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EDITORIAL

At the beginning of the 20th century, wise men professed that the business world would become one global park before the turn of the century. They predicted that there would be rampant movement of skills, capitals and goods & services across the world. The purpose was simple, i.e. money multiplying through core competency and competitive advantages of the various nations. As a result, accounting emerged as a powerful language of business to understand various facets of it. Today, accounting literature has become an intellectual instrument for managing business. But unfortunately, accountancy became a victim of politics across the world and different political systems made accounting systems different in various countries. Even though in 1494 (Luca Pacioli), accountancy was developed on scientific reasoning and sound principles & logic, the politicians made it oversimplified to suit their interests over the centuries.

During 1970's when the western world started transferring capital from one country to other, the money lenders and investors started demanding reports for safety and utilization of their funds. But due to different accounting systems across the world, the investors were at large to understand and ensure safety of their monies. That was the time, when harmonization of accounting practices started getting momentum in the form of uniform recording and reporting to the respective investors in their own understandable ways. At the same time, there were initiatives in individual countries to standardize accounting procedures and systems across companies, but many of them did not care for harmonization across the countries. As the FDI inflow and outflow started mounting throughout the world, the individual countries are left with limited choices for restricting their accounting systems within their own geographical areas.

In the 1970's noted accounting experts like Christofer Nobes, Paul Garner, Baxter, Glautier, Underdown and others made initiatives to harmonize accounting practices all over the world. But they were hardly appreciated for their initiatives by the industries. In the beginning of 1970's United Kingdom formed an international organization called International Accounting Standards Committee to boost standardization and harmonization of accounting practices all over the world. They also did not get so much supports from industries because accountancy was more of politician-driven than principles-driven. However, after three and half decades, in 2005, their efforts turned into reality, when whole of Europe harmonized and unified accounting practices in all the countries in Europe.

United States was lot lagging behind. From 1934, USA developed principle based accounting system, much away from political influence. It is well known that US GAAP is a strong and principle based accounting system but it count not gain wider acceptance all over the world may be because of its complexity in nature. There were divided opinions as to whose accounting system is more acceptable to the business, investors and other stakeholders: US GAAP or EU GAAP? Today, at this point of time this feeling is still remaining. But the fact of the matter is that European-designed accounting standards and systems have gained wider acceptance all over the world. After lot of deliberations, debates experiments and researches, accounting standard committee has brought out a wide spectrum of accounting system and standard which is scientifically based on the principles

of business of reality and logical reasoning. This is what is known as ‘International Financial Reporting Standards’ (IFRS).

Due to the peer pressure from the business world more than 100 countries in the world have adopted IFRS and India can not be an exception. By the end of this year, almost 150 countries are going to accept IFRS including India excepting USA and Japan. Hopefully, sooner, USA and Japan will also adopt IFRS before 2015. Therefore, after 2015 the whole business world will have one universal financial language. This is really a great revolution and I thank the thinkers and protagonists in the IFRS movement. Any major or minor investor of one country will easily understand the business performance of another company in another country and accordingly would be able to make meaningful investment decisions.

Coming to India even though we are not fully prepared to adopt IFRS, we are making a modest beginning from 01.04.2011 in phased manner. In the first phase around 300 companies will be adopting IFRS in 2011, in the second phase of companies having net worth of between Rs.500 crores and Rs.1000 crores will adopt IFRS from 2013 and rest of the listed companies will adopt it from 2014. But the one, we are going to adopt is not a ‘true IFRS’. It is an IFRS which is a convergence towards Indian Accounting Standards and Systems, rewritten to substantially align with ‘true IFRS’. A quick look of the alignment with ‘true IFRS’ suggests that there would be a 5% to 10 % deviation from the original IFRS or may be more. India will have two accounting systems and standards in parallel because other unlisted and smaller companies will continue with the existing practices and for how long I am not sure.

What this IFRS means to the non accounting professions in business. As accounting is a business language, every professional irrespective of his discipline has to understand IFRS to measure his success or failure, which would be communicated in an understandable international technical language. Therefore, IFRS is not at all the property of accounting profession only. The university syllabuses are to be revised substantially and the commerce and management teachers are to be trained effectively to bridge the gaps between business and academia. IFRS is certainly a great endeavour of modern times. But 100% adoption by India would have been more meaningful compared to convergence with 10%-15% deviations. Even a small deviation would call for reconciliation of business results which would make Indian accounting system a little complicated and confusing. My personal opinion is that complete adoption of IFRS would be more meaningful than convergence. I take this opportunities to invite researchers, academicians, corporate managers from various disciplines to contribute high quality papers for better understanding of the subject its business implications for the readers.

Editor

Determinants of Rural Non-Farm Employment in India : A State Level Analysis

Sangeeta Yadav¹ and Joydeep Ghosh²

Abstract

Recent years have witnessed a major decline in Indian agriculture's capacity and contribution towards productive employment generation. High population growth accompanied with increased pressure on land has left limited employment opportunities in agriculture. Non-farm sector has emerged as an alternative source of employment for the rural population of the country. The main purpose of this study is to identify the major determinants of non-farm employment in rural areas of India. The study uses multiple regression analysis (OLS) using state and union territory (UT) level data for the year 2001, to determine the factors that act as catalysts for creating productive employment opportunities in rural areas. Findings of the study indicate that the degree of casualization of the rural agricultural labour force, female participation in the rural labour force and literacy levels have a strong impact on the level of rural nonfarm employment. The study also indicates that public expenditure on rural nonfarm employment schemes, and agricultural and livestock productivity have no impact (statistically) on the level of rural non-farm employment. The policy recommendation is to facilitate the flow of capital to rural areas, remove institutional and infrastructural bottleneck that hinder the growth of rural manufacturing, better management of the government schemes and increased education (including IT) facilities in rural areas. There exists an urgent need of generating non-farm employment opportunities to ensure greater access and equity for the rural population of India and thus usher a more inclusive growth.

Keywords: Labor Force and Employment, Size and Structure; Welfare and Poverty

Introduction

The Indian economy is witnessing a major structural transformation with the importance of agriculture declining both in terms of contribution to GDP and in terms of employment generation. It is the manufacturing and service sectors that have been primarily responsible for employment growth in recent years. Thus non-farm employment opportunities assumes particular significance given that a large proportion of our population (approximately 72 percent, according to Census 2001) lives in rural areas. In most countries, the manufacturing and the service sectors of the economy have gained importance over time resulting in higher national incomes. In the Indian context too, this structural transformation of the economy is clearly evident from the figures. In 1980, agriculture accounted for about 42.8 percent of the Indian GDP, while the manufacturing and service sectors of the economy accounted for 21.9 percent and 35.3 percent of the Indian GDP, respectively. In 2000, agriculture accounted for 26 percent of the Indian GDP, while the manufacturing and service sectors accounted for 27 percent and 47 percent of the Indian GDP, respectively. Data on agricultural and non-agricultural employment in India are presented in Tables 1, 2 and 3. A few observations can be made on the basis of these

¹ Assistant Professor – Economics, School of Business, IILM Institute for Higher Education, Lodhi Road, New Delhi – 110 013, Email: sangeeta.yadav@iilm.edu, sangeeta.yadav@gmail.com

² Consultant- Economics, Institute of Economic Growth, University Enclave, University of Delhi (North Campus), New Delhi - 110 007, Email: jghosh@iegindia.org, jghosh87@rediffmail.com

data. First, the Indian economy added a total of 45 million main workers³ between 1991 and 2001. About ninety one percent of these jobs were created in the non farm sector, and about nine percent of the jobs were created in the agricultural sector. Second, the rural non farm sector employs (main workers) only a small proportion (about 8 percent) of the rural population. Third, the number of cultivators and agricultural labourers (measure of the rural casual agricultural labour force) in the economy has increased by about 48 million between 1991 and 2001. The cultivators and agricultural labourers together constitute the largest chunk of the Indian labour force, and are the most economically vulnerable and unproductive group of workers. Finally, there has been an approximately 84 percent increase in the number of female main workers in the economy between 1991 and 2001. About 80 percent of these new workers were employed in the non farm sector. The above figures can help us to understand some facets of the emerging labour market in the country.

The declining ability of the agricultural sector to create productive jobs could be attributed to several 'push' and 'pull' factors. The 'push' factors are low land productivity, inadequate production and marketing infrastructure, increasing mechanization of agricultural activities and inadequate credit facilities. These 'push' factors are often associated with the casualization of the agricultural labour force. The 'pull' factors are the rapid expansion of the non farm sector and better socio-economic conditions (like literacy rate, female participation in the labour force, government expenditure on the non farm sector etc). The 'pull' factors have been primarily responsible for generating employment in the non farm sector.

The main objective of this study is to identify the major determinants that act as catalysts for creating productive non-farm employment opportunities in rural areas of India. Since there is dearth of productive employment opportunities in the Indian agricultural sector, the role of the non-farm sector in job creation assumes more importance. A state level analysis is done to address the objective of the study, using data from the Census (1991 and 2001), the National Sample Survey Organization (NSSO), and the Ministry of Rural Development.

Literature Review

Several studies have been conducted on the rural non farm sector. One of the earlier studies (Mellor, 1976) opined that the green revolution would increase agricultural productivity (and agricultural wages), which would in turn stimulate the rural non-farm sector through consumption and production linkages. Consumption linkages work through the increase in demand for goods and services due to higher agricultural incomes. Production linkages imply the demand for agricultural inputs (like ploughs, engines etc) produced in the non farm sector, as well as the development of agro processing industries like rice milling, tobacco processing etc. The growth of the non farm sector would in turn stimulate the growth of agricultural productivity. In recent years, however, the agriculture-led growth theory has been questioned by several authors. According to Foster and Rosenzweig (2003) there is no evidence to support the fact that agricultural productivity growth enhances non-farm growth. The authors conclude that there is no relationship between agricultural productivity and the expansion of rural

³ According to the Census a person who has worked for 6 months or more during the last one year preceding the date of enumeration is termed a 'main worker'. A person who has worked for less than 6 months (including even for a worker single day) is termed a 'marginal worker'. 'Cultivators' and 'agricultural labourers' are not included under 'main/marginal worker.' For the purpose of Census a person is classified as 'cultivator' if she or he is engaged in cultivation of land owned or held from Government or held from private persons or institutions for payment in money, kind or share. Cultivation includes effective supervision or direction in cultivation. Cultivation involves ploughing, sowing harvesting and production of cereals and millet crops such as paddy, wheat, jowar, bajra, ragi etc, other crops such as sugarcane, tobacco, ground-nuts, tapioca etc, pulses, raw jute and kindred fibre crops, cotton, cinchona and other medicinal plants, fruit growing, vegetable growing or keeping orchards or groves etc. But cultivation does not include plantation crops like tea, coffee, rubber, coconut and betel-nuts (areca). For the purpose of Census, a person who works on another person's land for wages in money or kind or share is regarded as an 'agricultural labourer'. She or he has no risk in cultivation, but merely works on another person's land for wages. An 'agricultural labourer' has no right of lease or contract on land on which she / he works.

manufacturing. According to the study rural manufacturing expanded the most in those areas that did not benefit from higher agricultural productivity over the study period. Later, the role of factors outside of agriculture was emphasized by authors like Bhalla (1993a). Some of the factors that were thought to be important in stimulating the rural non farm sector were urbanization, growth of rural infrastructure, public expenditure on rural development and poverty alleviation programs, educational levels and the unemployment rate.

Visaria and Basant (1994) have studied employment patterns in the rural non farm sector using Census and NSS data. The important findings of the study are that there was an increase in the share of nonfarm employment in total rural employment during the 1980's, employment in the rural tertiary sector grew at a faster rate than in the rural secondary sector, and the increase in rural nonfarm employment is due to the increase in the number of casual workers.

The relationship between agricultural wage rates and the non farm sector has been highlighted by several studies. According to Bhalla (1993a) and Mukherjee (1996), the most important factor that led to the increase in real wage rates in the agricultural sector from the mid-1970s to the mid-1980s was the diversification of the workforce into the non agricultural sector. The increase in non agricultural employment was associated with decreasing poverty levels during the same period (Ghosh, 1995; Sen, 1997). In a recent study Mahendra Dev and Ravi (2007) argue that poverty reduction has slowed down in the post reform period (1993-2005). According to the authors the extent of poverty reduction has been higher in 1999-2005 than in 1993-2000, in spite of slower agricultural growth in the latter years (1999-2005). The higher poverty reduction seen in recent years in spite of lower agricultural growth can be partly explained by the increase in non-farm employment across most states during 1999-2005 Himanshu (2007).

