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From the Desk of the Chief Editor.....

In his famous book Third Wave, Alvin Toffler describes three waves - agriculture became the first wave of transformation which was started about 10,000 years ago. The second wave of transformation began in the form of Industrial revolution in the 18th century. Currently we are finding a new wave that is of the mind. This wave is driven by Information Technology. India missed the second wave. That is the reason why India has been dubbed as an agrarian economy/ primary economy/developing economy. But India is predicted to become a knowledge driven super economic power in the near future because India has a vast pool of human capital including 550 millon people under the age of 25. Also, India produces over 75,000 IT graduates and 20 lakh English-speaking graduates annually. However, the process of globalization has thrown up challenges. The case in point is the current global financial crisis which has swept all the economies of the world. Besides, India has her own social problems like growing communalism, open and disguised unemployment, poverty and last but not the least, growing divides in society. So at this juncture, the role of educational institutions will be of paramount importance.

The educational institutes in the 21st century should give a modernized yet secular and rational educational service to the student community so that our society will be in safe hands. DSMS Business School, an aspiring business school has made a humble initiative to provide professional management education with a right blend of knowledge, skills and attitude so that the graduate can work in a highly competitive, stressful yet rewarding corporate environment. And CALYX – Journal of Business Management is just a manifestation of the earnest desires of the DSMS family at Durgapur to convey the creativity of the DSMS family members and activities in the campus to various stakeholders of the society keeping an eye on the vision and mission of DSMS Business School. Most of the articles have come from the core of the hearts of the different researchers. It is my sincere hope and belief that the endeavour of the DSMS family members at Durgapur to publish the second volume of CALYX in near future is successful. I am thankful to all the DSMS family members and researchers for their unflinching faith and cooperation without which CALYX would not have seen the light of day.

Dr. Subir Ghosh

From the Desk of the Editor.....

It gives us immense pleasure that Calyx, Vol-2 is published and it maintains the best quality of work in the field of Management, Economics and Information Systems. Calyx promotes inquiry into contemporary issues in the field of management research within wider social, economical and technological contexts and provides a forum for the discussion of theoretical and practical insights emerging from such an inquiry. The journal intends to actively cultivate new explorations into contemporary business issues and aims to become a storehouse of knowledge in this area. We have published 15 research articles and most of them are empirical in nature. The blind review system not only enriches the quality of the journal but also reduces the chances of nepotism. The strong editorial board has stuck to its policy of quality and their endeavour has been successful.

We have published papers in the field of marketing, human resources, finance, accounting, information systems, corporate social responsibility, economics, entrepreneurship and so on. Each and every paper is standard and up to the mark.

We hope Calyx, Vol-2 will cater to all the needs of the students, researchers, academicians and industry people productively.

Dr. Durlav Sarkar

Editor

Calyx

From the corner of the Associate Editor.....

I am delighted to welcome you to the second issue of CALYX Journal of Business Management published by DSMS Business School, Durgapur. I wish to extend my gratitude to the members of the editorial Board and all the esteemed reviewers/referees of the journal as they are the backbone of this endeavour. I believe that it is important to have a journal which promotes high-quality research and intellectual output of academicians and management professionals and our journal within this short span of time has achieved the same. I look forward for more interesting research work, articles from authors and management practitioners and welcome any comments or suggestions you may have that would improve our journal.

Indranil Mutsuddi
Associate Editor

Calyx

Economic Analysis of Dynamics of Economic Components for The Indian Automobile Sector to Meet The Challenges Till 2020

Dr. Basistha Chatterjee[1]

Abstract

With the advent of time the demand for automobiles are astonishingly changing both quantitatively and qualitatively. The automobile manufacturers are also giving paramount importance on their production, domestic sales and exports to meet that. The very recently introduced products like Tata Nano, Hyundai Verna and exclusive Ferrari are the examples how sincere effort the domestic automobile manufacturers and OEMs offered to fulfill the segment wise demand of four wheelers in the Indian market. The same representation was observed in two wheelers, three wheelers and transport vehicles also. Besides that this sector contributed a significant share to GDP as well as growth of domestic employment which are also important in macroeconomic point of view. Based on this circumstance, it was imperative to understand the dynamics and interplay of the economic components of the automobile sector for the coming era of 2020. An attempt was made in this study to empirically analyze the factors like the future automobile production in the world and India, category wise automobile production in India, gross turnover of the Indian automobile industry, vehicle category wise domestic sales of automobile sector of India, production, domestic sales and export of automobiles produced in India in order to find way out to face the future challenges of the coming decade till 2020. According to the study the total vehicle production including all categories i.e. passenger vehicle, commercial vehicle, three wheelers and two wheelers will grow significantly. The gross turnover will be reached at more than 71 million USD in 2015-16. Study also revealed that both the domestic sales and export will increase with a good per cent of growth rate in the decade to come. In spite of the major challenges like post recessionary situation, price fluctuation of raw materials, the expected growth rate would be around 10-12 per cent. This will be supported by the huge impetus of the OEMs in this sector due to India based outsourcing strategy, recent Government policy, technical and allocative efficiency.

Key words: *Original equipment manufacturers (OEM), India made models, Open market competition, domestic sales, Regression analysis.*

Introduction

The Indian Automobile Industry which was emerged as a 'Sunrise Sector' in our economy is going ahead in bold footsteps by targeting the output level of US $ 145 billion. This would account for more than 10 per cent of the GDP and providing additional employment to 25 million people by 2016.

Currently India is one of the fastest growing market of passenger car and second largest manufacturer of two wheelers in the world. Moreover, this country is holding the topmost position in the world in manufacturing of motor cycle and fifth position in manufacturing of commercial vehicle. On an average the industry is producing about 13 lakh passenger vehicles, 4 lakh commercial vehicles, 76 lakhs two wheelers and about 3 lakh tractors per annum. The Indian tyre manufacturing industry as a complementary part made a turnover of about almost 3 billion US dollar.

Since 1991, it was a new journey of the Indian Automotive Industry as delicencing of the sector took place. This opened up 100 per cent investment opportunity of FDI into it. As a consequence almost all the global majors have set up

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their facilities in India. This feature is supported by the erect rise of production up to 9.7 million in 2006 from only 2 million in 1991.

Although this shows a rosy picture regarding the growth of the automobile sector, but to sustain the growth, to improve the domestic market the economic feasibility of the investment is to be judged. This study was undertaken to analyze the current trend of the Indian automobile market and to foresee the failure of it. Also the study approached the determining features of investment opportunity in this sector. Considering the usefulness of the study the following objectives were set.

Objectives

1. To identify with the inherent strengths and the driving factors of growth of the automobile industries in India.
2. To examine the year wise gross turnover and production of different segments of the particular industry.
3. To examine the domestic sale and exports of different segments of automobile industry.
4. To study the current investment feature in automobile industry and the probable constraints ahead.

Review of Literatures

Dev.S.M. (2006) opined that, the next ten years will be crucial period of growth for Indian Automobile Industry as a significant player in the global stage. Mitra.S. (2006), stated that, India being at the threshold for a major take-off in the automotive sector. The increasing pull of Indian market on one hand and the near stagnation in automobile sector in markets of USA, EU and Japan on the other hand worked as a push factor for shifting of new capacities and flow of capital to the auto industry of India. The increasing competency in automobile companies has not only resulted in multiple choices for Indian consumers at competitive costs, it also ensured an improvement in productivity by almost 20 per cent a year in automobile industry.

Fitch rating (2009) preached that stable commercial vehicle demand remains dependent upon a stable economic environment including continued positive growth in freight volumes and stabilization of freight rates at higher levels which may lead to an improvement in the financial and liquidity position of operations. Fitch expected a soft recovery to start towards the end of 2009.

Davar.J.(2010), expressed his view that, the technological development and moving up the value chain were given a special thrust in the year 2009-10. Moreover, as per the estimate of their knowledge partner Ernst & Young (E&Y) the industry may well be five-folds of its current size by 2020.

KPMG Report (2006) articulated India as emerging as an outsourcing hub for global majors. Companies like GM, Ford, Toyota and Hyundai were implementing their expansion plan in the current year. While Ford and Toyota continue to leverage India as a source of components. Hyundai and Suzuki had identified India as a global source for small car models.

Methodology

In order to fulfill the above objectives secondary data was collected from Society of Indian Automobile Manufacturers (SIAM) for the duration of 2003 to 2009. To know the existing challenges faced by the automobile companies, sectorwise Delphie method was adopted. In heavy automobile sector Maruti Suzuki, Tata Motors and Mahindra and Mahindra were purposively selected for their predominance in Indian market. For observing the picture of the two wheeler sector Bajaj Auto, Hero Honda and TVS Motors were selected purposively. Bajaj Auto was selected to represent the three wheeler sector also. Their opinion regarding the existing and coming challenges were taken. The inherent strength of this industry in the automobile market were also observed using this method. These observation led the study to find the factors determining growth of demand for the automobile industries

for the years to come. For this purpose precious information from the updates published in Indian Brand Equity Foundation (IBEF) journal, Annual Reports of Automobile Component Manufacturers Association of India (ACMA) and Automobile Mission Plan 2006-11 were accessed.

After collection of data time series analysis was conducted for the projection of probable estimates of the unknown variables by using the regression technique. To foresee the challenges of the market, projection for the year 2015 and 2020 were conducted as per requirement of the study. This analysis were done to estimate the future automobile production in the world and India, category wise automobile production in India, gross turnover of the Indian automobile industry, vehicle category wise domestic sales of automobile sector of India, production, domestic sales and export of automobiles produced in India.

Result and Discussion

Table 1: Year wise automobile production in the world and India

Year (X)	World production (Y1) in million	India's production (Y1) in million	India's production as percentage of world production
2003	60.09	7.24	12.05
2004	64.16	8.47	13.20
2005	66.46	9.74	14.65
2015 (projected)	98.60	22.23	22.54

Source: OICA Statistics Committee, world ranking 2005

Table 1 delineates the comparative feature of year wise automobile production of the world as well as India. Highest number of world's automobile production was observed in the year 2005. Highest growth rate of production was observed in the year 2004 (6.77%) followed by 2005 (3.58%) and 2003 (2.80%) respectively. According to the linear trend equation $Y_{2015} = 63.57 + 3.185X$ the forecasted production would be 98.60 million in 2015. The contribution of Indian automobile sector was observed to be increasing steadily. This was noted to be 12.05%, 13.20% and 14.65% in the years 2003, 2004 and 2005 respectively. Indian automobile sector shown a significant growth of 16.99% in 2004 and 14.99% in 2005 which were significantly higher than world growth in the respective years. In India's context concerned linear trend equation was $Y_{2015} = 8.39+1.25\ X$. Forecast shown that, in 2015 the automobile produced in India would be 22.23 million which is 22.54 per cent of the world production.

Table 2: Year wise and Category wise automobile production in India

Year	Passenger vehicle in million	Commercial vehicle in million	Three wheelers in million	Two wheelers in million	Total vehicles in million
2003	0.99	0.27	0.36	5.62	7.24
2004	1.21	0.35	0.37	6.59	8.46
2005	1.31	0.39	0.43	7.61	9.74
2006	1.54	0.52	0.56	8.47	11.09
2007	1.78	0.55	0.50	8.06	10.85
2008	1.84	0.42	0.49	8.42	11.17
2009	2.35	0.57	0.62	10.51	14.05
2020 (projected)	4.48	1.04	1.02	17.29	23.85

Source: SIAM data

Table 2 expressed the year wise and vehicle category wise production of automobile sector of India. In an overall analysis a gradual increase in the number of total vehicles and passenger vehicle were noticed during 2003 to 2009. The highest growth rate in total number of vehicles was observed in the year 2009 (25.78%). Lowest growth rate was observed in 2007 (2.16%). According to forecasting, the total automobile production may be 23.85 million by 2020. On the contrary, lowest growth of number of passenger vehicle was noticed in the year 2009(3.34%) and highest growth was observed in the year 2004 (22.22%). The forecast suggested that it will reach to 4.48 million in the year 2020. Apart from 2005 and 2008 commercial vehicle production shown upward trend. The three wheeler production shown the declining trend in the years 2007 and 2008. The two wheeler production shown year wise upward trend apart from the year 2007. In 2009 highest growth of production in commercial vehicle (35.741%) and two wheelers (24.82%) were observed. Again, in this particular year lowest production of passenger vehicle was also noticed.

Table 3: Year wise Gross Turnover of the Indian Automobile Industry

Year	Gross Turnover in million USD
2004-05	20.896
2005-06	27.011
2006-07	34.285
2007-08	36.612
2008-09	38.238
2015-16 (projected)	71.26

Source: SIAM data (Conversion rate: 1 USD=Rs 40)

Table 3 exhibited the year wise gross turnover of the Indian automobile industry during 2004 to 2009. The year wise turnover data shown a positive but declining growth rate. Highest growth rate of turnover was observed in the year 2005-06 (29.26%) followed by year 2006-07 (21.22%).

Growth rate was observed to be at its lowest in the year 2008-09 (4.44%). The forecasting method with a linear trend reflected that, this turnover may reach at 71.26 million USD in the year 2015-06. This also mean that, during coming 7-8 years a total growth of 86.86% growth might be possible.

Table 4: Year wise and Category Wise Domestic Sales of the Indian Automobile Industry

Year	Passenger vehicle in million	Commercial vehicle in million	Three wheelers in million	Two wheelers in million	Total vehicles in million
2003	0.90	0.26	0.28	5.36	6.80
2004	1.06	0.32	0.31	6.21	7.90
2005	1.14	0.35	0.36	7.05	8.90
2006	1.38	0.47	0.40	7.87	10.12
2007	1.55	0.49	0.36	7.25	9.65
2008	1.55	0.38	0.35	7.44	9.72
2009	1.95	0.53	0.44	9.37	12.29
2020 (projected)	3.63	0.98	0.64	14.57	19.82

Source: SIAM data

Table 4 articulated the year wise and vehicle category wise domestic sales of automobile sector of India. In an overall analysis a gradual increase in the domestic sales of total vehicles was noticed during 2003 to 2009 excepting the year 2009. The domestic sales of two wheeler, three wheeler and passenger vehicle shown steady year wise growth during 2003 to 2009. The highest growth rate in total number of vehicles was observed in the year 2004 (15.86%). According to forecasting, the total automobile domestic sales may be 19.82 million by 2020. This will be supported by the highest growth of domestic sales of passenger vehicle was noticed in the year 2009 (25.81%) and lowest growth was observed in the year 2005 (7.55%). Apart from 2008 domestic sales of commercial vehicle shown upward trend. Domestic sales of three wheeler shown the declining trend in the years 2007 and 2008. The domestic sales of two wheeler shown year wise upward trend apart from the year 2007. In 2009 highest growth of domestic sales in commercial vehicle (25.71%) and two wheelers (25.94%) were observed. Again, in this particular year highest domestic sales of passenger vehicle as well as commercial vehicle were also observed.

Table 5: Year wise relationship of production, domestic sales and export of automobiles produced in India

Year	Production in million	Domestic sales in million	Export in million
2003	7.24	6.81	0.48
2004	8.46	7.89	0.63
2005	9.74	8.91	0.81
2006	11.09	10.12	1.01
2007	10.85	9.65	1.24
2008	11.17	9.72	1.53
2009	14.05	12.29	1.80
2015 (projected)	19.04	16.04	3.06

Source: SIAM data

Table 5 described the year wise relation among production, domestic sales and export of automobiles produced in India during 2003 to 2009. This table also made an effort to forecast the production, domestic sales and export in million numbers for the year 2015. Apart from the year 2007 growth rate of production was observed to be significantly high (ranging 13.86% to 25.78%). A lion's share (87.47% to 94.06%) of the domestic production went for domestic sales during this period of time. High level of correlation is observed between total production and domestic sales as r value was 0.996. Also the correlation between total production and export was found to be fairly high ($r = 0.941$). It is also noted that apart from 2009 the export as a per cent of total production was increasing year wise. More than 13% of the total production was observed to be exported in the year 2008. Forecast for the year 2015 says that the total production will reach at 19.04 million vehicles, out of which 84.24% would be sold domestically and 16.07% would be exported.

Challenges ahead of the automobile industry as found from the stakeholders opinion are summarized as follows:

From 2009 a global recession was noticed in every spheres of the economy including the manufacturing sector. The wave may touch this industry of India also and the growth may be retarded.

Price fluctuation and volatility of price of metals and other raw materials may pull the production cost high. In this case India may loose the competitiveness in this sector. This may be a serious challenge ahead.

The durable nature of the cars and vehicles may make the demand volatile considering the inflationary situation and price level of the country.

As per the nature of the oligopolistic competition the margin of the manufacturers may be gradually less. This may be further less due to emergence of other manufacturers in this sector.

The factors responsible for growth of demand of automobiles which may help to meet the challenges are as follows:

- The increasing income level of the people lead to the increase of the luxurious and precious commodities like cars. Again, the increase in income of the middle class people pulls the demand curve of automobiles upwards. These two factors accrue for passenger cars and two wheelers. About 10-12% growth rate is expected for these commodities within the next five years as per the stakeholders' point of view on this sector.

- The automobile sector has got a big impetous with the entry of global OEMs (Original Equipment Manufacturers) in India. These OEM companies made India as their manufacturing base while supplying their produce to the foreign countries i.e. European countries. Asa result of that the Indian companies are enjoying comparative advantage while competing in global market. If this trend sustain, the demand for the outsourced motor parts will definitely grow high.

- The outsourcing model i.e., manufacturing of motor partys in India will definitely provide the scope of bulk production at the lower per unit production cost by enjoying the economies of scale.

Both the Indian made vehicles s well as India made models of internationally branded global OEMs are observed to be facing high global market demand as per the respondents' opinion. In th first case Scorpio model (Mahindra and Mahindra), City Rover (Tata Motors) may be taken as example. In the second case Santro Xing (Hyundai) and Alto (Suzuki) may be sighted as real example of the models of the OEMs.

The open market competition was facilited by India through the Government policies. This would bring more foreign direct investments. Indirectly the Government will promote the demand to raise the level of manufacturing to control the existing huge unemployment.

Investment in research and development for the automobile companies are gradually increasing. In this way new technologically developed model will come to the market and derive more demand for those cars and vehicles.

India's car manufacturers have the capacity of producing at least 25-30% less cost than the foreign countries because of lower cost of labour, availability of raw materials, better technical and designing skill with good technological adoptability.

Conclusions

In concluding remark it can be said that, being a 'Sunrise Sector' in Indian Economy the automobile sector is quite ready to face the challenges for the next decade. The study observed a fairly steady growth in this sector and this trend has to be maintained. By achieving this the overall production will reach at 22.23 million in 2015 which would be about 22 per cent of the world production. The two wheeler category faced some obstacles o declining trend mostly due to recession but according to the study the sector will make over it and will produce in 2020 at a higher note. The total vehicle production including all categories i.e. passenger vehicle, commercial vehicle, three wheelers and two wheelers will grow significantly. The gross turnover will be reached at more than 71 million USD in 2015-16. Study also revealed that both the domestic sales and export will increase with a good per cent of growth rate in the decade to come. In spite of the major challenges like post recessionary situation, price fluctuation of raw materials, the expected growth rate would be around 10-12 per cent. This will be supported by the huge impetus of the OEMs in this sector due to India based outsourcing strategy in one hand and Government policy to facilitate open market trade in the Union Budget 2010-11 on the other. The inbuilt technical and allocative efficiency of Indian automobile sector will attract fore FDI in this sector for further enhancement till 2020.

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Measuring the Effects of Inflation on Investment – An Important Strategy for Managerial Decision Making

Dr. Subir Ghosh[1]

Abstract

In today's complex business scenario, the manager faces a difficult and challenging task to take decision on capital budgeting for a project. Capital budgeting is one of the most important tasks to a manager as the manager is responsible for showing profit to the entrepreneur. Today's business requires facing competition and it needs profitability and financial stability of the company. In this context, it is important to evaluate the economic viability of the project. Again, nationalization or internationalization of trade involves business risk, competition, impact of inflation etc. Under the pressure of inflation, the company's capital investment budget is affected by rising trend of prices of the commodities. Therefore, the finance manager must tackle those factors carefully at the time of decision making. Out of all factors, inflation is one of the most crucial factor which influences on capital budgeting or investment decision making on the one hand and profitability on the other hand.

Against this backdrop, this paper highlights the measurement and effects of inflation on capital budgeting and shows how to tackle inflationary situation in case of managerial investment decision making.

Keywords: *Managerial Decision, Investment, Capital Budgeting, Economic Viability, Entrepreneur, Inflation, Financial Stability, Business Scenario, Competition, Gross Domestic Product (GDP), GDP Deflator, Cash Flow Analysis, Discounting Factor, Accounting Profit Analysis*

Introduction

Every project involves huge amount of investment and investment refers additional employment of money to the stock of capital. For such purpose, entrepreneur employs chief financial manager / analyst to look after the investment decision of the concern project. Financial manager takes the responsibility to show a sizable amount of profit to the entrepreneur and therefore, the manager needs to estimate the expected future returns of the project. But the future projection involves several factors like competition, inflation (rising trend of prices of the commodities), risks etc. Therefore, capital budgeting is considered as one of the crucial factors in managerial decision making.

Generally the finance manager evaluates the expected future returns on investment alternatives. For instance, lower returns may be accrued from a chance of yielding higher cash flows whereas another alternative may be fairly assuring future cash flows. It occurs because of the existence of inflation in the economy. Inflation plays an important role in capital budgeting or investment decision making and it is common for every nation. Inflation is a very common and challenging problem faced by the manager and it makes the investment decision more complicated. Most of the developing countries especially India faces double digit rate of inflation throughout the year. Therefore, Managers should be cautious about inflationary factor while calculating profitability of the project.

Though the existence of inflation is realized but in reality most of the managers do not take into account the effects of inflation in capital budgeting as the manager thinks that the effect of inflation is influenced proportionately on both revenue and cost of the project, and therefore it will not have any impact on profitability or in investment decision

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making. But practically, it is not a true fact. The effects of inflation on investment decision can be analyzed from two angles: Cash Flow analysis and Discount Rate analysis. Therefore, this study is relevant to analyze the method of measuring the inflationary effect on capital budgeting / investment decision making and its influence on profitability of the project. Against this background, this paper has been designed into two sections. The first section discusses about inflation, methods of measuring inflation and its possible effects on country's Gross Domestic product and the second section discusses about the inflationary effects on capital budgeting / investment decision making through Cash Flow and Accounting Profit Analysis.

Objective of the Study

General objective of the study is to highlight the effects of inflation on investment decision making and also to show how inflationary situation is adjusted in case of managerial investment decision making.

However the specific objectives are:

1. To study general trend and measurement of inflation and GDP growth rate in Indian economy over a certain period of time;

2. To show the effect of inflation on company's investment decision; and finally

3. To calculate the adjustment of inflation in capital budgeting as well as in profitability calculation.

Part – I: Inflation and its Measurement

Inflation

Inflation refers to the term as general rise in prices of the commodities. During the inflationary situation, the real purchasing power of people decreases and thereby people are bound to pay more to purchase the same commodity than before. For instance, initially a customer pays rupees 100 to purchase 5 kilogram of sugar but after a certain period of time the same customer is asked to pay Rs. 110 to buy the same amount of sugar at the situation of 10% rate of inflation in the economy. To stay in the same budget line (or to retain same expenditure on the consumption of sugar), the customer will be able to buy only 4.54 kilogram of sugar at the inflationary situation of 10%. Therefore, in inflationary situation the price level increases (in this particular example, price of sugar has increased from Rs. 20 / Kilogram to Rs. 22 / Kilogram) and thereby the real purchasing power decreases (in this particular example, purchasing power has decreased from 5 kilogram of sugar to 4.54 kilogram of sugar).

Since the purchasing power of the people decreases and the value of money depreciate during inflationary situation, therefore, it influences on investment decision as well as profitability of the company. In capital budgeting decision, if a manager expects inflationary situation in future, the manager take appropriate steps to adjust inflation in cash flow calculation. But in any case if a junior manager does not consider inflationary effect on investment decision, then the manager's anticipation becomes wrong on future expected return of the company. Therefore, inflationary effect should be taken care in capital budgeting of a company.

Measurement of Inflation

The general trend of inflation is understood simply observing the rising trend of price level of large number of goods and services in the economy. Inflation is calculated on average price level of goods and services based the data collected by government agencies. There are several ways to calculate inflation like Consumer Price Index (CPI), Wholesale Price Index (WPI), GDP Deflator etc.

Generally Wholesale Price Index (WPI) is used to calculate inflation in the Indian economy whereas Consumer Price Index (CPI) is used in most of the developed countries to calculate inflation in the economy.

Wholesale Price Index (WPI) measures the change in average price level of traded goods in the wholesale market. In India, price level of 435 commodities is considered through WPI method and the change in price level of such commodities indicates the rate of inflation in the economy. The price index of such commodities is available over different periods of time like weekly basis, monthly basis, quarterly basis and also yearly basis. Therefore, WPI is considered as an indicator of the rate of inflation in Indian economy.

On the other hand, Consumer Price Index (CPI) is a time – series analysis of average prices of a specified set of goods and services that are purchased by the consumers. Under CPI method, a set of fixed quantity – price combination is considered and the index is scaled so as to make it equal to 100 at the chosen point of time.

Table -1 shows rate of inflation (calculated both by WPI and CPI method) and compares with GDP (Gross Domestic Product) growth rate over the period 2000 to 2011.

Table – 1: Rate of Inflation in India (in percentage)

Year	Based on WPI	Based on CPI	GDP Growth Rate
2000	4.9	2.5	4.4
2001	1.6	5.2	5.6
2002	4.4	3.2	4.4
2003	3.4	2.27	4.5
2004	5.5	2.68	8.5
2005	6.5	3.39	6.5
2006	4.4	3.24	8.6
2007	5.4	2.85	8.9
2008	7.2	9.1	5.1
2009	3.6	12.4	7.7
2010	8.1	9.1	9.1
2011 (Upto March)	5.7	5.8	8.2

Source: Indiabudget.nic.in & http://vishalmishra.wordpress.com/indias-economic-oulook

Inflation and its influence on GDP

Inflation and GDP growth are the two most important macroeconomic variables. The Gross Domestic Product (GDP) is the key indicator which is used to measure the health of a country's economy. Gross Domestic Product (GDP) refers to the money value of all goods and services produced in an economy during a year. GDP is expressed as a comparison to the previous month, quarter or year etc. GDP also includes income earned by the foreigners in the country and excludes income received by the resident nationals from abroad. For example, the GDP growth rate in a certain year increases 10% means that the economy is growing by 10% over the previous year. GDP calculated in current market prices of the commodity, is called nominal GDP and GDP calculated in constant prices, is called real GDP. Since nominal GDP is calculated on current market prices, therefore it includes the effect of inflation. Inflationary factor is measured in using both nominal GDP and real GDP and is called GDP deflator.

GDP Deflator = [Nominal GDP / Real GDP] × 100

Usually nominal GDP is greater than real GDP because of inflation. If the difference between nominal GDP and real GDP is greater, then the inflation becomes more. GDP deflator is a factor used to correct nominal GDP into real GDP. To get real GDP, nominal GDP is deflated by dividing GDP deflator.

Therefore, Real GDP = [Nominal GDP / GDP deflator] × 100

= [Nominal GDP / Price index number of a year] × 100

For instance, nominal GDP in 2010 was Rs. 900 crores and price index was Rs. 150. The real GDP for 2010 would be Rs. (900 / 150) × 100 = Rs. 600 crores.

GDP of a country may increase or decrease but the change in GDP growth rate also reflects on stock market. A worst economic condition usually generates lower profit which

in turn indicates lower stock prices. But if the lower stock price takes turn into negative GDP growth rate then investors gets scared to invest in the stock market. Therefore, GDP growth rate also influences in investment decision making as it includes price changes (inflation). GDP deflator includes both nominal GDP (current prices) and real GDP (constant prices) in calculation. In other words, GDP deflator is the broadest measure of the change in price level of goods and services.

Current price figures indicate the price of the commodities transected during the period GDP is calculated and constant price figures indicate the average price of the commodities of a selected year / base year. The ratio between the current prices and constant prices is a measure of price movement and it forms the basis for calculating GDP deflator. GDP deflator shows the magnitude of change in price level in the current period over the change in the price level in the base year. It does not only consider the fixed basket of goods and services but it also considers change in the pattern of consumption or the introduction of new goods and services etc.

Part – II: Effects of Inflation on Investment Decision

Inflation and Investment Decision

Capital budgeting will not have any meaning unless the effect of inflation is taken into consideration in investment decision making. To make capital budgeting decision perfect, it is required to calculate cash inflows as well as cash outflows. The total available costs are denoted as cash outflows whereas the benefits of the company are denoted as cash inflows. In capital budgeting decision making process, cash flow estimation is the primary step. The information regarding the estimation of cost - benefit can be obtained from the departments of marketing, accounts, productions etc.

The evaluation of any capital investment proposal is based on the future benefits accruing for the investment proposal. Therefore, cost – benefit analysis is one of the most important tasks of a manager to make capital budgeting decision / capital investment proposal effective. There are two important methods available for cost – benefit analysis. They are Accounting Profit Analysis and Cash Flow Analysis. Practically, Cash Flow analysis is most popular and most difficult task to a manager mainly at the time of adjusting the effect of inflation in capital budgeting decision. Accounting profit is end result of different accounting concepts and policies whereas cash flow is the net result of cash inflows (benefits) and cash out flows (costs). Unless adequate care is taken while adjusting the inflationary effect on accounting data, then cash flow analysis will produce incorrect result and thereby the investment decision would be wrong. The difference between accounting profit analysis and cash flow analysis is shown in table -2 considering the hypothetical figure of revenue and expenses.

Table-2: Accounting Profit versus Cash Flow Analysis

Accounting Profit Analysis			Cash Flow Analysis		
Particulars	Rupees	Rupees	Particulars	Rupees	Rupees
Revenue		50,000	Revenue		50,000
Less: Expenses			Less: Expenses		
Cash Expenses	2,000		Cash Expenses	2,000	
Depreciation	1,000	3,000	Depreciation	1,000	3,000
Earnings Before Tax (EBT)		47,000	Earnings Before Tax (EBT)		47,000
Tax @ 25%		11,750	Tax @ 25%		11,750
Earnings After Tax (EAT)		35,250	Earnings After Tax (EAT)		35,250
			Add: Depreciation		1,000
			Cash Flow		36,250

Inflation and Cash Flow

There is a common concept that the effect of inflation does not bring much impact on profitability of the company because inflationary effect is counted on both net revenue as well as cost of production. But it is not true in reality because selling price the product and costs involved in production or marketing the product show different degrees of responsiveness to inflation. Therefore, estimation of cash flow is a very big challenge to the finance manager. In this respect, it is also require examining cash flow both in nominal terms as well as in real terms. Nominal cash flow is nothing but income received in rupee where as real cash flow refers to the purchasing power of people's income. This has been explained in table -3 with the following problem of capital budgeting.

Let us consider a manufacturing company which has invested Rs. 6, 00,000. Total capacity of the plant is 60,000 units of a certain product. The capacity utilization of the plant during first three years is shown in the table below.

Year	1st	2nd	3rd
Capacity Utilization (in percentage)	60	75	100

The selling price per unit of the finished product is charged at Rs. 15 and the variable cost of production is 40%. Fixed cost per annum is Rs. 30,000 and depreciation is 20% of total investment and inflation is considered at the rate of 10%.

Table -3 shows the detail calculation of cash flow of the

project and also shows the method of adjusting inflation in cash flow analysis and finally helps in investment decision making of the project.

Table 3: Comparison of Real Cash Flow and Nominal Cash Flow

Particulars / Year	1st Year	2nd Year	3rd Year
Sales Revenue (SR)	5,40,000	6,75,000	9,00,000
Less: Variable Cost (VC) [@40% on SR]	2,16,000	2,70,000	3,60,000
Depreciation (@ 20% of 6,00,000)	1,20,000	1,20,000	1,20,000
Fixed Cost	30,000	30,000	30,000
Earnings Before Tax [EBT = SR – VC- D - FC]	1,74,000	2,55,000	3,90,000
Tax [@ 25% on EBT]	43,500	63,750	97,500
Profit after Tax (PAT = EBT - Tax)	1,30,500	1,91,250	2,92,500
Real Cash Flow (SR – VC –FC)	2,94,000	3,75,000	5,10,000
Inflation Adjustment	(1.10) 1	(1.10) 2	(1.10) 3
Nominal Cash Flow	3,23,400	4,12,500	5,61,000

Inflation and Discount Rate

On the other hand, the finance manger should make consistency between inflation and market determined discount rate. In such case, the company's output price should be more than the expected rate of inflation in future and the percentage of profit must be high. Otherwise low profitability will make the investment decision wrong in presence of high rate of inflation. Since future inflation rate is unknown to a manager, therefore manager should be careful in calculating cash flow and should always match between discount rate and cash flow to make investment decision viable. Discount rate is also one of the prime concerns of a finance manager. It includes borrowing rate, lending rate, cost of capital, returns on stocks, opportunity costs etc. Mainly discount rate is influenced by Net Present Value (NPV) of the project. The selection of proper discount rate is a difficult task of a manager. Again it is important task because proper selection of discount rate can correct the investment decision. It is necessary to discount future benefits and costs to calculate net present value. If the discount rate is higher, then present value of future cash flow becomes lower. Therefore, the minimum requisite rate of return on funds committed to the project influences on investment decision making and it uses as a financial standard for evaluating investment projects. To make investment decision effective, manager should match cash flow with discount rate. To be consistent and free from inflation bias, the cash flows should match with discount rate.

Conclusion

Capital budgeting is one of the most important tasks to a manager as the manager is responsible for showing profit to the entrepreneur. Today's business requires facing competition and it needs profitability and financial stability of the company. In this context, it is important to evaluate the economic viability of the project. Under the pressure of inflation, the company's capital investment budget is affected by rising trend of prices of the commodities. GDP growth rate also influences in investment decision making as it includes price changes (inflation). GDP deflator is the broadest measure of the change in price level of goods and services. Therefore, the finance manager must tackle those factors carefully at the time of decision making. Capital budgeting will not have any meaning unless the effect of inflation is taken into consideration in investment decision making. To make capital budgeting decision perfect, it is required to calculate cash inflows as well as cash outflows. On the other hand, the finance manger should make consistency between inflation and market determined discount rate. In such case, the company's output price should be more than the expected rate of inflation in future and the percentage of profit must be high. Otherwise low profitability will make the investment decision wrong with presence of high rate of inflation. Since future inflation rate is unknown to a manager, therefore manager should be careful in calculating cash flow and should always match between discount rate and cash flow to make investment decision viable.

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Impact of Globalization on Industrial Relations at Micro Level in the Tea Gardens of Dooars Region of West Bengal

Debasish Biswas[1]

Introduction

In order to find out the impact of Globalization on tea industry located in the Dooars region of West Bengal, we have decided to measure the affect on the following important parameters of Industrial Relations, namely:

a) Man days lost due to strikes

b) Man days lost due to Gate meeting

c) Quantum of Gratuity dues

d) Trade union membership

e) Promotional opportunities

Each of the aforesaid parameters plays a very vital role in shaping the industrial relations in the tea gardens. The analysis of these parameters in the backdrop of pre and post globalization period can therefore help to understand the nature of changes which have taken place in the industrial relations in the tea gardens of Dooars region as a result of Globalization. Though we know that Globalization in India came into force in the year 1991 but its actual impacts on tea industries of India were experienced only from about 1999. We have therefore taken the period 1991 to 1998 as pre-Globalization period and 1999 to 2006 as post-Globalization period.

This study attempts to examine the impact of globalization on various parameters of industrial relations in the tea gardens of Dooars region.

1. Man days Lost due to Strike

Similar to the other industries in West Bengal, the tea industry also suffers from frequent work stoppages in the form of strikes and lockout. Ever since the emergence of trade union in the tea industry, the strikes have been the common phenomena. There has been a tendency to resort to strikes and gheraos which often degenerated in violence, confinement and assault of the managerial staff. The causes of strikes in the tea garden of Dooars include the following:

1) Wages

2) Bonus

3) Welfare facilities

4) Indiscipline and violence

5) Hours of work

6) Intra trade union rivalry

Strikes in tea industry result most frequently from differences regarding rates of wages. The data available from the selected tea gardens of Dooars region in respect of strikes from the year 1991 to 2006 shows an erratic nature of industrial disputes.

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Table 1.1

Average Number of Strikes in Selected T.Gs of Dooars Region during the Period 1991-2006

Pre- Globalization Period

Year	1991	1992	1993	1994	1995	1996	1997	1998
No of Strikes	3.77	4.70	3.80	2.50	1.60	3.47	3.23	2.57

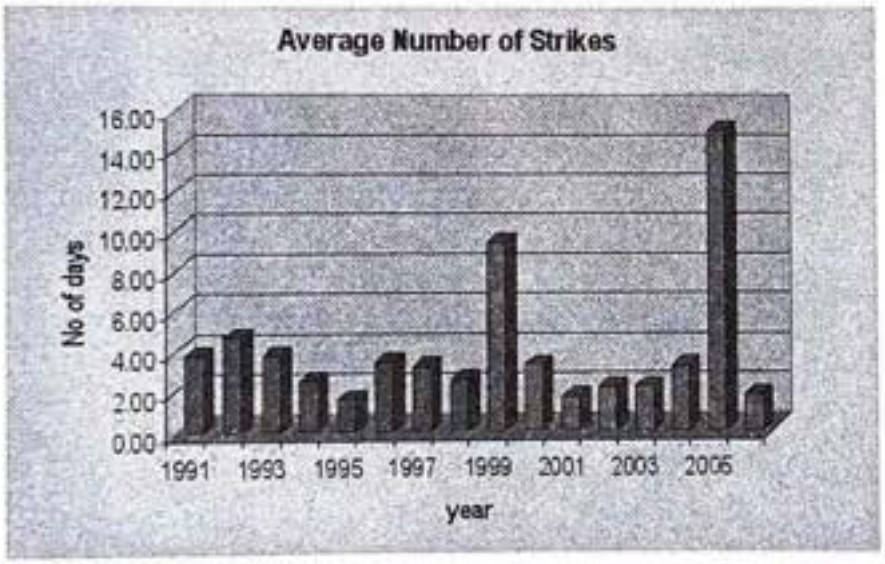
Post- Globalization Period

Year	1999	2000	2001	2002	2003	2004	2005	2006
No of Strikes	9.43	3.27	1.70	2.17	2.23	3.20	15.03	1.83

Source: Individual tea garden records (various years)

Figure 1.1

The Trends of Frequency of Strike in Dooars Tea Garden during the Period 1991-2006



Source: Individual tea garden records (various years)

In tible 1.1, no uniform and regular upward or downwird trend is noticed in the frequency of strikes in the selected tea gardens of Dooars region. The occurrence of strikes has been erratic in nature. In 1999 and 2005, there was an unusual/abnormal proliferation in the number of strikes in these gardens. In the year 1999, tea industry from Dooars, Terai and Darjeeling went on strikes for 10 consecutive days on the issue of wage increments. Similarly, in 2005, over 3.5 lakhs workers in the 350 tea gardens in North Bengal went on an indefinite strike from July 11 followin the failure of negotiations over their demand for highe wages. The stalemate over wages came to an end on Jul 25, when the parties concerned arrived at a settlement.1

From fig. 1.1, we find that the average number of strike during the period 1991-1998 was 3.20 where it was 4.8 during 1999-2006 which suggest that the number of strike has increased in the post- Globalization period. The hug spurt in the number of strikes in 1999 and 2005 has bee mainly responsible for the increased number of over a strikes in the post- Globalization period; otherwise th magnitude of strikes in pre and post- Globalization perio did not witness any significant changes.

