. Due to this long-lasting concern, poor people are less likely to take advantage of income generation opportunities, which may mitigate poverty. The majority try to manage their risks and deal with the consequences. Saving money, working extra time on other activities and asking for loans from friends or relations constitute some of the strategies used to avoid financial loss, which is unproductive and exacerbates poverty. Such informal safety procedures do not resist unexpected serial cases before they are capable to rise again from an adverse situation, a new unforeseen event may occur with more power throwing them back to stage one again. Micro-insurance therefore provides cushion against such vulnerability by offering micro-health, life, and property insurances. It is a generally accepted significant tactic therefore to recover sustainable economic development and alleviate poverty by making financial systems more comprehensive by improving access to savings, credit and insurance.

It is main to observe that some insurers like AIG, Allianz, Lombard And standard life have all entered in Indian insurance industry venture with promising results. Yet, some commercial insures and Policy makers still tend to believe that providing insurance cover to the poor is the responsibilities of the state and in practical terms it is risk to insure poor people on a cost covering basis. They suspect that poor households either cannot pay for their insurances or the informality of their living condition makes them unattractive as clients because they do not have formal employment, have ID cards and are uneducated. It should however be listed that several state run schemes of social security in developing countries have failed as they are poorly run, for those targeted do not advantage while those who can afford them are the ones who access these benefits. Also, public social safety schemes where available are delivered through formal sector employer which does not reach the unorganized workers both employed and self-employed in the informal economy. On the other hand however, insurers are commencement to notice the huge markets of low-income households but many problems want to be overcome if micro-insurance is to be offered skillfully and efficiently in terms of distribution system, products development and capacities It should however be listed that many state run schemes of social safeguard in developing countries have failed as they are poorly run, for those targeted do not benefit while those who can afford them are the ones who access these benefits. Also, public social security schemes where available are delivered through formal sector employer which does not reach the unorganized workers both employed and self-employed in the informal economy. On the other hand, insurers are beginning to notice the huge markets of low-income households but a lot of problems need to be overcome if micro-insurance is to be offered efficiently and effectively in terms of distribution system, products development and capacities.

**SUGGESTIONS**

1. IRDA should seem into the theme that all the insurers develop their own micro insurance products and fulfill the rural obligations. This will promote all the existing and upcoming insurers to develop and design more modified micro insurance products for the market, which will ultimately improve rural poor's circumstances and increases the overall insurance incursion in India.
2. It is highly suggested to induct more and more trained rural life insurance agents, especially micro insurance agents, for the micro insurance products only. For this reason, IRDA should supervise the quality of trainings imparted to the life agents/advisors. More quality training institutes are need for this purpose.
3. The development of the distribution channel into the rural areas is very significant for the overall development of insurance in India. Therefore, a proper distribution channel is required to develop.

**CONCLUSION**

Micro insurance has the effective to be a game changer, as it can help address several of the across the world. Microinsurance can result in a "win-win" situation, joining the double bottom line of commercial profit with social benefits of fighting poverty through methodical risk management among the rural poor. To unleash this potential, insurance companies will require displaying long-term requirement to the sector, design products that are suitable for the rural population and employ proper distribution mechanisms. Insurers will have to pay special attention to the uniqueness of the rural labour force, like the prevalence of unbalanced income streams and liking for simple products, before they can successfully penetrate this sector. Insurance in General and Life Insurance in particular is truly an industry for social well-being. But still the full prospective of the tough rural base has perhaps not been fully realized or exploited. Keeping in sight, the well-established role played by the individual agency force for selling insurance products in the rural areas, it is necessary to strengthen this channel with a set of new, up-to-date inputs is fitting the requirements. This would accomplish the aims of both the insurer as well as the nation – of classifying as well as strengthening these new untapped markets while also providing the much needed employment opportunities in rural areas. However, it is very essential that the awareness level and the ability of agents are improved. One when the agents will be able to explain the policies to the potential rural customers, micro-insurance will flourish. Sales personnel need new skills and attitudes to explain the concept and benefits of insurance to the rural mass.

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**TRENDS IN PRODUCTION, SALES AND COST STRUCTURE OF SELECT OIL AND GAS INDUSTRIES IN INDIA**

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**ABSTRACT**

*In this research article, the trends in production, sales, cost of sales and other costs have been analysed in detail. Trend analysis is effective only when relevant and related items are studied together. Thus, the results, which are shown, have to be viewed in conjunction with the resources employed. For the purpose of analysis, all components have been pooled. Value is calculated in select oil companies to analyze the production, sales and cost position of industry under study. 2006-07 has been chosen as the base year equal to 100. Index numbers have been calculated for the remaining years based on the base year.*

**KEYWORDS**

oil and gas industries, oil and gas production.

**JEL CODE**

G30

**INTRODUCTION**

Financial analysis is a process of getting an insight into the operating activities of a business enterprise. It is a process of selection, relation and evaluation. The first step is to select from the total information available about a business the data relevant to the decision under consideration. The second is to arrange the relevant data in a way that will bring out significant relationships. The final step is to study these relationships and evaluate or interpret the results. The important areas of performance evaluation for the present study are Production Trends, Sales Trends, Cost Trends.

**Production Trend** - Production is one of the most important areas of performance. Production performance of a company can also be measured by analyzing capacity utilization. The production of a concern or sector can be compared for different years with that of the companies in the same industry and may give an idea as to how the company has performed in the particular year under consideration.

**Sales Trend** - The figure of sales is the index of progress made by the company. It can also be used as an indicator of managerial efficiency. Marketing of the product is also one of the most important areas of operations. In the process of performance evaluation, sale indices are computed and compared with those of other similar companies for arriving at an objective conclusion.

**Cost Trend** - Cost is defined as 'the amount of expenditure incurred on or attributable to a specified article, product or activity'. Thus, cost has been defined as expenditure incurred on a thing. A study of cost trends helps in measuring efficiency or inefficiency with which each task has been carried out. It also helps in having control over expenditure and in fixing prices on the basis of the study of the cost trend which plays an important role in forecasting, planning, and budgeting and in breakeven analysis; wasteful expenditure, if any, can be avoided.

**OBJECTIVES OF THE STUDY**

The study is carried out with the following specific objectives:

1. To analyse the trends of production, sales and cost of the selected oil and gas industries in India.
2. To present summary of the study and to make suitable suggestion for development in the competitive business world.

**RESEARCH METHODOLOGY****PERIOD OF STUDY**

The period 2006-07 to 2015-16 is selected for this study of oil and gas industry in India. This 10 years period is chosen in order to have a fairly long, cyclically well balanced period, for which reasonably homogenous, reliable and upto-date financial data would be available. Further, the span chosen for the study is the period of the beginning of liberalization measures introduced by the Government of India. Hence, the period 2006-07 to 2015-16 is an era of growth of Indian oil and gas industries has got genuine economic significance of its own.

**SELECTION OF SAMPLE**

Keeping in view the scope of the study, it is decided to include all the companies under Indian oil and gas industry working before or from the year 2006-07 to 2015-16. But, owing to several constraints such as non-availability of financial statements or non-working of a company in a particular year etc., the researcher is compelled to restrict the number of sample companies to ten. Therefore, this study is ex post facto based on survey method making a survey of ten companies under Indian Oil and Gas Industry. There are more than ten companies operating in Oil and Gas Industry in India. The details of the financial data available in only ten companies of Indian oil and gas industries.

**SOURCE OF DATA**

The study is mainly based on secondary data. The major source of data analyzed and interpreted in this study related to all those companies selected is collected from "PROWESS" database, which is the most reliable on the empowered corporate database of Centre for Monitoring Indian Economy (CMIE). It contains a highly normalized database built on a sound understanding of disclosure in India, which include public, private, co-operative and joint sector companies. The database provides financial statements, ratio analysis, funds flow, cash flow, product profiles, returns and risk on the stock market etc.

Besides prowess databases, relevant secondary data have also been collected from BSE Stock Exchange Official Directory, CMIE Publications, Annual Survey of Industry, Business newspapers, Reports on Currency and Finance, Libraries of various Research Institutions, through Internet etc. The study required variety of data therefore; websites like <http://indiainfoline.com>, [www.indiastat.com](http://www.indiastat.com) and [www.google.com](http://www.google.com) have been comprehensively searched.

**LIMITATIONS OF THE STUDY**

The data used in this study have been taken only secondary sources and as such its findings depends entirely on the accuracy of such data.



## LITERATURE REVIEW

It is mandatory to review the literature available with respect to the area of the research study. Measuring the performance of the corporate sector has always been an area of controversies from the point of view of the government, shareholders, prospective investors, creditors, employees and any other stockholders. Several studies have been undertaken to evaluate the financial performance in the corporate sector. This chapter presents some of the studies conducted by financial analysis.

**Agiomirgianakis, Voulgaris and Papadogonas (2006)**<sup>1</sup> examined financial determinants of firm profitability and employment growth are identified by using a panel of 3094 Greek manufacturing firms for 1995 and 1999, just before the country's accession to the European Monetary Union. The analysis includes stepwise regression models.

The independent variables used are size, age, location and exports, as well as a number of financial ratios describing the asset structure, capital structure, reliance on debt, employee profitability and managerial efficiency.

The results show that size, age, exports, debt structure, investment in fixed assets and profitability assets and sales contribute significantly to firm growth. Econometric results also reveal that firm size, age, exports, sales growth, reliance on debt on fixed assets and investment growth, as well as efficient management of assets, influence profitability.

**Sam Luther (2007)**<sup>2</sup> analyzed the liquidity, Risk and profitability. To measure the liquidity two important ratios are used; they are current ratio and quick ratio. There are two major categories of profitability ratios 1. profit in relation to sales, and 2. profits in relation to investments. One of the major drawbacks of the profits in relation to sales is that it ignores the Japanese electric power firms have enough managerial and financial capabilities even if the American financial standard is hypothetically introduced into the evaluation of their financial performances. However, the empirical results also indicate that the empirical results also indicate that the Japanese power industry performs barely above the American standard. Thus, corporate leaders in the Japanese power industry need to pay more serious attention to their corporate finances and financial strategies.

Such financial perspective will be increasingly important along with the current deregulation policy of the Japanese government deregulation policy of the Japanese government.

**Dr. B. Ramachandra Reddy and Dr. B. Yuvaraja Reddy (2007)**<sup>3</sup> in their study, an attempt has been made to examine the effect of selected variables on MVA of selected cement companies in India from 01.04.2003 to 31.03.2004. For the purpose of the study 3 major cement units and 7 mini plants were selected. The MVA has been taken as a dependent variable and return on net worth, capital productivity, labour productivity, earnings per shares, economic value added, return on sales (or) turnover, return on total assets and cash profits have been selected as independent variables. It can be inferred from regression analysis that none of the factors was found to have significant impact on MVA. But EPS was found to have a negative and significant effect on MVA. This implies that the MVA of cement companies is not only affected by selected independent variables but also influenced by other factors.