Some studies have focused on gender patterns in the non farm sector. According to Unni (1997b) and Mitra (1993), an increasing trend was observed for female participation in the non farm sector in the 1980s. However, there has been a setback in recent years according to the authors. Lanjouw and Shariff (2002) conducted a micro level study based on data collected from 32,000 households in 1765 villages across India. According to the authors, education, wealth, caste, village level agricultural conditions, population densities were some of the factors that influenced access to non-farm occupations in rural areas. The growth of non-farm activities was found to be strongly associated with high agricultural wage rates. The authors stress the importance of education for improving access to non-farm activities in rural areas. Thus, previous studies in this area point to the rising importance (in terms of poverty alleviation) of the rural non farm sector, and the various factors (like agricultural productivity, education, female participation in the labour force, public spending etc) influencing its growth.

Research Methodology

The main objective of this study is to identify the major determinants of rural non-farm employment in India through a state level analysis using multiple regression analysis. The research is explanatory in nature.

The Sample and Data

The sample comprises of 23 states and union territories (UT) from India. Chandigarh, Dadra, Daman and Diu, Delhi, Lakshadweep, Manipur, Jharkhand, Chhattisgarh, Uttaranchal, Arunachal Pradesh, Nagaland and Sikkim were not part of the sample due to non-availability of data for these states/UT. Linear regressions (OLS) were run using data from the sample Indian states/UT. Data on agricultural and livestock output were collected from the Ministry of Statistics and Programme Implementation. Data on rural population, main/marginal workers by industrial category, rural literacy rate, and cultivators and agricultural labourers were collected from Census 1991/2001, and data on public spending on rural development schemes were obtained from the Ministry of Rural Development.

Variables

Three linear regression models (Table 4) are estimated, each with a different set of independent variables. The dependent variable in each case is the natural log of the proportion (main and marginal workers) of the rural population of the state/UT engaged in the non farm sector i.e. (RNFEMP/ RPOP).

RNFEMP is the number of main and marginal workers in the rural non farm sector in the state and RPOP is the rural population of the state.

The independent variables (all in natural logs) that are used in the different models are:

- Agricultural and livestock output (in Rs.) per capita of the rural population (LNALSRPOP)
- Proportion of rural cultivators and agricultural labourers in the rural population (LNRCAGLRPOP),
- Proportion of female workers in the rural population (LNRFEMRPOP),
- Rural literacy rate (LNRLITRATE),
- Per capita expenditure on the rural non farm sector in the state (LNRNFEXRPOP).

The independent variables were selected on the basis of previous studies (see Literature Review) on non-farm employment.

Agricultural and livestock output (in Rs.) per capita of the rural population (LNALSRPOP) was included to see the relationship between agricultural and livestock productivity, and rural non-farm employment. Proportion of rural cultivators and agricultural labourers in the rural population (LNRCAGLRPOP) helped in understanding the relationship between the degree of rural agricultural labour force casualization, as measured by the number of rural cultivators and agricultural labourers, and rural non-farm employment. Proportion of female workers in the rural population (LNRFEMRPOP) was included to see the effect of female workforce participation on rural non-farm employment. Non-farm jobs are often associated with higher levels of education/training. To capture the effect of education on the level of non-farm employment, rural literacy rate (LNRLITRATE) was used as an independent variable. Per capita expenditure (LNRNFEXRPOP) on the two main government schemes (Sampoorna Grameen Rozgar Yojana and Swarnjayanti Gram Swarozgar Yojana) responsible for generating rural non-farm employment is also used as an independent variable in the study. Sampoorna Grameen Rozgar Yojana (SGRY) is primarily responsible for generating wage employment in rural areas, while Swarnjayanti Gram Swarozgar Yojana (SGSY) is a major initiative for providing self employment opportunities to the rural poor. SGRY was launched in 2001 as a result of the merger of two schemes – the Employment Assurance Scheme (EAS) and Jawahar Gram Samridhi Yojana (JGSY). One of the important objectives of SGRY is to generate one billion days of employment every year for unskilled workers. Funding for this scheme is provided by the Central and State governments. SGSY was launched in 1999 and aims to provide income generating assets to the rural poor (people below the poverty line) through a mix of bank credit and government subsidy. The scheme is slated to achieve its objectives by establishing micro enterprises in rural areas.

Research Design

Multiple regression technique was used to establish the impact of various independent variables on non-farm employment in rural areas of India. Three regression models were used in this study to measure the level of non-farm employment.

Model 1: In Model 1, all the above independent variables are used.

$$RNFEMP/RPOP = b_0 + b_1 ALSRPOP + b_2 RCAGLRPOP + b_3 RFEMRPOP + b_4 RLITRATE + b_5 RNFEXRPOP$$

Model 2: In Model 2, LNRNFEXRPOP is dropped to see the effect on regression statistics.

$$RNFEMP/RPOP = b_0 + b_1 ALSRPOP + b_2 RCAGLRPOP + b_3 RFEMRPOP + b_4 RLITRATE$$

Model 3: In Model 3, both LNALSROP and LNRNFEXROP are dropped to see the effect on model results.

$$\text{RNFEMP/RPOP} = b_0 + b_1 \text{RCAGLRPOP} + b_2 \text{RFEMRPOP} + b_3 \text{RLITRATE}$$

where:

C= Constant; b_{1-5} = Coefficients; RNFEMP = the number of main and marginal workers in the rural non farm sector in the state. RPOP = the rural population of the state; ALSROP= Agricultural and livestock output (in Rs.) per capita of the rural population; RCAGLRPOP=Proportion of rural cultivators and agricultural labourers in the rural population; RFEMRPOP=Proportion of female workers in the rural population; RLITRATE= Rural literacy rate; RNFEXROP= Per capita expenditure on the rural non farm sector in the state.

All variables are in natural log.

Empirical Results

In Model 1, all the above independent variables are used. The values of R-squared and Adjusted R-squared are 0.85 and 0.80 respectively. Two of the variables (LNRCAGLROP and LNRLITRATE) are significant at the five percent level, and one of them (LNRFMROP) is significant at the one percent level. LNALSROP and LNRNFEXROP are not significant.

In Model 2, LNRNFEXROP is dropped to see the effect on regression statistics. The value of Adjusted R-Squared increases to 0.81 from 0.80 in Model 1. In this case too, LNRCAGLROP and LNRLITRATE are significant at the five percent level, while LNRFMROP is significant at the one percent level. LNALSROP is not significant.

In Model 3, both LNALSROP and LNRNFEXROP are dropped to see the effect on model results. There is a slight decrease in the value of R-squared in Model 3 relative to Models 1 and 2, however, there is an increase in the value of Adjusted R-squared. All the independent variables (LNRCAGLROP, LNRFMROP and LNRLITRATE) are significant in Model 3. LNRCAGLROP and LNRFMROP are significant at the one percent level, and LNRLITRATE is significant at the five percent level.

The results help us to make a few observations regarding the factors that influence rural non-farm employment.

- First rural non-farm expenditure by government agencies does not influence rural nonfarm employment. This conclusion is based on the fact that the coefficient of LNRNFEXROP is small and not statistically significant in Model 1.
- A similar conclusion is also applicable in the case of LNALSROP. The coefficient of LNALSROP is small and not significant in both Models 1 and 2. Thus, the second observation is that there is no relationship between rural non- farm employment, and agricultural and livestock productivity.
- The third observation is that the degree of casualization of the rural agricultural labour force, female participation in the rural labour force, and the rural literacy rate are the main determinants of rural non-farm employment. These three variables are statistically significant in all the three models, and are able to explain a significant proportion of the variation in the dependent variable. Based on Model 3, a one percent increase in the proportion of rural cultivators and agricultural labourers is associated with a 0.31 percent decrease in the proportion of rural non-farm employment. The result clearly suggests that states with higher proportions of rural agricultural casual workers are less likely to have high rural non-farm employment levels. The sign of LNRFMROP in Model 3 suggests that there is positive relationship between rural non-farm employment and female participation in the rural labour force. The coefficient of LNRFMROP is big and significant. Specifically, a one percent increase in the

proportion of females participating in the rural labour force is associated with a 0.42 percent increase in rural non-farm employment.

- Finally, the importance of education in influencing rural non-farm employment is revealed by the large and significant coefficient of LNRLITRATE. According to Model 3, a one percent increase in the rural literacy rate increases the level of rural non-farm employment by 0.64 percent. The results thus suggest that the degree of rural labour force casualization, female participation in the rural labour force, and rural literacy levels are the main determinants of rural non-farm employment.

The results are mostly consistent with the findings of other studies in this area. The ineffectiveness of government spending on the rural non farm sector has been documented by Saxena (2003). According to him, “the various government sponsored programs for boosting the non farm economy so far have achieved marginal success. There were certain structural weaknesses in the approach as these were based on the wrong assumptions – a) rural enterprises were motivated enough to spontaneously come out of their social and cultural stranglehold on the call of government agencies, and b) bureaucracy was well-equipped to take up the new challenge (Adhikari, 2001). The other problem is the multiplicity of schemes and agencies, and the absence of any comprehensive co-ordination and follow-up mechanism.” In view of this result, there is an urgent need to streamline and improve the implementation of various government sponsored schemes in the rural non farm sector. The relationship between agricultural productivity and the rural non farm sector has been the focus of many studies. The results of this analysis suggest that there is no relationship between agricultural (and livestock) productivity and rural non-farm employment, contrary to the theory proposed by Mellor (1976), and consistent with the more recent findings of Foster and Rosenzweig (2003). The positive relationship between female participation in the rural workforce and the rural non farm sector is consistent with the findings of Mitra (1993) and Unni (1997b). Finally, the importance of educational levels in stimulating the rural non farm sector conforms to the findings of Bhalla (1993a).

Conclusion & Recommendations

The agricultural sector in India has not been able to create productive employment opportunities in India due to factors like low land productivity, inadequate infrastructure, unavailability of credit and increasing mechanization of farm activities. The generation of alternative sources of productive employment for the rural population is of paramount importance. The rural non farm sector has been growing in recent years, and is an alternative source of employment for the rural population. The main objective of this study is to identify the determinants of non-farm employment in rural areas of the country. Linear regressions (OLS), using state/UT level data for the year 2001, were run to ascertain the factors that influence rural non-farm employment. The degree of casualization of the rural agricultural labour force, female participation in the rural labour force and literacy levels were found to be the main determinants of rural non-farm employment. Public expenditure on rural non-farm employment schemes does not influence the level of rural non-farm employment, indicating the failure of such schemes to meet their objectives. The results also suggest that there is no relationship between rural non-farm employment, and agricultural and livestock productivity, contrary to the agriculture-led growth theory proposed by Mellor (1976).

A few comments can be made based on this study. The Indian labour market has been characterized by the creation of jobs mostly in the non farm sector in recent years, on one hand, and the increasing casualization of the agricultural labour force, on the other. The creation of jobs has largely bypassed the largest and most vulnerable group of the Indian workforce, namely cultivators and agricultural labourers. There is considerable scope of increasing the number of workers in the rural non farm sector, thus boosting income levels in rural areas. States/UT's that are ahead in terms of literacy rates and female participation in the workforce are more likely to create more jobs in the non farm sector, and will thus create better income opportunities for their residents.

Besides the factors that are included in this paper, there are several other factors that determine the development of the non farm sector in rural areas. Opening up of the economy till now has been restricted to the large organized sector. Institutional controls still deter the opening up of the rural economy and unleashing the potential rural producers. In states like Karnataka and Maharashtra, for example, conversion of agricultural land for non agricultural purposes is not freely allowed (Saxena, 2003), with the result a farmer cannot set up industry on his own land. Deregulating markets to work in favour of the poor would increase economic opportunities in the rural areas. For example, easing licensing restrictions on milk processing plants in UP led to the doubling of such capacity within four years (Saxena, 2003). Yields and returns increased along the milk routes and collection centres. The biggest challenge for the policy makers is to create a progressive social and economic environment that would facilitate the movement of the marginalized sections of the Indian workforce to more productive employment opportunities in the non farm sector.

Manufacturing and service industries expand in areas where there is skilled manpower and good infrastructure. If the rural population is able to satisfy the requirements of employers, and there is adequate infrastructure development in the rural areas, there is a high probability that industries would relocate to rural areas, thus creating new centres of growth. There is an urgent need to create new centres of growth as the big cities are already facing the strains of a large population (inflow of migrant workers) and scarce infrastructure. Information technology (IT) can play an important role in the development of rural India, as evidenced by the success of initiatives like e-choupal⁴. Apart from providing direct employment to the rural population, IT can boost rural incomes by providing current information on prices, weather etc to the farmer, and by reducing his dependency on middlemen for the marketing of agricultural produce. The government can play a proactive role to take the benefits of IT to the rural population by providing incentives to firms setting up centres in rural areas.