2. Gate Meeting in the Tea Garden

Along with strike and lockout, gate meeting is one of th most decisive factors in determining industrial relations i the tea gardens. The workers hold gate meeting to discus about their grievances and in order to attract the notice o the management towards those grievances. The occurrenc of gate meeting in the tea gardens is more frequent tha strikes but its duration is much smaller than those of strikes.

The gate meeting takes place for minimum of half an hou and it can stretch to about 2 hours depending upon the

gravity of the issues involved. The gate meetings generally take place in front of the gate of the factory or the office of the management. It is held generally in the working hours of morning shift before resuming the work. All the workers of the gardens assemble in front of the gate of the factory or the staff room and raise slogans in support of their demands. The leaders of the trade union are also present during the gate meeting. Among the various issues involved in gate meeting in tea gardens, few notables are as under:

1) Delayed wages
2) Construction of new houses
3) Fringe benefits (umbrella, slippers, tarpaulin etc)
4) Additional employment
5) Badli workers
6) Electricity connection
7) Bonus rate
8) Decasualization of workers
9) Elephant depredation
10) Repairing of houses

So far as Dooars tea gardens are concerned, the occurrence of gate meeting has been a regular feature. From the data generated from the selected tea gardens of Dooars region, we find that there has been an increasing tendency in the number of gate meeting in these gardens during the post-Globalization period.

Table 1.2

Average Man days Lost due to Gate Meeting during the Period 1991 to 2006

Pre Globalization Period

Year	1991	1992	1993	1994	1995	1996	1997	1998
Man days lost	853.80	895.27	997.27	876.33	925.97	1116.17	868.47	1154.00

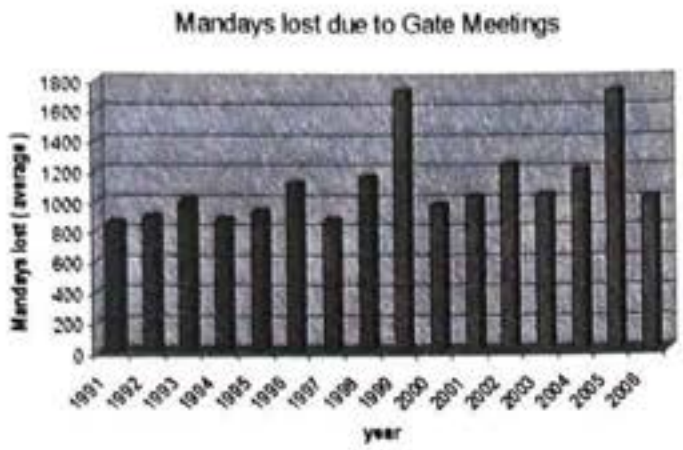
Post- Globalization Period

Year	1999	2000	2001	2002	2003	2004	2005	2006
Man days lost	1728.27	967.33	1025.77	1239.60	1033.17	1198.30	1720.43	1012.00

Source: Individual tea garden records (various years)

Figure 1.2

Average Man days Lost due to Gate Meeting during the Period 1991 to 2006



Source: Individual tea garden records (various years)

From table 1.2, it is revealed that there has certainly been a considerable increase in the average man days lost due to gate meeting in the post- Globalization period. The average man days lost between the period 1991 to 1998 is just around 961 where as it is 1241 during the period 1999 to 2006 which clearly suggest that in the post- Globalization period average man days lost has increased considerably.

The increasing trend of gate meeting in Dooars Tea gardens is an indicator of worsening labour management relations in these gardens. It throws light on the management's concern for the workers. The closer look into the main causes of gate meeting gives us an idea about the deprivation of workers from many benefits. The management has failed to meet its obligation set forth under the Plantation Labour Act 1951. The workers on the other hand have been trying hard to avail these benefits from the management. As a result of which the industrial relations in these gardens have been adversely affected.[3]

3. Quantum of Gratuity Dues

Through the data obtained from the selected tea gardens of Dooars regions, it is found that the quantum of gratuity dues has increased enormously during the post-Globalization period.

Table 1.3

Quantum of Gratuity Dues in the Dooars T.Gs during the period 1991 to 2006

Pre Globalization Period

Year	1991	1992	1993	1994	1995	1996	1997	1998
Gratuity Dues	42402.93	45313.3	49823.2	47923.1	42150.57	41100.8	37500.9	58485.27

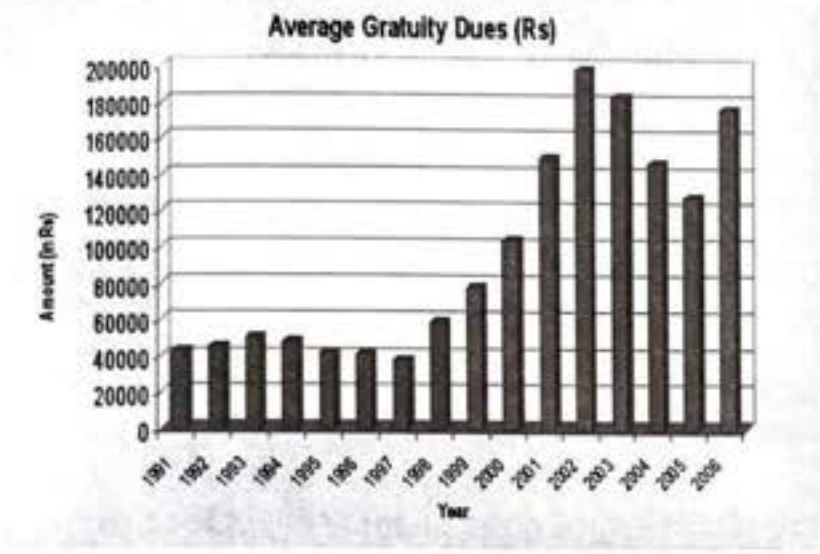
Post Globalization Period

Year	1999	2000	2001	2002	2003	2004	2005	2006
Gratuity Dues	77590.4	103957.3	149495.8	197953.8	182943.3	146626.1	127869.4	176531.3

Source: Individual tea garden records (various years)

Figure 1.3

The Trend of Gratuity Dues during the Period 1991-2006 in the Selected T.Gs of Dooars Region



Source: Individual tea garden records (various years)

From table 1.3, it is observed that the quantum of average gratuity dues from the year 1991 to 1998 did not show much fluctuation and remained close to around Rs 40,000. However, from 1998 onwards, it began to pile up in huge Quantum.

It is very clear from the chart, that in the post-Globalization period, the quantum of gratuity dues have increased enormously. It is thus clearly revealed from the figure 1.3 that, there has been a huge increase in the quantum of gratuity dues in the selected tea gardens of Dooars regions in the post- Globalization period. It indicates that with the advent of globalization, the tea industry began to witness the downfall in their overall performance resulting in inadequate welfare facilities to the workers as well as post retirement benefits. The analysis shows that in the post-Globalization phase, the dues of gratuity have remarkably increased.[4]

The situation can be interpreted in such a way that due to globalization, the competition is so stiff that the employers are not even focusing on a very crucial social issue in relation to the employees that is payment of gratuity to the employees on time.

If the quantum of gratuity falls due in a large amount or rather we can say that if there is an increasing tendency of gratuity fallen heavily due, industrial relations is supposed to be badly affected because gratuity helps a retired person or the legal heirs of a deceased employee to maintain its day-to-day livelihood in the absence of earnings in terms of monthly/weekly/daily payments.

So mounting of gratuity dues creates a fear psychosis in the minds of the existing employee that they/ their legal heirs may also be deprived of this benefit in the future. So they cannot concentrate on their activities and it adversely affects their level of motivation and productivity.[5]

So, mounting of gratuity dues has got an adverse relationship on industrial relations of an industry in general and tea industry in particular.

4. Social Cost borne by the Planters as per the Plantation Labour Act 1951

The data collected from the Dooars tea gardens regarding the social cost reveals the gradual decline in the quantum of social expenditure incurred by the planters. The decline has been observed more specifically from the year 2000 when the tea industry in the Dooars was under the severe crisis. The trend of expenditure on social cost by the tea planters in selected tea gardens of Dooars region is given in figure 1.4.

Table 1.4

Average Social Cost borne by the Planters (as per the Plantation Labour Act, 1951) in the Selected T.Gs of Dooars Region

Pre Globalization Period

Year	1991	1992	1993	1994	1995	1996	1997	1998
Social cost	8443342	8596182	8777415	8782732	8740827	8811671	8926836	8916556

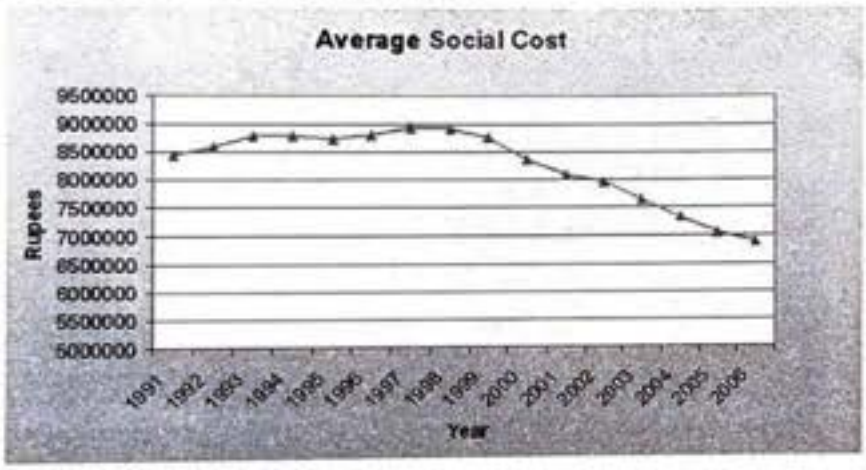
Post Globalization Period

Year	1999	2000	2001	2002	2003	2004	2005	2006
Social cost	8774532	8385578	8100952	7961026	7660811	7330927	7047213	6878038

Source: Individual tea garden records (various years)

Figure: 1.4

Average Social Cost borne by the planters (as per the Plantation Labour Act, 1951)



Source: Individual tea garden records (various years)

The average social cost in the Dooars tea gardens maintained a steady progress till the year 1998. However, when the tea industry began to experience depression in tea market, the social cost began to fall down. Most of the tea gardens in Dooars were forced to cut down on social cost to remain competitive. They resorted to paying labour wages lower than minimum wages, defaulted even the statutory payments like provident funds and gratuity to workers, working hand in glove with trade union leaders for carrying out discriminatory labour practices, not adequately taking care of the health and safety of the workers. The social cost therefore plunged down significantly during the post-Globalization period.[6]

5. Trade Union Membership

All the Trade unions in the Dooars tea gardens are registered under the Trade Unions Act 1926 and these are affiliated with various National Trade Union Federations like CITU, INTUC, UTUC, etc. The CITU affiliated unions have members in almost all the tea gardens of Dooars. The membership of CITU is the highest among the total workers in the Dooars. In membership strength, CITU is followed by the INTUC affiliated unions which has a small number of union membership.

While about 55% of the workforce in these gardens is female, we found that the presence of women in the union leadership is almost zero. Most of the gardens have more than 1 major trade union. 21% of the gardens had 4 or more unions, while 32% had three unions.

Only 42% had a single union. Multiplicity of unions has been blamed by some people in the management as one of the factors leading to non-viability of the gardens. They feel that they have to negotiate and compromise with many different interests groups, some of whom may be pulling in opposite directions.

Table 1.5

Average Trade Union Membership in Dooars T.Gs during the Period 1991 to 2006

Pre Globalization Period

Year	1991	1992	1993	1994	1995	1996	1997	1998
Membership	37671	37691	37666	37651	37545	37658	37609	37530

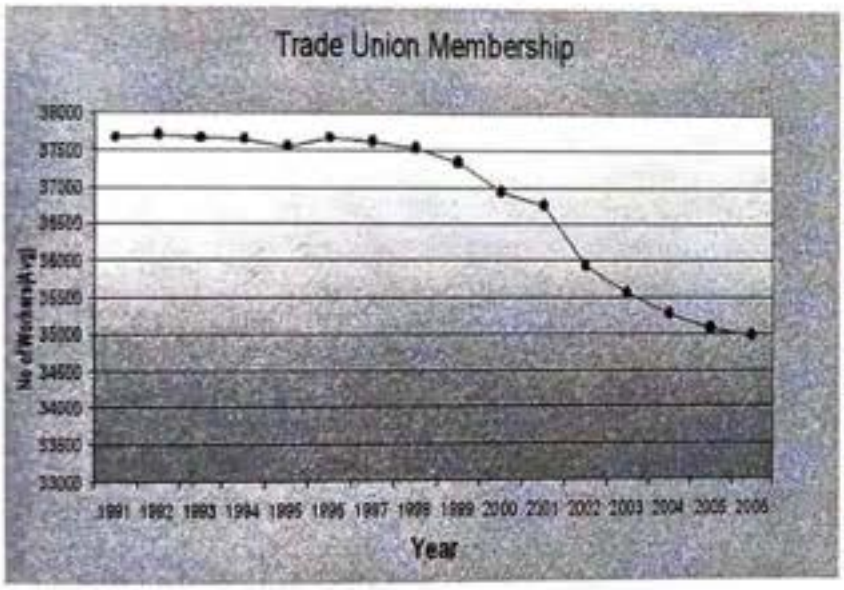
Post Globalization Period

Year	1999	2000	2001	2002	2003	2004	2005	2006
Social cost	37325	36920	36742	35912	35547	35267	35069	34970

Source: Individual tea garden records, (various years)

Figure: 1.5

Trends of Trade Union Membership in Dooars T.Gs during the Period 1991-2006



Source: Individual tea garden records, (various years)

The table 1.5 reveals that from the year 1991 to 1998, the trade union membership has maintained a uniform and steady trend. However, after 1999, there has been a considerable decline in trade union membership. It decreased over 7 percent during the period 1999 to 2006.

In the post-Globalization period, there has been a growing tendency among the workers to distance themselves away from trade union activities as they are more concerned about the survival of the industry for their own survival.

Trade unions have taken root in the tea garden of Dooars region against tremendous opposition from the planters and there is no denying the fact that over the years they have played an important role in improving the condition of the workers.

But today's picture of union in tea plantation of Dooars emerges different from that of the past. The union leaders who are often outsiders, show little sympathy towards the sufferings of the working class and are more interested to meet their own selfish ends and gain political mileage. The Plantation Labour Act 1951 makes it mandatory for the employers to provide facilities like housing, health, sanitation, drinking water, creches etc.[7]

One of the significant features of the trade union movement in the tea Industry in the Dooars region is outside leadership. Most of these leaders belonging to different political parties are less interested in labour welfare and are more concerned to secure private and personal ends and to get political mileage. Several factors have been responsible for the outside interference in the executive of trade union in the tea gardens. First, the majority of workers are illiterate. Second, fear of victimization and of being summarily dismissed by management.

Third, financial weakness of the trade union and absence of full time trade union workers have given the opportunity to an outsider to interfere in the trade union's administration and in the executives of the trade unions.

During the pre-Globalization Era, the trade unions in the tea gardens were more aggressive. They had the tendency to resort to strikes on the slightest pretext.

But now in the post-Globalization period, the scenario has changed. With the pressure of maintaining competitive edge, the management can no longer meet the unreasonable demands of the trade unions.

The workers have also realized the need to cooperate with the management and hence they are distancing themselves away from the trade union activities. As a result the total membership in the Dooars tea gardens has been declining considerably.[8]

Trade union is one of the important actors of industrial relations. In spite of some drawbacks, trade unions play an important role in shaping the industrial relations in the tea gardens.

gardens. The various factors which are taken int consideration before selecting a worker for being promote are as follows:

1) Worker's length of service in the tea garden/ servic records
2) Level of performance/ efficiency
3) Loyalty towards management
4) Trade Union's reference
5) Educational qualification

Over the years we find that the scope for promotion o workers in the tea gardens of Dooars region has bee gradually falling down. The Changing pattern of numbe of promotion awarded to the workers of Dooars tea garde during the period 1991 to 2006 is shown with the help o Figure 7.10.

6. Promotional Opportunities

There are no definite criteria for promotion in the tea

Table 1.6

Number of Workers Promoted during the Period 1991-2006

Pre Globalization Period

Year	1991	1992	1993	1994	1995	1996	1997	1998
Promotions	99	93	85	88	86	81	79	77

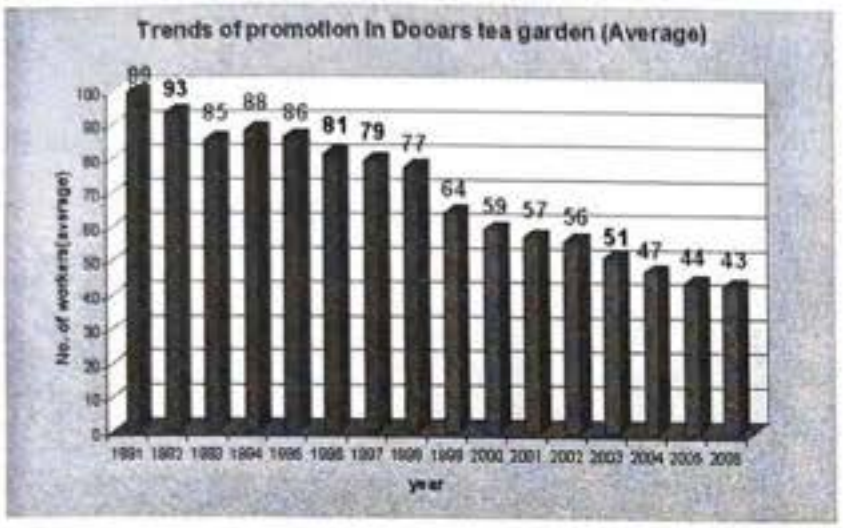
Post Globalization Period

Year	1999	2000	2001	2002	2003	2004	2005	2006
Promotions	64	59	57	56	51	47	44	43

Source: Individual tea garden records (various years)

Figure 1.6

Number of Workers Promoted during the Period 1991-2006



Source: Individual tea garden records (various years)

It is clear from the figure 1.6 that during the period from 1991 to 2006, there has been considerable fall in the number of promotion of the workers. In 1991, number of workers promoted was 99 where as in 2006 it was only 43. Thus during this period, number of promotion decreased by over 57 per cent. Close look at the trend of promotion reveals that during the period from 1991 to 1998, the decline is comparatively not as steep as during the period 1999 to 2006 where the fall is much steeper. The percentage change (decrease) during 1991 -1998 is just 22 per cent and the average promotion per year is 86.5. Where as during the period 1999-2006, the percentage change (decrease) is 33 percent and average promotion per year is 52.8.

It is thus very clear that during the post- Globalization period, the number of promotion in the selected tea gardens of Dooars region has come down considerably.

The lack of promotional opportunity to the deserving candidate has given rise to resentments among the workers in the tea gardens. The gradual spread of education among the local garden workers resulted in higher aspiration levels among the new generation. There has been growing demand that local people be appointed to clerical post in the garden whenever any vacancy arises in the clerical or staff category, a person from outside the tea garden is recruited bypassing or ignoring the local candidates. This disparity in recruitment process has created dissatisfaction among the workers and hence labour management relations in the tae gardens have been adversely affected.[9]

Conclusion

In conclusion we can say that firstly the huge spurt in the number of strikes in 1999 and 2005 has been mainly responsible for the increased number of over all strikes in the post- Globalization period; otherwise the magnitude of strikes in pre and post- Globalization period did not witness any significant changes. Secondly, the increasing trend of gate meeting in Dooars tea gardens is an indicator of worsening labour management relations in these gardens. Thirdly, mounting of gratuity dues has got an adverse relationship on industrial relations of an industry in general and tea industry in particular and the social cost plunged down significantly during the post-Globalization period. Fourthly, in the post-Globalization period, there has been a growing tendency among the workers to distance themselves away from trade union activities as they are more concerned about the survival of the industry for their own survival. Lastly, it is very clear that during the post-Globalization period, the number of promotion in the selected tea gardens of Dooars region has come down considerably.

Recommendation

The following suggestions may be recommended in order to improve the industrial relations.

1. General awareness level should be developed among the employees that strike is the last resort to be applied in order to redress their grievances and demands from management.

2. Management should draw their attention for the fulfillment of employee's grievances through collective bargaining process.

3. Gratuity should be paid by installment method if the fund is not sufficient to make full payment of gratuity at a time.

4. Social cost should be also born by government along with owners of tea gardens in order to reduce the excessive burden of social cost.

5. Promotional opportunities should be given in order to fulfill the aspirations of existing employees.

6. Trade union leaders should work for the employees only rather than to fulfill the political interest of political leaders.

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Projected Economic Growth and Estimation of Employment in Various Sectors of Indian Economy - An Analysis

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Abstract

Indian economy is a labor- intensive economy and problem of unemployment is one of the crucial points of discussion in every plan. It is the expectation of the existing government that during the twelfth plan (2012 -2017) our economy will achieve a 9 to 9.5 percent annual economic growth. This paper has analyzed the projected employment scenario in different sectors (Agriculture, Industry and Services) of Indian economy if nine percent economic growth achieved during the last phase of twelfth plan. The analysis part of this paper highlights the projection of formal – informal sector employment at the same rate of economic growth and comparison between two sectors. The paper attempts to show how the Service sector in India will dominate the Agriculture and Industrial sector as far as employment creation is concerned at nine percent economic growth. This paper empirically examines how Indian labor market is dependent on informal labor force. Lastly, we have analyzed the status of part – time /under- employed workers and gender wise projections of labor force in India and made some recommendations for quality employment in the Indian labor market.

Key words: *employment, Agriculture, industry, services, formal - informal*

I. Introduction

The planning commission of India conducted a full swing meeting to discuss the objectives of the Twelfth plan, i.e. plan for 2012 – 2017. The crucial agenda of the meeting was to discuss the goals and objectives of the forthcoming Twelfth plan. Government hoped to achieve a 9 to 9.5 per cent annual economic growth in the period 2012 – 2017 with a focus on the sectors like – water, health, education, infrastructure, employment and re-designing of government's ongoing and newly adopted programmes. A high degree of uncertainty in the global economic scenario and a spike in global price of goods and services could lead to higher interest rates, impose a negative pressure on India's economic growth and employment.One of the paramount objectives of the plan is to identify the neglected backward areas where existing policies and programmes on employment creation are not delivering results and should therefore, be strengthened or even restructured, if required. The problem of unemployment has always been more pronounced compared to other problems in India. The typical feature of employment scenario of India is that large volume of workers are in the informal sector [NSSO (2004 -05) estimates 94% workers are in the informal category in India].

In this paper, we shall try to highlight the projected employment scenario of different sectors (Agriculture, Industry and services) of Indian economy with special reference to extreme phase of eleventh (2011 – 12) and twelfth Plan (2016 – 17), if 9% annual economic growth prevails. Secondly, a projection on formal – informal employment if 9% economic growth has achieved during the same period and the resultant effect on quality of employment. The paper is structured as follows. The second section offers the data and source. The third section attempts

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an analysis and interpretation to focus the employment sector in India if nine percent economic growth achieves during twelfth plan. The last section consists of some conclusions and recommendations.

II. Data and source

The analysis is entirely based on secondary data. The data have been collected from the main report of National Commission for Enterprises in the Unorganized Sector (NCEUS), Government of India., report of Information & cultural Affairs Department, Govt. of West Bengal, published newspapers, related journals and Govt. websites. Based on available data we have tried to analyze the effect of 9 percent economic growth on the employment sector in India during the extreme phase of eleventh and twelfth plan.

Table- 01: Projection of employment in Agriculture, industry and service sector with 9 per cent growth rate

Year	Projected GDP growth (%)	Projection of employment (in millions) &sector wise percentage distribution of labor force			
		Agriculture	Industry	Services	Total
2004 - 05	Actual	213.02 (53.1%)	78.07 (19.46%)	110.04 (27.43%)	401.13 (100%)
2006 – 06	Actual	219.00 (51.29%)	86.13 (20.17%)	121.80 (28.52%)	426.93 (100%)
2011 - 12	9	229.23 (47%)	104.96 (21.52%)	153.48 (31.47%)	487.67 (100%)
2016 - 17	9	240.19 (43.20%)	126.17 (22.69%)	189.54 (34.09%)	555.90 (100%)

Source: NCEUS, Govt. of India (main report, 2009)

Note: Figures in parentheses are percentage distribution of workforce

III. Analysis and interpretation

Table -01 gives the highlight in detail about the projection of sector wise distribution of total work force mainly during the last phase of eleventh and twelfth plan. It is clear from the above table that service sector will be the main employment-generating sector compared to agriculture and industrial sector during the end of twelfth plan, if 9 percent growth rate is maintained. It is also inferred from the table that the growth rate of service sector (23.50 percent) is more than industrial (20 percent) and agriculture sector (4.78 percent) in between the period 2011-12 and 2016-17. Since during the entire phase of twelfth plan the focus area will be Health, Education, Infrastructure and Water and all are service oriented; so a separate well-designed plan for the growth of service sector is essential to maintain the projected economic growth. Three sectors (Agriculture, Industry and Service) are correlated as well as complementary to each other; mainly Service and Industrial sector, so the development of service sector will boost up the other two.

Table – 02: Sector wise distribution of workers in Agriculture, Industry and Services with 9% growth rate

Industry	Sector	Distribution of workers by sector(9%GDP)			
		2004 – 05	2006 - 07	2011 – 12	2016 – 17
Agriculture	Formal	2.34	2.36	2.43	2.49
	Informal	210.68	216.64	226.80	237.70
	Total	213.02	219.00	229.23	240.19
Industry	Formal	8.09	8.30	7.59	6.37
	Informal	69.98	77.83	97.37	119.80
	Total	78.07	86.13	104.96	126.17
Services	Formal	22.36	23.21	24.53	25.08
	Informal	87.68	98.59	128.96	164.46
	Total	110.04	121.80	153.48	189.54
Total	Formal	32.79	33.87	34.54	33.93
	Informal	368.35	393.06	453.13	521.96
	Total	401.13	426.93	487.67	555.90

Source: NCEUS, Govt. of India (main report, 2009); ibid.

If we go through the table – 02 that highlight the percentage distribution of workers as formal - informal wise in agriculture, industry and service sector. It is interesting to note here, that the share of informal workers in the economy is moving in an upward positive direction. Therefore, the question of quality of employment will continue to persist. If we consider the formal agricultural sector employment, the rate of growth is constant but in informal sector, it shows a rising trend. In case of industry, the growth of formal sector employment shows falling trend but informal sector employment growth is an increasing trend. However, the service sector is an exceptional one, where both the formal and informal employment grows in an increasing manner, which is a good signal for our country. Therefore, the employment seekers in India will get more job avenues in services sector (both formal and informal) than agriculture and industrial sector if 9 percent economic growth achieved during the twelfth plan. There is a view that excessive rigidities in the labor market is a primary reason for disappointing growth of employment in India's formal manufacturing sector. A recent report of the World Bank (2010) notes that by imposing excess rigidity in the formal industrial labor market, labor regulation has created disincentives for formal sector employers to create new jobs in the industrial sector. Table – 02 exhibits formal employment opportunities for new employment seekers in the labor market is almost static.

Table – 03: projection of employment in formal and informal sector (both in total and percentage term) with 9 percent growth rate

Year	Projected GDP growth (%)	Employment(million)			Percentage share		
		Formal sector	Informal sector	Total	Formal sector	Informal sector	Total
2004-05	Actual	32.79	363.35	401.13	8.17	91.83	100.00
2006-07	Actual	33.87	393.06	426.93	7.93	92.07	100.00
2011-12	9	34.54	453.13	487.67	7.08	92.92	100.00
2016-17	9	33.93	521.96	555.90	6.10	93.90	100.00

Source: NCEUS, Govt. of India (main report, 2009); ibid.

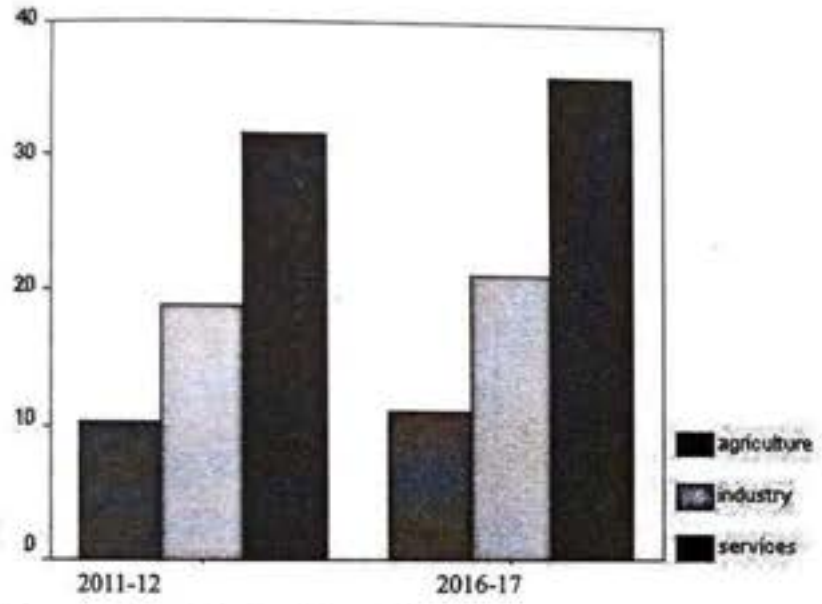
From table-03, it is clearly revealed how the share of formal and informal sector changes over the time. The total work force acted as formal workers was 32.79 million (8.17%) in 2004 – 2005 at an actual growth rate. It increased to 33.87 million (7.93%) in 2006 – 2007 at an actual growth rate. By the last phase of eleventh plan (2011 – 2012) it would further increase to 34.54million (7.08%) at a 9 percent GDP growth rate and 33.93 million (6.10%) at the extreme phase of twelfth plan (2016 – 17). On the other hand share of informal sector in terms of total employment was 363.35 million (91.83%) during the period 2004 – 05 at an actual growth rate. This volume of employment under informal sector has increased to 393.06 million (92.07%) in 2006 – 07. It would further increase to 453.13 million (92.92%) by the extreme phase of eleventh plan (2011 – 12) at 9 percent economic growth and further it would increase to521.96 million (93.90%) during the last phase of twelfth plan i.e.2016 – 17 at the same percentage of growth rate. So the analysis of the result clearly indicates that there will be a high degree of informalisation of employment towards the Indian economy if 9 percent economic growth is maintained. The main reason behind this trend towards informal employment is that, the incremental employment within the formal sector will mostly be of an informal type in the modern business environment. Secondly, Formal employment opportunities for new employment seekers in the labor market in Indian economy are decreasing day by day. Thirdly, the activities under informal sector have some typical features; such as, free entry and exit, highly depends on locally available resources, the structure of the enterprises based on family ownership, labor intensive technique of production, adopted technology, formal training from outside (absence of on - job training), unregulated and stiff competitive market, low requirement of capital, no government intervention, zero registration fee, exemption from all type of taxes etc. Expansion of informal sector in Indian economy has been a result of stagnating employment in the formal sector, which is followed by excess rigidity in the formal manufacturing labor market, labor regulation that has created disincentives for employers to create jobs in the formal manufacturing sector. These characteristics may convince the existing and new job seekers towards the informal sector.

Table – 04: Projection of employment additions by Agriculture, Industry and services during Eleventh and Twelfth plans at 9 per cent growth rate

Year	Projected GDP growth (%)	Additional Employment(million)			
		Agriculture	Industry	Services	Total
2011 - 12	9	10.23	18.83	31.68	60.74
2016 - 17	9	10.96	21.21	36.06	68.23

Source: NCEUS, Govt. of India (main report, 2009); ibid.

Figure1: Comparative analysis of Agriculture, Industry and service sector employment (in millions)



Source: Based on Table - 04

With reference to above projection of employment additions (Table – 04 and Fig-01), it is clearly inferred that 60.74 million (Agriculture-10.23 million, Industry – 18.83 million and services – 31.68 million) and 68.23 million (agriculture – 10.96 million, Industry – 21.21 and services – 36.06 million) people will get additional employment opportunity during the last phase of eleventh plan i.e. 2011 – 12 and at the extreme phase of twelfth plan i.e. 2016 – 17 respectively subject to the condition of 9 percent growth rate in GDP. From the comparative table it is seen that the employment additions by service sector will be more than agriculture and industrial sector at the end of twelfth plan. So more emphasis should be given for the quality improvement of the modern service sector. Education and infrastructure are the main parameters to improve the quality employment in the modern service sector.The growth of India's service sector is due to the rapid growth of Business Process Outsourcing(BPO), software business, financial and telecommunication services which are likely to be biased in favor of the trained , experience and educated people. Parallaly, informal personal services provided by domestic servants, house cleaners, cooks, shoe shiners, etc. which are known as 'residual part of service sectors'are also important. This residual part of service sector plays a crucial role in a labor-intensive economy like India because it provides employment to those sections of people who has no other alternative employment opportunity. To improve the status of modern service sector as well as residual part more stress should be given on quality education, proper training, Infrastructural development and financial support for the existing and new employment seekers.

Table – 05 Projections of labor force, employment, and unemployment rate at 9 per cent growth rate

Item	GDP growth rate (%)	Million Number			
		2004 – 05	2006 - 07	2011 – 12	2016 – 17
Labor force		429.90	450.32	501.17	550.53
Employment	9	401.13	426.93	487.67	555.90
Unemployment	9	28.77	23.39	13.50	-5.37
Unemployment rate	9	6.69	5.19	2.69	-0.97

Source: NCEUS, Govt. of India (main report, 2009); ibid.

Table – 05 shows that the total volume of labor force will increase from 429.90 million in 2004-05 to 550 million in 2016 -17.During the mean time total employment will increase from 401.13 million in the year of 2004 -05 to 555.90 million in 2016-17 with 9 percent annual economic growth. During the same time with same growth rate, unemployment rate will decrease from 6.69 percent in 2006 – 07 to 2.69 percent in 2011-2012 with 9 percent economic growth. It would further decrease to -0.97 percent in 2016-2017i.e at the last phase of twelfth plan. Therefore, we can expect that more resource that is human capital is required during the extreme phase of twelfth plan if our country can maintain the 9 percent economic growth throughout the planning period. Young generation will get different types of employment opportunities in the priority sector (health, education, water and infrastructure) of twelfth plan and the country will remove from the trap of unemployment and poverty.

Table- 06 Projection of strictly part – time workers and the under- employed persons with 9 % rate of growth

Item	GDP Growth rate (%)	Number (million)			
		2004 – 05	2006 - 07	2011 – 12	2016 – 17
Strictly part time workers	9	13.06	13.83	15.63	17.62
Under- employed worker	9	9.57	10.70	13.69	17.25

Source: NCEUS, Govt. of India (main report, 2009); ibid.

Table – 06 tells us if the GDP growth rate is maintained at 9 percent then how the projected volume of strictly part time workers and under – employed worker fluctuates. It is clear from the above table at 9 percent GDP growth scenario, the strictly part time workers will increase from 13.06 million to 15.63 million at the last phase of eleventh plan and will increase to17.62 million at the end of twelfth plan. Likewise, the underemployed workers will become 13.69 by last phase of eleventh plan and 17.25 million at the final year of twelfth plan. The presence of such a large volume of part – time and unemployed work force is not a good sign for any developing economy like India. This will degrade the quality of work, produce items and services as well as working environment. One vital question springs at this moment, that ever

under high growth rate (9 %); why huge volume of part – time and underemployed work force exists in the economy when there is a falling rate of unemployment (From table -05)? If this particular volume of work force gets full employment assignment, then the people of the country will get quality product and services from them. On the other hand, the workers will get good working environment with higher secured wages and certain degree of social security. This will stabilize the socio- economic status of the working force in our country.

Table -07 Labor force projections by age group and sex

Age group	Labor force (in million)			
	2012		2017	
	Male	Female	Male	Female
0-4	0.00	0.00	0.00	0.00
5 -9	0.05	0.04	0.05	0.03
10-14	1.41	1.33	0.58	0.35
15 - 19	28.62	14.40	25.39	12.62
20 - 24	53.19	20.95	54.64	20.94
25 -29	53.26	20.82	60.69	23.62
30 - 34	46.02	21.94	53.28	24.03
35 - 39	40.76	21.91	45.46	22.93
40 - 44	36.75	20.00	39.71	21.57
45 - 49	32.93	16.55	35.44	18.61
50 - 54	27.25	12.35	30.85	14.69
55 - 59	20.33	8.40	23.98	10.11
60 & above	26.70	10.83	31.06	12.85
Total	368.06	169.52	401.12	182.32

Source: NCEUS, Govt. of India (main report, 2009); ibid.

The labor force projection by age and sex in 2012 (last phase of eleventh plan) and 2017(last phase of twelfth plan) is shown in table – 07.In reference to above table the projected figure of labor force revealed that, there would be a consistent decline in both the male and female labor force of younger age groups up to 10 – 14 as a result of increasing enrolment rates in education and decrease in drop – outs. It is also projected from the table that the participation rate of women taken together would be just about half that of man during last phase of both plans. The peak level of labor force participation rate of female would be about 24.03 million while in case of male it will be 53.28 millions in the age group of 30 – 34 during the last phase of twelfth plan. It is also interesting to note here that

a peak level of 21.94 million and 24.03 million of the females will enter within the labor force only at the age group of 30 – 34 while about 53.26 million and 60.69 million of the males will get into it in the age group 25 - 29 during 2012 and 2017 respectively. If we consider the last age group of (60 and above) it is inferred that only about 26.70 million males and 10.83 million females will remain in the labor force in this age group during last phase of eleventh plan (2012) while 31.06 million males and 12.85 million females in the same age group during the extreme phase of twelfth plan. Household work, reproductive rates and various sociological factors of women are the responsible factors for their low participation rate and immobility.

IV. Conclusions and recommendations

Our first observation, therefore, is that a higher economic growth of 9 to 9.5 percent will lead to higher growth rate of employment in the labor market of Indian economy by the last phase of the twelfth plan; except a percentage of workers would be under employed or in part – time assignment.

It is observed in our above analysis that informal sector is playing an important role in new job creation. The informal sector constitutes 93 - 94 percent of Indian workforce. The main reason is stagnant employment opportunity in formal sector and legal rigidity in the formal labor market.

It is also observed that the share of service sector (both formal and informal) in total employment is an increasing trend. In recent years, much of the rise in service sector employment is because of lack of employment opportunities in other sector of the economy. If higher economic growth is achieved during twelfth plan then the economic level and techniques of production of the country will improve. These modern techniques and economic level will shift the economy towards service sector activities. This will increase the share of service sector in the labor market. Service sector will act as an engine of growth of the economy during the extreme phase of twelfth plan.