**KasturiRangan, S.(2008)**<sup>4</sup> in his study made an attempt to identify the factors determining the profitability of the banks through partial correlation coefficient for the period from March 2000 to 2007. These banks were categorized into 5 different groups for the purposes of analysis.

**Victoria Bellou, Andronikidis,(2009)**<sup>5</sup> depicts in their study that organizational climate, which includes the setting of values, rules and priorities to be followed by all individuals involved in the organization, has been receiving increased attention over recent years. The purpose of this paper is to look into the prevalent organizational climate within hotels and to identify variations employees' perception, based on whether they hold managerial or non-managerial positions. The results show that efficiency, reflexivity, innovation and flexibility, supervision support and quality were among the most prominent characteristics affected by organizational climate, whereas outward focus and pressure to produce were least affected. Moreover the only differences revealed between managerial and non-managerial employees were in the areas involvement and efficiency.

**Ray Sarbapriya and Mihir Kumar Pal (2010)**<sup>6</sup> in their study reflect dismal declining trend after the path -breaking economic reforms in 1991. There is an urgent need for developing a comprehensive plan for cement industry so that it can survive in the post -liberalized Indian environment and make its presence global.

**Chandrakumarmangalam, P Govindasamy (2010)**<sup>7</sup> in their study have discussed the impact of leverage on the profitability of the firm. The relationship between the debt and equity ratio and earnings per share and how effectively the firm be financing. The leverage and profitability and growth are related and the leveraging impact on the profitability of the firm.

**Glocker, Daniela (2011)**<sup>8</sup> in this paper I evaluate the effect of student aid on the success of academic studies. I focus on two dimensions, the duration of study and the probability of actually graduating with a degree. To determine the impact of financial student aid, I estimate a discrete-time duration model allowing for competing risks to account for different exit states (graduation and dropout) using individual level panel data from the German Socio-Economic Panel (SOEP) for the years 1984-2007. My findings suggest that the duration of study is responsive to the type of financial support a student receives. There are three main results. First, student aid recipients finish faster than comparable students who are supported by the same amount of parental/private transfers only. Second, although higher financial aid does on average not affect the duration of study, this effect is (third) dominated by the increased probability of actually finishing university successfully.

**Rai Sandeep Kumar and Dwivdei Shailesh K, (2011)**<sup>9</sup> in their study, stated that the Cement Industry in India is moment. Driven by a booming real estate sector, global demand and increased activity in his fracture development such as state and national highways, the cement industry has witnessed tremendous growth. The realty sector boomed but could not sustain for long and it collapsed because of the loan defaults. This situation spread like wild fiber and put the Indian economy in danger like the US economy. The US financial crises have affected many countries of the world and India is no exception to it. Because of these financial crises, Indian economy has lost more than 2% of GDP growth. Almost all sectors of the Indian economy have been affected by this crisis.

**N.VenkataRamana(2012)**<sup>10</sup> Bankruptcy is a situation where the liabilities exceed the assets in the company, generally it happens due to under capitalization, not maintain sufficient cash, sources are not utilize properly, in efficient management in all activities, sales decline and market situation etc. Predicting bankruptcy is a dire vital for taking curative and corrective measures for better financial planning, profitability, liquidity and solvency efficiency of the firm. In this study an attempt have been made know the financial performance and also to predict the risk of bankruptcy for selected cement companies from 2001-to-2010.

Liquidity Ratios; Working Capital Ratios, Solvency Ratios and Altman Z-Score Analysis was made to diagnose the problem of bankruptcy. The result reveals that liquidity, working capital turnover efficiency and solvency position of the selected cement companies are not satisfactory. In this study the Z-Score analysis results shows that KCP Ltd and Kesoram Industries Ltd have poor financial performance and Dalmia Bharat Ltd is at the edge of bankruptcy.

**Sachin Mittal, (2012)**<sup>11</sup> Indian cement industry is the second largest cement industry in the world. The paper attempts to examine the working capital trends on the basis of size of working capital, ratio of working capital to total assets, fitting trend line analysis, and correlation amongst the profit, sales and current assets. The present study opined that in India, cement industry has low level of profitability due to mismanagement of current assets and current liabilities. The main objective of working capital management is to arrange the needed funds at right time from the right sources and for the right period so that tradeoff between liquidity and profitability may be realized. The study unearthed that the cement industry in India are failing to maintain the required level of working capital.

**Sarangarajan (2013)**<sup>12</sup> Indian cement industry is the second largest cement industry in the world. The paper attempts to examine the performance and management of assets of the select cement companies in Tamilnadu with the support of Trend analysis. Data employed in this study are all secondary in nature which is frequently inspected by Institute of Chartered Accountants of India and Security Exchange Board of India. The pooled data collection is to assess the impact of regulation on performance of asset of cement companies in Tamil Nadu over the time horizon viz., 1996-97 to 2005-06 The variables used in this study are Land, plant, stock, cash and debtors. The authors have chosen four cement companies in Tamilnadu and using a statistical technique as Trend analysis with the aid of Minitab software version 15. On an analysis it is found that cement plants taken first study have procured land not only for plant construction but also mining lands keeping the future expansion/new plant on a long term basis. It is natural for Tamil Nadu cement factories to hold higher inventory of limestone because of various factors involved in mining operation and location of the mining land from the factory. As found in the Trend Analysis the cement plants had changed their marketing policy from "Cash and Carry" to credit sales. This change in policy of offering credit to large consumers is a major cause for higher debtors balance in the recent years.

The cement plants in Tamil Nadu in their efforts to increase their market share started offering credit to the consumers especially for real estate builders, which has resulted in low cash balance. It is expected that change in cement customer mix will result in a comfortable cash balance in future. It is found that so many small cement industries have been closed because of improper cash management. This has resulted in cash crunch In Cash Trend Analysis. The consumption of cement by government increases, this trend may be expected to decline.

**Dr. P. Krishna Kumar (2013)**<sup>13</sup> The study was designed to investigate the progress of Indian cements industry since 1991, in terms of its growth in installed capacity, production, exports, and value additions; In detail the research methodology used for the study that has focused on the past, present and the future performance of Indian Cement Industry (ICI) at the macro level and the Chettinadu Cement Corporation Limited (CCCL) at the micro level as a case firm. The study purely relies on secondary data. The secondary data were collected for a period of fifteen years (1991-92 to 2005-06) from the database maintained and made available by several organizations viz., Cement Manufacturers Association, Export Import Bank of India, Center for Monitoring Indian Economy etc. for the purpose of effective periodical analysis. In order to know the progress of ICI, annual time series data for the six variables were.

Studied for trend, cyclical variation and random variation, as seasonal variation was not observable in the annual data. The estimated trend equations were evaluated for their goodness of fit and predictive power and found valid to draw inferences. The values of the six variables were projected to the next five years. Estimated values were adjusted for the likely effects of cyclical variations (c) the reliability of predicted values were evaluated with the help of forecasting error. In the end of the study implications and conclusion were provided.

**Acharekar Sachin Vilas Vijaya (2013)**<sup>14</sup> Working capital is considered to be life -giving force to an economic entity and managing working capital one of the most important functions of corporate management. Working capital management (WCM) is the management of short – term financing requirements of a firm which includes maintaining optimum balance of working capital components –receivables, inventory and payables – and using the cash efficiently for day – to –day operations. The main objectives of this study are to examine and evaluate the working capital management in Cement Industries Limited, examine the management pattern of inventory, liquidity position and receivables management. This also finds the relationship between Working Capital Efficiency and Profitability, Profitability.

## RESULTS AND DISCUSSIONS

### 1. TRENDS IN PRODUCTION

Production may be considered as the backbone of a manufacturing enterprise. In business enterprise, production will be considered to be very effective and useful when it serves the dual purpose: 1) It must operate primarily to satisfy customer demands and 2) It must permit production activities to operate in an economical and efficient manner. In the economic sense “production” means both making goods and rendering services that add value to a product even though there are no utilities and utilization of resources such as, labour, energy, materials, equipment and machinery, etc. Utilities are goods and services which have want satisfying powers.<sup>15</sup>

**Ho: There is no significant difference between actual value of production and the trend value of production among different years.**

The trends in production of select oil companies for the periods from 2006-07 to 2015-16 have been presented in Table 1. It exhibits that the highest mean value of production was Rs.351459.65 crores in IOCL which accounts of total industrial production, followed by Rs.175672.80 crores in BPCL production. The remaining production of industry by HPCL was Rs.156523.32 crores, followed by ONGC with Rs. 71338.54 crores, GAIL with Rs.37040.86 crores and OIL with Rs.8872.69 crores. On the basis of average production, the maximum contribution together by IOCL and BPCL of industrial production.

The value of production of the oil industry for the period of study from 2006-07 to 2015-16 has been shown in Table 1. The production of oil industry has marked an increasing as well as fluctuating trend throughout the period. In the year 2006-07 the production was Rs.481121.71 crores which increased to Rs.861354.42 crores in 2015-16, marking an increase of 179.03 per cent in the indices. The mean value of production of oil industry during the study period was Rs.800907.88 crores. The compound annual growth rate of production was 15.85 per cent. The CV value of actual value of production was 28.11 per cent which indicates more fluctuation in the production of oil industry during study period.

The comparison of actual value of production has been shown in Table 1 which depicts that the trend values differed materially from the actual production. The original values of production were lower than the trend values in 2006-07, 2007-08, 2008-09, 2009-10 and 2010-11. It may be pointed out that in the remaining year, the original values of production were higher than the trend values. The calculated  $\chi^2$  value comes to 492079.25 which is higher than the table value of 16.919 at 5 per cent level. It indicates that the differences between actual values of production and trend values of production in different years were significant. Further the fitted linear regression can be used for prediction of production.

### 2. TRENDS IN SALES

‘Sales’ is the value of output supplied to the customers. It is the life blood of a business enterprise without which the business cannot survive. Further, ‘Sales’ is the indicator of the operational efficiency of management in how efficiently the management has used the assets of the business. The higher volume of sales is more efficient the management. Sale is also related to profitability of an enterprise. The higher amount of sales more profitable the business is and vice versa. The matching of costs incurred during a certain period with sales generated during that period reveals the net income or net loss. The trend of sales indicates the direction in which a concern is going and on the basis of which forecast can be made. The trend analysis of sales helps to understand the growth of a business enterprise.

**Ho: There is no significant difference between the actual value and trend value of sales among different years.**

The trends in sales of select oil companies for the periods from 2006-07 to 2015-16 have been presented in Table 1. It exhibits that the highest mean value of sales was Rs.350707.47 crores in IOCL which accounts of total industrial sales, followed by Rs.175378.60 crores in BPCL sales. The remaining sales of industry by HPCL was Rs.156127.04 crores, followed by ONGC with Rs. 71292.02 crores, GAIL with Rs.36960.75 crores and OIL with Rs.8870.14 crores. On the basis of average sales, the maximum contribution together by IOCL and BPCL of industrial sales.