In this regime of free market economics, market forces will play an increasingly important role in determining employment opportunities. Free market economics is based on the premise that displaced workers from a particular sector are able to move to other sectors of the economy seamlessly. The ability to learn quickly and adapt to new changes will be crucial for every worker. Education can provide the foundation to adapt quickly to changes in economic conditions.

The policy recommendations thus would be to provide education/skills training to the rural population, to design initiatives to encourage female participation in the rural labour force, to remove institutional bottlenecks that hinder the growth of rural manufacturing/service industries, a complete rethink of the government schemes that are supposed to promote the rural non farm sector, and finally, to design initiatives to promote infrastructure and IT facilities in rural areas. In this way the rural population would be less dependent on unproductive employment in the agricultural sector, and would thus be able to fully participate in the new skills based economy.

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⁴ Initiative of ITC, a major agribusiness firm, to educate farmers on market conditions, technology, weather etc through the use of information technology

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Appendix -1

Population and Employment in India (1991)

	MALES	FEMALES	PERSONS
Agriculture (main workers, Sector 0#)	4,651,940 (5.34*)	1,346,818 (9.91*)	6,004,985 (5.98*)
Non agriculture (main workers)	82,405,794 (94.66*)	12,249,633 (90.09*)	94,364,050 (94.02*)
Manufacturing (Sectors 1-5)	30,791,412 (35.37*)	5,323,139 (39.15*)	35,743,958 (35.61*)
Services (Sectors 6-9)	51,614,382 (59.29*)	6,926,494 (50.94*)	58,620,092 (58.40*)
Total main workers	87,057,734 (20**)	13,596,451 (3.37**)	100,369,035 (11.97**)
Total marginal workers	2,611,249 (0.60**)	25,411,666 (6.30**)	28,511,310 (3.40**)
Total workers (main + marginal)	89,668,983 (20.60**)	39,008,117 (9.67**)	128,880,345 (15.37**)
Cultivators	88,386,860 (20.31**)	22,190,435 (5.50**)	110,663,295 (13.20**)
Agricultural Labourers	46,076,358 (10.59**)	28,347,318 (7.03**)	74,633,385 (8.90**)
Total Population	435,208,158	403,359,778	838,567,936

See Appendix B; *Percent of total main workers; **Percent of total population

Source: Main/Marginal workers classified by industrial category (NIC), age and sex, B Series Tables, Census 1991

Appendix-2

Population and Employment in India (2001)

	MALES	FEMALES	PERSONS
Agriculture (main workers, Sectors A-B)	6,237,754 (5.16*)	3,617,948 (14.47*)	9,855,702 (6.76*)
Non agriculture (main workers)	114,611,671 (94.84*)	21,381,714 (85.53*)	135,993,385 (93.24*)
Manufacturing (Sectors C-F)	46,463,488 (38.45*)	10,421,648 (41.69*)	56,885,136 (39*)
Services (Sectors G – Q)	68,148,183 (56.39*)	10,960,066 (43.84*)	79,108,249 (54.24*)
Total main workers	120,849,425 (22.75**)	24,999,662 (5.04**)	145,849,087 (14.20**)
Total marginal workers	11,471,302 (2.16**)	10,780,831 (2.17**)	22,252,133 (2.17**)
Total workers (main + marginal)	132,320,727 (24.91**)	35,780,493 (7.22**)	168,101,220 (16.37**)
Cultivators	85,416,498 (16.08**)	41,896,353 (8.45**)	127,312,851 (12.40**)
Agricultural Labourers	57,329,100 (10.79**)	49,446,230 (9.97**)	106,775,330 (10.40**)
Total Population	531,277,078	495,738,169	1,027,015,247

*Percent of total main workers; **Percent of total population

Source: Main/Marginal workers classified by industrial category, age and sex, B Series Tables, Census 2001

Appendix-3

Population and Employment in Rural India (2001)

	MALES	FEMALES	PERSONS
Agriculture (main workers, Sectors A-B)	4,989,459 (9.31*)	3,306,498 (24.12*)	8,295,957 (12.33*)
Non agriculture (main workers)	48,594,104 (90.69*)	10,399,380 (75.88*)	58,993,484 (87.67*)
Manufacturing (Sectors C-F)	21,659,004 (40.42*)	6,190,424 (45.17*)	27,849,428 (41.39*)
Services (Sectors G-Q)	26,935,100 (50.27*)	4,208,956 (30.71*)	31,144,056 (46.28*)
Total main workers	53,583,563 (14.06**)	13,705,878 (3.80**)	67,289,441 (9.07**)
Total marginal workers	7,125,698 (1.87**)	8,398,468 (2.33**)	15,524,166 (2.09**)
Total workers (main + marginal)	60,709,261 (15.93**)	22,104,346 (6.13**)	82,813,607 (11.17**)
Cultivators	83,475,851 (21.90**)	41,243,896 (11.44**)	124,719,747 (16.82**)
Agricultural Labourers	54,706,211 (14.35**)	47,725,007 (13.24**)	102,431,218 (13.81**)
Total rural population	381,141,184	360,519,109	741,660,293

*Percent of total main workers; **Percent of total population

Source: Main/Marginal workers classified by industrial category, age and sex, B Series Tables, Census 2001

Appendix-4

Parameter Estimates from the Regressions

Variable	Model 1	Model 2	Model 3
INTERCEPT	-0.26 (-0.18)	-0.27 (-0.19)	-0.86 (-2.02)
LNALSRPOP	-0.06 (-0.47)	-0.05 (-0.44)	
LNRCAGLRPOP	-0.31 (-2.49*)	-0.29 (-2.57*)	-0.31 (-2.93**)
LNRFEMRPOP	0.47 (3.53**)	0.45 (3.78**)	0.42 (4.27**)
LNRLITRATE	0.63 (2.33*)	0.66 (2.72*)	0.64 (2.75*)
LNRNFEXRPOP	0.02 (0.34)		
R-SQUARE	0.85	0.85	0.84
ADJUSTED R-SQUARE	0.80	0.81	0.82

Figures in parentheses are t values; * significant at 5 percent level; ** significant at 1 percent level

Appendix-5

Industrial Classification - CENSUS 1991

SECTOR (NIC 1987)	DESCRIPTION
0	Agriculture, hunting, forestry and fishing
1	Mining and quarrying
2,3 and 4	Manufacturing, Processing, Servicing and Repairs in Household Industry
2,3 and 4	Manufacturing, Processing, Servicing and Repairs in Non-Household Industry
5	Construction
6	Trade and Commerce
7	Transport, Storage and Communications
8 and 9	Other Services

Appendix-6

Industrial Classification – CENSUS 2001

SECTOR (NIC 1998)	DESCRIPTION
A and B	Agriculture, hunting, forestry and fishing
C	Mining and quarrying
D	Manufacturing
E	Electricity, gas and water supply
F	Construction
G	Wholesale and retail trade, repair of motor vehicles, motor cycles and personal and household goods
H	Hotels and restaurants
I	Transport, storage and communication
J	Financial intermediation
K	Real estate, renting and business activities
L	Public administration and defence, compulsory social security
M	Education
N	Health and social work
O	Other community, social and personal activities
P	Private households with employed persons
Q	Extra territorial organizations and bodies

Role of Partnerships between Microfinance Institutions and the Corporate Sector in Building up Value Chains in India

Robert V. Goedegebuure¹ and Priyanka Jayashankar²

Abstract

The paper investigates the role of partnerships forged by Microfinance Institutions (MFIs) and the corporate sector in the development of inclusive value chains. The authors bring to light the impact of strategic partnerships between microfinance institutions and the corporate sector on the bottom of the pyramid segment by using a multiple case study approach.

MFIs can scale up the marketing and distribution value chains for companies targeting Bottom of the Pyramid (BoP) consumers. Through such partnerships, MFIs can provide their clients access to products, which are otherwise not easily available in the rural areas. It is also incumbent upon MFIs to develop value chains to empower low income producers, who typically lack market linkages and depend on middlemen. MFI-corporate partnerships can enable micro-entrepreneurs and farmers to have greater market access. Nonetheless, the development of sustainable MFI-corporate partnerships is fraught with challenges. MFIs promoting consumer goods should steer clear of providing excessive consumption-based credit, which would deplete the disposable income of the poor. Building inclusive value chains for producers at the BoP can be a long-drawn-out process due to the limited scalability of micro-enterprises and the lack of rural infrastructure. To delve deeper into the pros and cons of developing inclusive value chains, the authors have obtained qualitative inputs from the MFIs Hand in Hand, Grameen Koota, Larsen and Toubro Finance Ltd and the CII-backed Bharat Yuva Shakti Trust for this study.

Introduction

There are partnerships between microfinance institutions and the corporate sector can build up value chains in India, which in turn, would empower the constituents of the bottom of the pyramid segment. Clients of microfinance institutions can be empowered as producers and consumers at a grassroots level, as of the result of the partnerships with the corporate sector. The benefits of partnerships have been substantially cited in management literature. According to the resource based view of the firm, firms look for partners that have the resources they lack (Nohria and Garcia-Pont, 1991). “The use of external resources, acquired through long-term relationships, can generate growth and can help in the pursuit of opportunities,” (Stevenson and Jarillo, 1990.)

The partnership between microfinance institutions (MFIs) and corporate houses can be likened to a value-chain based partnership wherein, “companies in different industries with different but complementary skills link their capabilities to create value for ultimate users,” (Kanter, 1994.) In a similar vein, MFIs and their corporate partners can create value for microfinance clients by jointly creating market linkages, which would boost trade across the bottom of the pyramid (BoP) market.

Value chains entail inter-firm specialization, wherein individual firms engage in a narrow range of activities that are embedded in a complex chain of input-output relations with other firms (Dyer, 1997). The partnership between MFIs and their corporate partners can be symbiotic on the following grounds:

¹ Associate Professor International Business, Maastricht School of Management, The Netherlands

² Doctoral Researcher, Maastricht School of Management, The Netherlands

1. The corporate sector can leverage MFIs' domain knowledge of capacity building and vast client base;
2. MFIs, for their part, can benefit from the corporate partners' supply chain linkages, which would strengthen value chains for the BoP.

Significance and background of the study

Prahalad (2004) alluded to a market-oriented eco-system, in which the private sector and social actors, with different traditions and motivations, and of different sizes and areas of influence, act together and create wealth in a symbiotic relationship. Thus, it is worth investigating whether access to low cost credit, price information, technology and markets through microfinance-corporate partnerships catalyzes poverty alleviation. MFIs' clientele typically comprises product market actors such as micro-entrepreneurs and small-scale farmers. In India, there's a paucity of efficient institutions across agricultural markets and farmers are unable to access loans due to the lack of collateral (Agoramoorthy and Hsu 2008). The agricultural value chain in India remains largely untapped due to the prevalence of middlemen, which hinders farmers from selling their produce to urban retailers/ companies at profitable prices. Some of the large-scale MFIs in India have an intermediary function in inclusive agro-based value chains. There's also immense potential for MFI to scale up the marketing and distribution value chains for companies targeting BoP consumers.

Research objectives

1. To investigate how the partnerships between MFIs and the corporate sector address discrepancies in value chains in the bottom of the pyramid segment in India;
2. To identify best practices of the MFI-corporate partnerships, which can be emulated across other BoP-based value chains in developing countries;
3. To determine how MFIs and their corporate partners can effectively combine each other's core competencies in the BoP-based value chain.

Research questions

1. How effective are MFI-corporate partnerships for empowering producers and consumers of the BoP segment through an inclusive value chain based approach?
2. Which are the appropriate value chain governance mechanisms for building MFI corporate partnerships to strengthen the agricultural and micro-enterprise-based value chains in India?
3. How do the various actors in the BoP value chain interact with each other within the purview of MFI-corporate partnerships?
4. What are the components of product development in a MFI-corporate partnership?
5. What are the hindrances to the growth in MFI-corporate partnerships in a BoP-based value chain system?

Literature review

The value chain concept can enable companies to identify both existing and new strategic opportunities to create customer and partner value (Walters and Rainbird 2007). The UNDP, in its report, 'Creating value for all: strategies for doing business with the poor (July, 2008)' had proposed a four-pronged BoP strategy matrix:

- i) Adapt products and processes
- ii) Invest in removing market constraints
- iii) Leverage the strengths of the poor
- iv) Combine resources and capabilities with others

Partnerships between NGOs and the corporate sector have spurred BoP-based innovations worldwide. Danone partnered local NGOs to promote yoghurt in Bangladesh and South Africa (Subrahmanyam and Gomez-Arias 2007.) Unilever collaborated with UNICEF in order to educate African consumers about the iodine deficiency syndrome (Subrahmanyam and Gomez-Arias 2007.)