The presence of large volume of part – time and unde employed workers in Indian labor market is increasin with each successive plan. These workers are margina workers, they are actually a part of the entire productio system and consequently the responsibility an accountability of these workers towards the system is ver less. Incidentally, women workers in informa sector/part–time/under employed were rapidly increasin and several studies had shown that this segment continue to suffer from unequal wages and poor working condition .It is interesting to note here that169.52 millions and 182.3 millions of female labor force(table -07) will be create during 2012 and 2017 respectively. Therefore, it will be new challenge to the Central Government as well a respective state governments to tackle this alarming proble for socio – economic development of this segment o workers. To improve the quality of employment th government should ensure job security of differen temporary, contract and part- time/under- employed worker Without job security, the motivation level of this sectio of workers will not improve. We think this will also get top priority during the twelfth plan.

Simply a higher economic growth cannot improve th employment (both quantitative and qualitative) status i India, especially for those who are working in the informa sector. Higher GDP growth can be achieved by marke mechanism only but for expansion of employmen systematic and scientific set of employment-oriented policie have to be formulated and properly implemented by th competent authority. The focus of the policies should b given towards informal sector because this sector woul continue to receive most of increased labor force in ou country. Proper training facility, security measures, insuranc coverage, healthy working condition, motivation, loa facility with easy terms are the main parameters for th development of informal sector in our country. Labor forc should have the minimum level of education and skills t contribute to productivity and secure adequate returns.

Informal sector workers from the most significant part of total workers in the country suffer from cycles of employment and absence of social security protection. The NSSO had recorded total employment in both formal and informal sector as 45.9 crore workers (2004-05), of which informal workers formed 94 percent. The union cabinet cleared setting up a national level social security fund for informal workers. The proposed National Social Security Fund (NSSF) will have an initial corpus of Rs. 1,000 crore and will benefit 43.3 crore workers in the informal sector. The fund will support social security schemes for various segments of informal workers as most of these workers do not have any social security covering in the form of life and disability insurance , health care and pensions, old age protection, maternity benefits and any other benefit as may be determined by the government for informal workers. This is good news for the informal workers in our country.

In the concluding segment, it is our view that we shall have to wait up to 2017 for a near full employment situation in India, only if our economy grows at 9 – 9.5 percent on the average. A new approach of economic planning in our country is highly urgent during twelfth plan to improve the quantity and quality of employment in the formal sector with special emphasis to the informal sector. It is our expectation that planning cell of India will prepare very target oriented policies for the expansion of employment, mainly in the informal sector, which cannot be brought up by simply high rate of economic growth. Now the slogan of the twelfth plan will be 'optimizing employment in terms of quantity and quality for socio-economic development of our country'.

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An Econometric Analysis of Export - Import of Oil for Indian Case

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Abstract

The paper tries to analyze the export and import of black gold (oil) with respect to the Indian scenario. The study extensively tries to capture the trends over the last four decades. Existing stuff primarily focuses on real GDP, exports, imports and share of exports. Unlike the existing papers this study has made an attempt to pin down the issue of export and import of oil, petroleum and the related products. In such a backdrop we have considered three variables - export of oil, import of oil, and GDP at constant prices for the Indian case. It has been found that all three time series data are integrated of order one. In what follows the cointegration analysis was done to show that the bivariate relation between exports and imports of oil is negative. So taking their first difference, an appropriate VAR specification was proposed. However, the bivariate cointegration results were positive for import of oil and GDP and so were the trivariate results for the three variables. This allowed us to set up the vector error correction (VEC) model.

The Granger causality tests were also carried out as a natural procedure. In the end, the paper also points to some policy implications.

Key words: *Export, import, unit root test, cointegration, VAR, VEC, Granger Causality tests.*

JEL: *C32, C43, C51, C54, F14, F43*

A. Introduction

India's export earnings increased at a very slow rate from 1970/71. For a few years, a rising trend was observed but from 1973/74, it took a dramatic upward turn. Thereafter the rising trend was observed upto 1989/90. This can be analysed by the sharp increase in export unit value. Period after liberalization was marked by a sudden increase in export value. The increasing trend was observed for quite same time but in 1996/97 there was a dip in the value of exports. This declined again in 1998/99. Thereafter, exports increased only to decline marginally in 2001/02. From 2002/03 to 2009/10, the trend was continuously rising. A close inspection would reveal that in the last forty years, the trade balance was positive only in 1972/73 and in 1976/77; the trade surpluses being of small amounts.

The year 1990/91 saw a rise in trade deficit as imports rose by 13.5% against the export increase by 9.2%. But in the next year strict import restrictions were imposed to lower the trade deficit. But this generated decelerating effect on industrial growth Between 1993/94 to 1995/96, there was an overall increase in both exports and imports. The situation with trade deficit, improved and during the eighth plan (1992 – 92), the quantum of trade deficit was lower compared to the Sixth & the Seventh plan. The situation during the Ninth plan (1997 – 2002) worsened. The Tenth plan (2002 – 2007) saw a positive improvement in foreign trade. The beginning of the Eleventh plan witnessed more or less the same. In this regard, two points should be highlighted:

1. A massive increase in India's import bill was due to POL (Petroleum, oil & lubricants) import.

2. The Export of POL in the early 70S was very low. In

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fact the ratio of POL export to total exports was 0.65% i.e. less then even 1% in 1970/71. But over the years, the exports of POL had increased in quantum terms but in percentage terms, it shows a continuous decline.

B. Literature Review

The classical school of trade, following the steps of Smith & Ricardo, had always advocated that trade should be considered as an engine of growth. This ELG strategy came under a lot of attention during the 70s & the 80s. .

If both imports and the domestic resources are efficiently used, it would increase the factor productivity as said by Grossman and Helpman (1990), Romer (1991).The studies of Chow (1987), Sun (1988), Alse (1993), Levin & Raut (1997) have focussed on scale economies.

The methodologies used have improved over time. The earlier methods of using correlation between variables, using simple regression analysis have been replaced by unit root tests, co-integration, and VAR & VEC techniques.

Schenzler (1982) had concluded that was a significant correlation between exports and growth. Jung and Marshall (1985) got a completely different answer where there was no correlation between exports and growth. Ram (1987) derived no positive correlation between exports and growth. Nandi & Biswas (1991 concluded that export led growth was visible. Dutt and Ghosh (1994) derived a favorable cointegration between the variables.

Xu (1996) considered both real GDP and exports and he commented that India has experienced export led growth. Ghatak & Price (1997) considered real GDP, exports & imports. and concluded that India experienced growth driven exports.

We can now see the conflicting results in this type of study. Ekanayake (1999), Anwer & Sampath (2000) considered real GDP and exports. They both covered the same time period i.e. from the decade of 60s to that to mid-90s. While Ekanayake confirmed that there was two way causality between exports and growth, the other study simply confirmed of no such causality. There were some studies where the imports were also taken as variables. Nidugala (2000) concluded in favour of exports led growth. Dutta & Ahmed (2004) mentioned that the impact on import demand due to liberalization was not highly significant.

C. Data

We have considered the time period from 1970/71 to 2009/10 i.e. we have covered a thirty nine year period. The data was collected for oil exports, oil imports and GDP at constant prices, all given in Indian rupees i.e. in rupees crores from the RBI website.

From the above mentioned sources as we also collected the WPI data. In this regard, as we have considered only oil exports and oil imports, we considered the price index for fuel; power light & lubricants (FPL & L). This is because both the oil exports and oil imports data were given in current prices and we had to transform the given data to constant prices. By taking relatively recent period of 1993/94 as the base year, the link relatives were determined for the entire range of study. Thereafter, the natural log values of the given time since were considered. The natural log values of oil imports are denoted by 'LM', oil exports by 'LX' and that of GDP by 'LG'

D. Testing procedures

I. Unit root and stationarity

While calculating the presence of unit tests, we have followed three methods:

- Augmented Dickey – Fuller (ADF) test
- Dickey Fuller test with GLS detrending (DF – GLS)
- Phillips – Perron (PP) test.

We got significant results from first two tests. To check the validity of our results we introduce the Phillips – Perron

Test. The result derived is in tune with that derived from ADF & DF – GLS tests.

The basic unit root theory would consider a simple AR (1) process

$$y_t = \rho y_{t-1} + \delta_{xt} + \varepsilon_t \quad \text{---------- (1)}$$

Where x_t are the exogenous variables having either a constant or a constant and trend. Here, the researcher has to estimate the parameters ρ and δ and the white noise is ε_t. If $|\rho| < 1$, then we can state that y is a trend – stationary service but if $|\rho| \geq 1$, then y is non – stationary whereby the variance of y increases with time. Thus, by testing whether $|\rho| < 1$, one can check the whether y_t is trend stationary or not.

The standard DF test can be carried out by estimating equation (1) after subtracting y_{t-1} from both sides. This would give us

$$\Delta y_t = \alpha y_{t-1} + \delta x_t + \varepsilon_t \quad \text{--------(2)}$$

$$where\ \alpha = \rho - 1$$

Hence we would have

$$Ho: \alpha = 0\ against\ H_1: \alpha < 0 \quad \text{-------- (3)}$$

The conventional t ratios were used for evaluation. Dickey – Fuller (1979) showed that under the null hypothesis of a unit root, this test statistic does not follow the Student's t – distribution. They derive asymptotic results generate the critical values Mackinnon (1996) implemented much larger sets of simultaneous. These estimates allow the researcher the calculation of DF critical values and ρ values for various sample sizes.

The analysis so far considers that the series is merely an AR (1) process. If the series is correlated at higher order lags, the assumption of white raise ?t is disturbed. The ADF test at this stage introduces a parametric correction for higher order correlation by assuming that the y series follows an AR (p) process. We hence test the regression.

$$\Delta y_t = \alpha y_{t-1} + \delta x_t + \delta_1 \Delta y_{t-1} + \delta_1 \Delta y_{t-2} + - - - \delta_\rho \Delta y_{t-\rho} + u_t \quad \text{---(4)}$$

The DF-GLS test involves estimating the standard ADF test equation (4) where the original yt is substituted with the GLS detrended ytd.

$$\therefore \Delta y_t^d = \alpha y_{t-1} + \beta_1 \Delta y_{t-1}^d + \beta_2 \Delta y_{t-2}^d \ldots + \beta_\rho \Delta y_{t-\rho}^d + u_t \quad \text{-- (5)}$$

We now consider the t-ratio values to form our conclusion

The Philips – Perron (PP) test (1968) suggests a non-parametric method for controlling the serial correction when checking for a unit root. The PP method estimates the non – augmented DF equation (2)

i.e. $\Delta y_t = \alpha y_{t-1} + \delta x_t + \varepsilon_t$

The t-ratio of the α coefficient must be checked so that serial correlation does not affect the asymptotic distribution of the test statistic.

II. Co-integration

While most economic variables are non-stationary, their first differences are more or less stationary. Once the unit root testing is complete and satisfactory, we try to find out if there are any long run relationship or not between these variables. Two series y_t and x_t might be non-stationary but still there might the same common stochastic trends across y_t and x_t in their respective first differences. This allows us to determine whether there is a long run relationship or not and if there is, what is the specification of such a relationship. This long run relationship is called cointegration and if this exists, we can test for causality between the variables. If y_t and x_t has to be co-integrated then they must have the same order.

In this regard, we have applied the two maximum likelihood tests that are available. These are the maximum eigenvalue tests and the trace tests. Under the maximum eigenvalues test, we test the null hypothesis of the presence of r co integrating vectors against the alternative of r+1 cointegrating vectors. The trace test considers the null hypothesis of at most r co-integrating vectors against the alternative hypothesis of more than r such vectors

III. Granger Causality

The concept basically deals with the question, that given the variables x and y, whether x causes y and to find out that how much of present y can be explained by past values of y and then checking whether the added lagged values of x can add to the explanation. Hence y is said to be Granger – caused by x if x helps in the prediction of y.The idea of Granger causality between the series yt and xt generates three situations.

CASE – I

Let us consider that both the variables are stationary. We can use the following VAR model

$$y_t = c_1 + a_{11}\, y_{t-1} + a_{12}\, x_{t-1} + b_{11}\, y_{t-2} + b_{12}\, x_{t-2} + \varepsilon_{1t}$$

$$x_t = c_2 + a_{21}\, y_{t-1} + a_{22}\, x_{t-1} + b_{21}\, y_{t-2} + b_{22}\, x_{t-2} + \varepsilon_{2t}$$

where ε_{1t} & ε_{2t} are the white noise errors with zero means, constant variances, individually serially correlated but they might be correlated with each other.

CASE – II

Let us consider that both y and x are both integrated of order 1. But however there is no definite long run relationship between them i.e. they are not cointegrated. Under such cases the first differences of both y and x would be stationary. Thus, the Granger causality between them can be presented within a VAR model in first differences.

$$\Delta y_t = c_1 + a_{11}\, \Delta y_{t-1} + a_{12}\, \Delta x_{t-1} + b_{11}\, \Delta y_{t-2} + b_{12}\, \Delta x_{t-2} + \varepsilon_{1t}$$

$$\Delta x_t = c_2 + a_{21}\, \Delta y_{t-1} + a_{22}\, \Delta x_{t-1} + b_{21}\, \Delta y_{t-2} + b_{22}\, \Delta x_{t-2} + \varepsilon_{2t}$$

CASE – III

Let y_t and x_t be both integrated of order 1 and also say that both the variables are cointegrated. Then the vector error correction (VEC) representation would be given as –

$$\Delta y_t = \mu_1 + \lambda_1 (y_{t-1} - \beta x_{t-1}) + a_{11}\, \Delta y_{t-1} + a_{12}\, \Delta x_{t-1} + b_{11}\, \Delta y_{t-2} + b_{12}\, \Delta x_{t-2} + \varepsilon_{1t}$$

$$\Delta x_t = \mu_2 + \lambda_2 (y_{t-1} - \beta x_{t-1}) + a_{21}\, \Delta y_{t-1} + a_{22}\, \Delta x_{t-1} + b_{21}\, \Delta y_{t-2} + b_{22}\, \Delta x_{t-2} + \varepsilon_{2t}$$

Thus, the error correction term (y_{t-1} -βx_{t-1}) is included which allows for an additional route by which the Granger cause of the variables may be under inspection.

It must be noted that the VAR or VEC models are tested by using the standard Wald tests for zero restrictions which in turn would determine the Granger Causality; given that the variables in the system are stationary.

E. Stationary test result

The data if plotted would show a trend. We had plotted LX, LM & the L.G. date where LX, LM and LG are the natural logarithm values of oil exports, oil imports and GDP respectively, each being represented at constant prices. We observe the following:-

The ADF, DF-GLS and PP tests for unit roots were carried out for the given series, LX, LM and LG have unit roots in their levels. The null hypothesis that there is no unit root is rejected at 5% level of significance for all the tests. However when we check for the unit roots in their first differences, there is no presence of unit root in all the three variables i.e. LX, LM & LG.

The tests thus tell us that all the three variables LX, LM & LG are integrated of order 1 i.e. I (1).

F. Co-Integration

Once the variables are I(1) which we have derived on the basis of unit root tests, we can now go for cointegration. This is done to test whether the same stochastic trends are visible in LX, LM, LG. We have applied the two popular tests that are known – i.e. the trace test of Johansens and the maximum eigen value tests. In this regard, the following points are in order:

1. There is no cointegration between LX & LM.

In other words, the model cannot be represented as

$$\begin{bmatrix} LX_t \\ LM_t \end{bmatrix} = \begin{bmatrix} c_1 \\ c_2 \end{bmatrix} + \begin{bmatrix} a_{11}\, a_{12} \\ a_{21}\, a_{22} \end{bmatrix} \begin{bmatrix} \Delta LX_{t-1} \\ \Delta LM_{t-1} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \end{bmatrix}$$

where any a one period lag is considered.

Thus the bivariate framework for (LX – LM) fails in this regard and this conclusion is arrived by checking both the trac test and maximum eigen value tests.

2. We can however represent the system in a VAR, given that LX and LM are not cointegrated. To do that, we mus transform LX, LM so as to make it stationary.

Hence we would take the first differences to make it stationary. It would be however more appropriate to take the la period of two based on AIC.

Substituting the result, we get,

$$\begin{bmatrix} \Delta LX_t \\ \Delta LM_t \end{bmatrix} = \begin{bmatrix} 0.064 \\ 0.103 \end{bmatrix} + \begin{bmatrix} 0.109\ 0.745 \\ -0.035\ 0.070 \end{bmatrix} \begin{bmatrix} \Delta LX_{t-1} \\ \Delta LM_{t-1} \end{bmatrix} + \begin{bmatrix} -0.146\ 0.231 \\ -0.007\ 0.1529 \end{bmatrix} \begin{bmatrix} \Delta LX_{t-2} \\ \Delta LM_{t-2} \end{bmatrix}$$

3) There is cointegration between LM and LG. In other words, there are common stochastic trends between these tw variables. But we have seen the evidence of such cointegration at a lag length 4 based on AIC

4) In testing for a long run relationship between LX and LG, the cointegration test is carried out. But here, we are to selec an appropriate lag length. This is based on Akaike Information criteria. We allow a linear deterministic trend with a intercept in the cointegrating equation. Thus, this bivariate system strongly reject the null-hypothesis of no cointegratio (r=0) between the variables in this bivariate system. The AIC allows is to select the lag length of

5) The trivariate system of LG – LX – LM shows cointegration at a leg length of 1 which again is based on AIC. Th is a very strong result and again at lag lengths of 1 this is evident where we have selected the lag length based on AI

G. Test Results

- There is no cointegration between LX and LM (However, there is cointegration at lag 7. This is a mathematical result where no economic interpretation can be given as it does not minimise AIC.

- In the bivariate system, there is cointegration of (LG – LX) as well as in (LG – LM) and both these are true for a lag length of 4. This holds under the trace test but not under eigen value test.

- In the trivaiate system, there is cointegration between (LG – LX – LM). Here it holds for lags 1, 2 3 & 4 both for trace test & eigen value test. But the AIC Criteria allow us to select the lag length 1.

H. Granger Causality Tests

In respective of the cointegration results we now check for the granger causality. The Cointegrating equations have only intercepts while the level data has linear trends. As LX, LM, inspite of being of I(1), are not cointegrated, we test for the Granger causality within first difference vector autoregressive (VARD) models. Similarly for the bivariate system LG-LX and LG-LM are considered up to 5 lags.

The oil import Granger causes oil export but the converse is not true. For lags 2, 3 4 we reject that LG does not Granger cause LM. So LG Granger causes LM but again converse is not true. For oil exports and GDP we find a two way Granger casualty.

I. Summary of the results

The analysis tells us that the data on oil exports, oil imports and GDP at constant price are integrated of order one i.e. I (1). The cointegration results are positive for the bivariate cases of LG – LM, LG – LX, but not for LX – LM. The trivariate results for LG – LM – LX also show the presence of cointegration. While a suitable VAR Model was set up for LX – LM, for the other cases, a VEC model can be constructed.

J. Policy implications for India

The economic growth of India is largely dependent on the growth of exports and imports to a large extent, in particular, to that of oil. While India is a major importer of oil, on the export front, oil got a huge importance only in the last decade.

The causality results clearly hint that economic growth can be boosted by oil exports. This in turn would raise India's GDP which would then alone us to purchase more imports. While there is no immediate econometric link between exports and imports, the former positively affects the latter, which is visible after several lags. Thus, lagged effect is visible for the Indian scenario. Moreover in certain sectors, like agriculture and mining, India is operating at a suboptimum level. Suitable imports can push up the performance of these sectors acting as ingredients.

With exports (of oil) rising, this in the long run boosts up GDP. Given that imports are a function of income, this raises imports. Thus, boosting exports is of primary importance due to:

1. The domestic markets being limited become oversaturated after some period of time. Thus, India can exploit the advantages of economics of scale.

2. As exports rise, there generates new searches for overseas markets. Thus, the penetration into the international markets becomes more intense which improves the efficiency of domestic production.

3. With more penetration in the international markets, our exports would be more competitive.

4. Over time, more exports would allow for better and higher imports. The might have a positive effect on improving the capital base of the economy.

In general, along with imports of oil, we also get enjoy import of series along with import of technology. While technology transfer simply reflects movements of the same, it is technology diffusion that each country aspires for. This can only came with the relations with the external world and especially through imports.

India should thereby continue with the export oriented strategies. If we study the current trade policies of most SE Asian countries, we find that they are following the export oriented strategies.

The quantum of exports is also dependent on factor productively and more crucially on labour productivity. But this tackles the question from the supply side given that from the demand side there is sufficient demand for our products abroad. Thus, as labour productivity rises, there is a tendency for exports to rise. At the same time, imports have a strong impact on our labour productivity. If enough skill is not present, it would be difficult for India to use those imports efficiently. Thus, the focus of the issue now highlights the debate of qualitative versus quantitative. India is still a developing country and oil imports are a major building block to restructure our economy. At the same time there should be a continuous effort to improve our exports so that in the long run, the trade deficit can be checked.

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Impact Analysis of Global Recession of 2008 on Indian Textile & Clothing Exports to the United States of America and the European Union: A Case Study

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Abstract

Textile industry was one of the earliest industries to come into existence in India and it accounts for more than 30% o the total exports. The Indian textile & clothing industry is the second largest in the world, second only to China. Th global recession with its epicenter in the United States of America has not only affected developed economies but als the developing economies and India has not been spared. The paper attempts to find out whether there has been an impact on the textile & clothing exports from India to the United States of America and the European Union. A hypothesi has been formulated for the purpose of the study - the global recession has adversely affected the textile & clothing export from India to the United States of America and the European Union. The data for the study has been collected from primar as well as secondary sources. The study attempts to relate variables like scale of operations, number of export order profit earned, foreign exchange fluctuations, etc. to the recession. A survey of exporters was conducted for the purpos of the study. The study reveals some interesting facts about Indian textile & clothing exports, especially in the light the recent global recession. It indicates that though USA is the largest importer of Indian textile & clothing products, th exporters should concentrate on EU for their better future. The authors have brought out some recommendations for th development of this sector.

Key Words: *exports, textile, clothing, global, recession, USA, EU, India*

1. INTRODUCTION

The marketing environment of any nation has various levels – local, regional, national and global. The complexities of the environment and its elements have considerable influence on industry, trade and commerce. In today's environment, liberalization, privatization and globalization have made changes more difficult to anticipate, relate to certain variables, etc. The exports of a nation, in a similar manner can be related or unrelated to global changes like the recent economic crisis. The paper attempts to study the impact of recent global recession on marketers and consumers. It considers Indian garments and apparel exports as the product and the consumers are from US and UK.

The paper is divided into six sections. The first section is introduction. The second section provides an overview of Indian garments and apparel exports. The third sectio provides an overview of the global recession of 2008. Th forth section deals with the research methodology. Th fifth section reveals the analysis and findings. The six and final section provides the conclusion and the wa ahead.

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The table 1.1 indicates that the major importers of Indian textile items are the US and the UK.

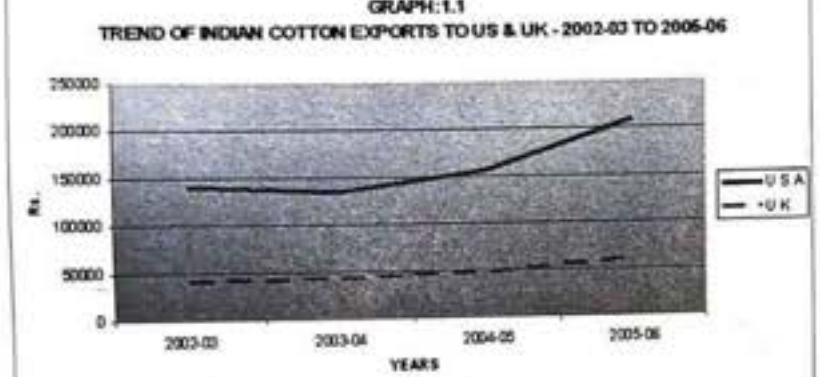
TABLE: 1.1 Major Country-wise Export of All Textile Items from India (2002-2003 to 2005-2006)

	2002-2003		2003-2004		2004-2005		2005-2006	
Country	**Rs. Mn.**	**Mn. US$**	**Rs. Mn.**	**Mn. US$**	**Rs. Mn.**	**Mn. US$**	**Rs. Mn.**	**Mn. US$**
U S A	140386	2908	134365	2932	155332	3464	209772	4747
U K	40216	833	42285	923	47460	1058	60721	1374
German F Rep	35983	745	38008	829	37113	828	50617	1145
U Arab Emts	38855	805	51380	1121	50496	1126	44256	1001
France	25087	520	27034	590	29472	657	36497	826
Italy	20737	430	24645	538	29907	667	36119	817
Spain	13387	277	15362	335	18222	406	25872	585
China P Rp	3921	81	6552	143	5525	123	24126	546
Canada	17814	369	16065	351	16610	370	18119	410
Netherland	13706	284	13370	292	12701	283	17382	393
Bangladesh	9291	192	12352	270	12574	280	16964	384
Saudi Arab	12080	250	14699	321	15074	336	15946	361
Belgium	10446	216	9898	216	11000	245	13181	298
Japan	11363	235	11212	245	10392	232	12187	276
Turkey	6930	144	9975	218	10610	237	11942	270
Denmark	4565	95	5649	123	6449	144	10091	228
Sri Lanka	6762	140	8342	182	7631	170	9708	220
Brazil	-	-	-	-	3035	68	4125	93
Pakistan	-	-	-	-	847	19	3470	79
Korea Rp	9824	204	11452	250	-	-	-	-
Egypt A Rp	4387	91	5574	122	6245	139	7846	178
Hong Kong	7653	159	8168	178	-	-	-	-

	2002-2003		2003-2004		2004-2005		2005-2006	
Country	**Rs. Mn.**	**Mn. US$**	**Rs. Mn.**	**Mn. US$**	**Rs. Mn.**	**Mn. US$**	**Rs. Mn.**	**Mn. US$**
Afghanistan	-	-	-	-	-	-	2106	48
Other								
Countries	140447	2910	153037	3337	156678	3494	167131	3782
Grand Total	**573840**	**11888**	**619424**	**13516**	**643373**	**14346**	**798178**	**18061**

[Source: Ministry of Textile, Govt. of India. (ON87)]

The trend lines of textile imports from India of the two nations indicate a gradual increase over the years, preceding the crisis period as evident from the graph 1.1



2. AN 0VERVIEW OF INDIAN GARMENTS AND APPAREL EXPORTS

The Indian textile industry is having a very optimistic outlook and the expectation is that the Indian textile industry would continue to grow at an impressive rate. The assets that India and its garment industry have built over the last few decades are:

1. A strong and committed entrepreneurial class and highly personalized quality control
2. Deadline oriented
3. Flexibility in production of small order lots
4. Presence of integrated companies and unbeatabl logistics
5. Friendly export policies
6. Ability to handle a host of value additions lik embellishments
7. A highly skilled workforce at competitive wages
8. Amazing technological advantages
9. Superior design capabilities
10. Competitive Pricing and a robust domestic market tha adds to industry expertise
11. Extremely good political and cultural connections wit importing countries. [Apparel Export Promotion Counc Website]

Strengths of Indian textile Industry

1. **Rich resources of raw materials of textile industr** - India is one of the largest producers of cotton in th world and is also rich in resources of fibres like polyeste silk, viscose etc.
2. **Highly trained manpower** – There is a huge advantag due to lower wage rates as a result of which th manufacturing cost in textile automatically comes dow to very reasonable rates.
3. **Highly competitive in spinning sector** - It has its

presence in almost all processes of the value chain.

4. **Diversity** - Indian garment industry is very diverse in size, manufacturing facility, type of apparel produced, quantity and quality of output, cost, and requirement for fabric etc. It also comprises of suppliers of ready-made garments for both, domestic or exports markets.
5. **Removal of quota restrictions** - Removal of quota restrictions since 2005 gives a major boost to the industry.
6. **Low per capita consumption** – According to FICCI (FICCI, 2010), India's per capita fibre consumption is 5-6 kgs. As against the global average of 140.8 kgs.

Weaknesses of Indian textile Industry

1. **Highly fragmented** - Indian textile industry is led by small-scale companies and is thus highly fragmented in structure.
2. **Reservation for small scale sector** - The reservation of production for very small companies that was imposed with the intention to help out small-scale companies across the country, led substantial fragmentation that distorted the competitiveness of industry.
3. **Lacks of financial resources** - Smaller companies do not have the financial resources to enhance technology or invest in the high-end engineering of processes. Hence they lose in productivity.
4. **Unfavourable labour laws** - Indian labour laws are relatively unfavorable to the trades and there is an urgent need for labour reforms in India.
5. **Restricted market access** - India seriously lacks in trade pact memberships, which leads to restricted access to the other major markets.
6. **Technological Obsolescence** – Age-old machinery is still in use and very few firms have modern facilities.

Till the year 1985, the development of textile sector in India took place in terms of general policies. In 1985, for the first time the importance of textile sector was recognized and a separate policy statement was announced with regard to development of textile sector.

In the year 2000, National Textile Policy was announced. The principal objectives were -

- To provide cloth of acceptable quality at reasonable prices for the vast majority of the population of the country
- To increasingly contribute to the provision of sustainable employment and the economic growth of the nation, and
- To compete with confidence for an increasing share of the global market.

The policy also aimed at achieving exports of US $ 50 billion by 2010. (Rana, 2008)

3. AN OVERVIEW OF GLOBAL RECESSION OF 2008

There was a speculation of a possible recession starting in late 2007 or early 2008 in some countries. The global financial crisis with its epicenter in the U.S.A. had originated from the indiscriminate lending of housing loans in that country's sub-prime mortgage market. The clients included investors with poor credit histories or insufficient financial resources. The sub-prime lending had resulted in high levels of defaults. The banks were laying huge bets with each other over assets and loans. There were various complex transactions designed to move risk and disguise the sliding value of assets. The investors were risk averse, they realized the situation, losses occurred, and the market as a whole plummeted which led to a deep credit crunch in the U.S.A. This effect was felt across the globe. It was found that the investor confidence had also eroded. The highest affected company was the Lehman Brothers that had gradually slowed down and eventually led to bankruptcy. Lehman

Brothers' collapse marked at the very least a powerful symbol of a new low in confidence, and the reverberations continued. US financial system failed in its two crucial responsibilities viz., - managing risk and allocating capital. It was all done in the name of innovation and any regulatory initiatives were fought away with claims that it would suppress that innovation.

The crisis has engulfed most of Western Europe. In UK, banks like HSBC, Standard Chartered, Abbey, and Barclays were trying to recapitalize and Bank of England was infusing liquidity through loans.

In Japan real estate companies are confronting a severe setback and forcing regional banks to raise reverse against bad loans. Even the Detusche Bank is within the spread of the tentacles of economic crisis. The liability of Detusche Bank is nearly about 805 of the GDP of Germany.

In many countries including India, Central banks have worked to improve liquidity but are charging higher credits. The interest rates have drastically increased from 11.5% to nearly about 16%. For people looking at the stock market, investment in no stock is cheaper for them and even if they are, people are afraid to invest in such a fluctuating portfolio.

These are basic highlights of the effects of global crisis round the globe. Furthermore, the common man is the biggest sufferer. Higher inflation has automatically made the consumer durables costlier. Middle class people are facing a tough time coping up with the necessities of living.

Coming to the international market, the financial disaster has blown into full-fledged global crisis. Some of the leading world banks are also spared out the loss. Royal Bank of Scotland, HSBC, Bank of England, mortgage lender Bradford and Bingley, Morgan Stanley, Central Bank, Yamato Life Insurance, and even the UniCredit Bank could not stem the panic. Even Lehman Brothers is highly affected by the recession 2008.

On a smaller scale, a huge number of people have lost their core with the fall down of the Sensex. Many have suffered loss of employment, loss of business, loss of grow opportunities, and even loss of hopes to build a futu ahead. As a whole the recession 2008 has blown the ent world's economy with devastating affects and aftermat

4.0 RESEARCH METHODOLOGY

4.1 Objective of the study

The main objective of this study is to analyze the patte of Garment exports from India to The United States America and the European Union (with reference to Uni Kingdom) and to determine the impact, if any of the glo recession.

4.2 Sources and collection of data

The study includes a sample survey of exporters in Ind The primary data has been collected through intervi method. The offices of the export firms were visited a required information was collected. A list of questions v prepared for the purpose. The framed questionnaire v distributed to the sample and collected after a reasona time. The secondary data was collected from boo periodicals, journals and newspapers and through inter The statistical data has been primarily collected fr http://www.indiastat.com and web sites of respect ministries of government of India.

4.3 Population, sample and sampling

The primary data was collected from the exporters of three main Industrial Areas of Jaipur – Sitapura Indust Area, RIICO Industrial Area and Vishwakarma Indust Area. Almost all garment export from Jaipur takes pl from these three Industrial Areas.

The sample size of 25, which is 10% of the populati was chosen from the exporters from Jaipur. A rand sampling was done and the sample was selected. The sam selected comprised of firms engaged in different type Garment Trade – Apparel/Ready Made Garments (RM

Fabrics, Made-Ups and Accessory manufacturers.

The distribution of the sample on the basis of Branch of Garment Export, Size or Capacity of Business Operations and Export Destination has been presented in a tabular form as below:

TABLE: 4.1 DISTRIBUTIONOF RESPONDENTS ACCORDING TO BRANCH OF GARMENT EXPORT

Branch Of Export	No. Of Respondents	Percentage
Apparel / RMG	10	40
Fabrics	04	16
Made-ups	06	24
Accessory Manufacturer	05	20
Total	**25**	**100**

The Table 4.1 indicates that most of the export firms are apparel or ready-made garments. There is a small portion about 16%, which deal with fabrics.

Table: 4.2 DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR SCALE OF BUSINESS OPERATIONS (MONTHLY)

Scale Of Operations (In Units)	No. Of Respondents	Percentage
Upto 10,000	02	08
10,000-20,000	08	32
20,000-30,000	06	24
30,000-40,000	04	16
40,000-50,000	03	12
50,000 And Above	02	08
Total	**25**	**100**

The above Table 4.2 indicates that the majority of the firms, about 56% operate within the scale of 10,000-30,000 units per month.

TABLE: 4.3 DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR EXPORT DESTINATION

Export Destination	No. Of Respondents	Percentage
USA	08	32
UK	05	20
BOTH USA & UK	12	48
TOTAL	**25**	**100**

The Table 4.3 reveals that about 50% of the firms export both to US as well as UK.

4.4 Time Frame for Conducting the Study

The data collected through the questionnaire related to immediately preceding six months information (from the start of the global recession).

The primary data from the exporters of Jaipur was collected by mailing questionnaires and telephonic interviews with the exporters. These meeting were conducted over a period of 4 weeks. The secondary data collected provides data for 2002-03 to 2008-09 as well as some projections till 2011-12 which facilitates the comparison.

4.4 Hypothesis

The primary hypothesis of the study is that the global recession has not affected the Indian exports of garments and apparel to US and UK.

4.5 Tools and techniques used

The various tools and techniques used for the study include a t-test, which has been summarized as below:

To test H_0: p = 0.5 against H_1: p > 0.5

Test Statistic:

$$t = \frac{(\hat{p} - 0.5)\sqrt{n}}{\sqrt{p(1-p)}}$$

Where $\hat{p}$ = sample proportion

reject here H_0 *if* $t > \tau_{0.05}$ *where* $\tau_{0.05} = 1.645$

4.6 Limitations of the Study

- The study focused on one of the primary centres for textile production, namely Jaipur. However, it can be expande by including more samples into the study.
- The limitations of the statistical tools used in this study apply to this study also.
- In this study European Union has been limited to UK. The limitation can be justified from the table below:

TABLE: 4.4

Export of Textile Items To EU Countries from India (2004-2005 to 2008-2009)

Country	2004-2005		2005-2006		2006-2007		2007-2008		2008-2009	
	Rs. Mn.	Rs. Mn.	Rs. Mn.	Rs. Mn.	Rs. Mn.	Rs. Mn.	Rs. Mn.	Rs. Mn.	Rs. Mn.	Rs. Mn.
Austria	1553	35	1639	37	1563	35	1498	37	1575	34
Belgium	11000	245	13181	298	16310	360	16350	406	19899	433
Bulgaria	238	5	169	4	247	5	449	11	413	9
Cyprus	249	6	242	5	231	5	177	4	241	5
Czech Republic	921	21	981	22	1108	24	1308	32	1317	29
Denmark	6449	144	10091	228	10540	233	9785	243	12574	273
Estonia	108	2	124	3	114	3	128	3	208	5
Finland	1680	37	3523	80	2445	54	2524	63	2941	64
France	29472	657	36497	826	38273	845	36322	902	44003	957
German F Rep	37113	828	50617	1145	50370	1112	55957	1390	75140	1634

Greece	2714	61	3548	80	3610	80	3725	93	3538	77
Hungary	906	20	895	20	595	13	415	10	426	9
Ireland	2806	63	3448	78	2893	64	3200	79	4664	101
Italy	29907	667	36119	817	41188	909	35613	885	38083	828
Latvia Lithuania	58 255	1 6	183 442	4 10	307 598	7 13	424 554	11 14	335 372	7 8
Luxem bourg	268	6	199	5	229	5	105	3	23	1
Malta	113	3	62	1	78	2	67	2	63	1
Netherland	12701	283	17382	393	20689	457	19515	485	25071	545
Poland	2071	46	3111	70	3736	82	3623	90	4551	99
Portugal	3499	78	4973	113	7069	156	6871	171	6696	146
Romania	364	8	417	9	746	16	831	21	1270	28
Slovak Rep	135	3	92	2	210	5	243	6	176	4
Slovenia	370	8	447	10	455	10	546	14	597	13
Spain	18222	406	25872	585	24469	540	23590	586	29956	651
Sweden	4676	104	6863	155	6967	154	6623	164	7929	172
U K	47460	1058	60721	1374	63463	1401	67306	1672	78121	1699
EU Countries Total	**215308**	**4801**	**281838**	**6374**	**298503**	**6590**	**297749**	**7397**	**360182**	**7832**
% To Total	**33.47**	**33.47**	**35.66**	**35.64**	**33.91**	**33.9**	**33**	**33**	**36.51**	**36.51**
All Countries Total	**643373**	**14346**	**790332**	**17883**	**880314**	**19437**	**902330**	**22415**	**986522**	**21451**

[Source: Ministry of Textile, Govt. of India. (ON87)]

5.0 ANALYSIS AND FINDINGS

5.1 Findings of the Exporters Survey

The exporters' survey data analysis can be presented in the following manner:

TABLE: 5.1

HOW HAS RECESSION AFFECTED QUANTUM OF EXPORTS?

Response	No. Of Respondents	Percentage
Increased	03	12
Decreased	21	84
No Change	01	04
Total	**25**	**100**

The above table 5.1 reveals that a majority of exporters have found that the global recession has lead to decrease in the quantum of their exports.

TABLE: 5.2

HOW HAS THE FLUCTUATION IN FOREIGN CURRENCY AFFECTED VALUE OF EXPORTS?

Response	No. Of Respondents	Percentage
Increased	12	48
Decreased	11	44
No Change	02	08
Total	**25**	**100**

Table 5.2 indicates an interesting fact that the fluctuations in foreign exchange have to a combined affect – about 48% report that there is an increase in their export because of changes in foreign exchange, whereas 44% report a decrease.