The value of sales of the oil industry for the period of study from 2006-07 to 2015-16 has been shown in Table 1. The actual sales of oil industry have marked an increasing trend throughout the period. In the year 2006-07 the sales were Rs.480800.12 crores which increased to 866319.53 crores in 2015-16, marking an increase of 180.18 indices. The mean value of sales during the study period was Rs.799336.02. The SD and CV value were 227194.47 and 28.42 per cent which indicate more fluctuation in the sales of oil industry during the study period. The CAGR values were registered at 2.93 per cent.

The comparison of actual value of sales and trend value of sales has been shown in Table 1 which depicts that the trend values differed materially from the actual sales except in the year 2007-08 and 2011-12. The original values of sales were lower than the trend values in the year 2006-07, 2007-08, 2009-10, 2010-11 and 2015-16. In the remaining years, the original values of sales were higher than the trend values. The calculated  $\chi^2$  value comes to 124986.30 which is higher than the table value of 16.919 at 5 per cent level. It indicates that the differences between actual value of sales and trend value of sales in different years were significant.

### 3. TRENDS IN COST OF PRODUCTION

The price for the product is usually fixed by taken into account the cost of the production and adding a mark-up which may be stated as a percentage of the cost for profit. The cost of production value is determined by the sum of the cost of the resources that went into making it. The cost can be composed of the cost of any of the factors of production including prime cost, work cost, administrative cost and selling cost, etc. Broadly, the determinants of cost of production are: the size of the plant, the level of production, that is, the utilization of the plant, the nature of technology used the process of the various inputs like raw materials, labour, power and fuel, managerial and labour efficiency, etc. For instance, the larger the size of the plant, the greater are the internal economies of production and consequently. The large firm will experience increasing returns of decreasing cost. In other words, the average physical product will rise and correspondingly, the average cost will decline. Likewise, there will be better utilization of plant, the use of better technology, and fall in the cost of production. In the same manner, a fall of prices of inputs like raw materials, or a fall in transport charges will also reduce the average cost of production.<sup>16</sup>

**Ho: There is no significant difference between actual values and trend values of cost of production among different years.**

The trends in cost of production of select oil companies for the periods from 2006-07 to 2015-16 have been shown in Table 1. It depicts that the highest mean value of cost of production was Rs.332971.16 crores in IOCL, which accounts of total industrial cost of production, followed by Rs.165920.26 crores in BPCL cost

of production. The remaining cost of production of industry by HPCL was Rs.148289.77 crores, followed by GAIL with Rs.31905.46 crores, ONGC with Rs.26857.06 crores and OIL with Rs.3091.64 crores. On the basis of average cost of production, the maximum contribution together by IOCL and BPCL of industrial cost of production.

The value of cost of production of oil industry for the period of study from 2006-07 to 2015-16 has been shown in Table 1. The cost of production of oil industry has marked an increasing trend throughout the period. The mean value of cost of production of oil industry during the study period was Rs.709035.39 crores. The SD and CV values of cost of production were 208317.49 and 29.38 per cent respectively during the study period. The CAGR value was marked 15.10 per cent. The comparison of actual value and trend value of cost of production has been depicted in Table 1 which shows that the trend value differed materially from the actual value of cost of production except during the year 2006-07 to 2015-16. The original values of cost of production were lower than the trend values from 2006-07, 2007-08, 2009-10, 2010-11 and 2015-16. It may be pointed out that the lower cost of production incurred in the oil industry. In the remaining year, the original values of cost of production were higher than the trend values. The calculated  $\chi^2$  value comes to 133072.55 which is higher than the table value of 16.919 at 5 per cent level of significance. It indicates that the difference between the actual and trend values of cost of production in different years were significant.

#### 4. TRENDS IN RAW MATERIAL EXPENSES

Raw material is a very important factor of production. It includes physical commodities used to manufacture the final end product. It is the starting point from which the first operations start. It is the first and most important element of cost. According to the Indian Association of Materials Management, 64 paise in a rupee are spent on raw materials by Indian industries. Materials are the principal substances used in production, and are transferred into finished goods. Raw material consumed consists of the amount spent on various types of raw materials and components consumed during the course of manufacturing. Further, the figure has been arrived at by adding the cost of opening stock of raw materials to the purchase of raw material and deducting the cost of closing stock. It includes the amount spent on coal, dolomite, iron ore, coke, limestone, etc.

**Ho: There is no significant difference between actual values and trend values of raw material expenses among different years.**

The trends in raw material expenses of select oil companies for the periods from 2006-07 to 2015-16 have been shown in Table 1. It depicts that the highest mean value of raw material expenses was Rs.308259.82 crores in IOCL, which accounts of total industrial raw material expenses, followed by Rs.148934.94 crores in HPCL raw material expenses. The remaining raw material expenses of industry by GAIL was Rs.28220.69 crores, followed by BPCL with Rs.11479.03 crores, OIL with Rs.8731.93 crores and ONGC with Rs.5681.67 crores. On the basis of average raw material expenses, the maximum contribution together by IOCL and HPCL of industrial raw material expenses.

The value of raw material expenses of oil industry during the study period from 2006-07 to 2015-16 has been shown in Table 1. The raw material expenses of oil industry have marked an increasing trend throughout the period. In the year 2006-07, raw material expenses was Rs.312565.31 crores which crossed the mark of Rs.587812.41 crores during the year 2011-12 and reached Rs.526539.78 crores in the year 2015-16, marking an increase of 168.46 indices. The mean value of raw material expenses was Rs.511308.07 crores. The SD and CV values were 138740.85 and 27.13 per cent respectively, which indicates more fluctuation in the raw material expenses of oil industry during the study period. The CAGR value was 13.35 per cent.

The actual and trend value of raw material expenses comparison shown in the Table 1 depicts that the trend value differed from the actual value of raw material. The original values were lower than the trend values from 2006-07, 2007-08, 2009-10, 2010-11 and 2015-16. It indicates during the years the lower raw material expenses were incurred. In the remaining years, the original values were higher than the trend values. The calculated  $\chi^2$  value comes to 90682.93 which is higher than the table value of 16.919 at 5 per cent level. It indicates that the differences between actual value and trend value of raw material expenses in different years were significant.

#### 5. TRENDS IN WAGES AND SALARIES EXPENSES

Wages and salaries as a means of providing income for the workers become the only sources of income, which determines their economic survival in the society; so they try to force the employers to follow a method of payment, which entitles them to higher wages. High wages and salaries are given to workers to become efficient and produce more. Increased production will result in lower cost per unit. Thus, cost of production per unit will come down. The amount paid to employees by way of salaries, wages, bonus, gratuities, and contribution towards the provident funds, superannuation funds, family pension scheme, staff welfare expenses, Voluntary Retirement Service (VRS) compensation funds have been classified as 'Wages and Salaries' in the present study.

**Ho: There is no significant difference between actual value and trend value of wages and salaries expenses among different years.**

The trends in wages and salaries expenses of select oil companies for the periods from 2006-07 to 2015-16 have been shown in Table 1. It depicts that the highest mean value of wages and salaries expenses was Rs.6534.31 crores in ONGC, which accounts of total industrial wages and salaries expenses, followed by Rs.5700.51 crores in IOCL wages and salaries expenses. The remaining wages and salaries expenses of industry by HPCL was Rs.1803.33 crores, followed by OIL with Rs.1514.16 crores, GAIL with Rs.802.33 crores and BPCL with Rs.298.80 crores. On the basis of average wages and salaries expenses, the maximum contribution together by ONGC and IOCL of industrial wages and salaries expenses.

The value of wages and salaries expenses of oil industry for the period of study from 2006-07 to 2015-16 has been shown in Table 1. The wages and salaries expense of oil industry have marked an increasing trend from 2006-07 to 2010-11, which reached the mark of 205.28 indices. In the year 2011-12 and 2013-14, the wages and salaries expenses declined to Rs.15772.01 crores and Rs.21794.75 respectively again increased to Rs.22160.49 crores in 2015-16, marking an increase of 268.22 indices from 2006-07 to 2015-16. The mean value of wages and salaries expenses was Rs.16653.44 crores. The SD and CV values were 5215.79 and 31.32 per cent, which indicates the fluctuation found during the study period. The CAGR value was 21.23 per cent.

The comparison of actual value and trend value of wages and salaries expenses is depicted in the Table 1 which shows that the trend values differed materially from the actual wages and salaries expenses except the years from 2006-07 to 2015-16. The actual value of wages and salaries expenses is lower than the trend value during the year 2006-07, 2007-08 to 2011-12, 2013-14, 2014-15 and 2015-16. The actual value is higher than the trend value in 2008-09, 2009-10, 2010-11 and 2012-13. It may be pointed out that the higher wages and salaries expenses were incurred the oil industry. The calculated  $\chi^2$  value is 1136.57 which is higher than the table value of 16.919 at 5 per cent level of significance. It indicates that the difference between actual and trend values of wages and salaries in different years were significant.

#### 6. TRENDS IN MANUFACTURING EXPENSES

The manufacturing expenses include freight inwards and transportation, packaging materials, job work/contract/processing charges, stores consumed, repairs on plant and machinery/buildings, technical fees paid, license fee/operation charges and other operating expenses have been grouped as manufacturing expenses for the purpose of the study.

**Ho: There is no significant difference between actual value and trend value of manufacturing expenses among different years.**

The trends in manufacturing expenses of select oil companies for the periods from 2006-07 to 2015-16 have been presented in Table 1. It depicts that the highest mean value of manufacturing expenses was Rs.11695.95 crores in IOCL which accounts of total industrial manufacturing expenses, followed by Rs.11633.69 crores in ONGC manufacturing expenses. The remaining manufacturing expenses of industry by HPCL was Rs.1484.85 crores, followed by GAIL with Rs.1044.52 crores, OIL with Rs.965.85 crores and BPCL with Rs.229.36 crores. On the basis of average wages and salaries expenses, the maximum contribution together by IOCL and ONGC of industrial wages and salaries expenses.

The manufacturing expenses of oil industry for the period of study from 2006-07 to 2015-16 have been shown in Table 1. The manufacturing expenses marked an increasing trend throughout the study period except in the year 2011-12. In the year 2006-07, the manufacturing expenses were Rs.16582.93 crores which increased to Rs.37766.77 crores in 2015-16, marking an increase of 227.74 per cent in the indices. The mean value was Rs.27054.21 crores. The CAGR value was 16.55 per cent. The SD and CV values were 7535.50 and 27.85 per cent which shows more fluctuation in the manufacturing expenses of Oil industry during the period under study.

The comparison of actual and trend value of manufacturing expenses of oil industry has been shown in Table 1 which depicts that the trend value differed materially from the actual manufacturing expenses. The original values of manufacturing expenses were lower than the trend values from 2006-07 to 2008-09 and 2011-12 to 2014-15. In the remaining years the original values were higher than the trend values. It may be pointed out that higher manufacturing expenses were incurred

the oil industry. The  $\chi^2$  value comes to 4869.12 which is found to be statistically significant. It indicates that the differences between the actual and trend of manufacturing expenses in different years were significant.