The UNDP (2008) had done a case study on value-chain based partnership between Votorantim Celulose e Papel (VCP), a Brazilian pulp and paper company, and ABN AMRO Real. In order to provide credit facilities, which would match the cash flow of small scale eucalyptus cultivators (eucalyptus is harvested only once in seven years), VCP partnered ABN AMRO Real, whereby the latter disbursed loans to the cultivators. VCP provided the guarantee to purchase the timber from the eucalyptus cultivators. The VCP-ABN AMRO partnership illustrates how the customization of cash flows, loan product design and the partnership model can transform the supply chain systems of agro-based industries.

The buyer-supplier relations would have to be examined in order to gain insights into the value chain governance mechanisms prevailing in the BoP segment. The key determinants of value chain-based governance structures are the complexity of transactions; codifiability of information; and capability of suppliers (Gereffi, Humphrey and Sturgeon 2005). Sturgeon and Lee (2001) have categorized supply relations based on the degree of standardization:

- i) The commodity supplier who provides standard products through arm's length transactions
- ii) The captive supplier who manufactures non-standard products exclusively for a single buyer
- iii) The turn-key supplier who provides customized products for buyers

Seelos and Mair (2006) posited that companies are unable to foray into low income countries due to the absence of local partners who can provide relevant resources and capabilities. Moreover, rural financial systems are typically characterized by high transaction costs, under-developed infrastructure, lack of access to information on borrowers' credit history and limited collateral (Fries and Akin 2004), which would hinder the development of BoP-based value chains. However, the above constraints can be overcome through collaborations between social enterprises and like-minded corporate players.

Seelos and Mair (2006) developed a case study to depict how the Norwegian telecom company Telenor successfully leveraged the resources and capabilities of Grameen Bank to promote mobile telephony across Bangladesh, which is an archetypal BoP market fraught with poverty, corruption and political upheavals.

The partnership gave rise to the establishment of GrameenMobile, a commercial organisation, and GrameenTelecom, a non-profit venture. Under the GrameenMobile initiative, micro-loans were provided by Grameen Bank to enable its clients to purchase mobile phones. Women micro-entrepreneurs were trained to provide in-demand phone services through the GrameenTelecom venture, which had a significant socio-economic impact across villages. The Grameen-Telenor collaboration has turned out profitable, with GrameenMobile emerging as a dominant player in the Bangladeshi mobile telephony market. This also goes to show that productivity gains can be increased in the value chain when the collaborating firms are willing to make transaction or relation-specific investments (Williamson 1985; Perry 1989.)

Methodology

A multiple case study based approach has been used for carrying out in-depth qualitative analysis on MFI-corporate partnerships in India. Both structured and semi-structured interviews have been conducted. The corporate partnerships of Hand in Hand, Larsen and Toubro Microfinance and Grameen Koota come under the purview of the study. Appropriate inputs from the Confederation of Indian Industry (an apex body for Indian companies) have been obtained in order to study the role of the corporate sector in the development of micro-enterprise based value chains.

Key findings of the study

Creating retail networks through MFIs : Urban markets are becoming increasingly saturated for FMCG companies and consumer durable manufacturers. Thus, the corporate sector can leverage MFIs' geographically well-fanned out client base in order to tap rural markets. However, value chains developed solely for distributing products among MFI clients may not yield long-term socio-economic benefits to the bottom of the pyramid segment, opined Kishore Mangalvedhe, the CEO of Larsen and Toubro Microfinance. The MFI, which was launched in 2008, is still in the process of scouting for corporate partnerships to reach out to consumers and producers in rural areas. It has swiftly increased its breadth of outreach across the states of Tamil Nadu, Andhra Pradesh, Karnataka and Maharashtra.

MFIs can provide micro-loans in order to enable rural consumers to purchase newly launched FMCG/durable products. Alternatively, MFIs can directly sell products to end-users, which would ultimately be inimical to micro-loan borrowers who run small retailing units (popularly known as *kiranas* in India). There are cases of MFIs procuring FMCG products in bulk at a special discount, which can be sold by micro-entrepreneurs. On an average, the market size of each village is negligible and hence, *kiranas* are unlikely to generate substantial demand for FMCG products. There is likelihood of micro-entrepreneurs borrowing excessively in order to procure products in bulk.

This may lead to the intensification of competition among kirana owners and the market share of each player would ultimately diminish due to the limited scope for expansion in each village. The working capital required by a *kirana* owner is usually in the range of Rs 10,000 to Rs 15,000 (143 to 214 euros). Many of L&T Microfinance's borrowers are fruit and vegetable vendors, who cater to very miniscule market segments. It would be more viable for the MFI to increase its breadth of outreach among *kirana* owners across various regions than to enhance the depth of outreach in each region.

While there's much scope for distributing FMCG and durable products to self-help groups through corporate collaborations, the MFI Grameen Koota's Project Manager, Vikash Kumar, has voiced his concerns about indiscriminate usage of micro-loans solely for consumption purposes. Corporate players have to factor in lending risks before partnering MFIs. Excessive micro-lending in a district may lead communities to financial ruin. Indiscriminate usage of consumption credit would give rise to negative cash flows. Kishore Mangalvedhe described how a loan default by a joint liability group member would induce fellow group members or other joint liability groups to follow suit.

The bottom of the pyramid concept has generated immense interest in rural markets among multinationals operating in India - take for instance, the influx of low cost sachets of FMCG products into villages and small-scale retail outlets. Nonetheless, the outflow of products from rural areas is still insubstantial (with the exception of agricultural produce and handicrafts).

Products and services targeted at rural consumers: According to Kishore Mangalvedhe, BoP-based value chains can be tapped by providing credit for the purchase of low cost water purifiers and mobile phones. Products also need to be customized to meet the requirements of rural consumers. Mangalvedhe cited the example of mobile handsets, which are emerging popular across rural India. He pointed out that a rural mobile user would need a battery back-up of a longer duration, as many households across villages still lack access to electricity.

The MFI³ has in the recent past partnered a leading private insurance company to provide group life

³ Under the jurisdiction of the Micro, Small and Micro-enterprises Act (2006), manufacturing companies with a maximum investment of Rs 2,500,000 in plant and machinery would be classified as micro-enterprises. Companies in the service sector, which have a maximum investment of Rs 1,000,000 in equipment would be considered micro-enterprises.

insurance for all of its borrowers at a low premium rate. The life insurance policy can help mitigate income shocks emerging from the sudden death of an earning family member.

“We want to inculcate the practice of purchasing life insurance policies among our borrowers,” said Mangalvedhe. L&T Microfinance is not remunerated by its insurance partner, as the life insurance policy is solely used for enhancing the debt repayment capacity of clients in times of contingency. There’s also immense scope for MFIs and insurance companies to provide health insurance services in rural areas.

Grameen Koota, an MFI which operates extensively across the South Western states of Karnataka and Maharashtra, serves over 300,000 clients. Companies can leverage Grameen Koota’s social mobilization skills in order to penetrate into rural areas, explained the MFI’s project manager, Vikash Kumar. Grameen Koota intends to socio-economically empower its clients through corporate partnerships. In order to improve the standard of living of its clients, the organisation partnered a US-based clean energy company Envirofit to distribute fuel-efficient stoves, which would reduce home-makers’ dependency on firewood for cooking. Envirofit has a network of local dealers who market and distribute the stoves. Grameen Koota disburses emergency loans in the denomination of Rs 1000 (16 euros) to customers across 34 branches to finance the purchase of Envirofit stoves (which are available at a price range of Rs 700 to Rs 2500 or 12 to 40 euros). Around 2500 stoves have been sold to Grameen Koota’s clients and field officers have cited a steady increase in demand in rural households. Selco, a Bangalore-based social enterprise specializing in alternative energy, has recently tied up with Grameen Koota to propagate the use of solar-powered products in rural Karnataka. Selco has previously partnered microfinance institutions and developmental organisations in order to provide solar credit to low income groups such as micro-entrepreneurs, handloom weavers and tobacco rollers. The potential for scaling up alternative energy usage through microfinance in rural India remains untapped. Rural electrification is still a daunting challenge across the country. In fact, the Indian government had proposed a scheme to electrify 115,000 villages by 2009.

Microfinance institutions, in such a scenario, can go a long way in promoting low-cost, alternative energy products, which would increase the standard of living of millions of rural Indians. The Tata Energy Research Institute (TERI), which is a leading environmental organization in India, initiated the Light a billion’ campaign in 2007 to promote the usage of solar lamps and torches across India. TERI has developed a business model, wherein entrepreneurs from rural communities are trained to manage solar stations and provide solar lanterns to households on a rental basis. The implementation partners for the Light a Billion Initiative include NGOs and microfinance institutions. The above model clearly indicates that microfinance institutions can play a pivotal role in public-private partnerships or social enterprise initiatives to fund the growth of alternative energy usage among the BoP.

The Project Manager of Grameen Koota, Vikash Kumar, said “Microfinance institutions and alternative energy companies should focus on educating the bottom of the pyramid segment about the benefits of low-cost alternative energy.” The rural masses, who lack access to electricity and basic amenities, are unlikely to evince much concern about issues such as carbon emission or the depletion of non-renewable energy, he pointed out.

Strengthening value chains through micro-entrepreneurship: Value chain development can be enhanced through partnerships between entrepreneurs and NGOs. The founders of the Swedish company Marktech AB have hired the MFI-NGO Hand in Hand’s self-help groups to manufacture teddy bears (which is marketed under the brand name Bo-Bear). Marktech had previously collaborated with non-profit organizations in China and Vietnam.

The Bo-Bear project entails the creation of a partially captive value chain, wherein there’s a high degree of control and monitoring by the lead firm (Gereffi, Humphrey and Sturgeon 2004). The product is designed in accordance with Marktech’s specifications. At least, 20 different components are used to manufacture the teddy

bears. While the fur and soft toy eyes are imported from Germany and the Netherlands, the remaining 18 components are procured from traders and companies located in the Southern Indian city of Chennai. The cost of raw materials is about 12 euros per bear and Hand in Hand is fully responsible for the procurement and import of components, the manufacture and export of the finished product.

The self-help groups, which comprise 17 women, are involved in the production of Bo-Bears. Hand in Hand imparts tailoring and quality control skills to its self-help groups, who, as a result, would be able to comply with Marktech's specifications. The formulation of technical and process standards can reduce the complexity of transactions and also facilitate better information flow among trading partners in a value chain (Gereffi, Humphrey and Sturgeon 2004.)

The finished products are shipped back to Sweden and are subsequently distributed.

Daniel Jesudason, coordinator of Hand in Hand's Bo-Bear production unit, explained that the teddy bears are not yet promoted as fair trade products, as some of the raw materials are sourced from developed countries. However, the women's self-help groups are remunerated as per fair trade norms. There's also scope for social marketing in export markets (which are concentrated in the US and Western Europe), since consumers can be made aware of low income women benefiting from the Bo-Bear initiative.

The Bo-bear is positioned as a niche, charity product. Hand in Hand does not distribute micro-loans to self-help group members who are employed in the Bo-Bear unit, since the Swedish firm Marktech provides the necessary raw materials and equipment. However, the repayment of loans, which are used for funding the micro-enterprises run by the self-help group members' spouses, has increased due to the flow of income from the Bo-bear production. Marktech is required to pay administrative charges to Hand in Hand for the training imparted to SHG members.

The Bo-Bears are packed into eco-friendly bags made by SHGs (with Hand in Hand's backing) from other districts. The Finnish pharmaceutical company Vayer is also procuring eco-friendly bags from Hand in Hand's self-help groups.

There's scope for creating rural value chains through partnerships between entrepreneurs and MFIs. The value chain co-created by Hand in Hand and BoBear has socially and economically empowered rural women. One of the key challenges would be to scale up the production through the existing supply chain.

Value chain governance mechanisms, which enhance the sustainability of corporate-MFI partnerships, need to be developed. The corporate sector would need a broader understanding about the potential of rural value chains and the core competencies of NGO-MFIs. Self-help group members in rural areas, on the other hand, would require a better understanding of market trends, packaging norms and product design.