TABLE: 5.3

HAS THE RECESSION LED TO ANY CHANGES IN TERMS & CONDITIONS OF EXPORT TO THE US AND THE UK?

Response	No. Of Respondents	Percentage
Yes	07	28
No	18	72
Can't Say	00	00
Total	**25**	**100**

Table 5.3 reveals that for 72% exporters - the glob recession did not bring about changes in terms and conditio of exports.

TABLE 5.4

HAS THERE BEEN ANY CHANGE IN THE NO. OF ORDERS RECEIVED FROM BUYERS?

Buyer Type	Orders Jan-Dec 2007	Orders Jan - Dec 2008	Percentage Change
Small Buyers	4,25,000	1,27,500	-70.00
Large Buyers	16,25,000	22,00,000	35.38

It is important to note that as indicated in Table 5.4, t small exporters have been adversely hit by the recessio whereas the large exporters have gained out of it.

5.2 Impact of economic slowdown on Textile & Clothing (T&C) Exports to US

US is the second largest export market for Indian T&C industry, accounting for 21% of India's total T&C exports by value in 2007-08. The country is the largest export market for Indian made-ups (accounting for 43% of India's total made-ups export value) and the second largest export market for garments (accounting for 28% of India's total garment export value). Indian T&C industry also exports yarn and fabric to US. However, US accounts for only 2% and 6% share of India's total yarn export value and fabric export value, respectively.

Economic growth in US fell by 0.3% between June and September, 2008. Retail sales of clothing and clothing accessories in US started declining from September, 2008 with a significant decline in November, 2008 (by 8% y-o-y), December, 2008 (by 10% y-o-y) and January, 2009 (by 10% y-o-y) owing to the economic slowdown and resulting drop in expenditure. On account of reduced sales, the inventory to sales ratio of the US clothing and clothing accessories stores has increased from 2.55 in September, 2008 to 2.73 in December 2008.

TABLE 5.5

CHANGE IN T&C IMPORTS BY US IN VALUE TERMS DURING 2008 (2007)					
	Q1	**Q2**	**Q3**	**Q4**	**Jan- Dec**
Yarn	**-9%**	**-10%**	**-4%**	**-13%**	-9%
	(-11%)	(-12%)	(-10%)	(-4%)	(-9%)
Fabric	**-0.04%**	**-5%**	**-6%**	**-19%**	**-7%**
	(-2%)	(0%)	(3%)	(4%)	(1%)
Garments	-5%	-3%	-2%	-3%	-3%
	(10%)	(4%)	(1%)	(-1%)	(3%)
Made-ups	**1%**	**-0.3%**	**-3%**	**-6%**	**-2%**
	(7%)	(5%)	(7%)	(7%)	(6%)
Total T&C	**-3.8%**	**-2.7%**	**-2.4%**	**-4.5%**	**-3.3%**
	(8%)	(3.5%)	(1.9%)	(0.7%)	(3.4%)

As observed in Table 5.4, garment imports by US witnessed a decline since Q1, 2008 with garment import value declining by 3.2% (y-o-y) in Jan – Dec 2008 (as against an increase of 3.2% y-o-y in 2007). As seen from Table 3.3(b), decline in garment imports continued in 2009 with the import value declining by 6.3% (y-o-y) in January 2009 and by 16.5% (y-o-y) in February, 2009.

Jan – Dec 2008 also witnessed a decline of 2.1% (y-o-y) in made-ups import value by US (as against an increase of 6.4% y-o-y in 2007). Decline in made-ups import value worsened in H2, 2008 with import value declining by 3% (y-o-y) in Q3, 2008 (as against an increase of 7% y-o-y in Q3, 2007) and by 6% (y-o-y) in Q4, 2008 (as against an increase of 7% in Q4, 2007). Decline in imports continued in 2009 with made-ups import value declining by 10.7% (y-o-y) in January 2009 and 23.6% (y-o-y) in February 2009.

5.3 Impact of economic slowdown on T&C exports to UK

UK is the largest export market for Indian T&C industry in the EU27, accounting for 7.5% of India's total T&C expor by value in 2007-08. The country accounts for 1.5% of India's total yarn export value, 4.7% of India's total fabric expo value, 12.3% of India's total garment export value and 7% of India's total made-ups export value in 2007-08.

UK witnessed an economic slowdown from Q3, 2008 with its GDP falling by 1.5% in Q4, 2008 after a 0.6% drop in th previous quarter.

TABLE 5.5

CHANGE IN T&C IMPORTS BY UK IN VALUE TERMS DURING 2008 (2007)					
	Q1	**Q2**	**Q3**	**Q4**	**Jan- Dec**
Yarn	**-16%**	**-12%**	**-21%**	**-20%**	**-17%**
	(-4%)	(-7%)	(-5%)	(-11%)	(-7%)
Fabric	**-11%**	**-19%**	**-22%**	**-24%**	**-19%**
	(-0.6%)	(7%)	(3%)	(-6%)	(0.5%)
Garments	**-11%**	**-13%**	**-7%**	**-3%**	**-9%**
	(1%)	(4%)	(3%)	(-1%)	(2%)
Made-ups	**-12%**	**-11%**	**-15%**	**-9%**	**-12%**
	(13%)	(2%)	(4%)	(-10%)	(2%)
Total T&C	**-11%**	**-13%**	**-10%**	**-7%**	**-10%**
	(1.6%)	(3.2%)	(2.9%)	(-2.4%)	(1.3%)

As observed in Table 5.5, yarn imports by UK witnessed an impact of economic slowdown with value-wise import declining by 21% (y-o-y) in Q3, 2008 (as against a decline of 5% y-o-y in Q3, 2007) and by 20% (y-o-y) in Q4, 200 (as against a decline of 11% y-o-y in Q4, 2007). Likewise, value-wise fabric imports declined by 22% (y-o-y) in Q3, 200 (as against an increase of 3% y-o-y in Q3, 2007) and by 24% (y-o-y) in Q4, 2008 (as against a decline of 6% y-o-y i Q4, 2007).

Garment imports in value terms declined significantly in Q1, 2008 (by 11% y-o-y), Q2, 2008 (by 13% y-o-y) and Q 2008 (by 7% y-o-y) as against an increase in each of the three quarters of 2007; though the decline moderated in Q4, 200 (to 3% y-o-y). Made-ups imports by UK also witnessed a significant decline during 2008 with made-ups import valu declining by 12% (y-o-y) in Q1, 2008, 11% (y-o-y) in Q2, 2008, 15% (y-o-y) in Q3, 2008 and 9% (y-o-y) in Q4, 2008.

5.4 Findings of the t-test

The t-test statistic was applied to test the hypothesis and the results are as follows:

To test H_0: $p = 0.5$ against H_1: $p > 0.5$

Test Statistic:

$$t = \frac{(\hat{p} - 0.5)\sqrt{n}}{\sqrt{p(1-p)}} \qquad t = \frac{(0.84 - 0.5)\sqrt{n}}{\sqrt{[0.5(1-0.5)]}}$$

$$= \frac{.034\sqrt{25}}{\sqrt{[0.5 \times 0.5]}}$$

$$= \frac{0.34 \times 5}{.05}$$

$$t = 3.4$$

$$t > \tau_{0.05}$$

H_0 is rejected and H_1 is accepted.

It indicates that there has been an adverse impact on Indian exports of garments and apparels to US and UK.

In the case of US it is also evident from the table 5.6 as below:

TABLE: 5.6

Export of Textile Items to USA from India (2002-2003 to 2008-2009) (Value Mn. US $)							
Description	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**
Fibre							
Raw Silk (incl. Silk Waste)	0.4	0.56	0.48	0.69	0.41	0.06	0.07
Wool/Fine/ Coarse Animal Hair (incl Wool Waste)	0.58	0.39	0.86	0.16	0.4	0.2	0.38

Raw Cotton (incl. Cotton waste)	0.05	0.04	1.25	0.14	2.28	0.98	0.44
Flax Jute Other Vegetable Textile Fibre	0.78	2.17	2	1.93	2.3	2.6	2.52
Synthetic /Artificial Filament Tow. Man -made Staple Fibre Man -Made Staple Fibre	4.79	6.7	9.86	20.14	12.75	21.83	19.92
Sub Total	**6.6**	**9.86**	**14.45**	**23.06**	**18.14**	**25.67**	**23.33**
Yarn							
Silk Yarn	0.23	0.64	0.83	1.15	0.42	0.69	0.38
Woollen Yarn Including Yarn of Animal Hair	2.28	3.52	1.85	2.81	1.55	2.72	2.22
Cotton Yarn (incl Cotton Sewing Thread)	7.2	8.36	10.88	26.22	39.07	28.45	21.79
Flax Yarn Jute Yarn and other Vegetable Textile Yarn	2.18	2.41	2.63	2.42	1.92	1.09	0.71
Man-made Filament Yarn	9.86	10.92	12.82	22.68	18.82	22.64	27.13

100% non-cotton Yarn (incl 100% Nc Sewing Thread)	2.58	5.61	2.37	7.49	10.11	10.72	10.69
Sub Total	**24.33**	**31.46**	**31.38**	**62.77**	**71.89**	**66.31**	**62.92**
Fabrics							
Silk Fabric	88.97	103.63	104.11	106.59	99.68	79.09	55.07
Woollen Fabric	2.87	2.43	2.32	2.36	2.01	1.5	1.48
Wooven Fabric of Cotton	99.58	81.89	66.46	64.56	59.77	55.66	43.72
Wooven Fabric of Flax Wooven fabrics of jute Vegetable Textile Fibres	16.28	13.89	16.56	17.92	12.76	18.74	14.31
Man-Made Woven Fabric	33.69	46.78	33.47	41.65	39.32	42.32	40.17
Pile Fabrics	0.13	1	3.4	6.48	8.3	14.93	6.78
Other Knitted or Crocheted Fabric	0.86	1.07	0.67	4.07	11.34	9.21	24.9
Special Woven Fabric Tufted Textile Fabrics Tapestries Trimmings Embroidery	30.69	21.44	17.74	25.11	27.36	29.67	25.27
Sub Total	273.07	272.13	244.73	268.74	260.54	251.12	211.7

RMG							
Articles of Apparel and Clothing Accessories	1732.29	1622.21	1996.82	2859.16	2889.31	2834.27	2713.47
Sub Total	**1732.29**	**1622.21**	**1996.82**	**2859.16**	**2889.31**	**2834.27**	**2713.47**
Madeups Carpets							
Other Made up Textile Articles set Worn Textile Articles rags Carpets and other Textile Floor Coverings	861.65	983.68	1163.61	1512.38	1490.35	1506.08	1330.95
Sub Total	**861.65**	**983.68**	**1163.61**	**1512.38**	**1490.35**	**1506.08**	**1330.95**
Other Textile Items							
Impregnated Coated & Laminated Textile Fabrics Textile Articles for Industrial use Wadding Felt and Nonwovens Special Yarn Twine Cordage Ropes and Cables and Articles Thereof	10.4	12.51	13.15	20.94	21.3	25.44	42.88
Sub Total	**10.4**	**12.51**	**13.15**	**20.94**	**21.3**	**25.44**	**42.88**
Grand Total	**2908.34**	**2931.85**	**3464.14**	**4747.05**	**4751.53**	**4708.89**	**4385.25**

[Source: Ministry of Textile, Govt. of India. (ON87)]

An analysis of the above table indicates that there has been a decline in all categories except "Other Textile Items".

In the case of UK a different picture emerges which is indicated in the table 5.6 as below:

TABLE: 5.7

Export of Textile Items to UK from India (2002-2003 to 2008-2009)

(Value in Mn. US $)

Description	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**
Fibre							
Raw Silk (Incl Silk Waste)	0.08	0.05	0.27	0.09	0.2	0.14	0.01
Wool/Fine Coarse Animal Hair (Incl Wool Waste)	0.46	0.43	0.45	0.79	1.14	1.7	1.8
Raw Cotton (incl Cotton Waste)	0.11	0.2	0.49	0.01	0.12	0.33	1.8
Flax, Jute, Other Vegetable Textile Fibre	0.31	0.26	0.28	0.29	0.53	0.51	0.32
Synthetic Artificial Filament Tow., Man-Made Staple Fibre, Waste of Man-Made Staple Fibre	0.13	1.15	0.39	0.67	1.33	0.62	1.68
Sub Total	**1.09**	**2.09**	**1.88**	**1.85**	**3.32**	**3.3**	**5.61**
Yarn							
Silk Yarn	0.02	0.06	0.31	0.13	0.06	0.1	0

Woollen Yarn Including Yarn of Animal Hair.	0.67	3.17	8.57	9.22	10.99	17.56	15.88
Cotton Yarn (Incl Cotton Sewing Thread)	11.81	11.62	7.23	7.19	7.73	9.56	6.27
Flax Yarn, Jute Yarn and Other Vegetable Textile Yarn	0.73	0.85	0.51	0.43	0.34	0.69	0.49
Man-Made Filament Yarn	8.21	8.71	7.16	7.97	9.53	7.43	4.4
100% Non-Cotton Yarn (Incl 100% Nc Sewing Thread)	4.42	7.14	7.02	6.95	7.78	10.38	9.16
Sub Total	**25.86**	**31.55**	**30.8**	**31.89**	**36.43**	**45.72**	**36.2**
Fabrics							
Silk Fabrics	22.3	23.74	29.24	30.6	39	45.37	36.73
Woollen Fabrics	0.48	0.65	0.76	1.04	0.94	0.84	0.91
Wooven Fabrics of Cotton	40.72	43.08	34.5	25.92	26.61	21.82	16.94

Wooven Fabrics of Flax, Wooven Fabrics of Jute, Other Vegetable Textile Fibres	6.14	7.9	5.68	4.01	3.98	6.78	7.15
Man-Made Woven Fabrics.	43.72	53.18	45.89	49.93	45.29	51.18	47.68
Pile Fabrics	5.96	6.28	5.7	2.93	1.58	2.09	0.65
Other Knitted or Crocheted Fabrics	2.54	3.83	1.07	4.7	8.39	3.93	2
Special Woven Fabrics, Tufted Textile Fabrics; Tapestries; Trimmings; Embroidery	14.95	9.05	7.76	11.07	11.88	14.71	13.69
Sub Total	**136.81**	**147.71**	**130.6**	**130.2**	**137.67**	**146.72**	**125.75**
RMG							
Articles of Apparel and Clothing Accessories	516..42	539.48	658.85	946.5	945.41	1196.75	1291.45
Sub Total	516.42	539.48	658.85	946.5	945.41	1196.75	1291.45
Madeups Carpets							

Other Made Up Textile Articles; Sets; Worn Textile Articles; Rags, Carpets and Other Textile Floor Coverings.	149.47	197.2	231.36	257.12	270.99	267.47	224.97
Sub Total	**149.47**	**197.2**	**231.36**	**257.12**	**270.99**	**267.47**	**224.97**
Other Textile Items							
Impregnated, Coated & Laminated Textile Fabrics; Textile Articles For Industrial Use, Wadding, Felt and Nonwovens Special Yarns; Twine, Cordage, Ropes and Cables and Articles There of	3.48	4.59	4.94	6.53	7.48	11.82	14.66
Sub Total	**3.48**	**4.59**	**4.94**	**6.53**	**7.48**	**11.82**	**14.66**
Grand Total	**833.13**	**922.62**	**1058.43**	**1374.09**	**1401.3**	**1671.78**	**1698.64**

[Source: Ministry of Textile, Govt. of India. (ON87)]

An analysis of the above table indicates that there has been a decline in all categories except "Fibre" and "Other Textile Items".

6.0 CONCLUSION AND THE WAY AHEAD

6.1 Conclusion

On the basis of the above analysis of data and its interpretation the following inferences and conclusions can be drawn to understand the relation between the two main elements of the study i.e. Recession and Export. After in-depth analysis of data and testing the hypotheses framed the following are the important findings pertaining to the study:

- Due to recession Small Exporters and Competitors have virtually ceased to exist and thus there are more export and business opportunities for Large Exporters.

- There is only scope for serious business. The old fashioned model of proxy sample enquiries and pricing has been overtaken by serious and ethical export orders and sample enquiries.

- Due to the increase in the value of foreign currencies i.e. United States Dollar and the Euro the Indian exporters have benefited. They had priced their garments at a lower exchange rate but the payments were received at a higher rate thus increasing profitability and turnover.

- Delayed shipments from last year have proved to be a blessing in disguise because of the increase in value of foreign currency. The realization amount has increased profits and made up for the slump in a small but noticeable way.

- As a result of serious buying by importers they are now resorting to short-listing vendors from India. The exporters that get selected are getting good business in spite of the recession.

- Importers have become more vigilant and the emphasis is on timely order fulfillment and quality control.

- Due to the increased vigilance of buyers there are unforeseen claims made by them. Importers are looking for excuses to give debit to the exporter so that the value of invoice goes down.

- Importers are asking for discount on packed shipments lying packed and unclaimed at ports. They are ready to forego advance money paid as they feel a small loss is better than a large loss.

- Importers are not sure if they can sell the goods at the rate they are paying the importers.

- Importers are remitting bill amount 60-90 days after delivery of shipment due to the huge financial crunch.

- Conditions are the same for all European countries and the United States of America.

- Vendors working for exporters are asking for 30-50% advance payment and the rest COD (Cash on Delivery) so that they can beat the slump. This creates liquidity crunch for the exporters.

- Due to increase in the value of all inputs the cost of production has gone up. The average per unit price of the goods goes up and thus the Indian goods lose their competitive advantage in the international market.

- The small and marginal exporters have been the biggest losers. They have lost in terms of export orders, profitability and turnover. Due to limited financial resources they can't afford to buy the inputs at a higher cost and thus unable to fulfill order commitments.

- They orders that the small exporters can't produce in turn fall to the large exporters. Hence, they have gained in terms of export orders, profitability and turnover. Financial and liquidity problems are not big constraints for then and thus they are able to tap the opportunity of additional business.

- Experienced exporters who have been in trade for a longer period of time have been able to cash in on their goodwill and retain their buyers. The newer exporters have suffered because of the lack of goodwill and trust of the importers.

- Exporters that export to both the USA and the EU have fared better than those who have exported only to a single country as they have diversified their risk.

- In view of the current financial turmoil in the United States, which has led to the closure of a few apparel retail outlets, Indian garment exporters are wary of taking new orders from US buyers fearing non-payment. The slack in demand is expected to increase and Indian exporters are expecting some of the apparel importing companies there to shut down.

- There is a fear that buyers may not actually release the payment, which is why exporters are now asking to minimize the Export Credit Guarantee Corporation (ECGC) cover.

- Mr. Rakesh Vaid, Chairman, Apparel and Export Promotion Council (AEPC), feels that due to the meltdown in western economies there has been less buying this year, the full impact of the downturn will be witnessed after March for which the Indian exporters need support from the government.

- India's garment exporters, grappling with falling demand and increasing competition from countries such as Bangladesh who offer cheaper alternatives are expecting a stimulus package from the government and hope that the garment export sector will be exempted from the Fringe Benefit Tax (FBT) bracket.

- Unlike the US, which is a mass market, the EU is a very demanding niche brand market. Exporters are now ready with apparel samples in chic, classic and casual shades that will hit retail shelves across Europe in Spring 2009. This is the prime reason Indian exporters prefer UK (or European Markets) to the US market.

- Apparel exports are likely to fall 24 per cent short of the 11.62 billion dollar target in the current financial year and may total up to 8.78 billion dollars. In 2007-08, the country exported garments worth 9.69 billion dollars, nine per cent more than in previous year.

- As a result, he added, nearly 500,000 Indian workers have already lost their livelihood in the apparel sector while more job losses are expected in the next three months. (Vaid, 2009)

6.2 The way ahead

A Comprehensive Fibre Policy should be formulated in order to:

- Reduce the dependence of Indian T&C industry on Cotton, which is an agricultural product

- Ensure availability of raw material (especially cotton and polyester) to the domestic T&C industry at competitive prices.

Till a fibre policy is formulated, Government should support the industry to reduce its dependence on cotton by the following measures:

1. **Import duty on manmade fibres and their intermediates to be removed**

   Manmade fibres attract a 5% import duty as against cotton fibre on which the import duty has been recently reduced to zero. Moreover, polyester fibre intermediates attract a basic import duty of 5%. Import duty on polyester (and its intermediates), which is an important raw material for the T&C industry, affects its usage. Government should abolish the import duty on polyester fibre and its intermediates. This will aid reduction of

polyester prices thereby increasing its share in total fibre consumption.

2. **Excise duty on manmade fibre and their intermediates to be removed**

   Manmade fibres and textiles attract an effective excise duty of 4.12% as compared to zero excise duty on cotton. Moreover, polyester intermediate MEG attracts a higher excise duty (8.24%) as compared to polyester resulting in accumulation of CENVAT credit. Excise duty on manmade fibre and their intermediates should be abolished to promote the use of manmade fibres.

3. **Promotion of export of value added products rather than fibres**

   Indian T&C industry should strive to export value added products since, this would result in more employment generation in the country. Government should consider withdrawing the export incentive for various fibres especially when the domestic industry is suffering from high raw material prices. In addition to above, the following measures are required to ensure sustained growth of Indian T&C industry.

4. **Formation of Joint Working Group**

   A Joint Working.Group should be formed comprising of members from the Ministry of Textiles, the Ministry of Finance, the Ministry of Commerce and members from T&C industry associations. The Working Group should periodically review the performance and dynamics of the T&C export markets and examine the factors affecting the competitiveness of the T&C industry. The findings of the Working Group may provide the Government with significant information to make necessary policy interventions in order to ensure long-term growth of the industry.

5. **Technology up-gradation and achieving economies of scale**

   The basic nature of Weaving, Processing and Garment sectors of the industry in India is that they are fragmented. The principal cause is that they are lacking economies of scale. Moreover, of the total TUFS disbursement up to December 2008, weaving industry accounted for only 7.7% and Garment industry accounted for only 5% as against 34% for Spinning industry. This indicates that the sectors have not undergone significant technology up-gradation. Fabric industry and Garment industry should undertake technology up gradation as well as achieve economies of scale to become more cost competitive.?

6. **Exploring new markets**

   The Indian garment exports have significant dependence on EU27 (47% share of India's total garment export value) and US (accounts for 29%). Though India's trade dependence on EU27 and US is in line with the World garment trade, Indian garment exports to the other leading garment importers are comparatively less. This dependence should be removed. The prospective markets are – Japan (the third largest garment importer with a share of 6.7% in world clothing imports in 2007, accounts for only 1.1% of India's total garment export value), Russia (the fifth largest garment importer with a share of 4.1% in world clothing imports in 2007, accounts for only 0.6% of India's total garment export value), etc. Efforts should be made by the industry to diversify the garment export market by developing business in these markets to reduce such trade dependence.

7. **Industry associations should ensure the availability of skilled labour for the industry**

   Non-availability of trained labour is one of the primary

business constraints mentioned by the industry. The initial cost of training is high which acts as a deterrent to in-house training initiatives by the industry because of high chances of loosing the trained manpower. Associations should establish Skill Development centres to ensure availability of skilled labour to the industry. The Skill Development centres should run certified training courses focusing on the specific skills required by the industry. Registration of skilled workers should be done at the Skill Development centres to maintain a databank of skilled labour.

TABLE: 6.1

Projected Exports of Textiles and Apparel of India (2008-2009 to 2011-2012)

(In Million US Dollars)

Item	**2008- 2009***	**2009- 2010**	**2010- 2011**	**2011- 2012**
Ready Made Garments	17355	23593	31697	34025
Cotton Textiles	7573	9185	10982	11328
Manmade Textiles	3012	3524	4123	4823
Wool & Woollen Textiles	124	141	160	182
Silk Textiles	542	590	643	701
Total	**28606**	**37033**	**47605**	**51059**
Handicrafts	1917	2224	2580	2993
Coir & Coir Manufactures	234	276	326	384
Jute	417	484	561	651
India	**31174**	**40017**	**51072**	**55087**
*** Actual figures**				

6.3 Scope for future research

The recent economic crisis has indicated that there will be an adverse impact on India but within a short period of time India has been able to show signs of recovery. In many sectors there has been negligible impact. This is indicative of the fact that a more detailed study be made on the impact of recent crisis on India, in real terms.

The projections indicate that the Indian textile and apparel exports will increase as evident from the table below:

[Adapted from Lok Sabha Unstarred Question No. 1245, dated 21.08.2007]

The table 6.1 also indicates the fact that there is a silver lining and India should concentrate on the specific areas as identified in the paper – extension of benefits available to units in SEZ, higher allocation of funds to apparel export industry for capacity building, adequate allocations for brand building exercise to mention a few.

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Analysis of Collection Performance: A Study Based on Select Indian Cement Companies

Dr Amitava Basu[1]

Abstract

Credit has become almost an indispensable convenience or a necessity in our scheme of living. The modern business runs on the concepts of mass production with the objective of cost reduction. Mass production is not possible with out mass distribution which in turn is not possible without credit. As the firm makes its credit policy lenient to achieve higher sales volume, investments in receivables also increases. Investment in receivables is treated as liquid asset so it is essential for every firm to recover it within the stipulated period allowed to the customers. In a competitive condition collecting all receivables within the period allowed is a difficult task. Unless receivables are collected in a certain period of time, the business firm loses its liquidity, exhausts its credit and finds its growth potential limited. Hence collections of receivables are an inherent part of any credit business. In this back drop, the present paper tries to highlight on analysis of customer details, classification of customer into different categories and suggesting the types of collection policy that a firm should adopt with respect to its credit policy.

Key Words: *Credit Policy, Investment in Receivables, Collection Procedure, Profitability*

Introduction

At present most of the business houses make their credit standard lenient to retain their market share and to expand their sales volume. When sales expand, a tendency to invest in receivables increases. Unless receivables are converted into cash within the stipulated period, the business firm loses its liquidity, exhausts its credit and finds its growth potential limited. Receivables play a strategic role in the management of a firm. Different studies showed that customer's credit as a percentage of current assets comprises a significant proportion and shows an increasing trend. From the firm's point of view credit may be regarded as a technical function of management dealing with such specific matters like setting credit standard, investigating credit risk, credit evaluation and lastly collection of accounts. From granting credit to receiving of the payments – there is a passage of time and the procedure is not over until final payment is received from the customers. Investment in receivables is treated as a liquid asset. So it is essential for every firm to recover it within the stipulated period allowed to the customers. In a competitive condition collecting all receivables within the period allowed is a difficult task.

Unless receivables are collected in a certain period of time, the business firm loses its liquidity, exhausts its credit and finds its growth potential limited because the receivables accounts means that firms have to bear extra interest expenses than their estimates. Hence collections are an inherent part of any credit business.

The final step in the sale of goods or service is usually the satisfaction of the obligation by payments of accounts. When, there is a sellers' market, liquidation of customer accounts becomes almost automatic, stimulated by the desire of customers to stay in the good books of suppliers. But in the present competitive environment these periods of collection-utopia rapidly disappears.

Prompt collection is vital to the success of any business that sells on credit. We know, profit depends largely upon turnover and at the same time to increase turnover additional

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investments are necessary. A slow collection system can hamper the process. Slow collection means blockage of own capital of the company that leads to an increase in interest expenses on borrowing capital. Hence, profit can not be proportionately large unless collections are made promptly. But unfortunately very little attention is given to this point. Still many companies think that, receivable management is mere debt management. "A sale is not a sale until the cash register rings", or in other words we can say 'A sale is not a sale until it is paid for'. According to realization concept, orders and invoices are notional book entries, until payment is received. From this hard money point of view, it is often concluded that collections are the credit departments' most important responsibility. On the other hand, we know that achievement of sales target is not an easy task. The sales department may counter the credit manager by saying that, 'there is nothing to be paid, until there is a sale'. So, it is crystal clear that, for successful monitoring and collecting receivables, coordination among different departments is essential and as well as a well established collection policy is very much needed for fulfilment of objectives.

Objectives of the Study

Investment in receivables is treated as an item of liquid assets. So, it is essential for every firm to recover that amount within the stipulated period allowed to the customer, otherwise, the firm may lose its liquidity. In this context present paper has the following objectives –

i) Try to establish a well defined controlling and collecting procedure.

ii) Try to select the appropriate collection policy which is most effective for the firm.

iii) Analysis and Classification of the customer's accounts and find out which collection method would be the most effective with that particular customer.

iv) Try to find out which collection stages are applicable for which classes of customers.

v) To measure the efficiency of collection activity of the selected companies and its impact on profitability.

Methodology

For the purpose of our study we have selected some companies in Indian cement industry. To materialize this, data have been collected relating to background of companies, financial statement etc. for the practical purposes and convenience, the data collected and used are all secondary published data. The data of cement companies for the period of 2000-2009 used in this study have been collected from secondary sources –

- The Stock Exchange official Directory of Bombay Stock Exchange.
- Capital line 2010, the official data base of Capital Market publishers limited, Mumbai.

For the purpose of our study cement companies are selected following purposive sampling procedure. The companies are –

1. Associated Cement Company.
2. Birla Cement Company.
3. Dalmia Cement Company.
4. Deccan Cement Company.
5. Gujrat Ambuja Cement
6. Indian Cement Company.
7. Madras Cement Company.
8. Mysore Cement Company.
9. Narmada Cement Company.
10. Shree Cement Company.
11. Katwa Cement Company.

To assess effectiveness of Receivable management of those companies for the purpose of analysis we rely on existing published literature on the topic. Editing, classification and tabulation of the data collected form the sources mention earlier will be done as per requirement of the study. To test the impact of receivable on sales and how the companies manage their investment in receivables and the sensibility of the profitability to CR, DTO and ITO, we used statistical techniques like Karl's Pearson correlation analysis, multiple correlation analysis, regression analysis etc. Statistical test like't' and 'F' also have been applied an appropriate places.

Conceptual Framework of the Study

There are four general policies from which to choose:

1. Liberal credit – Strict collection.
2. Strict credit – Liberal collection.
3. Liberal credit – Liberal collection.
4. Strict credit – Strict collection.

Though the collection policy differs from industry to industry and with one business firm to another but experience has shown that of the four, the first two are most likely the policies to be found in effect. Now, what type of collection policy will be adopted by the company depends upon many factors which have a bearing on policy determination.

Collection work can be run effectively and efficiently, if the personnel engaged with overall collection work is analyzed and classified for the specific customer accounts. Collection work would be easier and the result better, if the account could be immediately and accurately classified as to reason for non payment and which collection method would be the most effective with that particular debtor. Before taking a credit granting decision pertinent information regarding the prospective customer is very much essential which helps the credit men in classifying the debtors into one or more groups. Such classification helps the credit men to decide about what types of collection techniques to follow.

1. Customers who honestly misunderstand the terms of sale – Such type of customers offer no real collection problem. An explanation of the terms of sale usually brings a prompt remittance.

2. Customers who overlook accounts because of negligence or poor business methods - Just a reminder sent to customers, immediately after the expiry of the established credit period.

3. Customers who are temporarily slow, but who usually pay in time – Customers in this group usually pay their debt in time, but some times they make the creditor wait due to financial problem. These cases usually arise from shortage of operating capital. Debtors in this category involve no real credit risk and creditors firm may follow lenient collection policy with this class of debtors, but they should keep a close collection follow-up on the account.

4. Customers who are temporarily slow, because of local trade condition – Debtors in this group usually pay in time, but incidence like, strike natural calamity may create problem in meeting their own obligation. Risk is such cases is low and creditor firm may follow comparatively lenient collection policy and should co-operate until the debtors have time to overcome his temporary inability to pay, because debtors in this group are very much conscious to pay their obligation in due time but failed due to their temporary distress.

5. Customers who are chronically slow: - Debtors in this group fail to run their business operation efficiently. They have wrong collection policy in relation to their own debtors or draw too much from their business for personal living expenses, thus reducing their operating capital. Risk in such cases is high and chances of bad debt losses increase. The collection manager should adopt a firm collection policy toward these debtors, even at the risk of losing them as customers.

6. Customers who could pay promptly but disregard due dates because they think it is more profitable for them to use creditor's money then their own – Chances of bad debt losses is low in such cases but they tend to increases administration expenses. The creditors firm should follow stringent collection policy against these debtors. A consistently alert and forceful collection policy converts these types of debtors into fairly prompt paying customers.

7. Customers who are deliberately fraudulent – Debtors in this group are treated as very high risk category, and the probability of recovery of debt is very low. An attorney or collection agency can some times collect through energetic methods. It is only through the credit men that the fraudulent debtors can be put out of business.

8. Customers who are on the verge of insolvency or who are actually insolvent – The collection manager has no alternative but he has to take legal action or immediately place the account in hands of collection agency.

Such a classification helps the credit men to choose proper collection technique. On the basis of such classification, it is possible to divide a general collection system into four stages, giving emphasis in each stage to the kind of effort to use and to the sequence and timing of the collection efforts associated with that stage. These four stages are –

1. The impersonal routine stage.
2. The impersonal appeals stage.
3. The personalized appeals stage.
4. The drastic or legal action stage.

After discussing all the stages, we can decide which collection devices are appropriate for which classes of debtors. This is the shown in the following table –

1. **Impersonal routine stage:** Customers who honestly misunderstand the terms of sale, those awaiting notice, over look accounts because of negligence or poor business method. Ignore due dates because of the smallness of accounts

2. **The impersonal appeals stage:** Temporarily financially hard-pressed, but who usually pay in time. Honestly overlook, careless in making payment, accident or misfortune.

3. **The personalised appeals stage:** Overextended/ Overbought, Disputed account, financially sound but invest money in more profitable project. Chronically slow.

4. **Drastic or Legal action stage:** Chronically slow, on the verge of insolvency, or who are actually insolvent, deliberately fraudulent or no intention to pay.

Analysis and Findings

To measure the efficiency of collection activity of the selected companies and its impact on profitability, we selected four variables viz. return on capital employed (ROCE), current ratio (CR), Inventory turnover Ratio (ITR), and Debtors Turnover Ratio (DTR). A relatively high CR is an indication of firm's better liquidity position. An increase in the CR represents improvements in the liquidity position. ITR represents how quickly firm is able to convert its stock into sales. Generally a higher ratio indicates efficient management of inventory because more frequently the stocks are sold; the lesser amount of money is required to finance the inventory. DTR indicates how quickly the firm is able convert their credit sales into cash. We selected these variables for this purpose, as they have a close interrelation among each other. When a firm tries to accelerate its collection from debtors, it may hurt it sales volume, on the other hand, the objective of achieving higher

sales may compromise with collection procedure. The influence of CR, ITO, and DTO on profitability (ROCE) in each of the companies is examined and analyzed. The interrelationship among the selected variables has been examined by computing Karl Pearson's correction coefficient. In order to test whether the computed values of correction coefficient are statistically significant or not,'t' test has been used.

The Table1 exhibits that the correlation Coefficient between CR & ROCE, in Madras, Birla, Dalmia, ACC, Gujrat, India, Narmada, Mysore, Shree, Katwa Deccan , 0.63, .597, .331, .2483, (.110), (.178), .602, .679, .540, (.52), (.087) respectively. The results show that out of the eleven companies, four companies (GAC, India, Katwa, and Deccan) have negative association between CR and ROCE during the study period. Now, out of the four negative associations between CR and ROCE only in Katwa Company the correlation Coefficient was found to be significant at 10 per cent level. Other seven companies show a positive co-relation between CR and ROCE. Out of the seven companies, in Madras, Narmada, Mysore the correlation Coefficient was found to be statistically significant at 5 per cent level. In Birla and Shree it was significant at 10 per cent level. Thus, a mixed result (both positive and negative) was found in the calculation of correlation Coefficient between CR and ROCE.

In Table1 we also show the correlation Coefficient between ITR and ROCE. The results show that, out of the eleven companies, except Madras (-.498) and Birla (-.284), all have positive correlation Coefficient between ITR and ROCE. The negative association in these two companies, however, not found to be significant even at 10 per cent level of significant. All other companies Dalmia (.844), ACC (.18), GAC (.016), India (.27), Narmada (.53), Mysore (.36), Shree (.078) , Katwa (.88) and Deccan (.27) show positive correlation Coefficient between ITR and ROCE. The positive relationship in Dalmia and Katwa was found to be statistically significant at 1 per cent level. In case of Narmada it was at statistically significant at 10 per cent level.

Table1 depicts that the co-relation co-efficient between DTR and ROCE in Madras, ACC, GAC, India, Narmada, Mysore, Katwa and Deccan were .90, .55, .54, .72, .78, .54, .56 and .33 respectively, which reveal high positive association between the two variables. So, out of the 11 selected companies eight companies show a positive co-relation between DTR and ROCE. The correlation co-efficient in Madras, Narmada were found to be statistically significant at 1 per cent level. In ACC, GAC, Mysore, Katwa it was significant at 10 per cent level. In case of India it was found to be statistically significant at 5 per cent level. Birla, Dalmia and Shree show a negative co-relation co-efficient between DTR and ROCE. But they are not statistically significant even at 10 per cent level. It is an accepted principle that the faster the DTR, the lower is the relative investment is receivables and the higher is the profitability. The computed values of correlation coefficient between DTR and ROCE in the majority companies under study conform to the accepted principle.

In Table 2 and Table 3 it has been attempted to study the joint influence of liquidity and efficiency ratios on the profitability of each of the companies under study by using multiple correlation and multiple regression techniques. The partial regression co-efficient have been tested by't' test and multiple co-relation co-efficient have been examined by 'F' test.

The regression equation that has been fitted in this study is-

$$ROCE = \beta_0 + \beta_1 \times CR + \beta_2 \times ITR + \beta_3 \times DTR$$

Where $ß_0$ is the constant, $ß_1$, $ß_2$ and $ß_3$ are the partial regression co-efficient. Table II exhibited that for 1 unit increase in CR the ROC increase by 2.4 units in Madras, 41.94 units in Birla, 7.61 units in Dalmia, 34.49 units in ACC, 6.6 unit is Narmada, 33.56 unit Mysore, 19.39 units

in Shree. Out of these seven companies ACC and Mysore was found to be statistically significant at 10 per cent level. Dalmia was statistically significant at 5 per cent level and Birla and Shree at 10 percent level. The positive association in case of Madras and Narmada was not statistically significant. The remaining four companies showed negative association but they were not statistically significant.

Table 2 depicted that when ITR increased by one unit ROCE Increased, 0.24 in Madras, 4.41 in Birla,3.62 in Dalmia, 3.35 in ACC, 2.21 in India, 3.3 in Mysore, 1.31 in Shree, 2.36 in Katwa and .004 in Deccan. Thus, out of eleven companies nine companies showed positive relationship. Among them Dalmia was statistically significant at 1percent level, ACC and Katwa was found statistically significant at 5percent level. India and Mysore was statistically significant at 10 percent level. GAC and Narmada were negatively associated but they are not statistically significant even at 10 percent level.

Table 2 also showed that when DTR increased by one unit ROCE stepped down by.08 in Birla. In case of other ten companies one unit increased in DTR , ROCE stepped up by .62 in Madras, .34 in Dalmia, 1.13 in ACC, .63 in India, .68 in Mysore, .57 in Shree, .006 in Katwa, .358 in Deccan and.097 in GAC. The partial regression coefficient in Madras, ACC, India and Narmada were found to be statistically significant at 5 percent level and the coefficient in GAC, Mysore and Shree were statistically significant at 10 percent level. The negative association showed by only one company was not statistically significant.