#### 7. TRENDS IN POWER AND FUEL EXPENSES

Electricity expenses in oil industry play a vital role. For the purpose of analysis, any expenses related to electricity and for other fuel have been considered under this study.

**Ho: There is no significant difference between the actual and trend value of power and fuel expenses among different years.**

The trends in power and fuel expenses of select oil companies for the periods from 2006-07 to 2015-16 have been presented in Table 1. It exhibits that the highest mean value of power and fuel expenses was Rs.3202.24 crores in IOCL which accounts of total industrial power and fuel expenses, followed by Rs.1607.40 crores in GAIL power and fuel expenses. The remaining power and fuel expense of industry by HPCL was Rs.658.48 crores, followed by ONGC with Rs.338.81 crores, BPCL with Rs.268.28 crores and OIL with Rs.38.37 crores. On the basis of average power and fuel expenses, the maximum contribution together by IOCL and GAIL of industrial power and fuel expenses.

The power and fuel expenses of oil industry for the period of study from 2006-07 to 2015-16 have been shown in Table 1. The power and fuel expenses of oil industry have marked an increasing trend throughout the period. In the year 2006-07, the power and fuel expenses were Rs.1954.05 crores which increased to Rs.9125.37 crores marking an increase of 467.00 per cent of the indices. The mean value of power and fuel of oil industry during the study period was Rs.6113.58. The SD and CV were 3417.64 and 55.90 per cent respectively, which indicates that there was fluctuation found during the study period. The CAGR value was 16.67 per cent.

The actual and trend values of power and fuel expenses comparison are depicted in Table 1, which shows that the trend value differed materially from the actual value of power and fuel expenses except in the year 2006-07. The original values of power and fuel expenses were lower than the trend values from 2007-08 to 2010-11 and 2015-16. In the remaining years, the original values of power and fuel expenses were higher than the trend values. The calculated  $\chi^2$  value comes to 1716.87 which is found to be statistically significant. It indicates that the differences between actual and trend values of power and fuel expenses in different years were significant.

#### 8. TRENDS IN SELLING AND ADMINISTRATIVE EXPENSES

Selling and distribution expenses include the amount spent during the course of sales, boosting the sales and delivery of goods sold has been termed as selling and distribution expenses. The expenses relating to advertisement, commission to selling agents, marketing expenses, service charges, delivery charges, freight and transportation etc. are covered under the above head. The expenses relating to office and general administration of companies like the director's remuneration, legal expenses, rent, rates, taxes and depreciation of office building and equipment have been grouped as administrative expenses.

**Ho: There is no significant difference between actual value and trend value of selling and administrative expenses among different years.**

The trends in selling and administrative expenses of select oil companies for the periods from 2006-07 to 2015-16 have been presented in Table 1. It exhibits that the highest mean value of selling and administrative expenses was Rs.27662.55 crores in ONGC, which accounts of total industrial selling and administrative expenses, followed by Rs.6575.02 crores in IOCL selling and administrative expenses. The remaining selling and administrative expense of industry by HPCL was Rs.4388.74 crores, followed by OIL with Rs.2845.16 crores, BPCL with Rs.1341.43 crores and GAIL with Rs.746.72 crores. On the basis of average selling and administrative expenses, the maximum contribution together by ONGC and IOCL of industrial selling and administrative expenses.

The selling and administrative expenses of oil industry during the study period from 2005-06 to 2014-15 have been shown in Table 1. The selling and administrative expenses of oil industry marked an increasing trend throughout the period. In the year 2006-07 the selling and administrative expenses were Rs.24501.83 crores which increased to Rs.59245.38 crores in 2015-16, marking an increase of 241.80 per cent of indices. The mean value was Rs.43559.62 crores. The SD and CV values were 13880.46 and 31.87 per cent respectively, which indicates that fluctuation was found in the selling and administrative expenses of oil industry during the study period. The CAGR value was 14.24 per cent.

The actual and trend value of selling and administrative expenses comparison is depicted in the Table 1, which shows that the trend value differed materially from the actual value of selling and administrative expenses. The original values lower than the trend values are 2008-09, 2010-11, 2011-12, 2014-15 and 2015-16. It indicates that the lower selling and administrative expenses growth were found in oil industry. In the remaining years, the original values were higher than the trend values. The calculated  $\chi^2$  value comes to 1749.13 which is found to be statistically significant. It indicates that the differences between actual value and trend value of selling and administrative expenses in different years were significant.

#### 9. TRENDS IN MISCELLANEOUS EXPENSES

The miscellaneous expenses include donations, loss on sale of assets, loss on sale of investments, loss on revaluation of investment, bad debts, expenses amortized, provision on doubtful loan/deposit/advances and other provision for contingency have been considered under this head for the purpose of the study.

**Ho: There is no significant difference between actual value and trend value of miscellaneous expenses among different years.**

The trends in miscellaneous expenses of select oil companies for the periods from 2006-07 to 2015-16 have been presented in Table 1. It exhibits that the highest mean value of miscellaneous expenses was Rs.12951.77 crores in ONGC, which accounts of total industrial miscellaneous expenses, followed by Rs.4020.30 crores in IOCL miscellaneous expenses. The remaining miscellaneous expense of industry by HPCL was Rs.1198.41 crores, followed by OIL with Rs.744.11 crores, GAIL with Rs.656.96 crores and BPCL with Rs.39.10 crores. On the basis of average miscellaneous expenses, the maximum contribution together by ONGC and IOCL of industrial miscellaneous expenses.

The miscellaneous expenses of oil industry during the study period from 2006-07 to 2015-16 have been shown in Table 1. The miscellaneous expenses of oil industry have marked a decreasing trend during the year 2009-10, 2010-11, 2012-13, 2013-14 and 2014-15 then slightly increase in 2015-16 finally, it shows a fluctuating trend throughout the study period 2006-07 to 2015-16. In the year 2006-07, the miscellaneous expense were Rs.14501.74 crores which increased to Rs.19531.63 crores in 2015-16. In 2009-10, 2010-11, 2012-13, 2013-14 and 2014-15 indices value showed decreasing and finally an index of the study period was 134.68 per cent. The mean value was Rs.19892.25 crores. The SD and CV values were 4092.38 crores and 20.57 respectively, which indicates that fluctuation was found in the miscellaneous expenses of oil industry during the study period. The CAGR value was 11.73 per cent.

The actual and trend value of miscellaneous expenses comparison is depicted in the Table 1 which shows that the trend value differed materially from the actual value of miscellaneous expenses except in 2011-12. The original values were lower than the trend values in the year 2006-07, 2007-08, 2013-14, 2014-15 and 2015-16. In the remaining years, the original values were higher than the trend values. The calculated  $\chi^2$  value comes to 7174.92 which is higher than the table value of 16.919 at 5 per cent significant level. It indicates that the differences between actual value and trend value of miscellaneous expenses in different years were significant.

#### FINDINGS AND SUGGESTIONS

1. The production of oil industry has marked an increasing as well as fluctuating trend throughout the period. The mean value of production of oil industry during the study period was Rs.800907.88 crores. The compound annual growth rate of production was 15.85 per cent. The CV value of actual value of production was 28.11 per cent, which indicates more fluctuation in the production of oil industry during study period.
2. The actual sales of oil industry have marked an increasing trend throughout the period. The mean value of sales during the study period was Rs.799336.02. The SD and CV value were 227194.47 and 28.42 per cent, which indicate more fluctuation in the sales of oil industry during the study period. The CAGR values were registered at 2.93 per cent.
3. The cost of production of oil industry has marked an increasing trend throughout the period. The mean value of cost of production of oil industry during the study period was Rs.709035.39 crores. The SD and CV values of cost of production were 208317.49 and 29.38 per cent respectively during the study period. The CAGR value was marked 15.10 per cent.

4. The raw material expenses of oil industry have marked an increasing trend throughout the period. The mean value of raw material expenses was Rs.511308.07 crores. The SD and CV values were 138740.85 and 27.13 per cent respectively, which indicates more fluctuation in the raw material expenses of oil industry during the study period. The CAGR value was 13.35 per cent.
5. The wages and salaries expense of oil industry have marked an increasing trend from 2006-07 to 2010-11, which reached the mark of 205.28 indices. The mean value of wages and salaries expenses was Rs.16653.44 crores. The SD and CV values were 5215.79 and 31.32 per cent, which indicates the fluctuation found during the study period. The CAGR value was 21.23 per cent.
6. The manufacturing expenses marked an increasing trend throughout the study period except in the year 2011-12. The mean value was Rs.27054.21 crores. The CAGR value was 16.55 per cent. The SD and CV values were 7535.50 and 27.85 per cent, which shows more fluctuation in the manufacturing expenses of Oil industry during the period under study.
7. The power and fuel expenses of oil industry have marked an increasing trend throughout the period. The mean value of power and fuel of oil industry during the study period was Rs.6113.58. The SD and CV were 3417.64 and 55.90 per cent respectively, which indicates that there was fluctuation found during the study period. The CAGR value was 16.67 per cent.
8. The selling and administrative expenses of oil industry marked an increasing trend throughout the period. The mean value was Rs.43559.62 crores. The SD and CV values were 13880.46 and 31.87 per cent respectively, which indicates that fluctuation was found in the selling and administrative expenses of oil industry during the study period. The CAGR value was 14.24 per cent.
9. The miscellaneous expenses of oil industry have marked a decreasing trend during the year 2009-10, 2010-11, 2012-13, 2013-14 and 2014-15 then slightly increase in 2015-16 finally, it shows a fluctuating trend throughout the study period 2006-07 to 2015-16. The mean value was Rs.19892.25 crores. The SD and CV values were 4092.38 crores and 20.57 respectively, which indicates that fluctuation was found in the miscellaneous expenses of oil industry during the study period. The CAGR value was 11.73 per cent.

## CONCLUSION

(Table 2) After going through the above discussion on production and sales of oil industry in India, it is found that there has been an increasing trend throughout the study period except in 2006-07 and 2007-08. The cost structure analysis reveals a significant increasing trend during the study period. The cost structure of oil industry, the proportion of raw material cost with 83.94 per cent got the first place followed by wages and salaries with 2.73 per cent, manufacturing expenses with 1.91 per cent, power and fuel with 1.00 per cent, selling and administrative expenses with 7.15 per cent and miscellaneous expenses with 3.27 per cent during the study period.