Low credit penetration coupled with limited market access: Hemantha Kumar Pamarthy, Managing Director of Hand in Hand, who has several years of experience in marketing FMCG products, cited the following hindrances to the development of rural value chains:

- i) The rural producers' lack of knowledge of market trends, competition
- ii) Low standards of hygiene and packaging in rural manufacturing units
- iii) Lack of access to raw materials

Value chain development at the micro-enterprise level is still at a rudimentary phase due to the lack of access to credit and market linkages, explained Dili Babu, Team Manager of the Bharatiya Yuva Shakti Trust (BYST), a non-profit organization backed by the Confederation of Indian Industries, which is the apex body for the Indian corporate sector. Banks, which have stringent stipulations on the provision of collateral and

documentation, are seldom approached by micro-entrepreneurs. Micro-entrepreneurs, for their part, tend to have a limited understanding of the market trends.

Many MFIs avoid providing seed capital, as micro-enterprises can generate revenues only after a fairly long gestation period, confirm sources from a leading MFI. However, the BYST bucks such a trend, as it adheres to a long-term vision of nurturing first generation entrepreneurs, and provides seed capital without demanding a financial down-payment or collateral. The trust has tied up with a public sector bank under a credit guarantee scheme to disburse loans to micro-enterprises. The business proposals of loan applicants are thoroughly scrutinized by BYST officials and the most viable ventures are selected based on a feasibility report.

Micro-entrepreneurs availing of BYST schemes mostly hail from the bottom of the pyramid segment. About 30% of the BYST-backed micro-entrepreneurs in Chennai hail from slums, 36% are women and 40% belong to socially disadvantaged communities, according to Dili Babu, the Team Manager of BYST. The organisation has funded micro-enterprises, which manufacture jute and leather products. Proprietors of small-scale handicraft units, beauty salons and teashops have also received funding.

Having witnessed limited market access for silk producers across Karnataka, Grameen Koota is scouting for opportunities to develop clusters to promote sericulture. The MFI's project manager Vikash Kumar is of the view that trade could be facilitated among Grameen Koota's clients, who run micro-enterprises and small-scale farms. "Grameen Koota's clients can sell silk products to their counterparts living in Maharashtra (a neighbouring state of Karnataka)," he suggested. In the long-run, the formation of clusters or cooperatives may strengthen rural value chains and also enable Grameen Koota's clients to scale up their output to partner the corporate sector.

Mentoring role of the corporate sector: BYST assigns mentors who can guide aspiring entrepreneurs to build up their businesses. The mentors have several years of experience in the corporate sector and they provide necessary guidance in finance, marketing and various other functional areas of management. While MFIs have increased their outreach among micro-entrepreneurs, very few organizations don the role of mentors, opined Dili Babu, team manager of BYST. Some of the micro-entrepreneurs have gone on to scale up their businesses with venture capital funding from the International Finance Corporation. It is also pertinent to note that fifth grade dropouts have emerged as successful entrepreneurs by availing of BYST's loans.

MFIs may benefit by replicating Bharatiya Yuva Shakti Trust's mentorship programme, which has been launched across all of the regional chapters of the CII. While some of the leading Indian MFIs provide business development services to micro-loan borrowers, CII officials point out that MFIs are yet to fully tap the potential of micro-entrepreneurs.

BYST's founder, Lakshmi Venkatesh, had stated that enterprises backed by MFIs may fall into a micro-credit trap and remain confined to livestock rearing or vegetable vending. One-to-one mentorship by corporate sector would be required for enhancing the growth and diversification of micro-enterprises. Thus, microfinance institutions and the Indian business community can strengthen micro-enterprise value chains through:

- i) Capacity building for micro-entrepreneurs in marketing, finance
- ii) Provision of seed capital for sustainable business ventures
- iii) Creating market linkages, whereby the corporate sector can procure raw materials/ finished products directly from micro-enterprises
- iv) Enabling successful micro-enterprises to graduate into small and medium enterprises by providing access to venture capital

Challenges of scaling up agricultural value chains: Hand in Hand has formed 30,000 self-help groups consisting of small and marginal farmers in order to scale up the agricultural value chain across Southern India. Capacity building is a core focus area in the agricultural sector, since the output of small farm units has declined due to the rise in labour costs, excessive fragmentation of land, lack of economies of scale and poor soil quality. The small scale farmers are predominantly dependent on moneylenders, who charge usurious interest rates. The above constraints have deterred companies from partnering small-scale farmers.

Hand in Hand has imparted training to farmers in organic farming and crop rotation techniques with financial backing from the Dutch entrepreneurial development bank FMO. In the recent past, the organisation had partnered the South Indian retail chain Foodworld (which is now re-branded as Spencer's Daily), whereby its self-help group members supplied agricultural produce directly to the retailer. Hand in Hand provides cattle loans and crop insurance in collaboration with state-owned insurance companies. A 3.5 per cent premium is levied for insuring cash crops such as sugarcane, cotton, potatoes, oilseeds, pulses and cereals.

“The corporate sector has not tied up with small scale farmers due to the lack of quantity and quality,” observed N. Shivakumar, Hand in Hand's FMO and Special Projects Director, adding that there's scope for farmers to form a consortium or federations in order to supply vegetables and fruits to large-scale retail chains. He also noted that agricultural value chains can be strengthened during the stages of production and distribution through MFI-corporate partnerships.

Collection centers can be established in order to enable companies to procure agricultural products directly from farmers. Hand in Hand has rendered microfinance and capacity building services for dairy farming and vegetable cultivation. The NGO has a pivotal role to play during the various phases of value chain development in the agricultural sector. Under Hand in Hand's stewardship, farmers are trained to select appropriate seeds and pesticides. Training is also imparted for enhancing quality control and grading the agricultural produce.

Private insurance players are yet to tap the demand for agricultural micro-insurance, according to N. Shivakumar. Agriculturists across the country are susceptible to unsystematic risks emanating from droughts, floods and other climatic vagaries. He also alluded to the frequent wastage of excess agricultural produce due to the lack of cold storage facilities.

Dairy farmers obtain micro-loans from L&T Microfinance to purchase cows and cattle feed. A leading dairy company in South India has partnered the MFI in order to procure milk from farmers. The dairy company pays Rs 3000 (42.6 euros) directly to the farmer and Rs 1000 (14.2 euros) to L&T Microfinance, which is the repayment of the micro-loan provided to the farmer.

The Indian dairy market is predominantly unorganized and most dairy cooperatives and companies do not have a pan-Indian presence. Thus, an MFI, which is expanding aggressively across the country, may not profit much by partnering merely one regional dairy player. Mangalvedhe stated that an MFI operating across several states should enter into multiple partnerships in the dairy sector. L&T Microfinance, which is striving to have a pan-Indian presence, plans to expand geographically rather than confining its operations to a specific region.

After having established itself in the Southern Indian market during the last one year, L&T Microfinance clearly intends to increase the breadth of outreach throughout India. While multiple partnerships in the unorganized dairy sector would help L&T increase its market share across the country, the MFI would also find synergies in partnering corporate players, which are already well-established across diverse regions.

CSR-based partnerships: Hand in Hand is currently partnering the private sector to implement corporate social responsibility projects. Salcomp, a manufacturer of cellphone charger, has tied up with Hand in Hand to sponsor projects entailing rural sanitation and the refurbishment of primary health centers.

The Bharatiya Yuva Shakti Trust has been involved in CSR-based projects. Saint Gobain, which has a

manufacturing plant on the outskirts of Chennai, has availed the services of five micro-entrepreneurs backed by the trust, as part of a CSR initiative.

However, the scope for building up rural value chains remains largely untapped, as the corporate sector has a limited understanding of NGOs. “Companies should be willing to outsource their work to NGOs,” affirmed Hemantha Pamarthy. Capacity building for micro-enterprises remains Hand in Hand’s core focus area and many of its self-help group members are running profitable micro-enterprises. The MFI’s women’s self-help group members run a unit called Crisp Bakery, which supplies confectionary items to Hyundai, Nokia and other leading corporate players. “The companies are able to fulfill their CSR mandate by purchasing products from micro-enterprises,” explained Pamarthy. Hand in Hand plays an intermediary role by providing micro-enterprises market access to institutional buyers. Partner companies, return, can promote small-scale entrepreneurs hailing from the local community.

It would be pertinent to determine whether the on-going CSR initiatives can, in the long-run, metamorphose into full-fledged partnerships with Hand in Hand, which, in turn, would empower producers and consumers at the bottom of the pyramid on a larger scale and help create sustainable rural value chains.

MFI and companies, which are involved in the implementation of CSR projects, may explore further possibilities of jointly strengthening rural chains. The on-going CSR projects would enable the private sector player to gain a better understanding of the socio-economic conditions and consumption patterns of the MFI’s self-help group members. The MFI can give its corporate partner an overview of the usage of financial products and income generation activities of its clients.

Conclusion and Recommendations

The above case studies clearly indicate that MFI-corporate partnerships can increase market access for micro-entrepreneurs and agriculturalists. The lack of access to credit and business development services still continues to stifle the growth of rural enterprises.

The following inferences can be drawn based on the experiences of Hand in Hand, L&T Microfinance, Grameen Koota and the Confederation of Indian Industry:

Perils of consumption-based credit: While the emergence of BoP-centric business models has given an impetus to rural value chains, concerns have been voiced about the perils of spurring consumption credit. Arun Raste, the Corporate Communications Head of Kotak Mahindra - a private sector bank, which funds MFIs - reasoned that rural households with surplus income would have an excessive demand for consumption credit, if MFIs help promote FMCGs/ consumer durables. Arguably, the sudden influx of such products would adversely affect the practice of thrift among rural households and in extreme cases, exacerbate the conditions of rural indebtedness.

The lack of economies of scale and fragmentation of agricultural land would also affect small-scale farmers’ propensity to consume. Rural retailers, for their part, have limited access to cold storage or warehousing. This implies that there’s limited scope for increasing the rural demand for consumer products, given the low disposable income level of rural households and the constraints faced by retailers.

Insights into rural value chains : There is immense potential for the corporate sector to leverage MFIs’ vast network of self-help groups to strengthen agricultural value chains. MFIs can provide credit linkages and capacity building skills, which, in turn, would enable small-scale farmers to attain economies of scale and upgrade quality control techniques. Companies can collaborate with MFIs to strengthen the agricultural value chain by:

- Purchasing bulk quantities of the agricultural produce directly from farmers
- Selling agricultural inputs such as pesticides, cattle feed or machinery

- Imparting training in quality control, packaging and grading along with the MFI

MFI-corporate partnerships have led to the emergence of contract farming, wherein MFIs' clients supply their produce to agro-based companies. Under contract farming agreements, the agricultural produce is sold at a pre-determined rate to companies.

Arun Raste, who has worked in the fair trade sector, fears that farmers may be restricted from exercising choices in agricultural markets with the emergence of captive value chains in agriculture.

However, farmers who have to grapple with low productivity and limited market access, would benefit greatly through collaborations with agro-based companies. This would also reduce their dependency on middlemen. The direct purchase of agricultural produce by industrial buyers would facilitate disintermediation in the agricultural value chain. Nonetheless, Arun Raste stated that the role of middlemen cannot be fully discounted, as many of them render essential services in villages.

MFIs and their corporate partners would have to appoint livelihood service providers and dealers to coordinate grassroot level activities, which is tantamount to the emergence of another set of intermediaries. Arun Raste has warned that MFI-corporate partnerships would "replace one form of middlemen with another." A preliminary cost-benefit analysis would be needed to develop a partnership model, which would be advantageous for all stakeholders concerned. In fact, Walters and Rainbird (2007) have laid emphasis on a value chain approach, which helps identify optimal solutions that are acceptable to all stakeholders – customers, suppliers and investors.

Sustainable partnership models: As opined by the CEO of L&T Microfinance, MFIs, which are increasing their breadth of outreach across diverse regions, can enter into multiple partnerships within a specific sector. Conversely, companies, which already have a pan-Indian presence, may benefit by partnering various regional MFIs in order to gain a foothold into the bottom of the pyramid market.

It is also a pre-requisite for MFIs and their corporate partners to develop a sustainable business model, which would be profitable and socio-economically beneficial to the BoP.

As illustrated in the case study on Grameen Koota, MFIs and social enterprises can find synergies in promoting alternative energy-based products. The following approach towards BoP-based innovation in alternative energy has been advocated by Subrahmanyam and Gomez-Arias (2007):

- i) Diffusion of finance and low-maintenance technology
- ii) Innovation in the form of active partnerships between energy companies, aid agencies and communities
- iii) Innovation in the form of energy-efficient devices

Niche products targeted at export markets can also be developed by the MFI's self-help groups, as demonstrated by Hand in Hand's involvement in the Bo-Bear project.