In Table III showed that multiple correlation and coefficient of ROCE on CR, ITR and DTR .91 in Madras, .92in Mysore, .92 in Dalmia, .82 is ACC, .82 in Narmada, .89 in Katwa. Out of this six companies Madras and Narmada were found to be statistically significant at 1 per cent level and ACC, India, Katwa was statistically significant at 5 per cent level. However, the multiple correlation coefficients in the remaining companies are statistically insignificant. It implies that the joint influence of ITR and DTR of profitability was highly significant in Madras, Mysore, Dalmia, ACC, Narmada, Katwa and the selected influencing variables CR, ITR and DTR in this companies contributed respectively 82 per cent, 79 per cent, 83 per cent, 67 per cent, 70 per cent, 79 per cent of the variation in their ROCE.

CONCLUDING REMARKS

1. In four out of eleven companies CR negatively associated with the ROCE. But the negative association was statistically significant only in case of Katwa at 10 per cent level. However, in the remaining seven companies the association was positive but it was significant at 5 per cent level only in case of Madras, Narmada and Mysore. In Birla and Shree the positive association is statistically significant at 10 per cent level. It indicates that no definite relationship between liquidity and profitability especially regarding its nature can be establish from the empirical results obtain from the study.

2. In two out of eleven selected companies, there was a negative relationship between ITR and the profitability measure. The negative association between ITR and ROCE was statistically not significant. Remaining nine companies show positive association between ITR and ROCE. Out of this nine companies Dalmia and Katwa was statistically significant at five per cent level and Narmada was statistically significant at ten per cent level. In case of other companies the association was not statistically significant. The positive association confirms favorable influence of inventory management on profitability in the Indian cement industry during the stated period.

3. The impacts of credit management on profitability show a positive association in case of nine companies out of eleven companies. Out of the nine positively associated companies seven companies shows a statistically significant relationship. In Madras and Narmada was

statistically significant at one per cent level. India cement was statistically significant at 5 per cent level and ACC, GAC, Mysore and Katwa was statistically significant at ten per cent level. Only two company show negative association, however, they were not statistically significant at ten per cent level. It confirms significant influence of credit management on profitability in the Indian cement industry and it was proved that the generally accepted rule, larger the debtors turnover higher the profitability.

4. The partial regression coefficient shown in the regression equation of ROCE on CR, ITR and DTR fitted in this study witness that though both positive and negative influence of variation in the liquidity, inventory turnover and debtors' turnover were found. Debtors' management and inventory management of the majority of the companies under the study made positive as well as very significant contribution towards improvement of profitability during the study period.

5. The joint influence of liquidity inventory management and credit management on the profitability was very significant in seven out of eleven companies selected for the study. Moreover, the out come of the analysis of coefficient of multiple determinations makes it clear that at least 67.5 percent of the total variation in the profitability of the seven cement companies was accounted for by the joint variation in the three selected indicator relating to liquidity and efficiency ratio - CR, ITR and DTR.

Table-1

Karl Pearson's. Simple Correlation Analysis between the Selected Profitability measure and Ratios relating to Liquidity and Efficiency of the selected companies in Indian Cement Industry

Company	Correlation Coefficient between CR & ROCE	Correlation Coefficient between ITR & ROCE	Correlation Coefficient between DTR & ROCE
MADRAS	.630 (2.433701)**	(.498) (1.72283)	.904 (6.343378)*
BIRLA	.597 (2.232496)***	(.284) (0.88859)	(.147) (0.44584)
DALMIA	.331 (1.052318)	.844 (4.720858)*	(.286) (0.8954)
ACC	.2483 (0.768982)	.1817 0.554327	.552 (1.9858)***
GUJRAT	(.110) (0.33201)	.016 0.048006	.537 (1.9097)***
INDIA	(.178) (0.54267)	.272 (0.84797)	.724 (3.148739)**

NARMADA	.602 2.261752**	.532 1.8848***	.786 (3.814136)*
MAYSUR	.679 (2.77468)**	.363 (1.16871)	.543 (1.939903)***
SHREE	.540 (1.92475)***	.078 (0.234715)	(.333) (1.05947)
KATWA	(.52) (1.8456)***	.877 (5.475656) *	.569 (2.27579)**
DECAN	(.087) (0.26199)	.268 (0.834528)	.327 (1.03806)

Figures in bracket show |t| values

*Significant at 1 percent level

**Significant at 5 percent level

***Significant at 10 percent level

Table Value of t with (n-2) i.e. 9 degree of freedom at 1 percent, 5 percent, at 10 percent levels are 3.25, 2.26 and 1.83.

Table-2

MULTIPLE REGRESSION ANALYSIS OF THE SELECTED COMPANIES IN INDIAN CEMENT INDUSTRY

REGRESSION EQUATION OF ROCE ON CR, ITR AND DTR.

$$ROCE = \beta_0 + \beta_1 \times CR + \beta_2 \times ITR + \beta_3 \times DTR$$

COMPANY	PARTIAL REGRESSION COEFFICIENTS			CONSTANT
	β_1	β_2	β_3	
MADRAS	2.402462 (.292)	.247064 (.151)	.622988 (2.7687)**	.093707 (.004)
BIRLA	41.942540 (1.842)***	4.410652 (.9730)	-.083381 (.135)	-81.490710 (1.384)
DALMIA	7.614833 (2.275)**	3.621667 (5.214)*	.339564 (.687)	-16.572768 (1.524)
ACC	34.494972 (3.681)*	3.348168 (2.336)**	1.133499 (2.983)**	-70.118896 (2.722)

GUJRAT	-.775691 (.665)	-.425207 (.986)	.097938 (1.908)***	12.684386 (2.439)
INDIA	-1.204852 (.281)	2.213602 (1.916)***	.630011 (2.873)**	-10.449074 (.0239)
NARMADA	6.609311 (.521)	-5.293331 (1.160)	2.851884 (2.625)**	-23.210699 (1.823)
MAYSUR	33.568982 (4.163)*	3.300778 (1.965)***	.678772 (1.835)***	-76.746529 (4.836)
SHREE	19.393972 (1.888)***	1.307044 (1.165)	.574451 (1.856)***	-33.321153 (.183)
KATWA	-.609 (.877)	2.357 (2.357)**	(.006) (.094)	(.794) (.183)
DECAN	-1.058085 (.254)	.004172 (.006)	.358063 (.646)	11.055165 (.815)

Figures in bracket show t values

*Significant at 1 percent level

**Significant at 5 percent level

***Significant at 10 percent level

Table Value of t with (n-2) i.e. 9 degree of freedom at 1 percent ,5 percent , at 10 percent levels are 3.25, 2.26 and 1.83.

Table 3

Multiple Correlation Analysis of the Selected Companies In Indian Cement Industry

COMPANY	R	R2	F
MADRAS	.9055	.8199	10.6247**
BIRLA	.62464	.39017	1.49286
DALMIA	.91151	.83086	11.46181**
ACC	.82076	.67364	4.81630*
GUJRAT	.57773	.33377	1.16896
INDIA	.77964	.60784	3.61661
NARMADA	.8242	.67934	4.9434*
MYSORE	.89304	.79752	9.190438**
SHREE	.6745	.45501	1.94809
KATWA	.8918	.7953	7.7698*
DECAN	.36876	.13599	.36724

*Significant at 1 percent level

**Significant at 5 percent level

Table value of F with (k, n-k-1) i.e. (3,7) degree of freedom at 1 percent and 5 percent levels are 8.45 and 4.35 respectively.

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Corporate Governance and Ethical Values: The Indian Scenario

Dr. Susanta Mitra[1]

Corporate governance in its broadest sense takes in the whole framework within which company operates. That framework is partly set by law, partly by the participants themselves, and more widely by society.

– The Cadbury Committee, 1992

Introduction

Gambling with the seed money of the investors, firing millions of ill fated workers along with destroying their retirement savings, debasing the green habitat and defrauding a large number of other legitimate stakeholders of the corporates by the corrupt promoters and narcissistic managers now become regular news in the corporate world. The unprecedented, unexpected and unwanted collapse of some global corporate players like Enron, WorldCom, Arthur Andersen, Adelphia, Tyco, Royal Ahold, Parmalat, Barings Bank, China Aviation Oil, Satyam, Indian Telecom Scam and others brought into light the fact that the corporates supposed to be the darlings of the stock market and are very often cited as examples of spirited and innovative corporate icons, can burst like bubbles when deceit dominates promoters' motivations and managerial will. Furthermore, the motivations of some globally famous accounting firms have explored the fact that it is not only the unscrupulous corporate promoters and their overambitious agent-managers playing foul with the peoples money, but the watchdogs who are under contractual obligation to protect the interest of the shareholders vis-à-vis the interest of the firm and to take care of a large number of stakeholders including the society at large are also in the same boat to complement the criminal proceedings of the corporate promoters and managers. And, in particular, it is the syndicate of unscrupulous promoters, egoist managers and fraudulent auditors that works with the sole objective of prowling people's money. Public debates are mounting on the question that how such ill-networks of the immoral corporate people can be explored out and be removed to restore the shareholders' confidence and to revitalize the support of a large number of stakeholders. The national Government and the regulatory bodies are looking for stringent laws to widen their scope of scrutiny along with the right implementation of the existing ones to curve such kind of scandalous practices. Therefore, right at the moment, fewer concerns deserve to be more fundamental to the contemporary corporate agenda than that of corporate governance or corporate misgovernance. The need for good governance in Indian corporate world has emerged because of a series of scandals that took place since India initiated liberalizing its economy by the end of 1991 from the bureaucratic clutches under the leadership of Dr Manmohan Singh, the then Finance Minister of the Govt. of India. Harshad Mehta's mega-scam involving SBI and other financial institutions, Ketan Parikh scam involving Bank of India and Gujrat Cooperative Bank, UTI scams, Vanishing Companies scam, Bhansali scam, Telgi's stamp paper scam, the Satyam scam, 2G Spectrum scam etc are some of the notorious corporate cases that looted crores of money of the shareholders, made millions of workers jobless, made the environment disordered for normal breathing and deprived a large number of other legitimate stakeholders to get back their just returns of investment what they deserve.

Good Governance & Ethical Values

Good governance refers to an act or acts of managing or steering an entity by a privileged person or a group of persons acting on behalf of a person or a group to the road of long run sustainable progress to reach common objectives, that is, the greatest good of the greatest number, i.e., summum bonum, of stakeholders. Efficient and effective

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decision making for the greatest good is good governance. Parochial view of corporate governance aims at maximizing the shareholders' value while the broader definitions of corporate governance cover the entire network of formal and informal relationships in and around the corporate economy and their consequences for society in general (Solomon and Solomon, 2006). Stakeholders' value creation is supposed to be a better postulation of the corporate mission and vision from the perspective of good governance in contrast with the narrowly construed Anglo-Saxon view of shareholders' value maximization. None can deny that the business enterprise is an institution of the society, by the society and to serve the society because society has granted the organizations the right to exist and the right to do business. Good corporates are not made overnight but are made by the common will and combined efforts of all the stakeholders in a long run perspective. In the words of Carroll, "Business relies on society's educational system to provide it with employees, on society's maintenance and transportation system, on a stable social and political setting in which to conduct business and a legal system to settle disputes. In return for special rights, privileges and protection, a duty is owed to all of society" (Ray Carroll, 1998). Thus, it is not hard to understand that good governance is not just engineering of economic value or enhancing efficiency and instantly gratifying one or a few constituencies (popularly known as 'short-terminism' in the glossary of accounting), but also developing a culture of ethical sense and values to provide space for justice to the legitimate stakeholders they deserve. Corporate governance can best be understood when it is all about routing a company towards long run value creation on the one hand and distributing the created value in a just manner between the stakeholders following a contribution-inducement identity on the other. In the lines of Sir Adrian Cadbury "corporate governance in its broadest sense takes in the whole framework within which company operates. That framework is partly set by law, partly by the participants themselves, and more widely by society. While the legal requirements on companies are relatively predictable, the boundaries to corporate behavior set by the participants and by society are continually shifting" (Cadbury, 1993). OECD Code on Corporate Governance tells us that "it is a set of relationships between a company's management, its board, its shareholders and other stakeholders. Through these relationships it provides a structure for setting the objectives of the company, the means for attaining them and monitoring performance" (OECD, 1999). A good corporate governance structure can help to ensure the longevity of the organization by means of appropriate internal controls, management structures, performance measures, succession plans, and full consideration of shareholders and wider stakeholder interests. Summing up this section with the view of Charkham: ".....vital to keep a system of corporate governance under review. It is as important to a nation as any other crucial part of its institutional framework, because on it depends a good portion of the nation's prosperity; it contributes to its social cohesion in a way too little recognized. A proper framework for the exercise of power is an economic necessity, a political requirement, and a moral imperative" (Charkham, J, 1994). Trust, honesty, integrity, transparency and compliance with the laws of the land are the ethical attributes that are essential on the part of a corporation to travel to the royal road of good governance to reach sustainable value maximization. An increasing body of public opinion expects a business unit not to function only in the name of an economic unit for generating more and more surplus but also to act as a good corporate citizen to share the burden of the societal pains and to promote the nation towards progress. To achieve this, the corporations must be guided by ethical attributes like transparency, accountability, fairness and responsibility along with enhancing their value making efficiency. Good governance is an amalgam of the adoption of the best practices, enhancing economic efficiency, ethical culture and stakeholder protection.

Corporate Governance in India

Pre-Liberalization Era

The corporate culture in India was initiated only after the attainment of political freedom from the imperial clutches of British rulers in 1947. In an economy featured with feudalistic mode of governance and a premature political democracy, the governance of most of the organizations tilted to corrupt practices at the marketplace showing petty recognition for the greater human values and organizational ethics in dealing with a large number of stakeholders including the shareholders. State monopolies, incompetent and unproductive but central and dominant at that phase, loved to shift the burden of misgovernance to the shoulders of powerless stakeholders. Growing corruption in the government and its various services had kept the managements of business and industrial houses above accountability for their misdeeds, encouraging them to indulge to more unethical practices. Organizations in the private sector, except a few, indulged in all possible unethical practices to defraud their investors and customers on the one hand and to deny the state its due share on the other. The constitutional commitment of establishing the country towards a socialistic pattern of society marked by the Industries Act of 1951 as well as the Industrial Policy Resolution of 1956 brought in a regime of licensing, protection and red-tapism that sowed the seeds of corruption and stilted the corporate growth. Scorching tax rates encouraged deceptive accounting practices and tax evasion. In the absence of a developed stock market the three FDIs, namely, IFCI, IDBI and ICICI together with state financial corporations, i.e., SFCs were the main providers of long term credit. The financial institutions could have played a big role in keeping their clients in a right track but unfortunately defective credit appraisal techniques, lack of effective follow up and monitoring and above all the favour of the then political leaders helped the overambitious Indian promoters to enjoy managerial control and to dominate the corporate world with a very little equity investment. They bled companies with impunity, siphoning funds with the support of the FDIs nominee directors and defrauded the shareholders and other stakeholders. A period of more than forty years since independence had witnessed extreme callousness on the part of the government and misgovernance on the part of the corporates which not only made the corporates inefficient and sick but the tragedy is that it also de-accelerated the desired progress of the nation expected by its citizens. However, it is interesting to note that when India got political freedom, certainly she inherited one of the world's poorest economies but in terms of corporate laws and financial system it emerged far better endowed than most other colonies where factory sector contributing one-tenth of national product, four functioning stock market (predating the Tokyo stock exchange) with clearly defined rules governing listing, trading and settlement, a well developed equity culture and a banking system replete with well developed lending norms and recovery procedures were the advantages with which India started its journey towards corporate progress (Goswami, 2002).

Post-Liberalization Era

Efforts for a CG Framework

In the post-liberalization era, initiatives for framing a code of corporate governance in India dates back to the year 1992 following efforts made in many countries of the world to put in place a system suggested by the Cadbury Committee appointed by the Stock Exchange of London. Harshad Mehta mega-scam might be the other reason of such initiatives. The CII (Confederation of Indian Industries) framed a voluntary code of corporate governance for listed companies in 1998. This was followed by the recommendations of Kumar Mangalam Birla Committee set up in 1999 by SEBI culminating in the introduction of Clause 49 of the standard listing agreement to be complied with by all the listed companies in stipulated phase. The Birla Committee divided the recommendations into

mandatory and non-mandatory. Mandatory recommendations included such as the composition of the board, appointment and structure of audit committees, remuneration of directors, board procedures, management discussion and analysis as a part of the annual report, disclosure of director's interest, shareholders rights and the compliance level of corporate governance in the annual report. Non mandatory recommendations include concerning the chairman of the board, half yearly information to the shareholders, use of postal ballots in certain key decisions, appointment of nominee directors and obligations of institutional shareholders. The Companies Act, 2000 has included many of the above provisions and the issue of corporate governance was also introspected by the advisory group constituted by the standard committee on International Finance Standards and Codes of the RBI chaired by Dr Y.V.Reddy, the then Deputy Governor. While SEBI was making efforts to introduce corporate governance standards among Indian corporates, the Department of Company Affairs took another initiative which appointed Naresh Chandra Committee as a high level committee to examine various corporate governance issues on 21st August, 2002 to examine and recommend drastic amendments to the law involving auditor-client relationships and the role of independent auditors. Narayan Murthy Committee was set up by SEBI in 2003 to review the performance of corporate governance and to determine the role of the companies in responding to rumour and other price sensitive information circulating in the market to enhance transparency and integrity of the market. Dr J.J.Irani Committee on Company Law constituted in 2005 by the Govt. of India is the next effort to make recommendations on (i) responses received from various stakeholders on the concept paper; (ii)reducing the size of the Act and removing redundant provisions; (iii) enabling easy and unambiguous interpretation by recasting the provisions of the law; (iv) providing greater flexibility in rule making to enable timely response to ever-evolving business models; (v) issues arising from the revision of the Act; (vi) protecting the interest of the stakeholders and investors, including small investors and (vii) any other related business. The committee's report is a balanced and a well-rounded document and attempts to equate the pulls and pressures of modern business and those of shareholder democracy. It is a step toward providing a growth oriented modern company law with the thrust on stakeholder democracy and self-regulation.

Report Card

Indian industries have come a long way since 1991. An amazing growth both in quantity and quality is evident in the country. Some of them are doing extremely well and implanting their footprints abroad and some research shows that our corporates, though small in number, are second to none in the sense of good corporate governance. Companies like Infosys Ltd, Reliance Industries and Tata Group of Industries are on the top. To be noted that the balance sheet of Infosys is cited as a model to be emulated by the US companies by Securities Exchange Commission, the US capital market regulator. Asian Paints Ltd, Bajaj Auto Ltd, Britannia Industries, Cadbury India Ltd, GACL, ONGC, Indian Oil Corporation, ITC Ltd, Wipro Ltd, State Bank of India, Dr Reddy's Laboratories, Ranbaxy, VSNL, TVS Suzuki, Smithkline, Lupin Laboratories, Cipla, Dabur India Ltd, Hero Honda and hundreds of companies, if not more, are doing well in terms of good governance following certain criteria such as governance structure including composition and committees of the board, statutory and non-statutory disclosures in the annual reports, timeliness and content value of information in terms of the compliance with the listing agreements, contents on website and grievance resolution ratio, enhancement of shareholder value in terms of share prices and return on net worth and corporate commitments to the society. Since the days of liberalization there are more than 100 companies that are nominated for conferment of Govt of India's Award for Excellence in Corporate Governance. This implies that a sizeable number of corporates in the country are looking for serious efforts to adopt good corporate governance.

However, the success of the Indian corporates seems to be only skin-deep. The success story is limited only to a small number of companies having extraordinary capability and zeal, while the majority of them have done nothing apart from cosmetic changes in their corporate governance.

Major Corporate Scams in India: A Gallery

Pre-liberalisation Scams:

1948: Jeep Purchase Scam worth Rs. 80 lacs

1956: BHU Funds scam worth Rs. 50 lacs

1957: Mundhra Scandal worth Rs. 1.25 Crores

1960: Teja Loans Scam worth Rs. 22 Crores

1976: Kuo Oil Deals worth Rs. 2.2 Crores

1987: HDW Commissions Scam worth Rs. 20 Crores

1987: Bofors Pay off worth Rs. 65 Crores

1989: St Kitts Forgery worth Rs. 9.45 Crores

1990: Airbus Scandal worth Rs. 2.5 Crores per week

Post-liberalisation scams:

1992: Harshad Mehta Scam worth Rs. 5000 Crores.

1992: Indian Bank Rip off worth Rs. 1300 Crores

1994: Sugar Import Scam worth Rs. 650 Crores.

1995: JMM Bribes worth Rs. 1.2 Crores

1995: Preferential Allotment Scam worth Rs. 5000 Crores.

1995: Yugoslav Dinar scam worth Rs. 400 Crores.

1995: Meghalay Forest Scam worth Rs. 300Crores.

1996: Fertilisers Import Scam worth Rs.1300 Crores.

1996: Fodder Scam worth Rs. 950 Crores

1996: Urea Deal worth Rs. 133 Crores

1997: Sukhram telecom Scam worth Rs. 400 Crores.

1997: Lavalin Power project Scam worth Rs. 374 Crores.

1997: Bihar Land Scam worth Rs. 1200 Crores

1997: C R Bhansali stock scam worth Rs. 1200 Crores.

1998: Vanishing Companies Scam worth Rs. 330.78 Crores

1998: Teak Plantation Scam worth Rs. 8000 Crores.

2001: UTI Scam worth Rs. 4800 Crores.

2001: Dinesh Dalmia Stock Scam worth Rs. 596 Crores.

2001: Ketan Parekh security scam worth Rs. 1250 Crores.

2001: Stock Market scam worth Rs. 115000 crores

2002: Sanjay Agarwal Home Trade Scam worth Rs. 600 Crores.

2003: Telgi Stamp paper Scam worth Rs. 172 Crores.

2005: IPO Demat Scam worth Rs. 146 Crores.

2005: Bihar food relief Scam worth Rs. 17 crores.

2005: Scorpene submarine Scam worth Rs. 18,978 crores.

2006: Punjab's city centre project scam worth Rs. 1500 crores

2006: Taj Corridor Scam worth Rs. 175 Crores.

2008: Pune Billionaire Hasan Ali tax default scam worth Rs. 50,000 crores.

2008: Satyam Scam worth Rs. 10.000 Crores.

2008: Army Ration Pilferage Scam worth Rs. 5000 crores.

2008: 2G Spectrum Scam worth Rs. 176000 Crores.

2008: State Bank of Saurashtra Scam worth Rs. 95 crores.

2008: Illegal money in Swiss Bank worth Rs. 71,00,000 Crores.

2009: Jharkhand Medical equipment scam worth Rs. 130 Crores.

2009: Rice export Scam worth Rs. 2500 crores.

2009: Orissa Mine Scam worth Rs. 7000 crores.

2009:Madhu Koda scam worth Rs. 4000 crores.

2010: IPL fraud worth Rs ?

2010: Commonwealth Games loot worth Rs. 40000 crores

Though the gallery does not exhibit an exhaustive list of all the scams that took place in India after independence nevertheless all these scandals prove that the business environment in India is abounding with situations such as bribery, corruption, insider trading, and variety of malpractices and insiders do not think foul of siphoning funds that ought legitimately to belong to outsiders and stakeholders. However, the general environment of the country is not much healthy. As per the Annual Report,2010 of the Transparency International it is evident that India ranks 87th among 178 countries surveyed by the Transparency International of Berlin, Germany and it is to be noted that it has slipped seventeen places from its rank of 70, in 2006. So far Corruption Perception Index is concerned it is to be noted that India's score is 3.3 where the score ranges between 10 (highly clean) and 0 (highly corrupt). In contrast to India's 3.3 it will be interesting to notice Singapore's score of 9.3, Hongkong's 8.4, Japan's 7.8 and Bhutan's 5.7.

Conclusion

Ethics refers to a conception of right or wrong. Ethical business behaviour is expected by almost all people because it prevents harm to society, improves profitability, fosters business relations, enhances employee productivity, reduces criminal penalties, protects business against unscrupulous promoters and corrupt managers, protects employees from harmful actions by their employers and allows people in business to act consistently. Ethical problems occur in business for many reasons, including selfishness and greed of a few, competitive pressures on profit, clash of personal ethics and business goals and cross-cultural conflicts. Unethical issues, such as, bribery and corruption are evident throughout the globe, and many national governments and international agencies are actively attempting to minimize such immoral activities through economic sanctions and international codes. Though ethics and laws are closely related nevertheless ethical principles tend to be broader than legal provisions. Unethical business practices by business and its workforce imposes greater costs on business itself and the society at large. However, a business or company is considered to be ethical only if it tries to reach a trade-off between its economic objectives and its social obligations, i.e. between its obligation to the society where it exists and operates; its obligations to its people due to whom it can even think of pursuing economic goals; to its environment, from whom it takes so much without it demanding anything back in return; and the like (Raj, Rituparna, 1999).

In the context of unethical corporate practices in India, many corporate people claim that the general ethical climate in India is not conducive to allow the companies to be ethically efficient. Thousands of deals under the table is taking place everyday and go unreported. There is hardly a company which has not at sometime or other been either involved or suspected of some foul play. Even companies with ethical intentions to do business have had to compromise their principles due to highly politicized and bureaucratic business environment in the country. Growing corruption, increasing disparity between people and reducing profit margins add to the woes of corporates that want to be ethical. Indian companies do face two types of corrupt practices, namely, one, political corruption in which money is paid for favours done; and, two, administrative corruption. A research study on the ethical attitudes of Indian managers conducted by Monappa(2007) reported that business executives listed three major obstacles to ethical behaviour, namely, company policies, unethical industry climate and corruption in government. Socio-cultural environment is the root cause of all these things. With regard to the socio-cultural reasons underlying the tendency of the Indian corporates to be unethical are the low priority accorded to ethical norms and practices in newly formed democracies as it seems there are more urgent demands that have to be

dealt with first (Rossouw,1998). Apart from that the situation has been sharpened by the opening up of the economy wherein Indian corporates find it extremely difficult to compete in a dog-eats-dog kind of global markets. Lack of aspiration to build a strong and economically powerful nation is another reason. The psychological fear of loosing jobs, lax government structures and regulations, social sanctions and discriminations that can be offset by accumulating more wealth, uncertainties and fear about the future, an inequitable tax system and scorching tax rates, belief that ethics and business are not complementary, difficulty in amassing wealth in a legitimate way, overall scarcity of resources, accumulating substantial assets for progeny etc are some of the dominant reasons that accelerates the advancement of a corrupt society. Lea (1999) gives an explanation to the deviant ethical behaviour found among corporate in developing societies. Transition from a subsistence culture to the commercial enterprise of capitalistic culture can result in a moral chaos in which behaviour falls short of ethical expectations. Rapid economic growth leads to the development of a distorted understanding of capitalism and growth in which money power, survival and profitability at any cost are considered as the primary goals of any business. The need to adapt to the unethical climate is so strong that even that even large multinationals have been unable to avoid cutting corners. To capture the Indian market and beat the competition many MNCs have grossly broken their stringent code of conduct, which is unthinkable in the west. Right from the Harshad Mehta scam till the recent Spectrum Scam we see unethical practices taking place at random. Bribery, coercion, deception, theft, insider trading are taking place in reputed companies and at the top management level. To conclude with the Kings Report: "....successful governance in the 21st century requires companies to adopt an inclusive and not an exclusive approach. The company must be open to institutional activism and there must be greater emphasis on the sustainable or non financial aspects of its performance. Boards must apply the tests of fairness, accountability, responsibility and transparency to all acts or omissions and be accountable to the company but also responsive and responsible towards the company's identified stakeholders." (King Report, 2002)

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Source: www.allvoices.com

Appendix I: India's Rank in Corruption Perception Index (CPI: 1995-2009)

(Prepared by Transparency International, Berlin)

Year	No of Countries	CPI	Rank
1995	41	2.78	35
1996	54	2.63	46
1997	52	2.75	45
1998	85	2.90	66
1999	99	2.90	72
2000	90	2.80	69
2001	91	2.70	71
2002	102	2.70	71
2005	158	2.90	88
2006	163	3.30	70
2007	180	3.50	72
2008	180	3.40	85
2009	180	3.40	84

Source: www.allvoices.com

Branding Strategies for Hinterland: an Overview

Sumanta Dutta[1]

Abstract

Rural marketing is gaining prominence now a day. The biggest challenge in rural marketing is to create a brand loyalty among the consumers. Rural marketing becomes a task for the company, as most of them are in the way to capture the market. The market is full of opportunities at the same time challenges too. The marketer need to aware of these challenges through updates research and development centre and try to capture mind and potentiality of the hinterland. Present study focus on some of the brand building cases in the rural market.

Keywords: *Rural Market, Hinterland, Brand Building, Marketing Strategy*

Introduction

Rural India offers a huge untapped potential for marketers. The Indian rural market is influenced by various sociological and behavioural aspects. India's rural population accounts for around 70% of the total population. The rural market is assuming importance also because of market saturation in urban areas. The urban market is crowded with many companies and stiff competition. Hence, for this reason rural marketing is being considered as an attractive proposition. It delineates some of the initiatives taken by companies for reaching the Indian rural consumers.

The rural market for many products is growing rapidly; and simultaneously, the tastes and preferences of rural consumers are undergoing transformation. Rural advertising is, therefore, gaining ground in today's competitive world. The products that are offered to rural consumers may or may not be different. But the way they are marketed has to be carefully thought out. To cope with these challenges, marketers use a variety of advertising and promotional techniques and also media which are unique to rural areas. Today, no consumer goods company can afford to forget rural market which is a very big part of the Indian consumer market. You cannot build a brand presence in India until you have the strategy for reaching the villages.Dinesh Malhotra, general manager of Hinterland (rural arm of Lintas), pointed out that, "With media exposure and increasing literacy levels, people in rural India are now demanding a better lifestyle." The educated **"rural yuppie"** (males in the 15-34 age group) is moving out to work in nearby towns and cities, and sending money home to his family.

Rural Marketing-Challenges

Following are some of the challenges which the marketers have to face in Indian rural markets.

Low per capita income

Most of rural customers are attached with agriculture sectors or small businesses with limited or no educations. So their earnings are very poor as compared to the urban customer. Since their earnings are poor, their consumptions power is also poor.

Seasonal demand

Demand in rural market depends on the agricultural situation as it is the main source of income. Agriculture depends on monsoon. The per capita incomes of many rural customers are very poor. So, they have limited demands towards products. Their demands are seasonal based on some special occasions or festivals.

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Low literacy rate

Rural people are mostly illiterate and ignorant. So these create a great challenge for the marketer to influence them towards branded products. They do not care for brand of the product to buy. What they prefer is value for money.

Traditional Outlook

People in rural areas are traditional in their thinking; they are superstitious in their beliefs. This trend too is gradually changing because of increasing literacy levels among the rural youth.

Diverse Socioeconomic Background

Rural consumers are spread across different states in distant parts of India. Thus, their social norms and economic stratus differ widely from each other.

Lack of Proper Infrastructure

There are no proper infrastructure facilities in and around villages. This includes bad roads, bad warehouses, lack of proper communication system and inadequate credit facilities. This is gradually progressing because of Government initiatives and private players.

Logistics problems

Poor infrastructure plays a tough role for logistics also, which play an important role to provide timely supply of products in the market.

Poor life style of the rural customer

Life style of the rural customer is different than urban people because of differences in education, culture, belief, cast feelings and low per capita income. They are not at all habituated of using branded products. Even rich and educated class of farmers does not wear jeans or branded shoes. They lead a simple life style.

Customs and Traditions

People do not readily adapt to new practices as life in rural areas is based very strongly on traditions and customs. For example, even rich and educated farmers do not wear jeans or branded shoes.

Media for Promotions

The marketers have to undertake promotional activities in rural areas through the limited choices of media that are available.

Dispersed Population

Population density is much lower as compared to that in urban areas. It, therefore, becomes more challenging to reach out to a large number of people at an affordable cost.

Numerous intermediaries

The products of existing local market stand as a threat for MNC's for their branded products. As discussed earlier that rural customers do not care for brand of the product to buy.

Several situational problems:

Situational problems arise with cost like van for promotion, labour and so on.

Rural Market – An Attractive Destination:

Rural markets are attracting companies because of the following factors:

1. Rising demand from rural consumers resulting from a gradual increase in their incomes.

2. High competition in the urban market and some products being in the saturation stage in urban areas. This has made companies to move towards the rural market that is comparatively untapped. Thus, rural market is advantageous to early entrants.

3. Penetration level of products is high in urban areas and low in rural areas, thus providing untapped potential.

4. Most rural consumers are first time users of products/services.

An innovative strategy for rural market

An innovative marketing strategy is considered to be key differentiator while managing Indian rural markets. Companies' realize the inevitable need to differentiate the brand, taking the regional disparities into consideration. Such differentiation is not necessarily in terms of product content; it may not always necessarily be so, as it can be in terms of packaging and communication of the brand. Some examples in respect to rural marketing strategies adopted by the firm's across India are given below:

India Tobacco Company

ITCs e-**Chaupal** initiative which is looking at raising its present reach of 9,000 villages to 1, 00,000 villages, and some 1,500 kiosks to 20,000 kiosks over the next 10 years uses a communication model based on local language platforms

Godrej

- Godrej Consumer Products, introduced three brands of Cinthol, Fair Glow and Godrej in 50 gm packs, priced at Rs.4-5, meant specifically for Madhya Pradesh and Bihar.

- The company uses radio to reach the local people in their language and push its soap brands into the interior areas.

Colgate toothpaste/Toothpowder

- Colgate resorted to keep their products low priced than its arch-rival, Hindustan Lever. As a result, Colgate Gel, Total, etc. are priced marginally lower than similar offerings from HLL. Colgate's dominant position in toothpowder and lower-priced products has helped in increasing sales.

- The company launched Cibaca Top and Colgate Herbal, two low-priced brands targeted at the semi-urban market.

- Colgate's low price offers have also helped to enhance usage levels.

LG Electronic

- LG Electronics defines all cities and towns other than the seven metro cities as rural and semi-urban market, and has set up 45 area offices and 39 rural/remote area offices.

- 'Sampoorna', its customized TV for the rural market launched in 1998, was a huge success, selling, 1, 00,000 sets in the very first year.

- The company uses local language advertising and also uses vans and road shows to reach rural customers.

CavinKare

- Live demonstrations of hair care products being conducted by Chennai-based CavinKare Products.

Hindustan Unilever Limited

- Under its **'Operation Bharat'**, the company gave away low-priced sample packets of its toothpaste, fairness cream, Clinic plus shampoo, and Ponds cream to 20 million households in the rural market.

- Having realized the potential of India's rural market, the company lunched a variant of its largest-selling soap brand, Lifebuoy at Rs.2 for 50 gm. It also launched

a green variant of Lifebuoy soap, Lifebuoy Active Green, made of natural ingredients such as neem and tulsi.

- HLL has built a strong distribution system, and has developed a direct access to markets through wholesale channel, creating awareness through media, demonstration and on ground contract.

- The company relies heavily on its own company-organized media by way of promotional events organized by stockists. HLL stockists use auto rickshaws, bullock-carts, and even boats in the backwaters of Kerala, in order to service the remote villages.

Coca-Cola

- It introduced the price point of Rs.5.

- Coca-Cola has also introduced Sun fill, and instant ready-to-mix powdered soft-drink concentrate, available in a single-serve sachet of 25 gm priced at Rs.2, and multiserve sachet of 200 gm priced at Rs.15.

- The company has evolved a 'hub and spoke' distribution model to reach the villages. The ensure full loads, the company depot supplies large distributors who act as 'hubs' twice a week, who in turn appoint and supply smaller distributors once a week. Because of the lack of electricity and refrigerators in the rural areas, Coca-Cola provides low-cost ice boxes- a tin box for new outlets, and thermocol box for seasonal outlets.

- Coca-Cola uses a combination of TV, cinema and radio to reach 53.6% of rural households. It doubled the spend on Doordarshan, used banners and posters, and also tapped local forms of entertainment like annual haats and fairs, and made huge investments in infrastructure for distribution and marketing.

Colgate –Palmolive

- Colgate-Palmolive launched **"Operation Jagruti"** to educate villagers about oral hygiene and its benefits vis-à-vis traditional products like **"Neem."** Through product trials and free samples, the company was able to generate awareness in this new market.

Hero Honda

- In late 2007, **Hero Honda** started putting emphasis on the rural markets. In December 2007, the company started a separate **'rural vertical'**. To strengthen its network in rural areas, the company started sales, serving and spare part outlets in several small towns and villages. The company recruited local people as sale executives and trained them to market its product to rural customer.

DCM Shriram Consolidated Ltd

- Hariyali Kissan Bazaar was set up by DCM Shriram Consolidated Ltd to facilitate sale of agri-inputs such as fertilizers, pesticides, farming equipments, seeds, animal feed, etc.

Nokia's Low-Cost Handsets

- In order to capture price sensitive rural customers, Nokia has lunched seven handsets in the price range of Rs.1500 to Rs.5500 targeting rural customers.

- Further, Nokia is promoting a subscription-based service called **"Life Tools"** which provides information about agriculture and education that is helpful to rural people. It also provides entertainment services. The **"Life Tools"** service is priced between Rs.30 to Rs.60 per month, based on the package in individual opts for.

'Reuters Market Light' – Data Services for Farmers

- Reuters Market Light (RML) – a mobile services initiative specially launched for farmers was started in 2007. Through the "Market light" service, Reuters offers the much needed relevant market information about prices, weather, etc., to the farmers through the mobile phone network.

- The service is presently available in two states, namely – Maharashtra and Punjab. Reuters has achieved 60,000 subscription sales in Maharashtra and 3000 subscription sales in Punjab.

Dabur – Indian Oil Partnership

- In order to tap India's rural market, Dabur India Ltd. has tied up with Indian Oil Corporation (IOC). According to the agreement between the two companies, IOC's retail outlets all over the country will stock and sell Dabur's products consisting of healthcare, oral care, personal wash, skin care and home care products. This will help Dabur in reaching millions of rural customers.

- The Kisan Seva Kendra is a one-stop rural retail outlet of IOC, which offers fuel and non-fuel products like fertilizers, grocery, tools used for cultivation, seeds, personal care products, auto spares, etc. There are 1600 such IOC outlets across India.

Idea Cellular 3G

- Idea cellular launched their cellular services in semi-urban and rural area to tap the opportunity of the market share in that area.

- The company has its presence in 3, 00,000 villages, has the highest number of rural subscribers as a percentage of total subscribers among GSM operators.

Hence, rural marketers need to have an open mind, and sensitize themselves to understand rural consumer

Conclusions

The key challenge that companies face in the rural market is to identify and offer appropriate products without hurting the company's profitability or margins. Companies should recognize that rural consumers are quite discerning about their choices and customize products and services accordingly. Innovative Product awareness campaigns and advertising communications need to be designed and executed keeping in tune with the context. The products should not only be made available at the right time and at the right place but should also be affordable and acceptable to the rural people. Hence, it can be said that rural marketing becomes a task for the company, as most of them are in the way to capture the market.