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ANNEXURE

TABLE 1: ACTUAL VALUE AND TREND VALUE OF PRODUCTION, SALES, COST PRODUCTION, EXPENSES OF RAW MATERIAL, WAGES & SALARIES, MANUFACTURING, POWER & FUEL, SELLING & ADMINISTRATIVE AND MISCELLANEOUS OF OIL AND GAS INDUSTRY (Values Rs. In Crores)

Year	Value of Production (Rupees In Crores)	Indices	Trend Values (Yc)	Value of Sales (Rupees In Crores)	Indices	Trend Values (Yc)	Value of Cost of Production (Rupees In Crores)	Indices	Trend Values (Yc)	Value of Raw Material Expenses (Rupees In Crores)	Indices	Trend Values (Yc)
2006-07	481121.71	100.00	772181.71	480800.12	100.00	507444.33	415732.91	100.00	447604.32	312565.31	100.00	340316.77
2007-08	550198.07	114.36	778565.30	546106.84	113.58	572309.15	480500.77	115.58	505700.11	362054.84	115.83	378314.83
2008-09	656456.23	136.44	784948.89	6661277.46	137.54	637173.97	582372.15	140.08	563795.90	432117.09	138.25	416312.90
2009-10	606140.42	125.98	791332.49	594282.78	123.60	702038.79	525343.88	126.37	621891.70	386869.99	123.77	454310.97
2010-11	741953.13	154.21	797716.08	731332.33	152.11	766903.61	656194.55	157.84	679987.49	479447.46	153.39	492309.03
2011-12	925951.47	192.46	804099.68	921075.54	191.57	831768.43	816531.66	196.41	738083.28	587812.41	188.06	530307.10
2012-13	1046622.74	217.54	810483.27	1040633.00	216.44	896633.25	939373.64	225.96	796179.08	667068.07	213.42	568305.16
2013-14	1117955.64	232.36	816866.86	1113683.20	231.63	961498.07	1005357.74	241.83	854274.87	710159.53	227.20	606303.23
2014-15	1021324.96	212.28	823250.46	1037849.42	215.86	1026362.89	923483.01	222.13	912370.66	648446.17	207.46	644301.30
2015-16	861354.42	179.03	829634.05	866319.53	180.18	1091227.71	745463.56	179.31	970466.46	526539.78	168.46	682299.36
<b>Mean</b>	<b>800907.88</b>		<b>Computed <math>\hat{Y}^p</math> Value = 492079.25</b>	<b>799336.02</b>		<b>Computed <math>\hat{Y}^p</math> Value = 124986.30</b>	<b>709035.39</b>		<b>Computed <math>\hat{Y}^p</math> Value = 133072.55</b>	<b>511308.07</b>		<b>Computed <math>\hat{Y}^p</math> Value = 90682.93</b>
<b>SD</b>	<b>225132.89</b>			<b>227194.47</b>			<b>208317.49</b>			<b>138740.85</b>		
<b>CV (%)</b>	<b>28.11</b>		<b>Critical Value of <math>\hat{Y}^p</math> with (n-1)=9, Degree of freedom is 16.919 at 5% Significant Level Result : H<sub>0</sub> is Rejected</b>	<b>28.42</b>		<b>Critical Value of <math>\hat{Y}^p</math> with (n-1)=9, Degree of freedom is 16.919 at 5% Significant Level Result : H<sub>0</sub> is Rejected</b>	<b>29.38</b>		<b>Critical Value of <math>\hat{Y}^p</math> with (n-1)=9, Degree of freedom is 16.919 at 5% Significant Level Result : H<sub>0</sub> is</b>	<b>27.13</b>		<b>Critical Value of <math>\hat{Y}^p</math> with (n-1)=9, Degree of freedom is 16.919 at 5% Significant Level Result : H<sub>0</sub> is Rejected</b>
<b>CAGR (%)</b>	<b>15.85</b>			<b>2.93</b>			<b>15.10</b>			<b>13.35</b>		

Year	Value of Wages and Salaries Expenses (Rupees In Crores)	Indices	Trend Values (Yc)	Value of Manufacturing Expenses (Rupees In Crores)	Indices	Trend Values (Yc)	Value of Power & Fuel Expenses (Rupees In Crores)	Indices	Trend Values (Yc)	Value of Selling & Administrative Expenses (Rupees In Crores)	Indices	Trend Values (Yc)	Value of Miscellaneous Expenses (Rupees In Crores)	Indices	Trend Values (Yc)
2006-07	8262.13	100.00	9226.12	16582.93	100.00	17409.89	1954.05	100.00	1286.67	24501.83	100.00	23480.25	14501.74	100.00	18395.79
2007-08	9910.88	119.96	10876.63	18241.99	110.00	19553.07	2222.54	113.74	2359.32	27957.43	114.10	27942.33	14618.79	100.81	18728.34
2008-09	13127.29	158.89	12527.15	21505.43	129.68	21696.26	2451.54	125.46	3431.96	30489.38	124.44	32404.41	22790.51	157.16	19060.88
2009-10	14733.18	178.32	14177.66	27170.41	163.85	23839.44	3670.05	187.82	4504.61	37154.87	151.64	36866.49	20754.70	143.12	19393.43
2010-11	16960.38	205.28	15828.18	33377.32	201.28	25982.62	4935.91	252.60	5577.26	39651.38	161.83	41328.58	20467.64	141.14	19725.98
2011-12	15772.01	190.90	17478.69	22005.78	132.70	28125.80	7367.53	377.04	6649.90	43017.75	175.57	45790.66	28451.81	196.20	20058.52
2012-13	22004.04	266.32	19129.21	26117.51	157.50	30268.98	9281.22	474.97	7722.55	52935.67	216.05	50252.74	21509.86	148.33	20391.07
2013-14	21794.75	263.79	20779.72	30847.98	186.02	32412.16	9949.03	509.15	8795.20	61752.81	252.03	54714.82	19217.57	132.52	20723.62
2014-15	21809.21	263.97	22430.24	36925.96	222.67	34555.34	10178.57	520.90	9867.84	58889.67	240.35	59176.90	17078.26	117.77	21056.17
2015-16	22160.49	268.22	24080.76	37766.77	227.74	36698.52	9125.37	467.00	10940.49	59245.38	241.80	63638.99	19531.63	134.68	21388.71
<b>Mean</b>	<b>16653.44</b>		<b>Computed <math>\hat{Y}^p</math> Value = 1136.57</b>	<b>27054.21</b>		<b>Computed <math>\hat{Y}^p</math> Value = 4869.12</b>	<b>6113.58</b>		<b>Computed <math>\hat{Y}^p</math> Value = 1716.87</b>	<b>43559.62</b>		<b>Computed <math>\hat{Y}^p</math> Value = 1749.13</b>	<b>19892.25</b>		<b>Computed <math>\hat{Y}^p</math> Value = 7174.92</b>
<b>SD</b>	<b>5215.79</b>			<b>7535.50</b>			<b>3417.64</b>			<b>13880.46</b>			<b>4092.38</b>		
<b>CV (%)</b>	<b>31.32</b>		<b>Critical Value of <math>\hat{Y}^p</math> with (n-1)=9, Degree of freedom is 16.919 at 5% Significant Level Result : H<sub>0</sub> is Rejected</b>	<b>27.85</b>		<b>Critical Value of <math>\hat{Y}^p</math> with (n-1)=9, Degree of freedom is 16.919 at 5% Significant Level Result : H<sub>0</sub> is Rejected</b>	<b>55.90</b>		<b>Critical Value of <math>\hat{Y}^p</math> with (n-1)=9, Degree of freedom is 16.919 at 5% Significant Level Result : H<sub>0</sub> is Rejected</b>	<b>31.87</b>		<b>Critical Value of <math>\hat{Y}^p</math> with (n-1)=9, Degree of freedom is 16.919 at 5% Significant Level Result : H<sub>0</sub> is Rejected</b>	<b>20.57</b>		<b>Critical Value of <math>\hat{Y}^p</math> with (n-1)=9, Degree of freedom is 16.919 at 5% Significant Level Result : H<sub>0</sub> is Rejected</b>
<b>CAGR (%)</b>	<b>21.23</b>			<b>16.55</b>			<b>16.67</b>			<b>14.24</b>			<b>11.73</b>		

TABLE 2: COST STRUCTURE OF OIL INDUSTRY (2006-07 to 2015-16)

S.No	Cost Structure	Average Values (Rs. In Crores)	Percentage as Total
1	Raw Material Expenses	511308.07	83.94
2	Wages & Salaries Expenses	16653.44	2.73
3	Manufacturing Expenses	11633.69	1.91
4	Power & Fuel Expenses	6113.58	1.00
5	Selling & Administrative Expenses	43559.62	7.15
6	Miscellaneous Expenses	19892.25	3.27
<b>Total</b>		<b>609160.64</b>	<b>100.00</b>

Sources: Computed

**A STUDY ON IMPACT OF EMPLOYEE BEHAVIOUR ON THE TEAM EFFECTIVENESS****KARTHIKEYAN.V****M. Phil. RESEARCH SCHOLAR  
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PUDUCHERRY CAMPUS, PUDUCHERRY****ABSTRACT**

*This research aims at analyzing whether the employee behavior plays an important role in influencing the team effectiveness. This study is of descriptive, a survey was conducted among 115 employees IT companies, Pondicherry, who have been selected by simple random sampling method, and the data were collected using a 5-point scale questionnaire. The data collected were analyzed using SPSS software to find the relationship between the demographic details and the dimensions of the employee behavior and the team effectiveness; and found there is a significant difference between the dimensions of the employee behavior and the team effectiveness. It was also found that there is a Positive relationship between the team effectiveness trait and the employee behavior trait.*


**KEYWORDS**

employee behavior, team effectiveness.

**JEL CODES**

M12, M54.

**INTRODUCTION**

 Employee behavior refers to the way in which employee's respond to specific circumstances or situations in the workplace. While many elements determine an individual's behavior in the workplace.

Employee behavior is impacted by a variety of forces. Below are a few of the forces that influence employee behavior:

1. Positive environment
2. Technology
3. Customer demands
4. Personal and corporate culture

**TYPES OF EMPLOYEE BEHAVIOUR AT WORKPLACE****1. ASSERTIVENESS****TASK PERFORMERS**

Such individuals are well aware of their key responsibility areas and what they are supposed to do at the workplace.

**ORGANIZATIONAL CITIZENSHIP**

Show genuine courtesy towards fellow workers. Help your coworkers acquire new skills and learnings

**2. SUBMISSIVENESS****JOINING AND STAYING WITH THE ORGANIZATION**

It is essential for individuals to stay with the organization for quite some time. Organizations need to treat employees with respect for them to stick around for a long time and do not even think of quitting their jobs.

**3. AGGRESSIVENESS****COUNTERPRODUCTIVE WORK BEHAVIOUR**

Counterproductive work behaviour have a tendency to harm their organization. They are often involved in objectionable activities and doing unproductive tasks, which spoil the entire work culture.

**TEAM**

A team is a group of people linked in a common purpose. Human teams are especially appropriate for conducting tasks that are high in complexity and have many interdependent subtasks.