Prospects of insurance partnerships: Sources from a leading MFI pointed out unsystematic risks such as flooding and the lack of infrastructure may affect the viability of MFI-corporate partnerships. While partnerships between MFIs and insurance companies may not provide farmers direct market linkages, farmers availing of micro-insurance policies have greater financial security and are able to plan crop cultivation and livestock management effectively, which would ultimately strengthen the agricultural value chain.

Innovatively designed micro-insurance policies can help mitigate moral hazard. MFIs and their insurance partners stand to gain from weather-based insurance policies, as the compensation for crop failures is paid only on the basis of meteorological data. MFI can immediately reject claims made for crop failures, which would have occurred to extreme negligence by the policy holder under normal climatic conditions.

Scope for capacity building: It is imperative to develop the skills and knowledge base of the bottom of the pyramid segment in order to foster the long term growth of agricultural/ micro-enterprise based value chains. Organisations such as Hand in Hand, which play the dual role of a grass-root level NGO and a full-fledged MFI, can help increase the productivity of small-scale farmers and micro-enterprises through skills training and exposure to market trends. After having gaining a rudimentary understanding of marketing, finance, labeling and packaging, the MFI's clients would be better equipped to supply high quality products in accordance with the specifications of the corporate sector.

Taking CSR-based partnerships to the next level: CSR-based partnerships are generally forged in response to a social cause such as public healthcare or the empowerment of socially disadvantaged communities. Hand in Hand's partnership with Salcomp and the Bharatiya Yuva Shakti Trust's tie-up with Saint Gobain illustrate how the corporate sector can leverage NGOs' capacity-building skills in order to empower disenfranchised sections of society. Companies, which have partnered MFIs in order to fulfill their corporate social responsibility mandate, can also scout for opportunities to strengthen value chains for the BoP. As Kambalame and De Cleene (2006) had posited, issue-specific CSR-based partnerships can metamorphose into value chain development for sectors such as agriculture.

Scaling up the partnerships : MFIs can facilitate the formation of micro-enterprise-based clusters or agricultural cooperatives in order to enable their clients to attain economies of scale. This may be achieved through the provision of business development services, along with standardized loan/ insurance products. Once economies of scale are attained, rural enterprises would be able to supply bulk quantities to industrial buyers.

The experiences of Hand in Hand bear testimony to the fact that companies remain reluctant to partner small-scale farmers due to the low levels of agricultural output. At a micro-enterprise level, MFIs should explore more opportunities to provide seed capital to promising micro-entrepreneurs, who can eventually graduate into the small and medium enterprise segment. Collaborations with industry-backed organizations such as the CII would enable MFIs to give a stronger impetus to the growth of sustainable micro-enterprises.

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Stock Market Reaction to the Union Budget 2010-11: A Sectoral Analysis

Panduranga Venkataramulu*

Abstract

The Union Budget is a most important event in of economic policy of a country. The fiscal issues such as taxation, expenditure, fiscal deficit are obviously important for macro economics. Governments have often chosen the Budget speech as a platform for announcing important new policy initiatives, and for outlining some plans for forthcoming economic policies. Stock markets are said to be efficient when they react to given information. Stock Markets respond to union budget. One of the important event to which the stock markets react is union budget. As per as Indian Stock market is concerned, which is one of the most sensitive stock markets in the world, responds to the Union Budget quickly. An attempt has been made in this paper to analyse the reaction of the Indian Stock Market to the Union Budget 2010-11, BSE Sensex and Sectoral Indices movement.

Keywords: Stock Market, Union Budget, Fiscal Policy, Budget policies.

Introduction

Economists, industrialists, financial institutions, analysts, individuals, investors and the like persons' buzzword in the month of February, every year will be "Union Budget" in our country. The journey starts from the pre-budget expectations. Every one starts predicting how the forthcoming budget affects their economic position and they strategize on these predictions. These predictions may or may not hold good. One will come to know whether their predictions are true or false on the budget day. Union budget is an important event in India which will have impact on the stock prices. Almost all the budget proposals will have impact on the stock prices, directly or indirectly. The stock market response to budget is often viewed as an important factor which determines the quality of budget in terms of improving macro economic prospects. The budget 2010-11, while highlighting the strong fundamentals of the economy, has presented a balanced approach towards long-term economic planning and short term considerations of sustaining and broad-basing the momentum in economic recovery. An attempt has been made in this paper to portray the stock market reaction to Union Budget 2010-11 by analyzing the movement of BSE Sensex and Sectoral Indices.

Data and Methodology

The present paper aims to analyse the impact of Union Budget 2010-11 on Indian Stock Market. It is an analytical paper based on the secondary data. The population is all the stocks listed in Bombay Stock Exchange (BSE). To represent the population, the BSE Sensex and Sectoral Indices have been chosen as sample. The movement of BSE Sensex and Sectoral Indices points between February 15, 2010 and March 15, 2010 have been sourced from the website of Bomaby Stock Exchange and analyzed by using daily return. The main limitation of the study is the extraneous variables (i.e., variable affecting stock prices during the study period, other than the Union Budget 2010-11) are not taken into account.

Sensex and Union Budget 2010-11

Sensex – a pack of 30 BSE listed stocks is an important barometer of Indian Stock Market. It has been considered as an important variable in knowing the breadth of the market. The Appendix 1¹ shows the Sesex performance on budget day from 1996-2010 and the Appendix 2 shows the Sensex movement between February

* Lecturer, Department of Commerce & Management, Government College, Gulbarga - 585105, Kanrnataka State, India. Email: pvpatti@gmail.com

¹ All the Tables are given in Appendix

15, 2010 and March 15, 2010. Though it is not possible to keep everyone happy, the finance minister has done a commendable job. This was evident from the way markets reacted on February 26, 2010 to the budget announcements.

Sectoral Indices

This section forms crux of the paper. It shows the impact of Union Budget 2010-11 on various sectoral indices. The proposals of Union Budget 2010-11, related to each sector and their impact on related index is portrayed in this section. Sectors here are as per the BSE Sectoral Indices.

Auto : The important budget element for auto industry is roll back of the excise duty cut for large cars, multi-utility vehicles and sports-utility vehicles segment. Rise in excise duty will push the prices of cars up and leads to lesser demand. Hike in petrol and diesel prices might also prove negative for the auto industry as it might cause decrease in the demand of cars. The positive move is for inputs for electrical vehicle i.e., concessional 4 percent excise duty. Weighted deduction hiked from 150 percent to 200 percent for in-house R&D is also an incentive for the industry. The Appendix 3 shows the movement of BSE Auto Index. The negative impact is not very much as the budget does not affect all the segments of auto industry. The Auto Index has performed better than the Sensex on the budget day.

Banking : The important budget proposals related to banking sector are: the RBI will give additional branch licenses to private sector banks and NBFCs that meet the central bank's eligibility criteria; an additional sum of Rs 16,500 Cr. will be offered to the under-capitalized public sector banks to ensure that all PSU banks are able to attain a minimum 8 percent Tier-I capital by FY11; Banks' target for agricultural credit for FY11 has been enhanced to Rs 3, 75,000 Cr.; IIFCL which refines bank lending to infrastructure projects will enhance its disbursements from Rs 9,000 Cr in FY10 to Rs 20,000 Cr by FY11; Under the Debt Waiver and Debt Relief Scheme for farmers, the period for repayment of the loan amount by farmers has been extended by six months from December 31, 2009 to June 30, 2010; Scheme of 1% interest subvention on housing loan upto Rs 10 lakh, where the cost of the house does not exceed Rs 20 lakh has been extended by a year up to March 31, 2011 and with a view to strengthen and institutionalize the mechanism for maintaining financial stability, an apex-level Financial Stability and Development Council will be set up. The movement of BSE Bankex shown in the Appendix 4 reveals that the union budget has a positive impact on the banking sector stocks.

Capital Goods : Higher allocation of funds for infrastructure development may increase the demand for capital goods. But the roll back of excise duty, increased fuel prices may lead to increase in the prices of capital goods. As shown in the Appendix 5 Capital goods index is in green due to higher allocation of funds for infrastructure development. The index on February 15 was 12,984.97 and it rose to 13,634.19 by March 15, 2010.

Consumer Durables : The hike in tax slabs increases the disposable income of the individuals earning more than Rs.3,00,000 a year. The data depicted in Appendix 6 portrays a positive move in this index as there is an expectation of increasing demand for consumer goods due to hike in tax slabs.

Fast Moving Consumer Goods (FMCG): The highlights of Union Budget 2010-11 relevant to FMCG Sector are:

- GST to be implemented by April 2011
- MAT increased to 18 percent from 15 percent
- Allocation of Rs. 40,100 Cr. under NREGA in 2010-11.
- Revision in Tax Slab, leads to more disposable income.
- Increase in duty on cigarettes, cigars, cigarillos, non smoking tobacco and branded un-manufactured tobacco.
- Proposal to set up 5 more mega food park projects

- Service tax exempted on transportation of food grains
- Setting up of cold storages exempted from service tax
- Excise duty exempted for specific agro processing units
- External commercial borrowing will be available for cold storage. The government has also extended farm loan repayment by 6 months.

Impact of these budget proposals on BSE FMCG Index is shown in the Appendix 7. The budget has brought some sort of improvement in the FMCG Index.

Health Care : The good things in the current budget for health care sector are: weighted deduction hiked from 150 percent to 200 percent for in-house R&D; plan to focus on improvement in the food security and healthcare systems and increase in the plan allocation for the Ministry of Health and Family Welfare from Rs 19,534 cr to Rs 22,300 Cr. for 2010-11. Finance Minister has also announced that an annual health survey would be carried out to prepare the district health profile of the rural populace with an aim to improve availability and access to quality healthcare for people living in remote areas. This will also help increase in demand for medical equipments and drugs in the domestic market. An analysis of the data portrayed in Appendix 8 indicates that market has received these positive proposals.

Information Technology: The increase in MAT from 15 percent to 18 percent will increase the tax liability of software companies and thereby reduce their margins. This will particularly impact the cash flows of small and mid size companies which enjoyed lower tax-outlays under the same. However, companies may get some relief from reduction in surcharge that will lower the tax outgo. Setting up of a Technology Advisory Group for Unique Projects along with increased focus on e-governance will create more demand for IT in the domestic market. Moreover, as the allocation to the Unique Identification Authority of India has increased, this may benefit to domestic IT players. Simplification of refund process for exporters is likely to give some clarity in the issue. However no clarity given on the definition of software products which are usually treated as goods as well service may continue to lead to dual taxation. As depicted in the Appendix 9, the BSE IT Index has moved closely with the BSE Sensex.

Metal : Increased focus on infrastructure development would result in development of highways, ports, bridges etc., which will consequently increase the demand for steel. Plans to cover long distance gas pipelines would mean increase in demand for steel pipes and tubes. Increased spending on urban development schemes, especially housing is likely to increase the demand for long steel products. The 2 percent increase in excise duty is neutral for metal sector, it would pass this to end consumers. The proposed clean energy cess of Rs. 50 per tonne on coal will lead to a hike in metal companies' coal bill. Positive impact is seen in the post budget data of the BSE Metal Index as shown in Appendix 10.

Oil & Gas: The budget highlights for Oil and Gas Sector are:

- Excise duty on naphtha to be reduced to 14 percent while duty on High Speed Diesel blended with upto 20 percent. Bio-diesel to be fully exempted from excise duties.
- Restoration of 5 percent duty on crude petroleum, 7.5 percent duty on petrol and diesel and 10% on other refined products.
- Decision on pricing of petroleum products based on the recommendations of the Kirit Parikh committee deferred.
- Full exemption from basic customs duty is provided to composable polymers.
- Reduction in surcharge on domestic companies from 10 percent to 7.5 percent.

- Increase in central excise duty on diesel and petrol by Re. 1 each.
- Government subsidy to oil companies to be given in cash instead of issuing oil bonds

With higher custom duty, the input cost of crude oil for the refinery segments will hamper the downstream companies. As per the data depicted in the Appendix 11, post budget volatility is less than the pre budget volatility of BSE Oil & Gas Index.

Power: Higher allocation for power sector to aid new generation capacities that had been stalled for want of funds. Competitive bidding for allocating coal blocks to help bring about a level playing field in the sector as more and more generation companies are looking to have their own supplies of coal.

- Higher allocation for power sector to aid new generation capacities that had been stalled for want of funds.
- Competitive bidding for allocating coal blocks to help bring about a level playing field in the sector as more and more generation companies are looking to have their own supplies of coal.
- Higher outlay for renewable energy to help power companies given the mandatory requirements to source a part of their power distribution requirements from clean fuel sources.
- Hike in the standard rate of excise duty to 10 percent to make equipments a bit more expensive that will impact the overall project costs for power companies.
- Hike in the standard rate of excise duty to 10% to impact the overall project costs for companies like NTPC, Tata Power and other new players.
- 'Clean Energy Cess' of Rs 50 per tonne on domestic and imported coal to impact power companies across the board.