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Adversities and Uncertainties in Availability of Conventional Energy Resources – Scope of Alternative Energy Resources and its Management

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Abstract

Since inception, process of industrial activities has relied on burning of fossil fuels. It has become increasingly clear that such growth is unsustainable. Sustainable development may be considered as a development that meets need of present without compromising the ability of future generations to meet their own needs. This implies a complex balance sustaining the economic growth that is essential for poverty reduction using natural resources for a prudent fashion. It also means ensuring greater equity both within and between societies and generations-achieving a stable relationship between activities and the natural world that does not diminish the proposal for future generations to enjoy a quality of life at least as good as our own. This task will be difficult but by no means impossible. The same kind of creativity and drive that powered the industrial relation is also constantly creating new technologies that could permit continued economic growth without provoking unacceptable global warming.

The world now has an opportunity to the right path. The wrong choices now could not only exclude millions of people from the fruits of economic development but also cause them to suffer from the side effects of growth of others and cause some of the greatest damages to the poorest countries.

A few decades ago the main issue appeared to be that economic growth was unsustainable because the world was likely to run out of fossil fuels. Now that problem seems more remote, many countries still have ample reserves of coal and are discovering new deposits of oil and gas every year. The more immediate danger is that burning most of these deposits in the next hundred years will release so much carbon-di-oxide into the atmosphere that it will significantly change the global climate and alter the way our civilization functions. To avoid this, the world needs to produce same amount of goods and services by using fewer resources-sustaining and improving levels of consumptions while avoiding environmental degradation. In this paper effort has been made to work in this area elaborately.

Key words: *global warming, environmental degradation, and sustainable growth.*

1.0 Introduction

Since the dawn of civilization mankind had been dependent upon products of industries. For producing different consumables of daily requirements like food grains and cereals, clothing as well as durables like housing materials, agricultural appliances etc. there was no alternative thanlooking for industrial development. More the rate of development of human civilization and more the effort of human beings towards their safety, security, comfort and well beings, more there had been the dependence upon the process of industrialization leading it to its never ending process of steady growth towards its state of today's status and height. In the never ending race of growth though therehad been occasional phase of stagnation because of several unforeseen and unwarranted situations like as it is today because of global economic crisis, the extent of growth had been unimaginable.

This massive global growth had inherently been the cause

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of generation of curse of human beings as well as blessings. The curses though very much undesirable from the standpoint of even human existence but are unavoidable.

This paper identifies the different undesirable areas of human and consequent industrial development and tries to find out the means of coming out of the evils keeping the growth rate unchanged.

2.0 Identification of Hazards of Industrial Development

Industry needs some prime moving force to run its wheels of movement. The prime moving force as source of power is designed in different forms. Sometime it is steam engine, sometime it is electric power and others as well. In all these cases the prime moving force being it steam or electricity is generated by burning some fossil fuel- either coal or petroleum products. These all burn and convert its heat energy to mechanical or electrical energy to run the industries.

These fossil fuels, which are actually high calorific value enriched carbon based fuels, on burning, generate carbon die oxide. This carbon die oxide once released in environment shield the environment and it has got a physical property of being high heat absorbent without releasing or deciphering it. This carbon die oxide thus absorbs solar heat and raises atmospheric temperature by warming earth's surface. This effect is global warming. This global warming has numerous adverse effects, which are even cause of danger of existence of the civilization itself.

Also carbon die oxide and carbon mono oxide generated in excess because of combustion of fuel, produces adverse effects upon human and other animal creatures which can lead them towards their extinction.

The process of burning of fossil fuel is not sustainable or renewable in nature. The world has limited stock of these resources, which neither can be renewed nor replenished. More these are burnt to move the wheels of development more fast it moves towards total exhaustion. The world is likely to suffer the starvation of these fuels and the present generation will remain ever-indebted to future generations since they had consumed what the future generation had to consume and though this present generation had received the environment as rich and as resourceful as it is to-day, had left nothing for them since they, in this process, had made the world pauper without these natural resources.

3. Concept of Energy Management- Conventional and Emerging

Energy is used in its different forms in accordance with needs of human beings and is converted from one form to another. Since human need for energy is never ending, in order to satisfy never ending stream of requirements mankind depend upon prime sources of energy which are easily available, abundantly available and can be converted to form of energy which can energize appliances which human beings want at minimum cost.

3.1 Conventional Energy Resources

Some of the extensively used resources, which satisfy the criterions of easy and abundant availability and technological feasibility of being converted to necessary forms at optimum cost are fossil fuels which are mainly coal and petroleum products. These are resources that are used for generation of conventional energy like electricity without which even existence of human beings at present state of affairs is not possible. In industrial development or even sustenance of existing industries, at their existing state of affairs, is unthinkable. Electricity in present days may be considered to be something an essential commodity like food and drink without which people cannot live.

The sources that are presently used for generation ofelectricity are primarily coal and crude petroleum and these are called conventional energy resources.

3.2 Alternative Energy Resources

Energy is manifested in its different basic forms in nature-only what is required is to convert these different forms of energy into the conventional forms which can provide prime moving force to the appliances for operation of which energy in required form is desired. The technology for conversion of these non-conventional forms of energy is complex in nature and no concerned thought had been given over the technological development for harnessing the commonly used energy 'electricity' from the non-conventional sources. The management of identifying, implementing and using the technology for generating electricity from these non-conventional and alternative available sources of energy to a feasible and economic method which can be established to be quantitatively sufficient to replenish the conventional sources is called to be the 'management of alternative sources of energy'. Here care needs to be taken to identify a) sources b) the quantitative availability c) technological feasibility d) the status of advancements and future opportunity of the technology and its required appliances e) the economic viability of harnessing the sources and convertibility of these to electricity f) competitive advantages of these sources g) potentialities in respect of as much as these offer clean and green sources of energy.

3.3 Renewable Sources of Energy

The conventional sources, fossil fuel, are burnt to generate energy in different heating appliances like boiler, autoclave, generator, automobile engines (whether S.I or C.I) etc. These are burnt to oxides and these cannot be renewed to its original previous form. Accordingly these are called 'nonrenewable' sources. But there are some sources which are not destroyed during process of power generation; unlike the fossil fuels these can be reused. Like hydel-power generation system where water can be reused orrecycled for electrical power generation or other uses like irrigation etc. (as done by DVC or other hydel power generating sources), the sources of energy are renewable and inexhaustible in nature and can be replenished with human effort at a lesser cost on large scale basis.

3.4 Sustainable Development in Energy Management

Fossil fuel cannot be renewed and it is not inexhaustible in nature. Every use of this fossil fuel is at the cost of its existing reserve or stock in nature, which in no way can be replenished. More it is used by present generation in earth more it leads towards non-replenishable exhaustion of stock to be inherited by the future generation. This goes against the concept of sustainability.

Sustainable development may be defined, as a development that meets the needs of present without compromising the ability of future generations to meet their own needs. This implies a complex balance of sustaining growth that is essential for poverty reduction as well as economic growth without compromising national reserves and stocks.

4. Objectives of Alternative Energy Sources (AES) Sectors

4.1 The AES

The national goal of achieving 10% of the grid capacity from AES by 2010 has already been achieved in several states like Tamilnadu etc. The Tenth Plan goal is to consolidate/ stabilize the share of grid connected power with an additional capacity of 550 MW and to decentralize power generation to meet the total energy needs in agriculture, agro-processing, households etc. especially in remote areas and expand the use of renewable energy sources/ promote energy efficiency and thereby energy savings. Strategies formulated /implemented during Tenth Plan period for the development of alternative energy resources are:

- Encourage and promote private investments in renewable

energy through suitable policy initiatives at the state level

- Involve local bodies in decentralizing power and its use in agriculture, house hold sectors etc.
- Establish field units to promote Alternative Renewable Energy at local level by integrating existing program staff.
- Enable suitable revision of power purchase rate for grid-connected power to make it attractive for the investors.
- Encourage research and development to improve efficiency of devices and bring down the cost.
- Undertake awareness campaigns in districts through seminars, exhibitions etc.

4.2 Initiatives taken under AES sectors

- Undertaken micro survey studies for setting up of windmills in states like Tamil Nadu by identifying proper and suitable locations.
- Undertaken Biomass potential assessment studies at Taluk level and make database on Biomass potential available for prospective investors.
- Merge the staff under centrally sponsored schemes like IREP and National Biogas Development program and create field outfits to provide guidance and support to local bodies in tapping alternative renewable energy sources.
- Popularize and propagate renewable energy use among industries and households in rural and urban areas.
- Secure proper and reasonable price for grid connectedpower through State Electricity Regulatory Commission (SERC)
- Arrange for suitable adjustments in wheeling and banking facilities and third party sale to attract further investment in renewable energy sector.

5. Identification of Alternative Energy Resources and Managing their Usability

Though the importance of Renewable Energy sources has gained momentum in the country in the early 1970s, India has now one of he largest programs in harnessing RES. The Ministry of Non-conventional Energy Sources (MNES), which was established in the year 1992, has been functioning as the Nodal Agency for all matters related to new RESs. The National Program on RESs covers the entire gamut of technologies which is inclusive of Biogas plants, Biomass gasifiers, Solar Thermal, Solar Voltage Systems, Wind Mills, Biomass based cogeneration plants, Small and micro hydel systems, Power generation from the urban municipal and industrial wastes, Ocean energy etc. In each of these areas numerous programs, for the RESs such as assessment surveys, R&D works, prototype development, technology transformation and commercialization have been taken up in all India level.

Emerging technologies can be classified in two different categories. One category deals technology, which is quite new, mostly unheard of quite some time back. Many of such technologies might be in nascent stage and are not yet fully commercialized or are awaiting commercialization.

The other category concerns already established industries which have already incorporated or are incorporating new/emerging technologies b way of installation of newer type of equipments or modifying the process with a view to increasing efficiency curbing wastes, minimizing emission and pollution, improving product quality and lowering operating costs.

5.1 Wind as Alternative Energy Resource

The wind energy has become one of the today's lower cost renewable energy technologies. The global market for wind power has been expanding faster than any other source of renewable energy. From just 4,800 MW in 1995 the world has multiplied more than twelve fold to reach over 59,000 MW at the end of 2005.

Indian Scenario of Wind Energy:

India had the target of almost doubling its wind power generation to 10,000 MW by the end of 2010 to meet the rising demand. Capacity in India rose in the year March 2006, to 5,340 MW.

India ranks fourth in the world, leads in Asia. The World Wind Energy Association (WWEA) is of the view that India continues to be the leader among Asian countries in the area of wind power generation. India now ranks fourth in the world in wind power, both in terms of overall capacity (14,300 MW) and average trend in annual capacity addition (1,430 MW).

5.2 Solar Technology as a source of Energy

Solar energy is most readily available source of energy. It does not belong to anybody and is, therefore, free. It is also the most important of the non-conventional sources of energy because it is non-polluting and, therefore, helps in lessening the greenhouse effect. Also it is sustainable and not exhaustible.

Through solar photovoltaic (SPV) cells solar radiation gets converted into DC electricity directly. This electricity can either be used as it is or can stored in the battery. This stored electrical energy then can be used at night. SPV can be used for a number of appliances such as:

i) Domestic lighting,

ii) Street lighting

iii) Village electricity

iv) Water pumping

v) Desalination of salty water

vi) Water heating

vii) Powering of remote telecommunication repeater station.

5.2.1 Solar Thermal Power Plant

Solar thermal power plant use the sun ray to heat a fluid, from which heat transfer systems may be used to produce steam. The steam, in turn is converted to mechanical energy in a turbine and into electricity from a conventional generator coupled with the turbine.

India is one of the few countries with long days and plenty of sunshine, especially in the Thar Desert region. This zone having abundant solar energy available is suitable for harnessing solar energy for a number of applications.

A proposal for installation of a 140 MW integrated combined cycle power project with solar thermal capacity of 35MW had been proposed by MNES (Ministry of Non-conventional Energy Resources). This plant is to be located in the Jodhpur district of Rajasthan.

5.3 Development of Tidal Energy

The earth is filled with almost 75%water and it is conceivable that tides based on pollution free sources of energy would be vey much cost-effective for generating electricity. T ides are aggravated from the motions of earth, the moon and the sun. Tidal energy exploits the natural rise and fall of coastal tidal water caused mainly due to interaction of gravitational fields of the sun and moon. He gravitational forces of moon cause ocean water to bulge along an axis pointing directly at the moon. The moon has the greater effect on earth despite of having smaller mass than the sun because it is so much closer.

The technology required to convert tidal energy into electricity is very similar to that used in traditional hydroelectric power plant,. The best tidal sites are those

where a bay has narrow opening reducing length of a dam across a tidal bay. At certain points across the dam, gates and turbine are installed. In case of adequate difference in elevation of water on two sides of dam gets will be opened. The hydrostatic head causes water to flow through turbines turning electric generators producing electricity.

The main potential sites for tidal power generation are the gulf of Kutch and the Gulf of Khambat (Cambay), both in the western state of Gujrat and the Gangatic delta in the Sundarbans area of West Bengal, in Eastern India.

The tidal ranges in the Gulf of Kutch and Gulf of Khambat are 5m and 7m respectively, theoretical capacities are 900MW and 7000MW are respectively and estimated annual output approximately1.6TWH and 15.0TWh respectively.

5.4 Ocean Thermal Energy Conversion

5.4.1 Ocean thermal energy conversion

OTEC or OTE is a method for generating electricity which uses the temperature difference that exists between deep and shallow waters to run a heat engine. As with any heat engine, the greatest efficiency and power is produced with the largest temperature difference. This temperature difference generally increases with decreasing latitude, i.e. near the equator, in the tropics. Historically, the main technical challenge of OTEC was to generate significant amounts of power, efficiently, from this very small temperature ratio. Changes in efficiency of heat exchange in modern designs allow performance approaching the theoretical maximum efficiency. OTEC requires a temperature difference of about 200C. This temperature difference exists between the surface and deep seawater year round throughout the tropical regions of the world.

5.4.2 Work principles

Some energy experts believe that if it could become cost-competitive with conventional power technologies, OTEC could produce gigawatts of electrical power, and in conjunction with electrolysis, could produce enough hydrogen to completely replace all projected global fossil fuel consumption. Managing costs is still a huge challenge, however. All OTEC plants require an expensive, large diameter intake pipe, which is submerged a kilometer or more into the ocean's depths, to bring very cold water to the surface.

Depending on the cycle used there are three types of OTEC used a) open cycle b) Closed cycle c) Hybrid cycle:

5.4.3 Open-cycle

Open-cycle OTEC uses the tropical oceans' warm surface water to make electricity. When warm seawater is placed in a low-pressure container, it boils. The expanding steam drives a low-pressure turbine attached to an electrical generator. The steam, which has left its salt and contaminants behind in the low-pressure container, is pure fresh water. It is condensed back into a liquid by exposure to cold temperatures from deep-ocean water. This method has the advantage of producing desalinized fresh water, suitable for drinking water or irrigation.

In 1984, the Solar Energy Research Institute (now the National Renewable Energy Laboratory) developed a vertical-spout evaporator to convert warm seawater into low-pressure steam for open-cycle plants. Energy conversion efficiencies as high as 97% were achieved for the seawater to steam conversion process (overall efficiency of an OTEC system using a vertical-spout evaporator would still only be a few per cent). In May 1993, an open-cycle OTEC plant at Keahole Point, Hawaii, produced 50,000 watts of electricity during a net power-producing experiment. This broke the record of 40,000 watts set by a Japanese system in 1982.

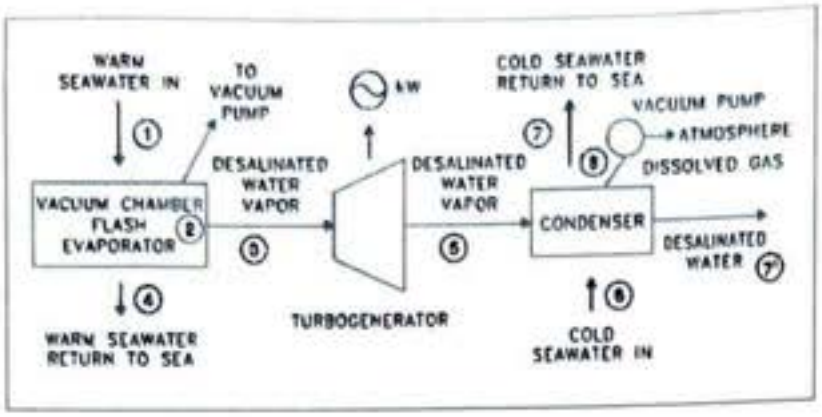

Exhibit-1: Open Cycle OTEC

5.4.4 Closed-cycle

Closed-cycle systems use fluid with a low boiling point, such as ammonia, to rotate a turbine to generate electricity. Warm surface seawater is pumped through a heat exchanger where the low-boiling-point fluid is vaporized. The expanding vapor turns the turbo-generator. Then, cold, deep seawater—pumped through a second heat exchanger—condenses the vapor back into a liquid, which is then recycled through the system.

In 1979, the Natural Energy Laboratory and several private-sector partners developed the mini OTEC experiment, which achieved the first successful at-sea production of net electrical power from closed-cycle OTEC. The mini OTEC vessel was moored 1.5 miles (2.4 km) off the Hawaiian coast and produced enough net electricity to illuminate the ship's light bulbs, and run its computers and televisions.

Then, the Natural Energy Laboratory in 1999 tested a 250 kW pilot closed-cycle plant, the largest of its kind ever put into operation. Since then, there have been no tests of OTEC technology in the United States, largely because the economics of energy production today have delayed the financing of a permanent, continuously operating plant.

Outside the United States, the government of India has taken an active interest in OTEC technology. India has built and plans to test a 1 MW, closed-cycle, floating OTEC plant.

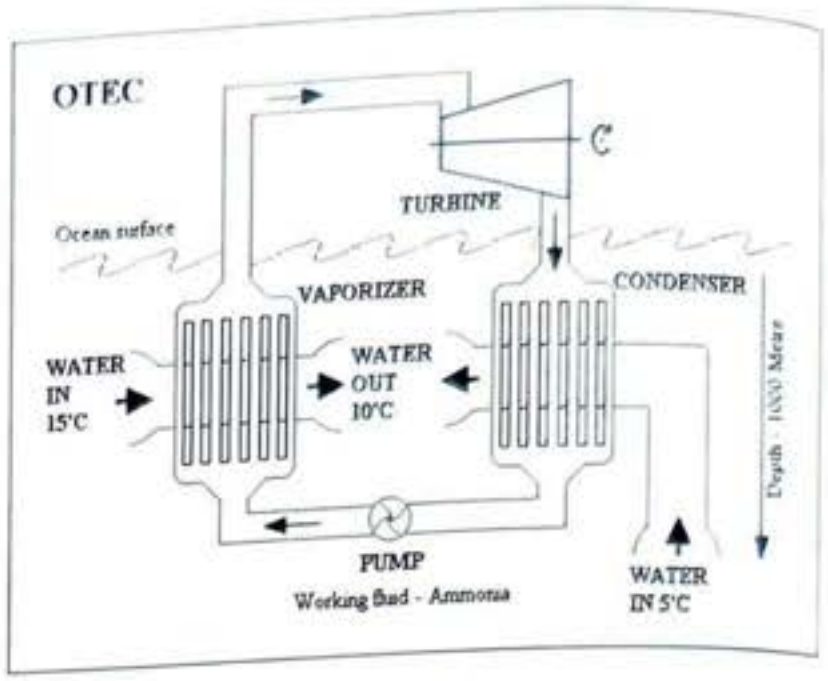

Exhibit-2: Closed Cycle OTEC

5.4.5 Hybrid Cycle

A hybrid cycle combines the features of both the closed-cycle and open-cycle systems. In a hybrid OTEC system, warm seawater enters a vacuum chamber where it is flash-evaporated into steam, similar to the open-cycle evaporation process. The steam vaporizes the ammonia working fluid of a closed-cycle loop on the other side of an ammonia vaporizer. The vaporized fluid then drives a turbine to produce electricity. The steam condenses within the heat exchanger and provides desalinated water. (see heat pipe)

The electricity produced by the system can be delivered to a utility grid or used to manufacture methanol, hydrogen, refined metals, ammonia, and similar products.

5.4.6 Political concerns

Because OTEC facilities are more-or-less stationary surface platforms, their exact location and legal status may be affected by the United Nations Convention on the Law of the Sea treaty (UNCLOS). This treaty grants coastal nations 3-, 12-, and 200-mile zones of varying legal authority from land, creating potential conflicts and regulatory barriers to OTEC plant construction and ownership. OTEC plants and similar structures would be considered artificial islands

under the treaty, giving them no legal authority of their own. OTEC plants could be perceived as either a threat or potential partner to fisheries management or to future seabed mining operations controlled by the International Seabed Authority.

5.4.7 Cost and economics

For OTEC to be viable as a power source in terms of global utilization, the technology must have equal tax and subsidy treatment as competing energy sources. Because OTEC systems have not yet been widely deployed, estimates of their costs are uncertain. One study estimates power generation costs as low as US $0.07 per kilowatt-hour, compared with $0.05 - $0.07 for subsidized wind systems.

Beneficial factors that should be taken into account include OTEC's status as a renewable resource (with no combustion or waste products or limited fuel supply), the amount of area in which it is available, (often within 20° of the equator) the geopolitical effects of dependence and reliance on petroleum, the development of alternate forms of ocean power such as wave energy, tidal energy and methane hydrates, and the possibility of combining it with solar energy, aquaculture, refrigeration and air conditioning, hydrogen production or filtration for trace minerals to obtain multiple uses from a single pump system.

5.5 Geothermal Process of Energy Production:

5.5.1 History

People have used geothermal resources in many ways, including healing and physical therapy, cooking, space heating, and other applications. Prince Piero Ginori Conti invented the first geothermal power plant in 1904, at the Larderello dry steam field in Italy. The first geothermal power plants in the United States were operated in 1960 at The Geysers in Sonoma County, California. Table 1 (below) shows the timeline of the recent history of geothermal energy in the United States.

5.5.2 Geothermal Power Technology

Utility-scale geothermal power production employs three main technologies. These are known as dry steam, flash steam and binary cycle systems. The technology employed depends on the temperature and pressure of the geothermal reservoir. Unlike solar, wind, and hydro-based renewable power, geothermal power plant operation is independent of fluctuations in daily and seasonal weather.

Dry steam

Dry steam power plants use very hot (>455 °F, or >235 °C) steam and little water from the geothermal reservoir. The steam goes directly through a pipe to a turbine to spin a generator that produces electricity. This type of geothermal power plant is the oldest, first being used at Lardarello, Italy, in 1904.

Flash steam

Flash steam power plants use hot water (>360 °F, or >182 °C) from the geothermal reservoir. When the water is pumped to the generator, it is released from the pressure of the deep reservoir. The sudden drop in pressure causes some of the water to vaporize to steam, which spins a turbine to generate electricity. Both dry steam and flash steam power plants emit small amounts of carbon dioxide, nitric oxide, and sulfur, but generally 50 times less than traditional fossil- fuel power plants. Hot water not flashed into steam is returned to the geothermal reservoir through injection wells.

Figure 3 is a schematic of a typical

Binary-cycle

Binary-cycle power plants use moderate-temperature water (225 °F– 360 °F, or 107 °C–182 °C) from the geothermal reservoir. In binary systems, hot geothermal fluids are passed through one side of a heat exchanger to heat a working fluid in a separate adjacent pipe. The working

fluid, usually an organic compound with a low boiling point such as Isobutene or Isopentene, is vaporized and passed through a turbine to generate electricity. An ammonia-water working fluid is also used in what is known as the Kalina Cycle. Makers claim that the Kalina Cycle system boosts geothermal plant efficiency by 20–40 percent and reduces plant construction costs by 20–30 percent, thereby lowering the cost of geothermal power generation. The advantages of binary cycle systems are that the working fluid boils at a lower temperature than water does, so electricity can be generated from reservoirs with lower temperature, and the binary cycle system is self-contained and therefore, produces virtually no emissions. For these reasons, some geothermal experts believe binary cycle systems could be the dominant geothermal power plants of the future.

5.5.3 Geothermal Power Generation

As of 2000, approximately 8,000 megawatts (MW) of geothermal electrical generating capacity was present in more than 20 countries, led by the United States, Philippines, Italy, Mexico, and Indonesia (see Table 2 below). This represents s 0.25% of worldwide installed electrical generation capacity. In the United States, geothermal power capacity was 2,228 MW, or approximately 10% of non-hydro renewable generating capacity in 2001 (This capacity would meet the electricity needs of approximately 1.7 million U.S. households. Current geothermal use is only a fraction of the total potential of geothermal energy. U.S. geothermal resources alone are estimated at 70,000,000 quads21, equivalent to 750,000- years of total primary energy supply (TPES) for the entire nation at current rates of consumption. The geothermal energy potential in the uppermost 6 miles of the Earth's crust amounts to 50,000 times the energy of all known oil and gas resources in the world. Not all of these resources are technologically or economically accessible, but tapping into even a fraction of this potential could provide significant renewable resources for years to come. The Geothermal Energy Association reports the potential for developing an additional 23,000 MW of generating capacity in the United States using conventional geothermal energy technology.

5.6 Integrated Gasification Combined Cycle

An Integrated Gasification Combined Cycle, or IGCC, is a power plant using synthesis gas (syngas). This gas is often used to power a gas turbine whose waste heat is passed to a steam turbine system (Combined cycle gas turbine).

An **Integrated Gasification Combined Cycle**, or IGCC, is a technology that turns coal into gas - synthesis gas (syngas). It then removes impurities from the coal gas before it is combusted. This results in lower emissions of sulfur dioxide, particulates and mercury. It also results in improved efficiency compared to conventional pulverized coal. Both because it can be found in abundance in America and many other countries and because the price of it has remained relatively constant in recent years, coal is used for about 50 percent of U.S. electricity needs. [1] Thus the lower emissions that IGCC technology allows may be important in the future as emission regulations tighten due to growing concern for the impacts of pollutants on the environment and the globe.

The plant is called "integrated" because its syngas is produced in a gasification unit in the plant which has been optimized for the plant's combined cycle. In this example the syngas produced is used as fuel in a gas turbine which produces electrical power. To improve the overall process efficiency heat is recovered from both the gasification process and also the gas turbine exhaust in 'Waste Heat Boilers' producing steam. This steam is then used in steam turbines to produce additional electrical power.

5.7 Biomass Integrated Gasification Combined Cycle

Process energy in the form of heat and electricity is the largest energy input into the ethanol production process. Currently the most common fuel used to provide process heat is natural gas, and some plants now burn coal. Biomass is an alternative, renewable source of energy for ethanol plants. Dry-grind corn ethanol plants produce biomass co products which contain a significant amount of energy when used as a fuel. These ethanol plants also are typically located near agricultural areas which may have biomass residues available for use as fuels. Biomass powered dry-grind ethanol plants could generate the electricity they need for processing as well as surplus electricity to sell to the grid. Using biomass replaces a large fossil fuel input with a renewable source which will significantly improve the renewable energy balance of dry-grind corn ethanol.

Several studies have explored the possibilities of producing electricity at ethanol plants, but Biomass Integrated Gasification Combined Cycle (BIGCC) technology has not been evaluated [3–5]. BIGCC technology has the potential to produce electricity at a higher efficiency through the use of combustion turbines and steam turbines. This technology has already been evaluated for paper mills and the sugarcane ethanol industry

There are technologies available which can significantly decrease the amount of fossil fuels needed to produce ethanol. 30.4 MW of renewable power can be produced at a dry-grind ethanol facility with a capacity of 190 million liters per year while also supplying all the process heat needs using ethanol co products and corn cobs. The renewable energy ratio of ethanol production could be improved from a typical value of 1.7 up to 5.1 at plants using BIGCC technology.

A key to the feasibility of these systems will be the cost to build and operate them. Future work is needed to evaluate the economic realities associated with BIGCC technology applied to the ethanol industry. In states where the utilities are mandated use renewable sources of electricity perhaps partnerships between ethanol plants and utilities could be made. The heat and power generation system could be located at a separate, but nearby site and operated by the utility. Future work in the area of public policy is needed to understand what incentives would be necessary to help the ethanol industry proceed in the direction of improved sustainability.

5.8 Modification of Conventional Boilers for using Alternative Fuels

In conventional boilers, both fire tube and water tube, using conventional fossil fuel are presently undergoing several modifications so that these can be used for combustion of different materials, which were so long being considered as garbage having little use or unproductive use. These thrown off materials Most of the industries using fire tube boilers are big consumers of coal. In recent times a number of them are switching over to the use of the thrown off materials. For example, jute dust, a common type of machine waste produced in jute industries contain batching oil as emulsifiers having energy value as high as 7000/8000 calorie per kg. Typical boiler manufacturers like Thermax, Calorex etc. have designed package type water tube boiler to use jute dust as substitute of fossil fuel, reducing the consumption of the later significantly. Boilers, which are using this type of alternative fuel, are saving upto 50000 tones of coals per annum.

Several other agro-based industries like rice mills, sugar factories, or oil mills are using rice barns, sugarcane bagasse, and ground nut shells in the package type boilers used in the mills, saving considerable amount of fossil fuel.

5.9 Fluidized Bed Boilers

The major portion of the coal available in India is of low quality, high ash content and low calorific value. The traditional grate fuel firing systems have got limitations

and are techno-economically unviable to meet the challenges of future. Fluidized bed combustion has emerged as a viable alternative and has significant advantages over conventional firing system and offers multiple benefits – compact boiler design, fuel flexibility, higher combustion efficiency and reduced emission of noxious pollutants such as SOX and NOX.

Mechanism: When an evenly distributed air or gas is passed upward through a finely divided bed of solid particles such as sand supported on a fine mesh, the particles are undisturbed at low velocity. As air velocity is gradually increased, a stage is reached when the individual particles are suspended in the air stream – the bed is called "fluidized".

With further increase in air velocity, there is bubble formation, vigorous turbulence, rapid mixing and formation of dense defined bed surface. The bed of solid particles exhibits the properties of a boiling liquid and assumes the appearance of a fluid – "bubbling fluidized bed".

At higher velocities, bubbles disappear, and particles are blown out of the bed. Therefore, some amounts of particles have to be recirculated to maintain a stable system – "circulating fluidized bed".

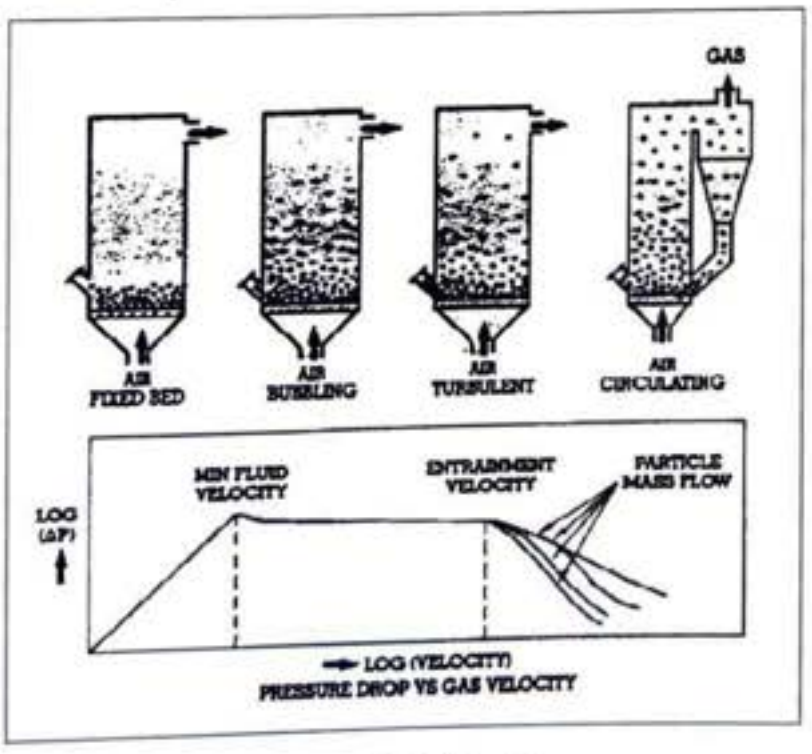

Exhibit-3: Fluidized Bed Boiler

Fixing, bubbling and fast fluidized beds

As the velocity of a gas flowing through a bed of particles increases, a value is reaches when the bed fluidizes and bubbles form as in a boiling liquid. At higher velocities the bubbles disappear; and the solids are rapidly blown out of the bed and must be recycled to maintain a stable system.

5.10 Conclusion

The scarce availability of the conventional energy sources, limited reserve, and nonreplenishable as well as nonsustainable nature of these sources is beyond the control of available technology. The exploration of alternative sources of energy is imminent. The global base search of these alternative sources is being taken and it is hoped that these alternative sources will take the lead in the coming days as savior of industrial as well as economic development of the mankind or summarily sustenance of human civilization taking the position of the primary source of energy leaving the conventional sources as secondary. In India also much work and research are in progress and the Ministry of Nonconventional Energy Sources created in 1992, is taking the pioneering role in this regard. The ministry offers different entrepreneur facilities in the form of grants, financial concessions, etc. and under sponsored research activities.

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Industry-Institute Interface: A Strategic Partnership for the Future of Management Education

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Abstract

Industry-institute interface can bridge the gap between textbook theory and practical aspect of management education. It can pave the way for imparting a part of practical lessons on the floor of industrial houses. Institutes can use this mechanism as a tool to enhance the quality of management education. This, in turn, can help industry in getting access to innovations and trained manpower at lower cost. However, the advantage of this interface has not been rightly harnessed. Many institutions still produce graduates unsuitable to the industrial sector. Requirements are there for need-based syllabus, industry exposure to faculty and industrial research. Due to the failure of management institutes in these aspects, corporate houses are arranging in-house training programme for their employees or sending them to acclaimed business schools abroad. This holds a big challenge to the future of Indian b-schools. The paper argues that in the changing environment industry-institute interface should be used as a strategy to upgrade quality of management education in India and build confidence that Indian business schools have ability to meet the growing needs of the industry.

1. Introduction

Institutions offering management education in India are facing a completely different scenario today. Management education, which hitherto used to be looked upon as applied business education for the selected few, has undergone a vast expansion. Number of AICTE approved management institutes has increased from 1888 in 2005-06 to 3858 institutes in 2010-11. During the same period number of seats offered to students has increased from 120000 to 380000. Given the reputed IIMs and their ongoing expansion plans, thousands of other institutions are struggling for a stake in the existing market. Those institutions include Technical Institutes, Engineering Colleges, universities and various private institutions.

Many of the private institutions look at management education with a commercial motive and chalk out ways how it can be designed, packaged, targeted and marketed. Some institutes are spending enormous amount of fund on advertisement to expand their market share and fight competition. Though the foreign business schools have not been allowed to set up their offshore campus in India, but through collaboration with private colleges they have started enrolling students from India and awarding them degrees and diplomas. It means that the Indian business schools are not only competing with domestic institutions, but also facing challenges from their foreign counterparts.

To upgrade marketability of the courses many management institutes have got their institutions approved by AICTE. Many of them have acquired quality certificates like ISO 9001, etc. Nonetheless, when a downturn begins, share markets crash, all businesses shed values and halt with all net negative performance indices. The pertinent question is -when the management graduates fail to rescue the businesses from crisis, does it justify that these institutions impart quality management education to them? Is there any gap?

Indeed there is gap. The education lacks depth of real life problems. Though the provision of summer training is there, but that is not the final remedy. In many cases the business houses do not divulge the trade policy to the learners. Students return with a token certificate from an industrial unit and comply with the partial requirement of getting the MBA degree. What is necessary is a strong Industry-Institute interface, which is taken to be a strategy

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to an institution to remain popularly involved with industry and serve the industrial requirements along with the pursuit of promoting education and research in management.

2. Industry-Institute Interface: Need and Importance

Placement data of some top business schools give a very encouraging picture (see Table.1). In some business schools more than hundred companies visit campus for the purpose of fresh recruitment. However, this should not be mixed with industry-institute interface. Secondly, the picture of campus recruitment is not so good in every institution.

'Industry-Institute interface' has a broad perspective. It should not be narrowly treated as device for placement of graduates. This mechanism has several other important facets, which include "industry-institute joint ventures', joint research projects, faculty-executive exchange programme, consultancy, industrial training and so on.

Table .1: Placement Record of Some Top B-Schools

Institutions	Number of students	Number of companies visited campus
IIM Ahmedabad	283	110
IIM Calcutta	278	120
XLRI Jamshedpur	180	75
IIM – Kozhikade	250	122
IIM Indore	235	110

Source: Business World, Vol. 30, Issue 6, 28th June 2010

Industry-Institute interface could be **defined** as interactive and collaborative arrangement between business institutions and corporate houses for achievement of certain mutually inclusive goals and objectives. This relationship is symbiotic, i.e., mutually rewarding to each other. It is a long-term productive relation consisting of mutual sharing ofknowledge and experience.

Rao Tulasi (2008) points that in the post liberalization scenario extremely dynamic business world and rapidly developing knowledge based service economy have put in an increased demand for professionals to manage business effectively. In the global competitive scenario industry works in an environment that demands new and constantly developing skill to retain global competitiveness. Shalini (2008) observes the need to establish different relationship than what existed traditionally with their corporate houses. The necessity for building industry-institute interface has gained enormous momentum in the changing perspective.

Unfortunately the perspective has not been given a right shape. As per NASSCOM Report 2007, in India only 10% of the non-technical graduates and 25% of the technical graduates are employable. As per AICTE's admission, 73% of the graduates produced by AICTE approved institutions are found to be unemployable by the industry (Goyal J K, 2011).

Industry is voicing its dissatisfaction over the quality of graduates produced by the business schools.

One limitation of business education in India is that, except some top business schools, it is abstract and confined in theoretical lectures, which are not adequate to help a graduate conduct a business in real life. The urge for bridging the gap between theory and practice is almost lacking. Tandon and Garg (2011) observe that there is hardly any industry-academia linkage in India. Almost all technical colleges have laboratory for practical classes. Every medical college is attached with a hospital. When treatment of a particular disease is discussed in the class, students are taken to the ward where patients suffering from that particular disease are undergoing treatment. Diagnosis and symptoms are explained there. When anatomy is concerned, dissection of human dead-body is made to give the learners an opportunity to inspect the internal

systems visually. During house-staff period, junior doctors get the opportunity of applying their knowledge on a living practice ground.

However, in case of business education, building such practice ground has not been made mandatory. There is no compulsion that a business school must be attached with a business house for its practical part of education. Thus, investment cost associated with setting up of b-school is very low. As a result, any one having a commercial motive can open a business school and turn out some fresh MBAs.

As it is neither feasible nor acceptable that every b-school must have its own business undertaking for imparting practical business lessons to the students, so, to fill the gap between theory and practice emphasis should be given on building industry-institute linkage. This is essential for building the right capability. Sridhar and Ramesh (2007) observe that building of capability demands a partnership between industry, commercial users of capability, and the academia, as the creators of the capability. This partnership should be based on continuous interaction between two pillars of the knowledge economy.