A team becomes more than just a collection of people when a strong sense of mutual commitment creates synergy, thus generating performance greater than the sum of the performance of its individual members.

**COMMON CATEGORIES OF TEAM****EXECUTIVE TEAM**

An executive team is a management team that draws up plans for activities and then directs these activities.

**COMMAND TEAM**

The goal of the command team is to combine instructions and to coordinate action among management. In other words, command teams serve as the "middle man" in tasks.

**PROJECT TEAMS**

A team used only for a defined period of time and for a separate, concretely definable purpose, often becomes known as a project team.

**ADVISORY TEAMS**

Advisory teams make suggestions about a final product.

**WORK TEAMS**

Work teams are responsible for the actual act of creating tangible products and services.

**ACTION TEAMS**

Action teams are highly specialized and coordinated teams whose actions are intensely focused on producing a product or service.

**VIRTUAL TEAMS**

A virtual team is a group of people who work interdependently and with shared purpose across space, time, and organizational boundaries using technology to communicate and collaborate.

Formation of team involves the four stages:

- dependency and inclusion
- counter dependency and fighting
- trust and structure
- work

#### TEAM EFFECTIVENESS

The formation of teams is most appropriate for tasks that are difficult, complex and important. These types of tasks are often beyond the skills and abilities of any single individual. However, the formation of a team to complete such tasks does not guarantee success.

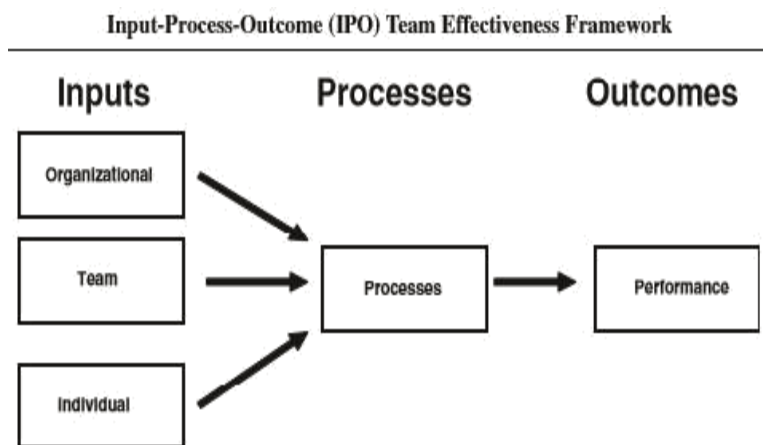
Rather, the proper implementation of teams is positively related to both member satisfaction and increased effectiveness. Organizations who want to receive the benefits afforded by teams need to carefully consider how teams are built and implemented.

Often, teams are created without providing members any training to develop the skills necessary to perform well in a team setting. This is critical, because teamwork can be cognitively and interpersonally demanding. Even when a team consists of talented individuals, these individuals must learn to coordinate their actions and develop functional interpersonal interactions.

#### TEAM EFFECTIVENESS FRAMEWORK

McGrath (1964) advanced an input-process-outcome (IPO) framework for studying team effectiveness. Figure 1 contains an adapted version of this framework. Inputs describe antecedent factors that enable and constrain members' interactions. Processes are important because they describe how team inputs are transformed into outcomes.

#### INPUT-PROCESS-OUTCOME TEAM EFFECTIVENESS FRAMEWORK



#### REVIEW OF LITERATURE

Bogler and Somech (2004) in their study they focused on the relationship between teacher empowerment and organizational Citizenship Behavior(OCB). Pearson correlation and multiple regression analysis indicated that personal perceptions of their level of empowerment are significantly related to their OCB.

Gersick's (1988, 1989) studies purported to show that classical developmental dynamics were not observable in two samples of task groups, the use of group development theory in organizational behaviour (OB) research has virtually disappeared.

Beck & Lewis, 2000; Kieffer, 2001; MacKenzie, 1994; Wheelan, 1997). We argue that in organization studies, group development theory has been hampered by a persistent misunderstanding about what it is and the lack of an efficient method for capturing developmental dynamics in large samples of groups.

Tuckman (1965; Tuckman & Jensen, 1977) caused OB scholars unfamiliar with group development theory to misinterpret previous work, become obsessed with the content of "stages" of development, and lose sight of the underlying processes group development theorists were grappling with.

McGrath, 1991 the theory of group development, noting that most of it was created and validated out of the observations of self-analytic groups, and offer a the TIP), and the boundary spanning model (Ancona & Caldwell, 1992) of team effectiveness.

Schutz, 1960; Slater, 1966 Common understanding of the theory of group development and its relation to team effectiveness has been hampered the theories of group development as descriptive rather than as the prescriptive models they actually are.

Alge et al. (2006) Results of multiple regression showed that employees who feel empowered are likely to perceive the link between their actions and broader organizational outcomes and feel more responsibility for helping others over and above what is specified in their job requirements.

Harris et al. (2009) his research examined the moderating impact of empowerment on the relationships between leader member exchange and the job satisfaction and he suggested that employees need to have the workplace freedom to display OCB through empowerment.

Gilbert et al. (2010) investigated the relationship between organizational citizenship behaviour and the empowerment structure by placing mediating role of psychological burnout and he found that there is a positive relationship between OCB and EE.

Najafi et al (2011) in his research the findings revealed that psychological empowerment directly and positively influences the effectiveness of the team and organization citizenship behaviour.

Early group development theorists (e.g., Bennis & Shepard, 1956; Mills, 1964;) were describing processes they observed in groups that developed.

Contrary to the image perpetuated in organizational studies (e.g., Caouette & O'Connor, 1998; Chang, Bordia, & Duck, 2003; Chidambaram & Bostrom, 1996; Gersick, 1988), linear stage models of group development do not attempt to describe what happens to a group over time. Rather, they purport to describe a path taken by groups that reach superior levels of team functioning.

If group development exists and we do not control for the various stages of development in the teams we study, then a great deal of unexplained variance could be causing those who are studying teams to get conflicting and confusing results. Another explanation for the confusion over group development theory in the management literature is that later group theorists use the word development to describe linear (Gersick, 1988) or cyclical (Worchel, 1998) group processes. In their theories, there are no claims that development leads to superior functioning or achievement of advanced states of being; rather, they use the word development to describe what happens to most or all groups over time.

The claim is however that more developed groups will be able to function more effectively across tasks and environmental contexts than less developed ones (e.g., Bennis & Shepard, 1956; Lacoursiere, 1980; Mills, 1964). Developmental models at the individual, group, and organizational levels tend to share similar conceptions of what constitutes a more developed state. There are at a minimum four common themes: (a) The more developed a group is, the greater the awareness it has of itself—it can talk to itself about itself (Bennis & Shepard, 1956); (b) emotional, reactive behaviour decreases, and rational, goal-directed behaviour increases (Bion, 1961); (c) the group is better able to actualize its potential (Lacoursiere, 1980); and (d) a more developed group has a greater sense of identity and greater openness to changing that identity (Srivastva, Obert, & Neilsen, 1977). Group development theory explained the results of studies of team effectiveness of longer-term teams grappling with tasks and problems that are "conceptual versus behavioural" (Chatman & Flynn, 2001) or "creative versus computational" (Polzer, Milton, & Swann, 2002).



The logic of entrainment (Ancona & Chong, 1996) in a developmental context, we would expect to see members of effective teams turn to these issues in the second half of the group's life if they have completed the task of membership. Seeking and validating external information (Ancona & Caldwell, 1992) is one requirement for completing the competence phase with teams embedded in organizational contexts. This is not to say that some members could not appear to be seeking external information before a group has completed the membership phase; just that if such information is used at all, it will be to only sort out membership issues until the membership phase is completed. Once the group is in the competence phase, such information is sought and processed in service of the group's duties, obligations, and success.

Hackman (1987) provides a more expansive definition by expanding team viability into two separate constructs: maintaining the ability of team members to work together again in the future and satisfaction of group members' needs.

Formalization refers to the emphasis placed on following rules and procedures in performing a team's job. Formalization appears to be positively related to the effectiveness of cross-functional teams (Pinto et al., 1993), virtual teams (Workman, 2005), and boundary-spanning service teams (De Jong et al., 2001). Clearly defined procedures facilitate the effectiveness of decision-making teams without sacrificing quality, since internal stakeholders' support for decisions increases when a fair process is followed (Andrews, 1995; Chan and Mauborgne, 2003). This support is critical for the success of sourcing teams, since their decisions typically need to be followed up by actions in the organization to implement contracts and achieve compliance. This suggests that sourcing teams should benefit from formalization.

However, this has not yet been subject to research. Sourcing teams have to decide on an adequate strategy and should make high-quality decisions based on correct, detailed, and timely information (Monczka et al., 2006). In the 1990s, information technology solutions took a central role in purchasing research and practice (Johnson and Klassen, 2005).

The field of POB has emerged from the recently proposed positive psychology approach. Psychology has been criticized as primarily dedicated to addressing mental illness rather than mental "wellness" — the four D's approach. This prevailing negative bias of psychology is illustrated by the fact that the amount of publications on negative states outnumbers that on positive states by a ratio of 14:1 (Myers, 2000). The purpose of Positive Psychology "is to begin to catalyze a change in the focus of psychology from pre-occupation only with repairing the worst things in life to also building positive qualities" (Seligman & Csikszentmihalyi, 2000, p.5). Thus, positive psychology studies the strengths and virtues that enable individuals and communities to thrive.

Like positive psychology, POB does not proclaim to represent some new discovery of the importance of positivity, but rather emphasizes the need for more focused theory building, research, and effective application of positive traits, states, and behaviours of employees in organizations (Luthans & Youssef, 2007).

According to Luthans (2002), POB is interested in "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace" (p.59). Luthans has argued that inclusion criteria for POB are being theory and research based, measurable, developmental, and manageable for performance impact in the workplace.

Failing to recognize the positive aspects of work is inappropriate and as Turner, Barling, and Zacharatos (2002, p. 715) have argued "it is time to extend our research focus and explore more fully the positive sides, so as to gain full understanding of the meaning and effects of working." However, in order to make a substantive contribution to organizational science, POB will need to show the added value of the positive over and above the negative. For instance, if work engagement would be the perfect opposite of burnout, there is little to be gained from engagement research beyond what is already known from burnout research. Moreover, we agree with Tetrick (2002), who convincingly argued that it is very unlikely that the same mechanisms that underlie employee ill-health and malfunctioning constitute employee health and optimal functioning.

Other examples of recent POB studies investigated how the combination of stressful and motivating job characteristics influences negative and positive aspects of well-being. According to the job demands—resources (JD-R) model (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004) working conditions can be classified in two general categories (i.e., job demands and job resources) that are applicable to virtually all occupations. Job demands require effort and are therefore related with physiological and psychological costs, such as fatigue, whereas job resources foster personal growth, learning, and development, and have motivational qualities. Bakker, Demerouti, and Euwema (2005), in their study hypothesized and found that job resources buffered the impact of job demands on burnout (exhaustion and cynicism). Specifically, they found that job demands such as work overload, emotional demands, physical demands, and work-home interference did not result in high levels of burnout if employees experienced job resources, such as autonomy, performance feedback, social support, or coaching from their supervisor. Psychologically speaking, different processes may have been responsible for these interaction effects.