Lower surcharge on corporate tax to help companies reduce their overall tax payments. The power index has shown bit positive impact immediately after the budget and the same is nullified in the next week (See Appendix 12).

Realty: Governments' thrust on infrastructural development will benefit infrastructure companies as it would lead to higher order inflows going forward. Higher allocation to National Highways Authority of India (NHAI) for the National Highway Development Programme (NHDP) will benefit infrastructure companies. Increase in refinancing from IIFCL will encourage banks to lend to infrastructure companies boosting overall growth in the sector. Additional tax benefit for investment of Rs. 20,000 in infrastructure bonds would enable easier financing for infrastructure firms and allocated and more funds in different segments such as roads, irrigation, ports, airports, power etc. Higher allocation for irrigation projects would benefit players having expertise in irrigation and water projects like Jain Irrigation. As shown in Appendix 13, the index points of February 15 are close to March 15 and in between these dates, there are positive and negative movements.

Conclusion

The Union Budget 2010-11 presented by the Finance Minister was welcomed by the stock market which is evident from the sharp jump in the key benchmark index Sensex and majority of the sectoral indices on February 26, 2010. Majority of the indices have shown positive growth. In few of the indices the index points on February 15 are close to the index points on March 15. There is some sort of volatility between February 15 and March 15. It can be said that the budget influenced the market in the pre and post budget period. The less volatility indicates that the majority of the predictions have turned true. One can book profits by trading on these movements. Based on the concessions and support given in the budget, it can be conclude that the budget is very much friendly not only for the individuals but also for the industries.

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Appendix – 1

BSE Sensex Performance on Budget Day

Year	Budget day close	Previous day close	Movement on budget day	Movement on budget day (%)
2010	16429.55	16254.20	175.35	1.08
2009 (Final)	14913.05	14043.40	869.65	6.12
2009 (Interim)	9634.74	9305.45	329.29	3.54
2008	17824.48	17578.72	245.76	1.40
2007	13478.83	12938.09	540.74	4.18
2006	10281.82	10370.24	- 88.42	-0.85
2005	6569.98	6713.86	- 143.88	-2.14
2004 (Final)	4955.97	4843.84	112.13	2.31
2004 (Interim)	5695.67	5620.98	74.69	1.33
2003	3277.43	3283.66	- 6.23	-0.19
2002	3705.66	3562.31	143.35	4.02
2001	4069.61	4247.04	- 177.43	-4.18
2000	5740.69	5446.98	293.71	5.39
1999	3233.74	3399.63	- 165.89	-4.88
1998	3571.50	3622.22	- 50.72	-1.40
1997	3427.83	3474.79	- 46.96	-1.35
1996 (Final)	3797.73	3807.60	- 9.87	-0.26
1996 (Interim)	3519.00	3494.09	24.91	0.71

Appendix – 2

BSE Sensex between February 15, 2010 and March 15, 2010

Date	Close	Sensex Return
February 15	16,038.35	—
February 16	16,226.68	1.17
February 17	16,428.91	1.25
February 18	16,327.84	-0.62
February 19	16,191.63	-0.83
February 22	16,237.05	0.28
February 23	16,286.32	0.30
February 24	16,255.97	-0.19
February 25	16,254.20	-0.01
February 26	16,429.55	1.08
March 2	16,772.56	2.09
March 3	17,000.01	1.36
March 4	16,971.70	-0.17
March 5	16,994.49	0.13
March 8	17,102.60	0.64
March 9	17,052.54	-0.29
March 10	17,098.33	0.27
March 11	17,167.96	0.41
March 12	17,166.62	-0.01
March 15	17,164.99	-0.01

Appendix – 3

BSE Auto Index

Date	Close	Index Return	Sensex Return
February 15	6,939.89	—	—
February 16	7,035.11	1.37	1.17
February 17	7,119.36	1.20	1.25
February 18	7,068.34	-0.72	-0.62
February 19	6,998.24	-0.99	-0.83
February 22	7,006.90	0.12	0.28
February 23	6,879.71	-1.82	0.30
February 24	6,850.00	-0.43	-0.19
February 25	6,846.66	-0.05	-0.01
February 26	7,170.99	5.03	1.08
March 2	7,478.81	4.00	2.09
March 3	7,544.67	0.88	1.36
March 4	7,553.42	0.12	-0.17
March 5	7,553.20	0.00	0.13
March 8	7,688.14	1.79	0.64
March 9	7,619.09	-0.90	-0.29
March 10	7,644.04	0.33	0.27
March 11	7,571.07	-0.95	0.41
March 12	7,572.64	0.02	-0.01
March 15	7,518.50	-0.71	-0.01

Appendix - 4

BSE Bankex

Date	Close	Index Return	Sensex Return
February 15	9,335.89	—	—
February 16	9,440.00	1.12	1.17
February 17	9,605.45	1.75	1.25
February 18	9,636.41	0.32	-0.62
February 19	9,560.25	-0.79	-0.83
February 22	9,565.75	0.06	0.28
February 23	9,600.83	0.37	0.30
February 24	9,583.75	-0.18	-0.19
February 25	9,611.58	0.29	-0.01
February 26	9,828.68	2.26	1.08
March 2	10,053.68	2.29	2.09
March 3	10,196.17	1.42	1.36
March 4	10,175.47	-0.20	-0.17
March 5	10,198.99	0.23	0.13
March 8	10,310.37	1.09	0.64
March 9	10,294.67	-0.59	-0.29
March 10	10,277.39	-0.27	-0.27
March 11	10,348.67	0.69	0.41
March 12	10,341.20	-0.07	-0.01
March 15	10,235.13	-1.03	-0.01

Appendix - 5

BSE Capital Goods Index

Date	Close	Index Return	Sensex Return
February 15	12,984.97	—	—
February 16	13,116.97	1.02	1.17
February 17	13,279.09	1.24	1.25
February 18	13,219.57	-0.45	-0.62
February 19	13,143.87	-0.57	-0.83
February 22	13,150.93	0.05	0.28
February 23	13,164.70	0.10	0.30
February 24	13,165.67	0.01	-0.19
February 25	13,333.25	1.27	-0.01
February 26	13,474.86	1.06	1.08
March 2	13,732.73	1.91	2.09
March 3	13,782.22	0.36	1.36
March 4	13,848.45	0.48	-0.17
March 5	13,885.26	0.27	0.13
March 8	14,008.51	0.89	0.64
March 9	13,891.14	-0.84	-0.29
March 10	13,869.64	-0.15	0.27
March 11	13,869.76	0.00	0.41
March 12	13,784.03	-0.62	-0.01
March 15	13,634.19	-1.09	-0.01

Appendix - 6

BSE Consumer Durables Index

Date	Close	Index Return	Sensex Return
February 15	3,975.92	—	—
February 16	3,984.00	0.21	1.17
February 17	4,117.02	3.34	1.25
February 18	4,138.33	0.52	-0.62
February 19	4,078.69	-1.44	-0.83
February 22	4,036.28	-1.04	0.28
February 23	4,009.73	-0.66	0.30
February 24	3,957.17	-1.31	-0.19
February 25	3,964.66	0.19	-0.01
February 26	4,001.78	0.94	1.08
March 2	4,055.38	1.34	2.09
March 3	4,084.60	0.72	1.36
March 4	4,150.68	1.62	-0.17
March 5	4,128.22	-0.54	0.13
March 8	4,122.79	-0.13	0.64
March 9	4,126.18	0.08	-0.29
March 10	4,134.22	0.19	0.27
March 11	4,162.84	0.69	0.41
March 12	4,143.58	-0.46	-0.01
March 15	4,121.38	-0.54	-0.01

Appendix - 7

BSE FMCG Index

Date	Close	Index Return	Sensex Return
February 15	2,731.07	—	—
February 16	2,754.05	0.84	1.17
February 17	2,770.78	0.61	1.25
February 18	2,758.01	-0.46	-0.62
February 19	2,753.33	-0.17	-0.83
February 22	2,751.45	-0.07	0.28
February 23	2,748.73	-0.10	0.30
February 24	2,746.09	-0.10	-0.19
February 25	2,723.29	-0.83	-0.01
February 26	2,662.05	-2.25	1.08
March 2	2,718.80	2.13	2.09
March 3	2,759.29	1.49	1.36
March 4	2,775.29	0.58	-0.17
March 5	2,783.13	0.28	0.13
March 8	2,804.33	0.76	0.64
March 9	2,801.91	-0.09	-0.29
March 10	2,824.73	0.81	0.27
March 11	2,802.39	-0.79	0.41
March 12	2,794.88	-0.27	-0.01
March 15	2,815.63	0.74	-0.01

Appendix - 8

BSE Healthcare Index

Date	Close	Index Return	Sensex Return
February 15	4,792.77	—	—
February 16	4,850.08	1.20	1.17
February 17	4,857.18	0.15	1.25
February 18	4,859.44	0.05	-0.62
February 19	4,862.93	0.07	-0.83
February 22	4,829.74	-0.68	0.28
February 23	4,861.43	0.66	0.30
February 24	4,830.08	-0.64	-0.19
February 25	4,837.82	0.16	-0.01
February 26	4,912.98	1.54	1.08
March 2	4,964.13	1.06	2.09
March 3	5,018.61	1.10	1.36
March 4	5,034.29	0.31	-0.17
March 5	5,049.69	0.31	0.13
March 8	5,095.33	0.92	0.64
March 9	5,073.01	-0.45	-0.29
March 10	5,056.08	-0.33	0.27
March 11	5,077.53	0.42	0.41
March 12	5,060.66	-0.33	-0.01
March 15	5,046.47	-0.28	-0.01

Appendix - 9

BSE IT Index

Date	Close	Index Return	Sensex Return
February 15	5,032.44	—	—
February 16	5,100.98	1.36	1.17
February 17	5,089.73	-0.22	1.25
February 18	5,099.46	0.19	-0.62
February 19	5,081.67	-0.35	-0.83
February 22	5,132.75	1.01	0.28
February 23	5,159.25	0.52	0.30
February 24	5,160.63	0.03	-0.19
February 25	5,188.92	0.55	-0.01
February 26	5,173.99	-0.29	1.08
March 2	5,243.63	1.35	2.09
March 3	5,277.60	0.65	1.36
March 4	5,223.05	-1.03	-0.17
March 5	5,228.72	0.11	0.13
March 8	5,265.47	0.70	0.64
March 9	5,310.18	0.85	-0.29
March 10	5,290.71	-0.37	0.27
March 11	5,343.52	1.00	0.41
March 12	5,338.35	-0.10	-0.01
March 15	5,411.69	1.37	-0.01

Appendix - 10

BSE Metal Index

Date	Close	Index Return	Sensex Return
February 15	15,672.54	—	—
February 16	15,920.00	1.58	1.17
February 17	16,435.14	3.24	1.25
February 18	16,209.81	-1.37	-0.62
February 19	15,806.15	-2.49	-0.83
February 22	15,913.98	0.68	0.28
February 23	16,029.22	0.72	0.30
February 24	16,015.03	-0.09	-0.19
February 25	15,989.77	-0.16	-0.01
February 26	16,401.52	2.58	1.08
March 2	17,044.56	3.92	2.09
March 3	17,283.70	1.40	1.36
March 4	17,553.58	1.45	-0.17
March 5	17,560.26	0.15	0.13
March 8	17,547.42	-0.07	0.64
March 9	17,272.96	-1.56	-0.29
March 10	17,218.13	-0.32	0.27
March 11	17,162.62	-0.32	0.41
March 12	17,271.54	0.63	-0.01
March 15	17,245.21	-0.15	-0.01

Appendix - 11

BSE Oil & Gas Index

Date	Close	Index Return	Sensex Return
February 15	9,720.78	—	—
February 16	9,830.34	1.13	1.17
February 17	9,925.57	0.97	1.25
February 18	9,725.83	-2.01	-0.62
February 19	9,655.30	-0.73	-0.83
February 22	9,632.51	-0.24	0.28
February 23	9,593.15	-0.41	0.30
February 24	9,593.95	0.00	-0.19
February 25	9,493.53	-1.04	-0.01
February 26	9,596.24	1.08	1.08
March 2	9,606.87	0.11	2.09
March 3	9,825.93	2.28	1.36
March 4	9,764.20	-0.63	-0.17
March 5	9,767.37	0.03	0.13
March 8	9,771.93	0.05	0.64
March 9	9,649.75	-1.25	-0.29
March 10	9,739.25	0.93	0.27
March 11	9,786.82	0.49	0.41
March 12	9,826.94	0.41	-0.01
March 15	9,809.88	-0.17	-0.01