3. Corporate University

Corporate University is found in those corporate houses, where a new academic department is opened for training of the personnel of the concerned corporate house. It may be defined as a formal educational entity associated with an organization that is chartered with providing employees with skills and understanding the need to help the organization achieve its business objective, both short and long term (Garg Shalini, 2008). Following are the some examples of Corporate University:

Motorola University in US

Barclays University in UK

Shell Open University in Europe

These universities draw majority of the learners from within corporation. By the early of 1980s there were 400 corporate universities in US, the real growth occurred in 1990s, when the number increased sharply to 1600. Now more than 80% Fortune 500 companies have set up corporate university. If this space is continued, one day the number of corporate university will exceed the number of traditional university. The temporary relief is that corporate university is not allowed in India. To by-pass this restriction, corporate hoses in India arrange on–the-job-training for their personnel.

It is a time to realize that corporate university holds a challenge to the future existence of traditional b-schools. However, if Industry-Institute Interface is taken up as a strategy, the future survival can somehow be chalked out.

It is assumed that if Industry-Institute linkage is built, corporate houses, instead of setting corporate university, will rely on Industry-Institute partnership and get their personnel trained at b-schools. That will be a great blessing for future survival and growth of the b-schools. In the wake of this trend, existing b-schools must look forward and go on building linkages with industry.

4. Approaches to Interface

Approaches to Industry-Institute Interface can be categorized into two broad forms, viz. consortium approach and one-one collaboration approach.

Consortium Approach: University-Industry Council is an example of Consortium Approach. It was launched at CII Education Summit organized on 14th May 2007 at New Delhi. This council is a platform at which universities can collectively interact with industries to understand each other's requirements and evolve together in order to make higher education practically relevant to industrial application. Going beyond mere hiring of human resources, it would holistically cover aspects like research and innovation, faculty development, intellectual property, etc. (Singh and Sharma, 2008)

One-one Collaboration Approach: Industry-institute interface can take the form of one-one collaboration too. There are over a handful of examples of 'one-one collaboration' in India. Institutes such as the Indian Institute of Science, Bangalore and the Indian Institute of Technology at Chennai, Mumbai, Kharagpur and other prominent institutes follow this model in areas of their inter-action. These institutions have ongoing research engagements with companies in various industries on one-one basis (Krishnan Sivaramkrishnan, 2007)

5. Mechanisms of Industry-Institute Interface

There are different ways how Industry-Institute interface can be given a shape. The choice of the mechanism depends on the attitude of the institute and industry. When depth of inter-action turns really good, almost all mechanisms appear applicable. The ways in which interface can be promoted have been enumerated below:

i) Nominating industrial representatives on the governing body of the institutes

ii) Faculty- Executive exchange programme

iii) Industry- institute joint venture in the area of research and development

iv) Consultancy

v) Joint preparation of curriculum

vi) Summer training for industrial experience

vii)Campus recruitment and placement

viii)Sponsorship for projects and chair professors

ix) Sponsorship for industrial medal / scholarship etc

x) Preparation of case study, etc.

6. Benefits of Industry-Institute Interface

When Industry-Institute Interface is created, the institutes first establish the platform for providing practical education to the students. In addition to this, institutes can obtain fund from industrial houses in various forms. Those include sponsorship for industry medals, joint research projects, seminar and workshops, etc. While industries create the post of 'chair professors', institutes receive supporting finances for salary and other benefits from industrial houses. Reddy Sudarsana (2006) enumerates following benefits that accrue to the institutions

i) Framing of need based curriculum

ii) Imparting practical training to the students

iii) Sharing executive experience with students

iv) Placing students on internship training

v) Getting fund from industry

vi) Giving industry exposure to faculty

vii)Preparation of real life Case Studies

viii)Campus recruitment and placement of students

ix) Getting help of industry experts as guest lecturers, etc.

Industry-Institute partnership simultaneously brings lots of gain to the industry. Reddy Sudarsana (2006) enumerates the benefits that accrue to the industry. Some of the important ones are guarantee of getting right kind of people from business schools, possibility of solving organisational problems at lower cost, low cost of conducting executive training, etc. Obviously, this is not the exhaustive list of the benefits. Many other benefits are there. As this partnership is extended further in different directions, many benefits begin to accrue. For example, if joint research project is undertaken, industry gets access to intellectual property.

7. Indian School of Business: An Ideal example of Interface

Shollarpur (2008) presents the example of Indian School of Business, Hyderabad as an ideal case of industry-institute interface.

Indian School of Business has been set up as an outcome of partnership between eminent business leaders and international institutes. The prominent business barons on the Governing Council of Indian School of Business are Anil Ambani of RIL, Rahul Bajaj of Bajaj Auto Ltd, Manvinder Banga of HLL, Anand Mahindra of Mahindra & Mahindra group, Adi Godrej of Godrej Group, Narayan Murthi of Infosys and Deepak Parekh of HDFC.

These business leaders and leaders from the global companies together are involved in developing PGP curriculum, which is again compared with the curriculum of the top ranked international B-Schools. This school is affiliated with world's leading B-Schools such as Kellogg School of Management and London School of Business. Professors from these international B-schools are on the teaching board of the ISB. The school engages the business leaders and entrepreneurs throughout the academic year to give students a practitioners' perspective.

Business leaders also talk to the students about their personal experience, challenges they have faced, using real life situations drawn from their organisations, their industries and their market. ISB offers a pragmatic learning approach with a clear business focus. The students are trained to apply the concepts and tools learnt to real business problems. The Industry-Institute interaction of ISB can be considered as an ideal example that other institutions can follow. This is further to add that 310 companies came to ISB for campus recruitment in the last year, of which 75 were international companies. The average salary offered to the students in 2011 is the best in India (Source: Business World).

8. Interface and Steps towards Quality of Management Education

Interface is essential for the sake of the quality of management education. The aspects of interface that help in upgrading the quality of management education have been discussed below.

Curriculum: An established Interface is helpful in designing need-based curriculum and producing right kind of trained managers what industry demands. Quality of knowledge imparted to the students depends upon the curriculum, which should be relevant in the context of prevalent business issues and problems. As business scenario is undergoing changes from time to time, the curriculum should be reviewed and revised at regular intervals. Experienced executives from industry should be included as members of the board constituted for designing and revision of curriculum. They can tell what qualities passing students should possess and for that purpose what courses should be included in the curriculum.

Case Study: More than 90% books authored in Indian lack practical example and case study. Case study method promotes participative learning, activates sense of rational thinking and encourages decision-making. It gives the learners the opportunity of applying theoretical knowledge acquired by them to solve business problems. Unfortunately no real case is taken to students. They are made to handle some imaginary cases from foreign textbooks. Students find no interest in handling those imaginary cases of unknown foreign companies.

Cases should be designed from live problems of the companies operating in the environment of the learner. Cases may include some problems: like how to solve the declining sales volume of an automobile firm? Why a particular FMCG company is experiencing declining profits? What is its product portfolio? How a change of the product portfolio can arrest the problem of falling profit? If the case is drawn from real story of an Indian firm, it will arouse interest in the mind of learners; from handling these cases the students will derive a sense of satisfaction. Therefore, it is suggested that the academicians should interact with business executives and draft cases from live business problems confronted by the executives. The credit of drafting the case may jointly shared between the academicians and executives as co-authors of the case drafted.

Research: It is worth mentioning that F W Taylor conducted his research at Midvale Steel Company and developed the Principles Scientific Management. Similar is the case of Hawthorne Experiment, which was done at Hawthorne plant of Western Electric Company, USA, by Elton Mayo in 1930s. These industrial researches unfolded new vistas of management movement.

The above examples indicate that a great part of research works is required to be done on the floor of industrial establishments. For conducting successful industrial research, academicians need active support from industrial houses. However, today it is observed that for want of data, industrial research has become a very difficult job to undertake in India. Most of the executives do not respond to the questionnaires of researchers. Building industry-institute linkage may be a good alternative to do away with this difficulty.

Consultancy: To find solution to business problems, most of the business houses go to consultancy firms. Indeed there is reason why firms should go to consultancy firms like Boston Consultancy Group, McKinsey, etc. IIMs have also developed good track record in consultancy. But for want of time many of these expert houses cannot go to the root of real problem encountered by the firms. Had there been a platform like industry-institute interface, institute could remain in constant touch with the firm and conduct thorough study and give expert solution to various business problems.

Industry Visit and Industry Exposure to Faculty: Academicians need visit industry and gather practical knowledge about the industry, because until an academician has full knowledge about the operations of a business, he cannot tell what organisation structure it will fit, what internal control system it should operate and what method of costing should be applied. From time to time industry visit by faculty may be good mechanism in this respect. This will enhance the scope of consultancy. However, nothing is possible unless mutual understanding between industry and institute is developed and academicians are really allowed to visit industry.

Internship Training/ Summer Training: Internship Training is one of the participative and practical methods of learning. In most of the business schools the common practice is that during a summer vacation or between two semesters the students are sent to various business undertakings for practical training. Students acquire practical skill while they work on different functional areas like production, marketing, accounting, etc. The method is ideally considered effective. Business undertakings' willingness and support are highly essential in this respect. However, Patil and Arolkar (2011) observe that the method has not succeeded in yielding results up to the expectation, because business undertakings do not like to divulge every thing to a learner. Unless there is a continuous, long-lasting and cordial relationship between business undertakings and institutes, this programme cannot be implemented successfully.

After all, records show that business schools that have good interface are the best b-schools in India. Other b-schools should take steps in this direction. Until and unless industry-institute interface is developed, management education will continue to suffer from its lapses.

9. Conclusion

Industry-university interface is a kind of double blessing. It is a blessing to the institute, because it paves the way to make management education practical and effective. It is a blessing to the industry; because, it outlines how truly trained managers can be recruited for their business. If the relation is further extended in various directions like joint research, executive development, consultancy, etc. aggregate benefits accruing to the institute and industries will increase. While 80% of Fortune 500 companies have set up corporate university, at this juncture the institutes need think seriously how the interface can be used as a strategy to shape their future survival. Industries should also think how this

partnership can be exploited to increase their global competitive strength. To conclude, this partnership should also be built, extended and strengthened for the sake of future of management education too.

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Evangelism Marketing – A Social Networking Approach

Raja Mukherjee[1]

Abstract

The purpose of this paper is to give an awareness of a new facet of marketing which is Evangelism Marketing. It throws a light on the paradigm shift in the marketing mix of the recent era. The paper encompasses a new process which shows adoption of a new technology and concept which has catapult promotional activities in the cyber space. It's been shown that Evangelism due to personalization is giving potential and existing customers a free platform to talk about their experiences that they had with the companies. It presents a scenario where companies are seizing this opportunity as a competitive advantage by investing huge amount of money for positioning. This paper has attempted to present an overview of an emerging concept to show untapped promotional process that Indian organization can adopt to create a niche while getting a competitive edge.

Keywords: *Evangelism, Customer Evangelist, Marketing Mix*

Introduction

"Do what you do so well that they will want to see it again and bring their friends" –

Walt Disney

Yes, Evangelism, a buzzword in Marketing now a days. Reader should not have this misconception that they are going to be preached about God. An insight has been drawn to provide a viewpoint about the power of Evangelism Marketing in today's world. The word evangelism comes from the Greek word eu-angelos, meaning "Bringer of Good News". It's an advance form of marketing where people as a customer becomes so satisfied or even may become so delighted that they promote willfully the product and services and often are successful in persuading and influencing others to buy them. Well, it's companies' effort to that extent where customer considers themselves as an integral part of it. It's an improved form of Word of Mouth Marketing. Here people out of pure belief and loyalty to the organization, mentors the potential customer the benefits in having a relationship with the company. People try to transfer their belief to others. In that pursuit they become a companies' person who merely works for faith not for money. Traditional marketing is changing its paradigm by adopting newer technology by using the help of internet, website, social networking etc. The new face of marketing is Evangelism.

Shift in the Concept of Marketing Mix

The most common theory we are accustomed with the Marketing Mix are "Product", "Price", "Place" and "Promotion" was once put forwarded by Jerome McCarthy in 1960. Now with the latest trend in Marketing these 4Ps has been replaced by 4Es.

1. Product to Experience
2. Place to Everywhere
3. Price to Exchange
4. Promotion to Evangelism

The fourth point is what we are interested in. Companies are trying to boost their delighted customer to exchange their experiences with the potential customer and that is becoming very powerful tool today. Though it's a mixture Word of Mouth, Social Networking and Web 2.0 but still being used by providing a powerful heart to Marketing process.

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We have seen Dove has profitably utilized this concept where they grouped all women of the world interested in beauty products for a campaign of Real Beauty. All sorts of women were invited on web and it became an evolution. It became so big that this campaign helped Dove to reach record level sales.

Another good example would be evangelist marketing is Dommino's Pizza. Domino's with Facebook and YouTube formed the community which increased their size of Marketing Scope.

What is Customer Evangelism

Authors Ben McConnell and Jackie Huba In their book, "Creating Customer Evangelists" gave us a framework for developing evangelism marketing strategies and programmes. They offered six steps to creating customer evangelists:

1. Customer plus-delta (Continuously gather customer feedback)
2. Napsterize knowledge (Freely share your knowledge)
3. Build the buzz (Create intelligent word-of-mouth networks)
4. Create community (Encourage communities of customers to meet and share)
5. Make bite-size chunks (Devise specialized, smaller offerings to get customers to bite)
6. Create a cause (Focus on making the world, or your industry, better)

(**Source:** Wikipedia)

The basic theory on which Evangelism Marketing stands is TRUTH which is being established between an organization and its customers.

Evangelism in the Cyber World

The concept of Evangelism has been catapult in the cyber world. Evangelist helps people in understanding the very mission, vision and potential of the company. Out of many companies, Google, mostly in the technology sector, employs as "evangelists." Microsoft often relies on "Chief Evangelist" so that they can preach their core values and mission. "Evangelism is about selling your dream so that other people believe in it as much as you do," says Guy Kawasaki, former chief evangelist for Apple Computer and one of the key people responsible for marketing the Macintosh in 1984. "Those people then, in turn, get even more people to believe which is just like Jesus, an evangelist, who recruited 12 more evangelists."

Customers are used to traditional mass marketing, so companies of 21st century are looking forward to unpaid customer who works like a passionate Samaritan to influence others. Companies with little bit more focus on social networking websites, blog and forums will give them some fruitful data to identify those customers who are passionate about their products and services.

The Supremacy of Evangelism

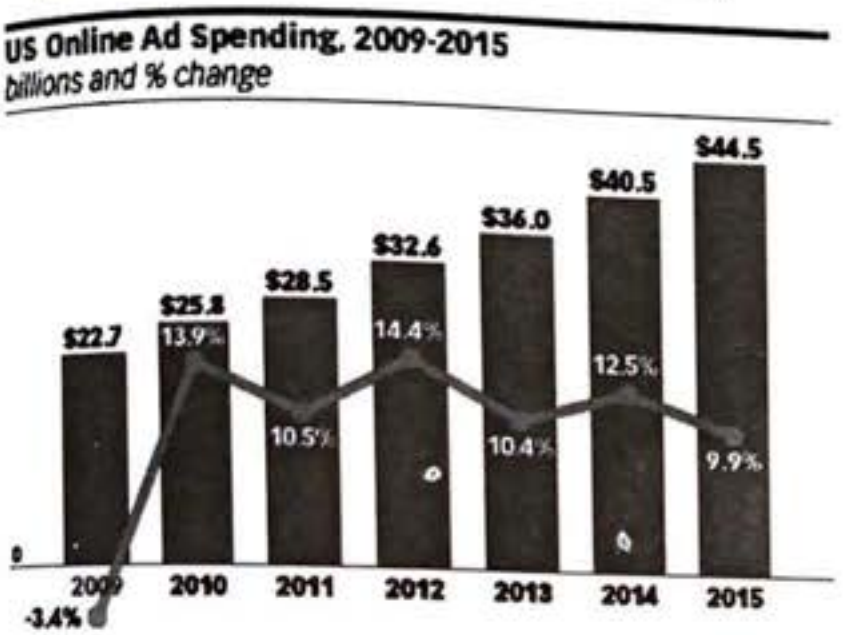
In March 2010 we have seen a nationwide protest against Nestle buying palm-oil from Indonesian companies that killed their rainforest. This disgruntlement shown by the consumer on facebook made it global.

Few researches have shown that it's the channel called "recommendation from the people" that consumers have trusted worldwide when it comes to purchasing decision. Researches have also showed us that it is the spokesperson, especially from academic or expert from industry, who are most trusted among the customers. Internet seems to be the most effective vehicle for evangelism in this century.

Word of Mouth has existed before but internet in the form of social marketing has catapult the whole concept in the forefront. World has seen that after the recovery from the recession phase, e-marketers are estimating that US online advertisement spending will reach $28.5 million.

Mobile and Social Media are fast developing and being more often than not has been capitalized by modern organization. eMarketer predicts that investment on advertisement will reach $1.1 billion and online ads on Facebook and Twitter will exceed $3 billion. Figure 1 gives you an insight on the above mentioned scenario.

Figure -1: (US Online Ad Spending, 2009-2015)



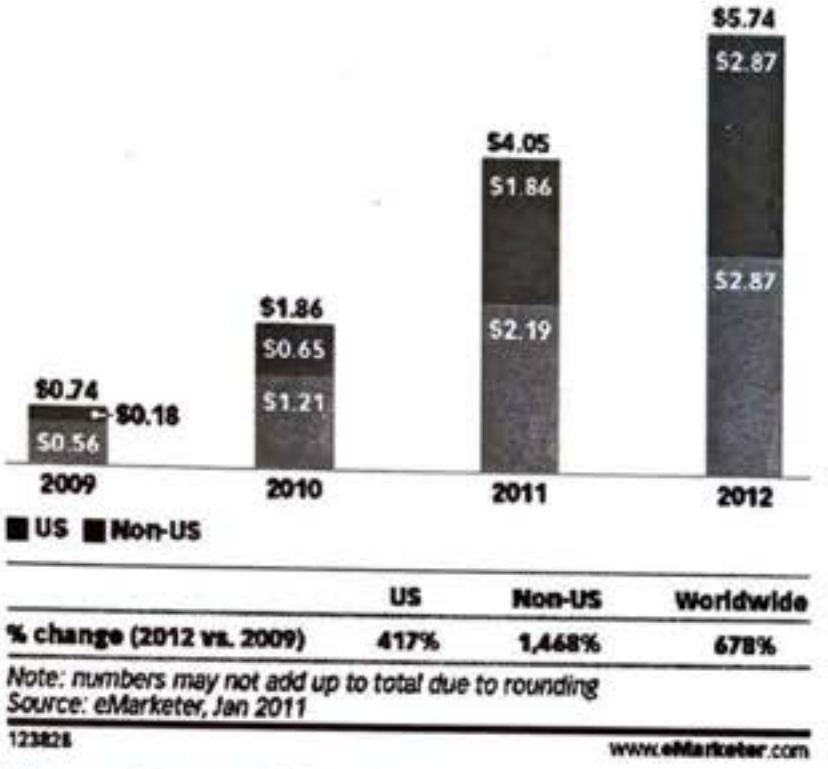
Source: Reports of eMarketer.com

The above Figure -1 depicts the growth of online ad market. Facebook rules when it comes to Social Networking Advertising. According to eMarketer predicts that an investment of $4 billion worldwide will be done on Facebook worldwide and with a $2.2 billion in US alone. In the US, it will acquire 71% of social network spending and 7.7% of total US online ad spending.

Investment throughout the world on social networks will be approximately $6 billion this year, out of which $3.1 billion will be spend in US and $2.9 billion in global markets.

Twitter will outshine MySapce by the year 2012 as far as investment on advertisement is considered. It will not stop itself by selling ads to US only but will attract global players soon and eMarketer predicts it to be $150 million by the end of this year and $250 million by 2012.

Figure 2: (Facebook Ad Revenues, 2009-2012)



Source: Reports of eMarketer.com

Leverage of "Autonomy of Consumers" by Marketers

There is a vigorous growth of Internet in the last decade and a prominence of a major shift in paradigm of web content. World has seen a shift from publisher driven content to personal driven content. Modern internet users are now sharing their beliefs, likes, dislikes, lifestyle, success, challenges, problems, relationships, interests etc. Most important thing is that they are documenting it and publishing it on the internet platform like social networking websites. Evangelism has taken a big leap and people are getting the autonomy of expression, recommendation of products, services, brands that they often use. They are socializing and making friends whereby they are sharing

their views.

It's the high time to see how marketers capitalize this advance form of Word of mouth tool to promote positive massages to promulgate their brand image.

The stage is set for well-tuned organization to grab this opportunity that has been presented before them by the advancement of the society and technology. It's been seen that publishers are now giving impetus to permission marketing. According to Seth Godin, traditional advertising no more works as it sways attention of customers from their normal focused jobs. He termed this as "Interrupt Advertising". This continuous interruption makes customers angry or frustrated. So Godin is advising all the publishers to change their view from "Interrupt Advertising" to "Permission Advertising". By this he means the choice of viewing commercial should be left to customer's decision. Traditional marketing worked well when customer didn't have platform to express or publish their thoughts and voices. Socializing on internet has changed the whole scenario. That's why marketers should all the more careful about traditional marketing. Standing in this cyber era, it's worthwhile for marketers to give it a thought of using the above mentioned evangelism approach on the backdrop of internet as their competitive advantage. The world has to see how smart these marketers are in choosing this "Word-Of-Mouse" tool as one of their marketing mix.

Consumers in the Light of Evangelism

Traditionally we have seen that how painstaking it is satisfy customer needs by offering product and services at the right time, at the right place. It's highly scrupulous to generate a lead, nurture it and convert it as it is associated with investment of time and energy by the marketers.

If an organization has effectively and honestly played its part in satisfying a customer's need then this effort percolates down to customer appreciation. This endeavor by the marketers will create a pleased and a thrilled customer who in turn will be evangelist and will be puffed up promoters of its brand. They will be overjoyed by the experience that they had with the organization and will be filled with zeal in sharing this with others. We know that "A Satisfied Customer is the best advertising" and this should be the Mantra for the marketers of this era.

Now, more than ever, it is evident that the market is customer centric. Consumer always has been a great researcher. They almost dictates the market whereby showing that they have the power to choose. They are aware of the perfect solution of their needs. That marketer would be lucky enough who has been chosen. This reason would be that they must have provided the perfect solution to consumer's problem whereby getting a complete competitive edge than their competitors. This would be a perfect scenario where an organization would be getting a consumer base who could be evangelist for the brand.

How to Create Customer Evangelist

Organization always looks forward in creating a lifelong relationship with the customers and tries to sustain it.

The study by Ben McConnell and Jackie Huba authors of Creating Customer Evangelists: How Loyal Customers Become a Volunteer Sales Force. The study provides examples of companies who have successfully turned loyal customers into consumer evangelists for their organizations.

The study mentioned some key factors in defining consumer evangelists:

- Consumer Evangelists purchase and believe in your product or service
- Consumer Evangelists passionately recommend you to friends, family and colleagues
- Consumer Evangelists provide unsolicited feedback or praise
- Consumer Evangelists forgive dips in service and quality
- Consumer Evangelists are not bought they "extol" your virtues freely
- Consumer Evangelists feel part of something bigger than themselves

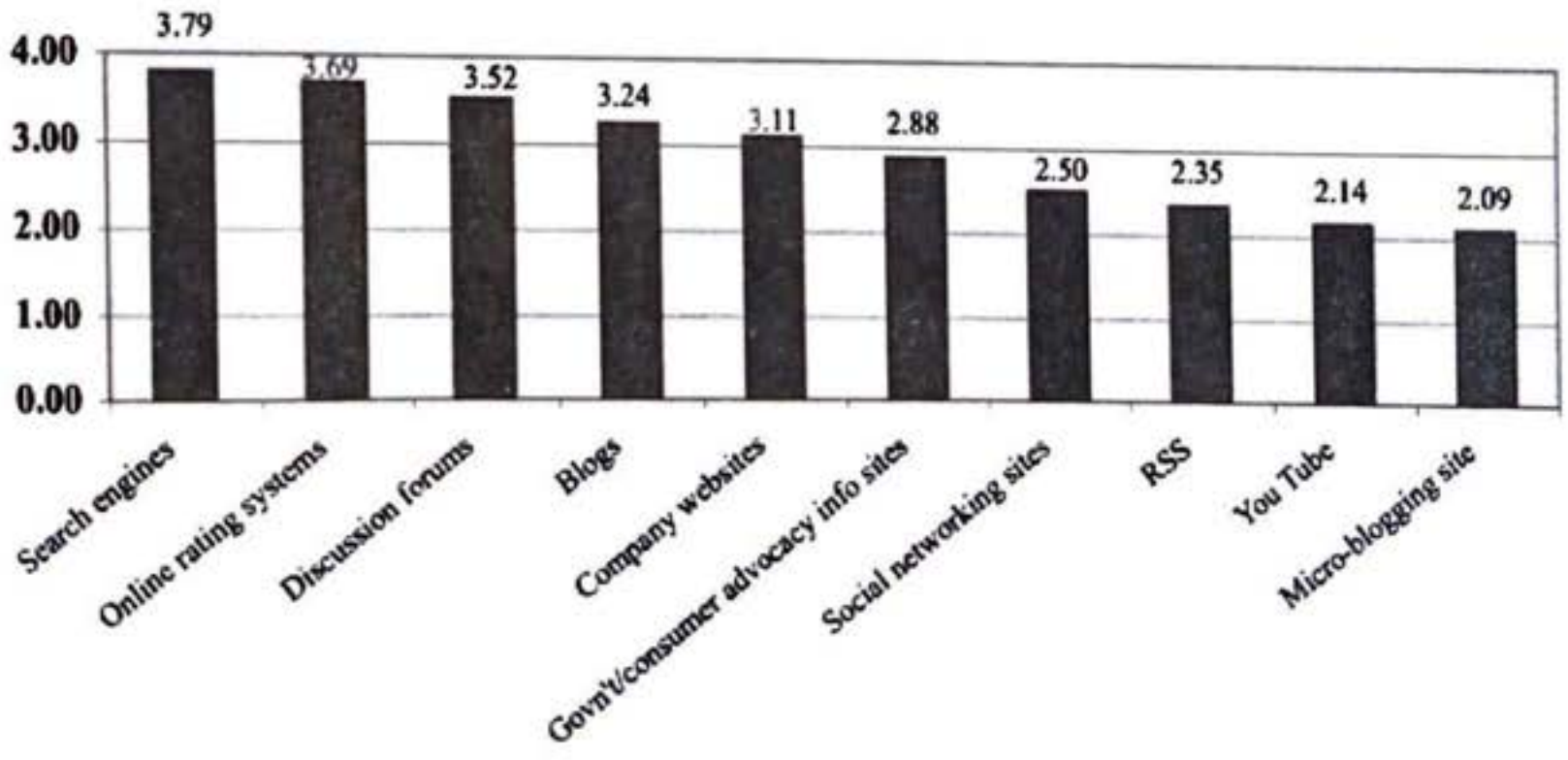
(**Source:** creatingcustomerevangelists.com)

Role of Social Networking in Evangelism Marketing

Role of Social Networking has been an effective tool for the marketers. The majority of companies in the Inc. 500 have already started to hold close these Social Media to integrate then in their marketing and communications strategies. Now a days the almost all companies haves inclined in adopting this new strategy whereby they are taking advantage of a free platform and modern technology to promote brands and corporate image.

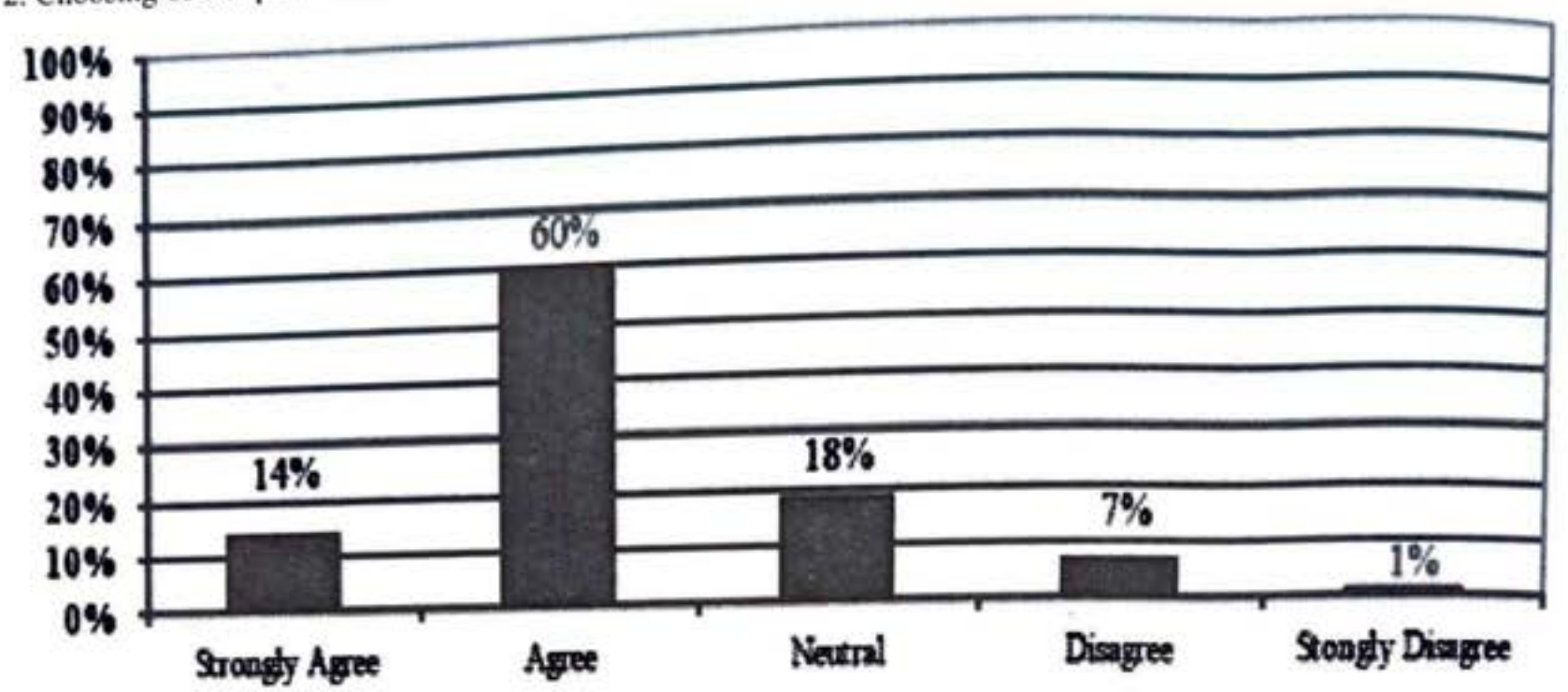
Let us take a look at some of the charts which will establish the fact that how important is the role of Social Networking in the life of marketers.

1. Comparison of the sources of information while taking a decision.



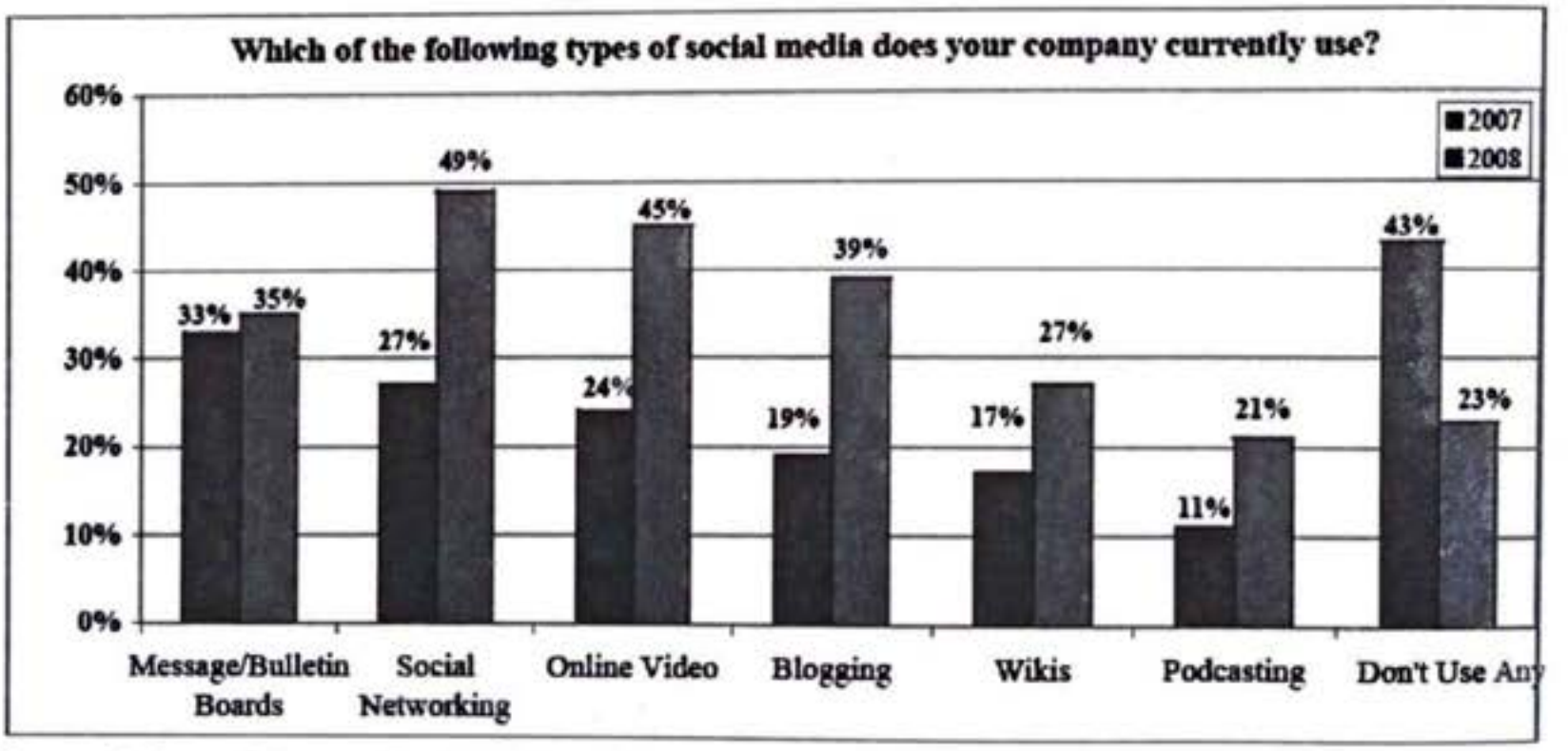
*[**Source:** Rebecca J. Larson, The Rise of Viral Marketing through the New Media of Social Media, 1-1-2009, Faculty Publications and Presentations. Paper 6]*

2. Choosing of companies or brands based on other's customer care experiences shared online.



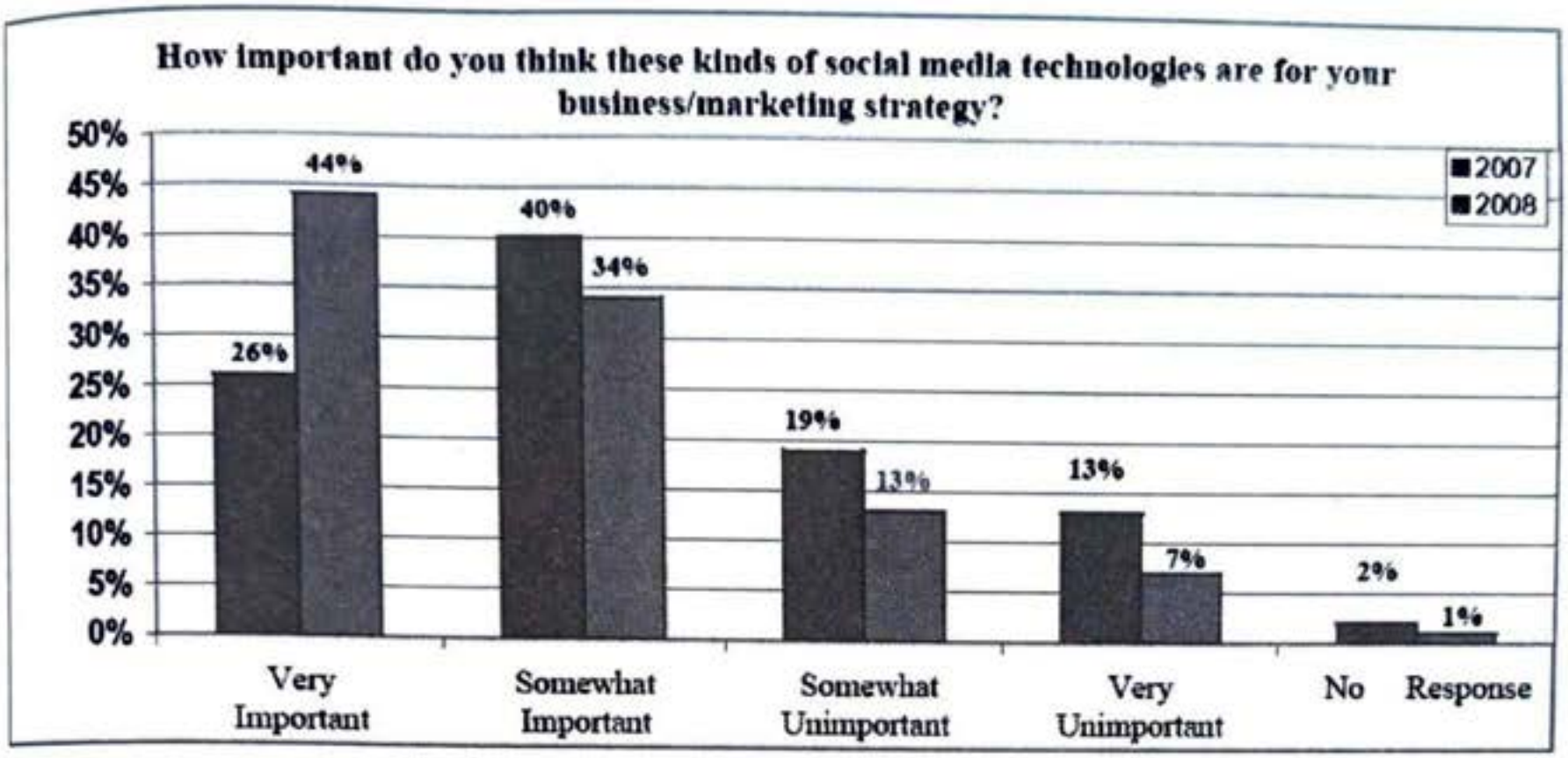
[**Source:** Rebecca J. Larson, The Rise of Viral Marketing through the New Media of Social Media, 1-1-2009, Faculty Publications and Presentations. Paper 6]

3. Comparison of social media companies uses.



*[**Source:** Rebecca J. Larson, The Rise of Viral Marketing through the New Media of Social Media, 1-1-2009, Faculty Publications and Presentations. Paper 6]*

4. Importance of these social media technologies for marketing strategies.



*[**Source:** Rebecca J. Larson, The Rise of Viral Marketing through the New Media of Social Media, 1-1-2009, Faculty Publications and Presentations. Paper 6]*

Social Networking, Evangelism in India

India in this new millennium is slowly but surely embracing social networking. For example a company named RAMCO SYSTEMS has seen a turnaround from October 2010 and March 2011 during which customer acquisition gone up four times. The reason according to Mr Kamesh Ramamoorthy, COO, Ramco Systems, is that they changed their marketing strategy to social media.