Seligman (1998a, 1998c, 1999; Seligman & Csikszentmihalyi, 2000) is generally recognized to be the main proselytizer—the spearhead of today's positive psychology movement. Like most psychologists, he had spent his career researching and being concerned with what is wrong with people, human frailties and weaknesses (e.g., his famous studies on learned helplessness). Shortly after being elected president of the American Psychological Association a few years ago, he claims an epiphany occurred when his young daughter said to him: 'When I turned five, I decided not to whine anymore. That was the hardest thing I've ever done. And if I can stop whining, you can stop being such a grouch' (Seligman & Csikszentmihalyi, 2000, p. 6). Seligman suddenly realized that raising children or studying people in general, is much more than just concentrating on and trying to fix what is wrong with them (i.e., his daughter's whining or people's pathologies and dysfunctions). Instead, 'it is about identifying and nurturing their strongest qualities, what they own and are best at, and helping them find niches in which they can best live out these strengths' (Seligman & Csikszentmihalyi, 2000, p. 6).

## NEED FOR THE STUDY

To know that whether Employee behavior plays an important role in the effectiveness of the team. To find employee behavior acts as an influencing factor in team activities.

## PROBLEM STATEMENT

An organization is influenced by various human resources factors. The Employee behavior is one of the factors penetrating in the organization. The employee behavior will affect the whole system in the organization. This study explores that to find whether employee's behavior acts as an influencing factor in team effectiveness and for this study the employee behavior are grouped into three dimensions. The dimensions are Assertiveness, Submissiveness Aggressiveness and the team effectiveness are grouped into three dimensions. The dimensions are cohesion, support, collaboration.

## OBJECTIVES OF THE STUDY

1. To know the variation of demographics and the study variables.
2. To know the existence of employee behavior and team effectiveness among the employees.

## RESEARCH HYPOTHESIS

- H1A: There is a significant difference between the gender of the respondents and employee behaviour.  
 H1B: There is a significant difference between the gender of the respondents and Team effectiveness.  
 H2A: There is a significant difference between the marital status of the respondents and employee behaviour.  
 H2B: There is a significant difference between the marital status of the respondents and Team effectiveness.  
 H3A: There is a significant difference between the Working status of spouse of the respondents and employee behaviour.  
 H3B: There is a significant difference between the Working status of spouse of the respondents and Team effectiveness.  
 H4A: There is a significant difference between the Experience of the respondents and employee behaviour.  
 H4B: There is a significant difference between the Experience of the respondents and Team effectiveness.  
 H5A: There is a significant difference between the Job Title of the respondents and employee behaviour.

H5B: There is a significant difference between the Job Title of the respondents and Team effectiveness.

H0: There is no significant difference between the Employee Behaviour and Team effectiveness.

**RESEARCH METHODOLOGY**

**TYPE OF RESEARCH**

The research method used is survey method and the type of research is descriptive research.

**DATA COLLECTION PROCEDURE**

The data were collected from the respondents through questionnaire having 5-point rating scale. The questionnaire consists of three parts. The first part addresses the Personal information, which consists of Gender, Marital status, working status of spouse, experience in the organization and their job title. The second part consists of questions related to Team effectiveness and the Third part consists of questions related to the employee behavior

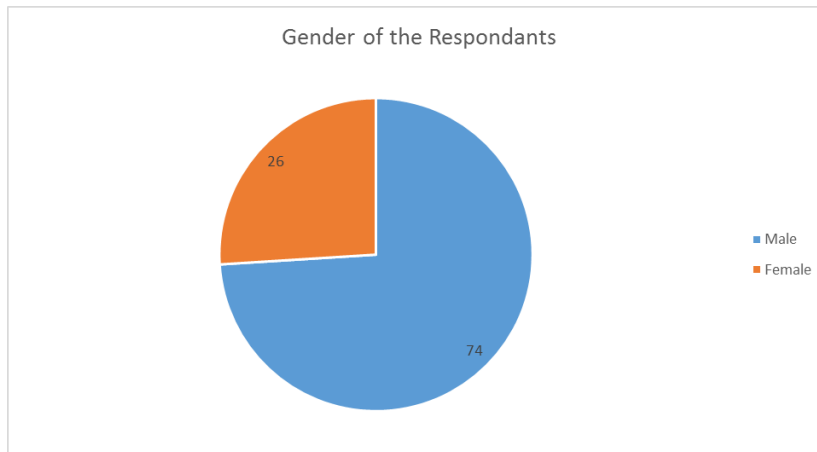
**DATA ANALYSIS AND INTERPRETATION**

**PERCENTAGE ANALYSIS**

**TABLE 1: GENDER OF RESPONDENTS**

Category	No. of Respondents	Percentage
Male	85	74
Female	30	26
n = 115		

**CHART 1: GENDER OF RESPONDENTS**

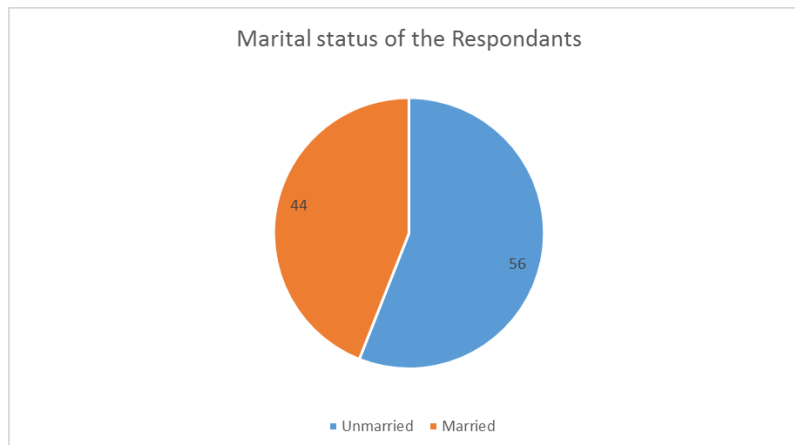


**INFERENCE:** The percentage analysis based on the gender of the respondents show that 74% of the respondents are male whereas 26% of the respondents are female. It is also inferred that most of employees in the organization are male.

**TABLE 2: MARITAL STATUS OF RESPONDENTS**

Category	No. of Respondents	Percentage
Un married	64	56
Married	51	44
n = 115		

**CHART 2: MARITAL STATUS OF RESPONDENTS**

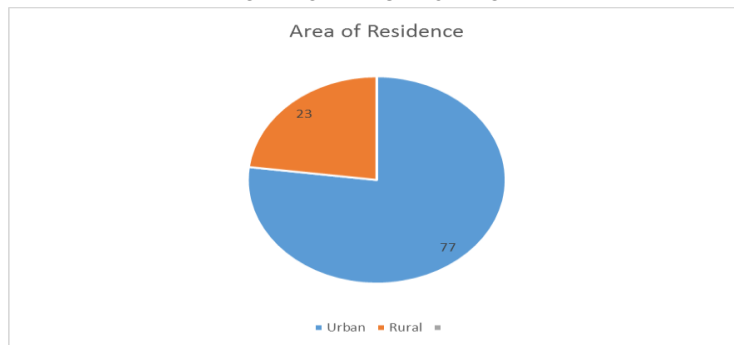


**INFERENCE:** The percentage analysis based on the Marital Status of the respondents show that 56 % of the respondents are married whereas 44% of the respondents are not married.

TABLE 3: AREA OF RESIDENCE

Category	No. of Respondents	Percentage
Urban	89	77
Rural	26	23
n = 115		

CHART 3: AREA OF RESIDENCE

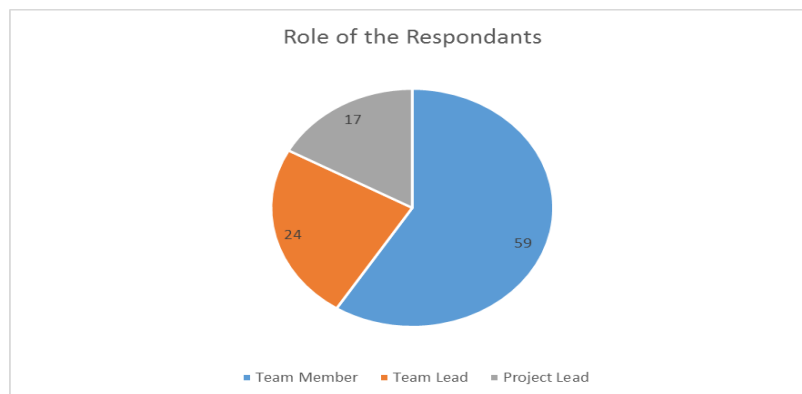


**INFERENCE:** The percentage analysis based on the Area of residence of the respondents show that 77% of the respondents are from urban area whereas 23% of the respondents are from rural area.

TABLE 4: JOB POSITION OF THE EMPLOYEES

Category	No. of Respondents	Percentage
Team member	68	59
Team Leader	27	24
Project Head	20	17
n = 115		

CHART 4: JOB POSITION OF THE EMPLOYEES

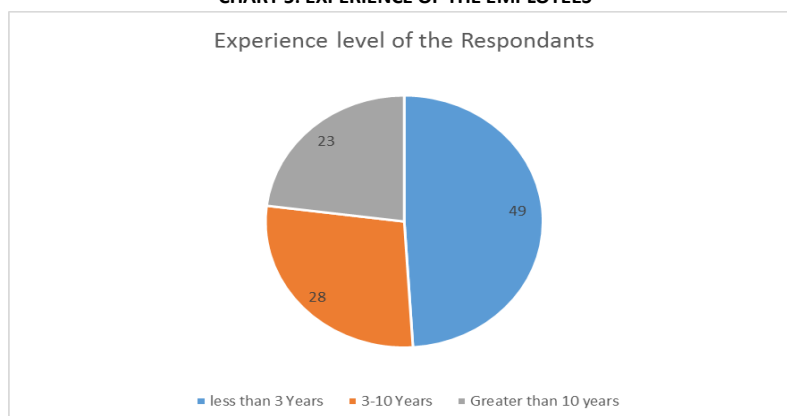


**INFERENCE:** From the above table, it is inferred that 59% of the respondents are working as Team members, 24% of the employees are their Team Leaders, 17% of them are Project Heads and 2% of the employees are project leads.

TABLE 5: EXPERIENCE OF THE EMPLOYEES

Category	No. of Respondents	Percentage
Less than 3 years	56	49
3-10 Years	32	28
Greater than 10 years	27	23
n = 115		

CHART 5: EXPERIENCE OF THE EMPLOYEES

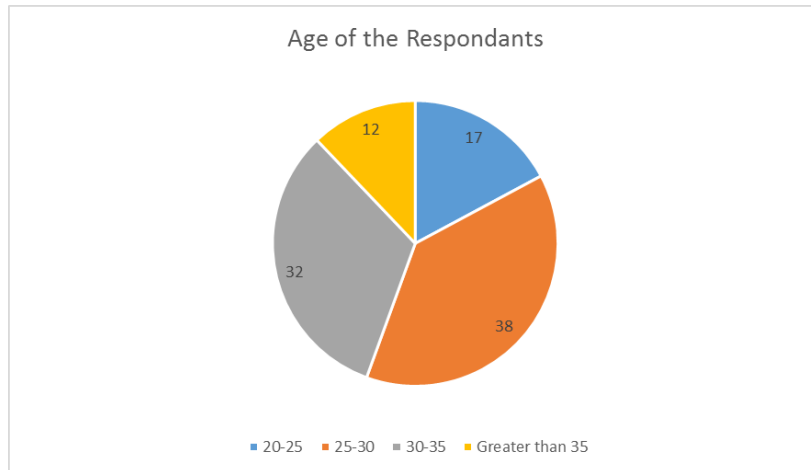


**INFERENCE:** From the above table, it is inferred that 49% of the respondents are having less than 3 years of work experience, 28% of the respondents have 3-10 years of experience and 23% of the respondents have greater than 10 years of experience.

**TABLE 6: AGE OF THE EMPLOYEES**

Category	No. of Respondents	Percentage
20-25	20	17
25-30	44	38
30-35	37	32
Greater than 35	14	12
n = 115		

**CHART 6: AGE OF THE EMPLOYEES**

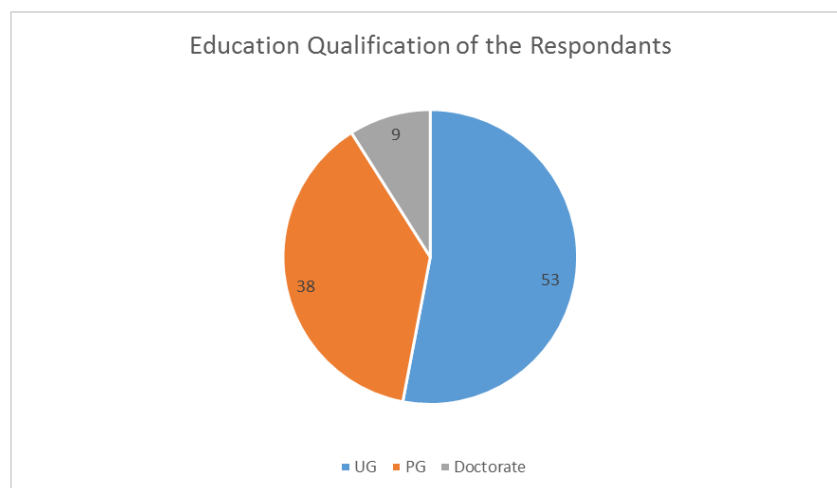


**INFERENCE:** From the above table, it is inferred that 17% of the respondents belong to the 20 – 25 category, 38% of the respondents belong to the 25-30 category, 32% of the respondents belong to 30-35 above category, and 12% of the respondents belong to 35 and above category.

**TABLE 7: EDUCATION QUALIFICATION OF THE EMPLOYEES**

Category	No. of Respondents	Percentage
UG	61	53
PG	44	38
DOCTORATE	10	9
n = 115		

**CHART 7: EDUCATION QUALIFICATION OF THE EMPLOYEES**



**INFERENCE:** The above table shows that 53% of the respondents hold a Undergraduate degree, 38% of the respondents hold an Post graduate degree and 9% of the respondents hold a Doctorate.

**CORRELATION BETWEEN THE EMPLOYEE BEHAVIOR AND TEAM EFFECTIVENESS**

**TABLE 8**

		Assertiveness	Submissiveness	Aggressiveness	Cohesion	Support	Collaboration
Assertiveness	Pearson Correlation	1	.680**	.104**	.072	.007	.261**
	Sig. (2-tailed)		.000	.269	.447	.941	.005
	N	115	115	115	115	115	115
Submissiveness	Pearson Correlation	.680**	1	.091	.118	.305	.295**
	Sig. (2-tailed)	.000		.336	.209	.001	.001
	N	115	115	115	115	115	115
Aggressiveness	Pearson Correlation	.104	.091	1	.138	.038	.076
	Sig. (2-tailed)	.269	.336		.140	.685	.421
	N	115	115	115	115	115	115
Cohesion	Pearson Correlation	.072	.118	.138	1	.330**	.155
	Sig. (2-tailed)	.447	.209	.140		.000	.098
	N	115	115	115	115	115	115
Support	Pearson Correlation	.007	.305**	.038	.330**	1	.728**
	Sig. (2-tailed)	.941	.001	.685	.000		.000
	N	115	115	115	115	115	115
Collaboration	Pearson Correlation	.261**	.295	.076	.155	.728**	1
	Sig. (2-tailed)	.005	.001	.421	.098	.000	
	N	115	115	115	115	115	115

**INFERENCES**

1. There is a strong co relation among the two traits (Assertiveness and Submissiveness)
2. There is a strong co relation among the two traits (Assertiveness and Collaboration)
3. There is a strong co relation among the two traits (Support and Submissiveness)
4. There is a strong co relation among the two traits (Cohesion and Support)
5. There is a strong co relation among the two traits (Support and Collaboration)

**RESULT**

From the above Inference, we can develop a model for option 2 and option 3 and remaining options are self-relating to its own dimensions, which doesn't have major impact in our study.

**FINDINGS OF THE RESEARCH**

**RESEARCH FINDINGS**

**FINDINGS RELATED TO DEMOGRAPHICS**

- We inferred that that 74% of the respondents are male whereas 26% of the respondents are female. We can arrive at a conclusion that most of employees in the organization are male.
- We inferred that 56 % of the respondents are married whereas 44% of the respondents are not married.
- We inferred that the Area of residence of the respondents show that 77% of the respondents are from urban area whereas 23% of the respondents are from rural area.
- We inferred that 59% of the respondents are working as Team members, 24% of the employees are their Team Leaders, 17% of them are Project Heads and 2% of the employees are project leads.
- We inferred that 49% of the respondents are having less than 3 years of work experience, 28% of the respondents have 3-10 years of experience and 23% of the respondents have greater than 10 years of experience.
- We inferred that 17% of the respondents belong to the 20 – 25 category, 38% of the respondents belong to the 25-30 category, 32% of the respondents belong to 30-35 above category, and 12% of the respondents belong to 35 and above category.
- We inferred that 53% of the respondents hold a Undergraduate degree, 38% of the respondents hold an Post graduate degree and 9% of the respondents hold a Doctorate.

**FINDINGS RELATED TO CORRELATION TABLE**

- There is a strong co relation among the two traits (Assertiveness and Submissiveness)
- There is a strong co relation among the two traits (Assertiveness and Collaboration)
- There is a strong co relation among the two traits (Support and Submissiveness)
- There is a strong co relation among the two traits (Cohesion and Support)
- There is a strong co relation among the two traits (Support and Collaboration)
- We can develop a model for option 2 and option 3 and remaining options are self-relating to its own dimensions, which don't have major impact in our study.

**CONCLUSION**

This study is to identify how an individual behavior will have an impact on team effectiveness. From this study, we can infer that the majority of the employees possess the assertiveness behavior and submissiveness behavior, which is very essential for the company. The company can concentrate on the growth rate of an employee so that they can be more effective in nature to boost the employee involvement. Team effectiveness is the important thing that ever has to monitor over a period and in this study, we found that assertiveness behavior and submissiveness behavior has influenced the team effectiveness.

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**APPENDIX  
QUESTIONNAIRE**

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

- 1. What is your gender?
  - 1. Male
  - 2. Female
- 2. What is your age?
  - 1.25 Or under
  - 2.25-30
  - 3.30-35
  - 4.35 above
- 3. What is the highest level of education you have completed?
  - 1. UG degree
  - 2. PG degree
  - 3. Doctoral degree
- 4. What is your current marital status?
  - 1. Married
  - 2. Single
- 5. Which of the following best describes the area you live in?
  - 1. Urban
  - 2. Rural
- 6. ROLE OF WORK
  - 1. Team Member
  - 2. Team Leader
  - 3. Project Leader
- 7. YEAR OF EXPERIENCE
  - 1. Less than 3 years
  - 2. 3-10 years
  - 3. Greater than 10 years

For Below questions please rate on 1 to 5 scale and the options are given below thereby it will be very helpful while studying the situations

1 – Strongly disagree • 2 – Disagree • 3 – Neither agree nor disagree • 4 – Agree • 5 – Strongly agree

Sl.no	Questions	Rating
1	I generally keep quiet and do not agree with others when they don't listen to me.	
2	Though I feel people often take advantage of me, but I guess nothing can be done on that people.	
3	I feel very embarrassed and don't know, how to react when I receive compliments from others.	
4	I feel hurt and depressed when someone criticizes me, but I don't say anything and just walk away.	
5	I don't like to be compared with others.	
6	I felt very hurt and angry, if the other person refuse when I ask for a favor.	
7	If I am angry with a person of higher authority (e.g. boss and superior staffs), I take out my anger on inanimate objects (e.g. throwing a book, kicking a chair etc.)	
8	I get angry and defensive, when others laugh at me.	
9	When I am angry with someone, I usually became silent and indifferent.	
10	I shout or snap back at others when they don't listen to me.	
11	I am able to recognize and express my strength.	
12	I try to find out the reason with others when they don't listen to me.	
13	I don't feel shy in asking for a favor or making a request.	
14	I speak clearly and directly, keeping my voice calm and controlled, even in a conflict.	
15	I can refuse a request without feeling guilty or over explaining.	
16	Members of this team generally feel that their concerns and views are ignored by the other members.	
17	Members support each other when required	
18	This team does not function as a strong team	
19	Members back the decisions taken by the group.	
20	The team is given adequate resources to carry out its function.	
21	The team does not get adequate support needed to perform its task.	
22	The team has enough competent person needed for its work	
23	There is lack of various resources (human and financial) required by the team.	
24	Members do not volunteer to help others and to take responsibility.	
25	In the group the task is divided into small team.	
26	Members in this team hesitate to ask for others help when they need help.	
27	Members respond positively to the help requested.	
28	The goals of this team are well defined.	
29	The team has enough freedom to decide its way of working.	
30	Members generally avoid discussing the problems facing the team.	
31	The team is given adequate resources to carry out its functions.	
32	Members do not volunteer to help others and to take responsibility.	
33	There is lack of various resources (human and financial) required by the team.	
34	Members respond positively to the help requested.	
35	The team does not have internal mechanism of assessing its progress in achieving its tasks.	
36	The members of the team have enough freedom in their own areas	

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