More Social Networking websites are coming up and they are becoming a platform for helping customers and also helping brands in winning back unsatisfied consumers. More Indians are joining social media sites such as Facebook, LinkedIn and Twitter while consumer brands are relying on a new breed of social media start-ups such as MediaREdifined, Blogadda and Blogworks to build and track online chatter about them and manage their online reputation. According to NASSCOM regional director Avinash Raghava, "Realizing the business potential of this medium, a rising number of entrepreneurs is developing innovative products especially for the Indian market based on social media". According to a report 'India Social Media Landscape' by market research firm Nielsen, it is concluded that in the past year we have seen the exceeding two million Indians have related themselves with social media and it's forecasted to grow 36 times in the next three years. Out of 80 million Indians online, one-third of them are on social media sites, according to the report. "Companies have now realized that one person posting or tweeting negative comments can influence millions of people," says Raj Mruthyunjayappa, managing director of Talisma Corporation, a customer relationship management software solution provider. It is evident that Social media is becoming a vital business tool which is forcing Indian firms and even domestic organizations to seek help from entrepreneurs to transform virtually every part of their business operations. This includes

handling marketing, customer service and sales, to product development and human resources. India Emerging profiles a bunch of such start-ups.

Conclusion

Evangelism Marketing is a wonderful tool that will be beneficial to customer's life and gives a real breather to an organization whereby customer will spread the good faith that it has for the organization. It cost less and is more effective in globalizing a product or a companies' name. It's viral and it is trust worthy as it is based on absolute good faith and loyalty. Indian companies should look forward in capitalizing this tool to enhance their effectiveness in increasing market segment.

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Critical Issues Affecting ERP Implementation with Special Reference to DSMS Group of Institutions, Durgapur

Gurudev Adhikary[1], Jayanta Pattanayak[2], Jayanta Bhattacharyya[3] , Anupam Mukherjee[4]

Abstract

Implementing an ERP causes massive change that needs to be carefully managed to reap the benefits of an ERP solution. Critical issues that must be carefully considered to ensure successful implementation include commitment from top management, reengineering of the existing processes, integration of the ERP with other business information systems, selection and management of consultants and employees, and training of employees on the new system.

The Enterprise Resource planning (ERP) software market is one of the fastest growing markets in the software industry. It has seen a rocky start with several project failures and a huge shortage of skilled and experienced workers. The ERP market is predicted to grow from a current $15 billion to a gigantic $50 billion in the next five years. The estimated long-term growth rates for ERP solutions are a stratospheric 36 percent to 40 percent.

ERP Solutions

An ERP system can be thought of as a companywide information system that integrates all aspects of a business. It promises one database, one application, and a unified interface across the entire enterprise. An entire company under one application roof means everything from human resources; accounting, sales, manufacturing, distribution, and supply-chain management are tightly integrated. This integration benefits companies in many ways: quick reaction to competitive pressures and market opportunities, more flexible product configurations, reduced inventory, and tightened supply chain links.

The current ERP systems have open client/server architecture and are real-time in nature, i.e., clients can process information remotely and the results of a new "input" will "ripple" through the whole "supply-chain" process. The appeal of such systems for businesses is that all employees of a company will have access to the same information almost instantaneously through one unified user interface. ERP systems such as SAP/R3 include not just the functional modules that "crunch" the numbers but also the most advanced technologies and methodologies.

Implementing such a system results in benefits from the "integrated" nature of the system as well as from the "reengineering" of the business practices and the entire "culture" of the business, all at the same time.

The popularity of ERP programs can be attributed to an increasing trend towards globalization, mergers and acquisitions, short product life cycles, and the fear of looming disasters from aging legacy systems that cannot handle dates beyond the end of this century (commonly know as Year 2000 problem). To be successful, a global enterprise must have accurate real-time information to control and coordinate the far-flung resources. ERP systems have the capability to integrate far-flung outposts of a company along with the supply-chain activities. This integration allows sharing of information in a standard format across many departments in the home country as well as across the national borders regardless of language and currency differences. In this era of global competition and uncertain markets, companies are merging for competitive advantage. In the United States, the past couple of years have seen about $1 trillion in mergers annually, many of which involved overseas firms. These newly formed corporations often have very little in common other than a corporate logo. To achieve synergy across national boundaries and product lines, these businesses must

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implement a set of standard business applications and consistent data definitions across all business units. ERP packages are extremely useful in integrating a global company and provide a "common language" throughout the company. DSMS GROUP OF INSTITUTION GROUP OF INSTITUTION is implementing EduFlex ERP system across its more than 1 locations in West Bengal . DSMS GROUP OF INSTITUTION is not only implementing a standardized College Management application but is also moving to a common architecture and infrastructure. For many colleges, an ERP software rollout is a good time to do some serious college management and consolidation of their IT infrastructure around the world. DSMS is expecting a return on investment of 50 percent from this global rollout. If the other colleges implement the same ERP solution, then they will save a tremendous amount in cost and time when integrating their systems. Recently, many of the colleges implementing ERP system.

Critical Implementation Concerns

Even in a single site, implementing ERP means "Early Retirement Probably." An ERP package is so complex and vast that it takes several years and millions of dollars to roll it out. It also requires many far-flung outposts of a company to follow exactly the same business processes. In fact, implementing any integrated ERP solution is not as much a technological exercise but an "organizational revolution." Extensive preparation before implementation is the key to success. Implementations carried out without patience and careful planning will turn out to be corporate root canals, not competitive advantage. Several issues must be addressed when dealing with a vast ERP system, and the following sections discuss each of them in detail.

Top Management Commitment

The IT literature has clearly demonstrated that for IT projects to succeed top management support is critical. This also applies to ERP implementations. Implementing an ERP system is not a matter of changing software systems, rather it is a matter of repositioning the company and transforming the business practices. Due to enormous impact on the competitive advantage of the company, top management must consider the strategic implications of implementing an ERP solution. Management must ask several questions before embarking on the project. Does the ERP system strengthen the company's competitive position? How might it erode the company's competitive position? How does ERP affect the organizational structure and the culture? What is the scope of the ERP implementation -- only a few functional units or the entire organization? Are there any alternatives that meet the company's needs better than an ERP system? If it is a multinational corporation, the management should be concerned about whether it would be better to roll the system out globally or restrict it to certain regional units? Management must be involved in every step of the ERP implementation. Some companies make the grave mistake of handing over the responsibility of ERP implementation to the technology department. This would risk the entire company's survival because of the ERP system's profound business implications.

It is often said that ERP implementation is about people, not processes or technology. An organization goes through a major transformation, and the management of this change must be carefully planned (from a strategic viewpoint) and meticulously implemented. Many parts of the business that used to work in silos now have to be tightly integrated for ERP to work effectively. Cutting corners in planning and implementation is detrimental to a company. The top management must not only fund the project but also take an active role in leading the change. A review of successful ERP implementations has shown that the key to a smooth rollout is the effective change management from top. Intervention from management is often necessary to resolve conflicts and bring everybody to the same thinking, and to build cooperation among the diverse groups in the organization, often times across the national borders. Top management needs to constantly monitor the progress of

the project and provide direction to the implementation teams. The success of a major project like an ERP implementation completely hinges on the strong, sustained commitment of top management. This commitment when percolated down through the organizational levels results in an overall organizational commitment. An overall organizational commitment that is very visible, well defined, and felt is a sure way to ensure a successful implementation.

Reengineering

Implementing an ERP system involves reengineering the existing business processes to the best business process standard. ERP systems are built on best practices that are followed in the industry. One major benefit of ERP comes from reengineering the company's existing way of doing business. All the processes in a company must conform to the ERP model. The cost and benefits of aligning with an ERP model could be very high. This is especially true if the company plans to roll out the system worldwide. It is not very easy to get everyone to agree to the same process. Sometimes business processes are so unique that they need to be preserved, and appropriate steps need to be taken to customize those business processes.

The companies also face a question as to whether to implement the ERP software "as is" and adopt the ERP system's built-in procedure or customize the product to the specific needs of the company. Research shows that even a best application package can meet only 70 percent of the organizational needs. What happens to the rest? An organization has to change its processes to conform to the ERP package, customize the software to suit its needs, or not be concerned about meeting the balance 30 percent. If the package cannot adapt to the organization, then organization has to adapt to the package and change its procedures. When an organization customizes the software to suit its needs, the total cost of implementation rises. The more the customization, the greater the implementation costs. Companies should keep their systems "as is" as much as possible to reduce the costs of customization and future maintenance and upgrade expenses.

Integration

There is a strong trend toward a single ERP solution for an entire company. Most companies feel that having a single vendor means a "common view" necessary to serve their customers efficiently and the ease of maintaining the system in future. Unfortunately, no single application can do everything a company needs. Companies may have to use other specialized software products that best meet their unique needs. These products have to be integrated along with all the homegrown systems with the ERP suite. There are several advantages to choosing this option, including continuous maintenance and upgrade support.

One of the major benefits of ERP solutions is the integration they bring into an organization. Organizations need to understand the nature of integration and how it affects the entire business. Before integration, the functional departments used work in silos and were slow to experience the consequences of the mistakes other departments committed. The information flow was rather slow, and the departments that made the mistakes had ample time to correct them before the errors started affecting the other departments. However, with tight integration the ripple effect of mistakes made in one part of the business unit pass onto the other departments in real time. Also, the original mistakes get magnified as they flow through the value chain of the company. For example, the errors that the production department of a company made in its bill of materials could affect not only the operations in the production department but also the inventory department, accounting department, and others. The impact of these errors could be detrimental to a company. For example, price errors on purchase orders could mislead financial analysts by giving a distorted view of how much the company is spending on materials. Companies must be aware of the potential risks of the errors and take proper steps, such as monitoring the transactions and taking immediate steps to rectify the problems should they occur.

They must also have a formal plan of action describing the steps to be taken if an error is detected. A proper means to communicate to all the parties who are victims of the errors as soon as the errors are detected is extremely important. Consider the recent example of a manufacturing company that implemented an ERP package. It suddenly started experiencing a shortage of manufacturing materials. Production workers noticed that it was due to incorrect bills of materials, and they made necessary adjustments because they knew the correct number of parts needed to manufacturer. However, the company did not have any procedures to notify others in case any errors were found in the data. The domino effect of the errors started affecting other areas of business. Inventory managers thought the company had more material than what was on the shelves, and material shortages occurred. Now the company has mandatory training classes to educate employees about how transactions flow through the system and how errors affect the activities in a value chain. It took almost eight weeks to clean up the incorrect bills of materials in the database.

ERP Consultants

Because the ERP market has grown so big so fast, there has been a shortage of competent consultants. The skill shortage is so deep that it cannot be filled immediately. Finding the right people and keeping them through the implementation is a major challenge. ERP implementation demands multiple skills -- functional, technical, and interpersonal skills. Again, consultants with specific industry knowledge are fewer in number. There are not many consultants with all the required skills.

One might find a consultant with a stellar reputation in some areas, but he may lack expertise in the specific area a company is looking for. Hiring a consultant is just the tip of the iceberg. Managing a consulting firm and its employees is even more challenging. The success or failure of the project depends on how well you meet this challenge.

Implementation Time

ERP systems come in modular fashion and do not have to be implemented entirely at once. Several organizations follow a phase-in approach in which one module is implemented at a time. For example, in EduFlex educational application is composed of several "complete" modules that could be chosen and implemented, depending on an organization's needs. Some of the most organization installed modules are student management, payroll, library and finance management modules.

The problem with ERP packages is that they are very general and need to be configured to a specific type of business. This customization takes a long time, depending on the specific requirements of the business.

Implementation Costs

Even though the price of prewritten software is cheap compared with in-house development, the total cost of implementation could be three to five times the purchase price of the software. The implementation costs would increase as the degree of customization increases. The cost of hiring consultants and all that goes with it can consume up to 30 percent of the overall budget for the implementation.

Selecting the Right Employees

Companies intending to implement an ERP system must be willing to dedicate some of their best employees to the project for a successful implementation. Often companies do not realize the impact of choosing the internal employees with the right skill set. The importance of this aspect cannot be overemphasized. Internal resources of a company should not only be experts in the company's processes but also be aware of the best business practices in the industry. Internal resources on the project should exhibit the ability to understand the overall needs of the company and should play an important role in guiding the project efforts in the right direction. Most of the consulting organizations do provide comprehensive guidelines for selecting internal

resources for the project. Companies should take this exercise seriously and make the right choices. Lack of proper understanding of the project needs and the inability to provide leadership and guidance to the project by the company's internal resources is a major reason for the failure of ERP projects. Because of the complexities involved in the day-to-day running of an organization, it is not uncommon to find functional departments unwilling to sacrifice their best resources toward ERP project needs. However, considering that ERP system implementation can be a critical step in forging an organization's future, companies are better off dedicating their best internal resources to the project.

Training of Employees

Training and updating employees on ERP is a major challenge. People are one of the hidden costs of ERP implementation. Without proper training, about 30 percent to 40 percent of front-line workers will not be able to handle the demands of the new system. The people at the keyboard are now making important decisions about buying and selling -- important commitments of the company. They need to understand how their data affects the rest of company. Some of the decisions front-line people make with an ERP system were the responsibility of a manager earlier. It is important for managers to understand this change in their job and encourage the front-line people to be able to make those decisions themselves. Training employees on ERP is not as simple as Excel training in which you give them a few weeks of training, put them on the job, and they blunder their way through. ERP systems are extremely complex and demand rigorous training. It is difficult for trainers or consultants to pass on the knowledge to the employees in a short period of time. This "knowledge transfer" gets hard if the employees lack computer literacy or have computer phobia. In addition to being taught ERP technology, the employees now have to be taught their new responsibilities. With ERP systems you are continuously being trained. Companies should provide opportunities to enhance the skills of the employees by providing training opportunities on a continuous basis to meet the changing needs of the business and employees.

Conclusion

ERP solutions are revolutionizing the way companies produce goods and services. They are a dream come true in integrating different parts of a company and ensuring smooth flow of information across the enterprise quickly. ERP systems bring lot of benefits to organizations by tightly integrating various departments of the organization. Even though ERP solutions have been popular in Europe for some time, North American companies have been using them for only about five to six years. Some of the factors that have contributed to ERP growth are the trend towards globalization, Year 2000 problems, and mergers and acquisitions.

ERP systems are very large and complex and warrant a careful planning and execution of their implementation. They are not mere software systems; they affect how a business conducts itself. How a company implements an ERP system determines whether it creates a competitive advantage or becomes a corporate headache. The top contributor for a successful ERP implementation is strong commitment from upper management, as an implementation involves significant alterations to existing business practices as well as an outlay of huge capital investments. The other important factors are the issues related to reengineering the business processes and integrating the other business applications to the ERP backbone. Upper management plays a key role in managing the change an ERP brings into an organization. Organizational commitment is paramount due to possible lengthy implementation and huge costs involved. Once implemented, an ERP system is difficult and expensive to undo. Since no single ERP solution can satisfy all the business needs, organizations may have to implement custom applications in addition to the ERP software. Integrating different software packages poses a serious challenge, and the integration patchwork

is expensive and difficult to maintain.

Selecting and managing consultants pose a continuous challenge due to the shortage of skilled consultants in the market. ERP vendors are bringing out industry-specific solutions and newer methodologies to cut the length and costs of implementation. Organizations could reduce the total cost of implementation if they reduce customization by adapting to the ERP's built in best practices as much as possible. Selecting the right employees to participate in the implementation process and motivating them is critical for the implementation's success. Finally, it is important to train the employees to use the system to ensure the proper working of the system.

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Perception of Employees' and Management Towards HRIS Module with Gender Levels of Respondents in KPCL Company

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Abstract

This paper deals with perception of employee and management towards the HRIS model with the Gender level of Respondent in Karnataka power corporation limited(KPCL) in Bangalore with respect to Record Keeping, Hiring, Orientation and Training, Employee Communication, Discipline and Termination. The main objective of this paper whether the non-managerial or managerial employee they will satisfied for implementing HRIS model in KPCL company. Based on responses from a sample of three departments like HRD, AGM (HRD), and Account department.

Keywords: *HRIS, Record Keeping, Hiring, orientation and Training, Employee Communication, Discipline and Termination, HRD, AGM (HRD), Account.*

I. Introduction

1.1 Overview

This article discusses a model for human resource information system development in large formal organization, the human resource information system model. The model developed for large local government client as one part of a corporate training and staff development strategy.

This is because:

1. People (not system) recognize and deliver value added(i.e. Service, quality):
2. People (user) define the expectations and required performance characteristics of system:
3. People (user) deliver – or don't deliver – the value of investment in IT system.

Thus, unless a user organization has the right kinds of people in the right places with right skills, responsibilities, authority and support, then good strategy. On the other hand, with due attention paid to people and the organization spaces in which they act, there is at least a chance of systematic quality in design and use.

Many well-known examples of the use of information technology for competitive advantage involve systems that link an organization to suppliers, distribution channels, or customers. In general, these systems use information or processing capabilities in one organization to improve the performance of another or to improve relationships among organizations. Declining costs of capturing and using information have joined with increasing competitive pressures to spur numerous innovations in use of information to create value. The ideas do not constitute a procedure leading inexorably to competitive advantage. However, they have been of value when combined with an appreciation of the competitive dynamics of specific industries and a grasp of the power of information (Taleo Research Vice President, Alice Snell., **1895**).

Dramatic advances in technology which necessitate the redesign of jobs and constant modifications in recruiting, selection, training and appraisal techniques, the globalization of businesses and the need to educate and train managers on dealing with the complexities of a global economy and the move towards a knowledge based economy, where value of the company depends on its employees' skills and knowledge, are just some of the challenges facing the HR departments in many organizations. With many functions

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to track and huge amounts of information to process frequently and accurately, HR executives have turned to information technology (IT) to help them meet their organization's information needs. This has led to the development and use of computer-based HRIS in organizations. A HRIS is used to acquire, store, manipulate, analyze, retrieve and distribute pertinent information regarding an organization's human resources (Kavanagh et al., 1990).

The pattern of the remainder or this paper is as follows. First, there is an outline of the model's structure and content followed by an outline of problem that prompted and informed the development. This in turn is followed by a discussion of practical issues in the model's use and further development. Finally, some practical stumbling blocks are discussed in the conclusions section.

1.2 Human Resource Information System (Hris):

Meaning of HRIS [According to D.K.Bharadvaj]:

Computer system for tracking employees: a managerial control computer system used to maintain personnel records.

In its most basic form HRIS is a system used to acquire, store, manipulate, analyze, retrieve and distribute pertinent information about an organization's human resources. It is often regarded as a service provided to an organization in the form of information (Tannenbaum, 1990).

1.3 HRIS Internal Working Process [According to Walker (2001)]:

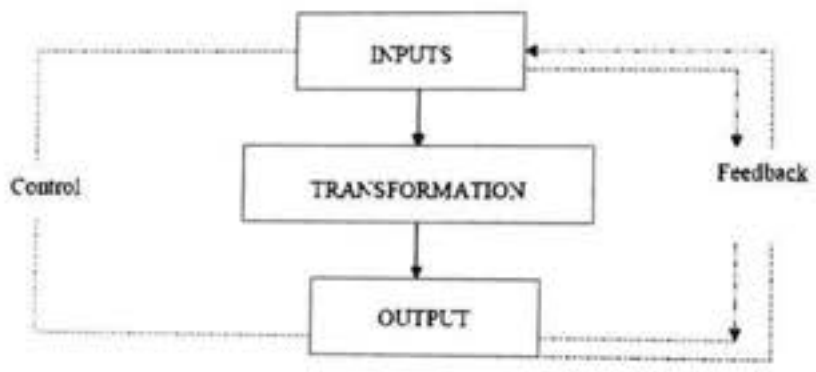


Fig.1: Shows how the HRIS internal working process

Inputs

The input of HRIS includes information related to employees such as education, age, experience, training, present status, present salary, whether promoted or not, organization's policy past and present, procedures past and present and other necessary detailed information relating to the human resources in the organization. The computerized human resource information system in all respect superior to manual system, which is time consuming and not so cost effective. The most important benefit of the system is that the information is available immediately as and when required.

Transformation

The information fed to the computer can be transformed into more meaningful and necessary information that is exactly required by the organization. This is the conversion stage of computerized HRIS. The information transformed into meaningful calculation is very useful to the managers and organization as well. This works as a decision support system, which aids in making appropriate decisions.

Output

Output refers to the printouts of the transformed material from the computer printer like salary statement, report on performance of an employee, budget estimates, etc. All these can be had in the form of printouts, terminal screens etc. A well knit HRIS acts as a worthy decision support organism of a very high quality. The high quality output must be accurate, relevant, consistent, readable and comprehensive.

Feedback and Control

Whether the output obtained is relevant and useful or not must be known. The method of ensuring it is known as feedback. Feedback establishes control over the system.

2. EXPLORATORY QUESTIONS for the PRESENT STUDY

The purpose of our study is to gather information regarding the implementation of an HRIS, the perceived benefits of the HRIS, satisfaction with that system, and, lastly, its strategic impact. Human resource information systems play a vital role in many businesses today, yet few studies have been conducted on HRIS in relation to other aspects of the HR function. Even fewer reports show the strategic/analytical parts of HRIS; however, they do discuss the non-managerial managerial employee segment. The most important section, although neglected completely, is on how to improve a firm's decision making through analysis of the information provided by HRIS. Much of the literature provides information discussing possible strategic roles of HRIS, but none have explored a way to realize these roles and deploy them in an efficient way.

This study focused on the implementation of HRIS, specifically the implementation of HRIS in HR practices within the organization.

Methodology

The employees – managerial and non-managerial – with in the company are basically the knowledge workers or the professional employees. This questionnaire contained different number of statements (questions) relating to different strategies.

Strategy Types and Number of Statements Covered under the Questionnaires like Record Keeping Process (09), Hiring (04), Orientation and Training (06), Employee Communication (07), Discipline and Termination (07).

The research problem

1. What are the Human Resource Information System in HR practice in the KPCL Company in Bengaluru?
2. Which strategy the managers consider more important?
3. What are the perceptions of the managers and non-managers in organizations?
4. Differentiation among the management and employees (non-managers) perceptions in adopting a particular Human Resource Information System.
5. The influence of demographic variables on the perceptions of the employees towards the HRIS module.

Research Questions

While focusing on human resource information system for investigation, the questionnaire that seeks to understand the perceptions of the managers and the non-managers which covers different strategies would seek to analyse the following questions:

- To what extent the KPCL Company has adopted various human resource information systems?
- What is the relative strength of each strategy?
- To what extent the managers and non-managers differ in their perception of the human resource information system?
- To what extent each human resource information system is related to other employee (HR) strategies?

Hypotheses Test

H_1: Respondents with different Gender levels differ significantly in their perception on human resource information system.

Sample Study of Employees

To study the perceptions of the employees in this organization a sample of employees was taken using the simple random sampling method. The sample consisted of both the managerial employees and the non-managerial employees among whom there were men and women employees.

Distribution of Sample of the Study in organization is Top-

management (22), Middle-management (22), Officer (20), Employees (36).

Pilot Study

A pilot study was conducted on a small sample of 30 respondents among them 15 were from management and remaining 15 were employees. The purposes of the pilot study were:

a. To check the clarity of the items enlisted in the selected questionnaires.

b. To get an approximation of time required to complete the questionnaire.

c. To ensure the feasibility of the tools selected for the study.

d. To get a fair idea of the respondents' reaction towards the strategies their managements have adopted to retain people.

Data Analysis

Following statistical techniques were employed to analyzer the data in the present study.

1. Descriptive statistics
2. Contingency coefficient analysis

A brief description of each of these statistical tools/method is given below

Descriptive Statistics

The descriptive procedure displays uni-variate summary statistics for several variables in a single table and calculates standardized values. Descriptive statistics provides general description of the sample in the form of central tendencies and measures of variability. In the present study mean values were calculated for each of the component of strategy statements along with standard deviation values to get an idea regarding measures of central location and scatteredness of scores. Descriptive statistics are used to describe the main features of collection of data in quantitative terms. Descriptive statistics are distinguished from inferential statistics (or inductive statistics), in that descriptive statistics aim to quantitatively summarize a data set, rather than being used to support inferential statements about the population that the data are thought to represent. Even when a data analysis draws its main conclusions using inductive statistical analysis, descriptive statistics are generally presented along with more formal analyses, to give the audience an overall sense of the data being analyzed.

Contingency Coefficient Analysis

The contingency table analysis or Crosstabs procedure forms two-way and multi-way tables and provides a variety of tests and measures of association for two-way tables. The structure of the table and whether categories are ordered determine what test or measure to use. In the present study contingency table analysis was employed to see the association between groups of respondents (management and employee) with their responses on various aspects of HRIS.

TOOLS AND TECHNIQUES

1. Microsoft office excel 2007
2. Dr Arsham's Java Scripts
3. Reliability Calculator

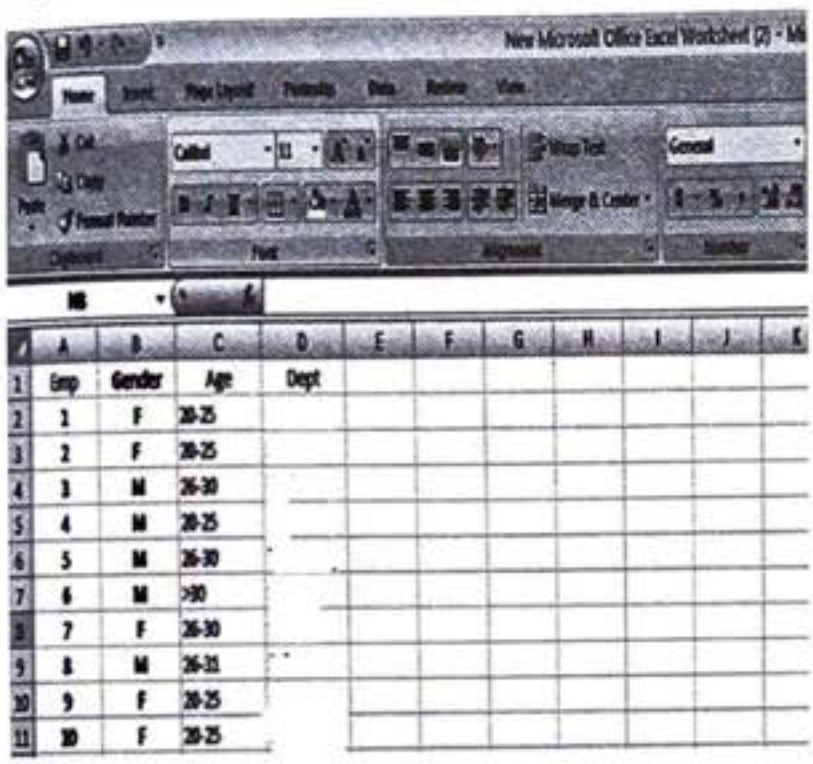
Microsoft office excel 2007

The opinions of the respondents were collected in the form of liker ratings ranging from 1 to 5. Each of the respondents opinion were entered into Microsoft office excel sheet along with demographic parameters. Different set of values were generated by sorting the respondent's opinion with respect to each demographic parameters. Sorting, summation, count-if were calculated using Microsoft excel software.

Dr Arsham's Java Scripts

The values are entered into the cross table, and when the calculate tab is clicked the chi square value, correlation, P-value are generated and also conclusion about the hypothesis testing is generated

Fig.2: Microsoft office Excel



Emp	Gender	Age	Dept
1	F	20-25	
2	F	20-25	
3	M	26-30	
4	M	20-25	
5	M	26-30	
6	M	>30	
7	F	26-30	
8	M	26-31	
9	F	20-25	
10	F	20-25	

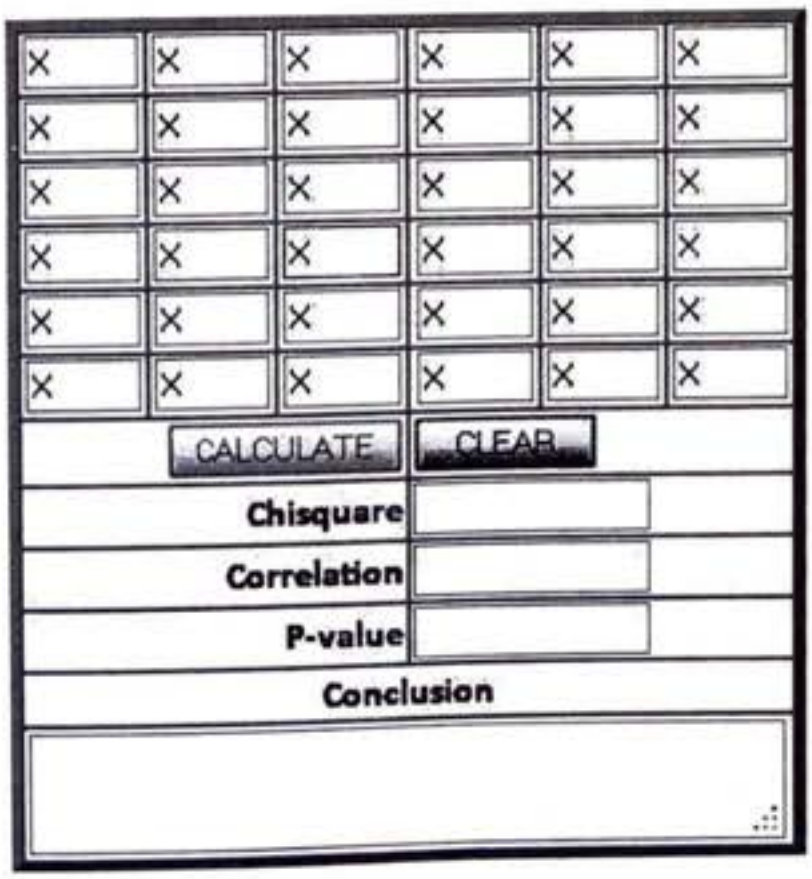


Fig. 3: Java script table for contingency table

Reliability Calculator

Reliability calculator is a pre-coded Microsoft excel tool which has a series of rows and adjacent columns.

The survey values obtained through the likert scale from the respondents are entered into appropriate cells and the cronbach alpha value is determined at top left corner of the canvas.

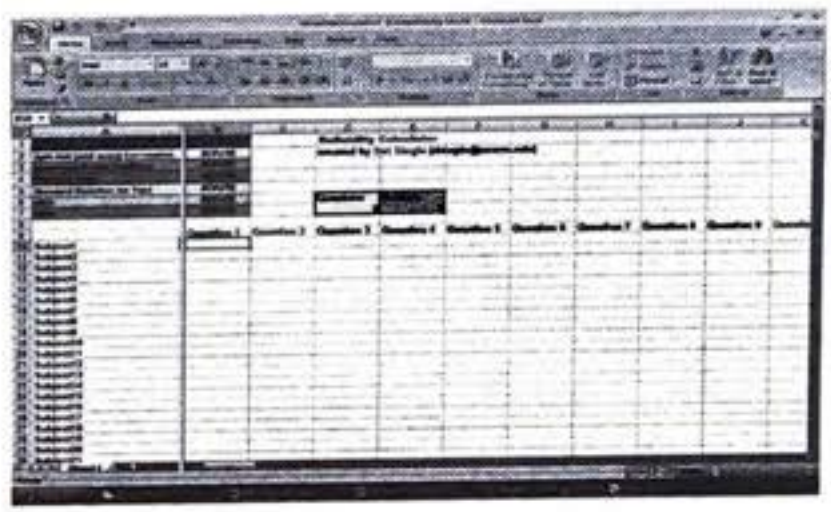


Fig. 4: Reliability calculator for testing cronbach alpha value

RESULTS

Record Keeping Process strategies: Gender-wise comparison indicated no difference between male and female respondents (X^2=1.411; P=.285) and the interaction between groups and gender was also found to be non-significant (X^2=1.411; P=.285). In examining the observed cell frequencies, it can be concluded that X^2 =1.411, $p > 0.05$. So it is not a statistically significant. Hence it is not accepted.

Hiring strategies: Gender-wise comparison indicated no difference between male and female respondents (X^2=0.0051; P=.943) and the interaction between groups and gender was also found to be non-significant (X^2=0.0051; P=.943). In examining the observed cell frequencies, it can be concluded that X^2=0.0051, $p > 0.05$. So it is not a statistically significant. Hence it is not accepted.

Orientation and Training strategies: Gender-wise comparison indicated no difference between male and female respondents (X^2=0.9915; P=.319) and the interaction between groups and gender was also found to be non-significant (X^2=0.9915; P=.319). In examining the observed cell frequencies, it can be concluded that X^2=0.9915, $p > 0.05$.So it is a not statistically significant. Hence it is not accepted.

Employee Communication strategies: Gender-wise comparison indicated no difference between male and female respondents (X^2=0.5963; P=.44) and the interaction between groups and gender was also found to be non-significant (X^2=0.5963; P=.44). In examining the observed cell frequencies, it can be concluded that X^2=0.5963, $p > 0.05$. So it is not a statistically significant. Hence it is not accepted.

Discipline ant Termination strategies: Gender-wise comparison indicated no difference between male and female respondents (X^2=0.3878; P=.533) and the interaction between groups and gender was also found to be non-significant (X^2=0.3878; P=.533). In examining the observed cell frequencies, it can be concluded that X^2=0.3878, $p > 0.05$. So it is not a statistically significant. Hence it is not accepted

Components of performance appraisal	Chi-Square Value	Correlation Value	Significant Value
Record Keeping process strategies	1.1410	0.1064	1.1410
Hiring strategies	0.0051	0.0070	0.0051
Orientation and Training strategies	0 .9915	0.090	0 .9915
Employee Communication strategies:	0.5963	0.0769	0.5963
Discipline and Termination strategies	0.3878	0.062	0.533

Table 1: Respondents in Various Gender Levels on Different Components of HRIS Model and Results of CONTINGENCY TABLE

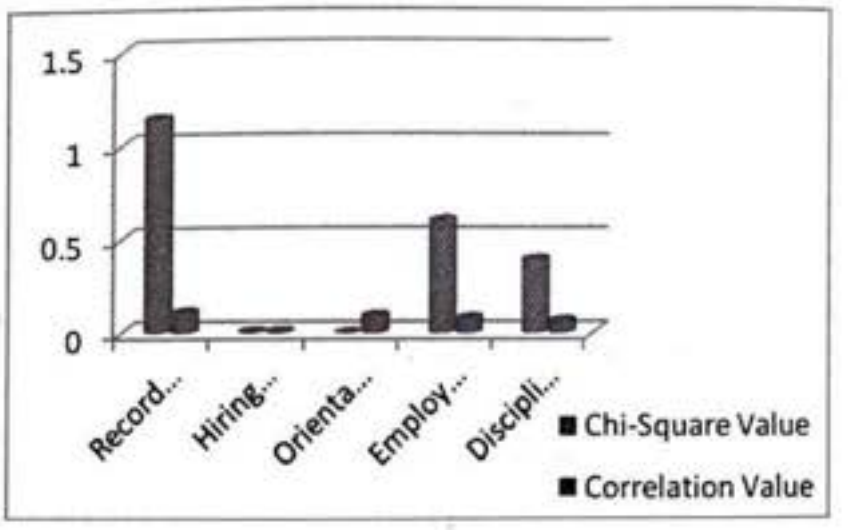


Fig.5: Respondents in Various Gender Levels on Different Components of HRIS Model and Results of Chi-Square and Correlation Value.

CONCLUSION

This research was exploratory and primarily descriptive in nature; we were interested in determining whether HR directors perceived that human resource information systems in HR practices were fulfilling their promise in regard to their potential strategic impact in organizations. We also had a relatively small sample size, as mentioned above. Therefore, I used Contingency tables to measure the statistically Significance of favourable responses to a series of questions assessing HR directors' perceptions of HRIS. The results of the survey are contained in above Tables 1.

This research focused on the role of HRIS in assisting HR managers to perform their roles more professionally. It looked at the impact of HRIS on HR managers' role - both traditional and new emerging roles.

The results revealed that HRIS were playing an important role in helping HR Managers. Most were using HRIS, at least, for operational level tasks and some were using it for strategic level tasks. The strategic level use of HRIS was smaller. The respondents generally believed that HRIS were important in allowing them to perform their work more efficiently, effectively and professionally in our organizations. This confirms that HRIS are vital in helping HR managers to meet the ever-increasing demands on their job and quality of service.

The company is basically a service industry company with a lot of branches over the whole Karnataka state. The report contains a detailed list of useful data that can be referred further in the company's database. It is recommended that the company should follow the information system to the fullest of it. Although, it is based on one of the larger database version of one of the databases, it should be examined and reviewed if any developments seem necessary from the point of view of the company.

It is also come to the notice that few of the employees are not satisfied with the management of the company. It is hereby stated that the system also contains some questionnaire about the same. It can be regulated among the employees and the result can be fed into the information system. It contains the required technological provision for it.

Ironically, well-intended company created the narrow image of HRISs, and they have no one to blame but themselves because of the way that all systems, including the HRIS, are justified. Justification is simply a matter of cost takeout and paper elimination. Almost without exception, a human resource executive would be sent back to the drawing board if he or she made the case for a system that spoke to future possibilities versus immediate cost reductions.

HRIS has to go through a metamorphosis for the good of the corporation and the human resource function. It has to become a tool for empowerment rather than control; a tool for sharing rather than just storing; a tool for feedback not just feed in. Company that takes advantage of the internal and external forces working toward change will achieve strategic advantage in the workplace and in the marketplace.

LIMITATIONS AND FUTURE SCOPE

There are some limitations that need to be recognized while interpreting the findings from this study. Firstly, although there are many different forms of HRIS such as Web-based HRIS, intranets, employee self-service and interactive voice response (IVR) kiosks, in this study, HRIS was simply viewed as the use of computer hardware and software applications to perform HR activities. Since results may vary in the case of different types of HRIS, future research can perhaps examine the adoption of specific types of HRIS.

The biggest impediments to reaching the full potential of HRIS are lack of money and top management support. Other problems include the availability of applications/solutions to HR users and system designer's lack of HR understanding. Today, literally thousands of HR computer applications are available from consulting firms, software houses, and the organizations own system developers. However, the vast majority of such applications focus on administrative tasks, rather than decision support. While supporting decisions is more difficult, it also seems to offer the greatest opportunity to affect the HR profession. Future developments in HRIS must and will address this area. HR users are demanding it, and with a time-lag, providers will respond.

While the benefits of ready access to computerized HR information are compelling, this technology creates new obligations and responsibilities for the HR professional.

The data stored on computerized systems is often confidential and private and should be accessible only to approved individuals under controlled conditions. When HR data resided on mainframes and required special expertise to use, controlling access was somewhat easier cumbersome procedures, for all their disadvantages, reduced the chance that unauthorized persons would gain access to the data. Technology must be tempered with strong organizational values.

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MHM 2 year full time Kolkata Campus	**Hospital Management** Affiliated to West Bengal University of Health Sciences (WBUHS), with support from CMRI Hospital, Kolkata Eligibility: Graduate in any discipline and WBUHS entrance qualified

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