Appendix - 12

BSE Power Index

Date	Close	Index Return	Sensex Return
February 15	2,975.12	—	—
February 16	2,998.62	0.79	1.17
February 17	3,015.64	0.57	1.25
February 18	2,995.30	-0.67	-0.62
February 19	2,960.64	-1.16	-0.83
February 22	2,954.74	-0.20	0.28
February 23	2,956.88	0.07	0.30
February 24	2,954.56	-0.08	-0.19
February 25	2,953.92	-0.02	-0.01
February 26	2,961.56	0.26	1.08
March 2	3,015.05	1.81	2.09
March 3	3,073.30	1.93	1.36
March 4	3,085.87	0.41	-0.17
March 5	3,087.54	0.05	0.13
March 8	3,100.05	0.41	0.64
March 9	3,073.81	-0.85	-0.29
March 10	3,069.97	-0.12	0.27
March 11	3,066.97	-0.10	0.41
March 12	3,050.46	-0.54	-0.01
March 15	3,031.86	-0.61	-0.01

Appendix - 13

BSE Realty Index

Date	Close	Index Return	Sensex Return
February 15	3,368.41	—	—
February 16	3,406.43	1.13	1.17
February 17	3,372.49	-1.00	1.25
February 18	3,300.96	-2.12	-0.62
February 19	3,189.77	-3.37	-0.83
February 22	3,133.27	-1.77	0.28
February 23	3,163.33	0.96	0.30
February 24	3,192.81	0.93	-0.19
February 25	3,196.34	0.11	-0.01
February 26	3,236.69	1.26	1.08
March 2	3,246.74	0.31	2.09
March 3	3,316.83	2.16	1.36
March 4	3,399.91	2.50	-0.17
March 5	3,460.19	1.77	0.13
March 8	3,439.87	-0.59	0.64
March 9	3,402.30	-1.09	-0.29
March 10	3,422.29	0.59	0.27
March 11	3,416.23	-0.18	0.41
March 12	3,387.92	-0.83	-0.01
March 15	3,361.10	-0.79	-0.01

Likeability of Successful Film and Differentiating Factors for Unsuccessful Films: A Study of Select Telugu Films using Multivariate Analysis

A.Ramesh¹, V.Jayashree² and Arvind Gandhi³

Abstract

Telugu film industry, popularly known as 'Tollywood' contributes to the 45% of south Indian film industry revenue. (Ficci & E&Y Report 2009). The failure rate is precariously high, out of 123 movies released in 2009, only ten of them are successful. The paper attempts to define new construct of 'likeability' of successful film using multi item scale. Ten popular and nine unsuccessful films in 2009 are selected for the analysis. Likeability is measured using one movie "Maghadhera" which is the most expensive movie made in the history of telugu film industry. (Rs 35 crores). The movie is also the highest grosser for the year 2009 in India. The underlying key factors for the likeability of the popular or successful movie are derived using factor analysis. The derived factors are used for differentiating the successful and unsuccessful movies using discriminant analysis. The paper attempts to build the model for discrimination and prediction of successful and unsuccessful films. Six factors for the likeability of the successful film derived using exploratory factor analysis are Entertainment value, Direction and Genre, Unique family entertainer, Technical aspects, Hero & Coherence and Screenplay. The variables which discriminate between unsuccessful and successful film are (in the order of importance) Hero and coherence, technical aspects, unique family entertainer, screenplay, direction, genre, and entertainment value.

Introduction

According to the latest FICCI-KPMG report on entertainment sector, the Indian film industry is projected to grow 9.1 per cent annually in the next five years, reaching Rs 16,860 crore in 2013 from Rs 10,920 crore in 2009. Over the last three-four years, big names like the Anil Ambani-promoted Reliance BIG entertainment, Aditya Birla Group and the Mahindras have invested in film projects. The South Indian cinema industry, which is heavily dependent on domestic theatrical revenues, is pegged at Rs 17.3 billion.(15.84% of total industry revenues).Telugu and Tamil movies contribute around Rs 7.7 billion each(Rs 730 crore , and 6.5% of the total Indian film industry (45 per cent each of south Indian film industry), according to an Ernst & Young-Ficci report. Malayalam movies make Rs 1.4 billion, or eight per cent share of the South Indian film market, while Kannada films earn Rs 0.5 billion (two per cent). Almost 65 per cent of the revenues in the South Indian Film industry come from films exceeding budgets of Rs 70 million, the report, which looked at the fiscal ended 31 March 2009.

Need and Importance of the Study

Understanding the key success factors will give insight to know the pulse of the audience and possibly mitigate the risk of movie failure. The application of multivariate techniques for studying the drivers of success and failure in Telugu films is new and unique. Research on success and failure of films in Telugu film industry

¹Senior Assistant Professor, Vignana Jyothi Institute of Management, Bachupally, Via Kukatpally, Hyderabad-500090, Andhra Pradesh.
E-mail: a.ramesh@vjim.edu.in.

²Senior Assistant Professor, Vignana Jyothi Institute of Management, Bachupally, Via Kukatpally, Hyderabad-500090, Andhra Pradesh.
E-mail: v.jayashree@vjim.edu.in

³Assistant Professor, Vignana Jyothi Institute of Management, Bachupally, Via Kukatpally, Hyderabad-500090, Andhra Pradesh.
E-mail: arvind.gandhi@vjim.edu.in

is sparse. The new construct of likeability of the film is being considered for the commercial success of the movie.

Purpose

The purpose is to derive the underlying key factors for the likeability of the popular movie or successful movie using factor analysis and use the derived factors for differentiating the successful and unsuccessful movies using discriminant analysis. The paper builds the model for discrimination and prediction of successful and unsuccessful films.

Research Design

Select films are selected from the big hits and flops of the year 2009. The most successful movie of the year 2009 is Maghdheera (drama-genre) and it is also the most expensive movie made in the history of Telugu film industry with budget of Rs 35 crores is selected to define the construct of likeability of the popular movie. The movie also is claimed as biggest grosser of the year in India in the year 2009. The other successful movies selected are Arundati, Kick, Bendu Apparao RMP, Akashamnata, Kocham ishatam kocham istam kastam, Ride, Arya2, Villagelo Vinanyakudu . The unsuccessful movies (9) selected are Eenadu, Evarina Epudina, Maska, Josh, Oye, Bumper offer, Kurradu, Ekniranjan, Saleem. Out of 123 movies released, only ten of them are successful. The movies are selected by popular websites. The study involves qualitative research using focus group discussions among student groups, quantitative research uses multivariate techniques such as, factor analysis and discriminant analysis.

Exploratory study involving the focus group discussions among the audiences (who watched the movie "Maghadhera") was conducted to identify the variables. Multi-item scale is constructed with derived variables to measure the likeability of the movie. Internal validity is measured with Cronbach alpha. Underlying factors can be derived from the variables using factor analysis. The discriminant model was developed using the derived factors and to differentiate between successful and unsuccessful movies.

Theoretical Development

Movies are being liked for various reasons such as songs, hero or music and genre etc. The commercial successful movie is liked by the larger audience. Likeability may ensure repeat movie watching, positive word of mouth and the movie runs for higher number of days. Likeability possibly ensures the success of the movie. Likeability is also the element or component of the attitude.

Literature Review

Deepak Halan (2003) Observed that given high failure rate in Hindi film industry, market research can make large difference, film makers should avoid making single approach will not work and offer variety to the audience.

Valenti (2004; Vogel 2001) Producing and marketing motion pictures is a risky business, with only three to four out of ten movies breaking even, and about one out of ten becoming profitable at the box office.

Austin and Gordon (1987) Common movie genres are action movies, drama, comedy, horror, westerns, and science fiction. There are no formal classifications of movie genres exist and movies regularly conform to more than one genre. Accordingly, the movie genre must be regarded as a highly complex concept

Cooper-Martin (1991); Holbrook and Hirschman (1982) Observed that the primary reason for people to consume a movie is to experience it, rather than expecting it to fulfill a physiological need. Hedonic value (e.g., pleasure, thrill) is the main motive for experiential consumption, while utilitarian motives play an ancillary role.

Thorsten Hennig et al (2007) Distinguished direct and indirect effects between potential success drivers and motion picture success by understanding the interrelationships among different determinants of movie success. Structural qualities such as popularity of star,producer and director, budget as part of the movie traits etc advertising,neutral information sources like movie reviews,awards, and word of mouth impact the viewer's choice and success of the film.

Alison Ernold(1988) examined the important aspect the eclectic nature of Hindi film songs, its popularity and role in society and culture.

Rajnish Dass et,al(2006) analyzed the various risks in the Indian film industry and looked at various ways to mitigate the same.Authors also opined that greatest reason for flops is quality of the films and is the reason for the risk of flop.

Wallace, Seigerman, and Holbrook (1993) shows a significant impact of genre on box-office results. The production costs of a movie vary from genre to genre.

Caves (2000) Movies are "complex creative goods" that are the result of teams of creative's working together.

Faulkner and Anderson 1987; Litman and Kohl 1989; Wallace,Seigerman and Holbrook 1993; Prag and Casavant 1994; Sochay 1994; Sawhney and Eliashberg1996; Albert 1998; Neelamegham and Chintagunta 1999; Basuroy, Chatterjee and Ravid 2003; Elberse and Eliashberg 2003; Ainslie, Drèze and Zufryden 2005 found evidence that a movie's likely cumulative, weekly, or opening-week revenues increase with the rank of the star talent associated with it.

Vero Vanden Abeele and Bieke Zaman (2008),argue that uses and gratification(U&G) paradigm is good approach to research likeability of media applications. They also combined with expectancy-value (EV) theory. Through research project found that select gratification and design attributes that are key to support playful behaviour of preschoolers behaviour in home environment.

Eliashberg et al (1994) Developed a conceptual framework for the enjoyment and proposed that it is an outcome of the dynamic interaction between individual difference factors,temporary moods and emotional content of the experience. The movie enjoyment model was developed.

Russell (1989) Degree of pleasure and degree of arousal are consistently portrayed as categories of emotions. Operationally, pleasure-displeasure dimensions items include such as delighted,happy,sad and miserable.Arousal-Sleepiness dimension include items such as alarmed,tired,tensed, and bored.

Sherry et al., (2006) conducted a survey (elementary scholars to university students as respondents) in order to determine the uses and gratifications of playing video games. Sherry and Lucas (2003) (defined six gratifications that could explain why young people play video games:

- (1) competition: to be the best player of the game;
- (2) challenge: to push yourself to beat the game or to get to the next highest level;
- (3) social interaction: to play as a social experience with friends;
- (4) diversion: to pass time or alleviate boredom;
- (5) fantasy: to do things that one cannot do in real life.

Research Questions

Is there any similarity or dissimilarity in these films? (genre ,story etc)

What are the key aspects liked in the movies by the audience?

Which factors have greater influence on the success and the failure of the film?

Limitations- The study involves the audience of adults. (Students group aged between 20-25, both male and female). The likeability factors were derived from only one movie.

Future Research- The study can be extended to other regions, other age groups, and other languages. The different segments can be identified using cluster analysis.

Research Design/Methodology

Qualitative research and scale for measuring the likeability

Although four existing scales such as attitude towards movie, (action, extrinsic cues, intrinsic cues, and story) measure some aspects which are related to the likeability of the film, but there is no scale to measure the likeability aspects of the film more comprehensively. Hence new scale was developed to measure the construct of likeability of the film. Likeability for operationally defined as movie goers liking the film for various reasons such as songs, music, story, genre and hero etc.

Four scales for measuring attitude towards the movie

Attitude towards the movie (Action ex- entertaining and action) by Pechmann and Shih(1999)”

Attitude towards the movie (Extrinsic Cues ex- music and special effects) by Neelamegham and Jain (1999)

Attitude towards the movie (Intrinsic Cues Ex story, acting) by Neelamegham and Jain(1999) .

Attitude towards the movie (Story) by Pechmann and Shih(1999)

Two focus groups were conducted among the students aged 22-25, female and male to discuss the likeability of the film Maghadhera ie, the various aspects of the film which made like the film or movie. After removing some variables/sentences based on content validity and overlapping, the final scale was with 22 variables. (**Refer scale development given below**) was finalized. The value of internal reliability is 0.877. (**Tables. 1-3**) which is found to be satisfactory. This value is acceptable as per Nunally (1978).

Results of Analysis

Scale development for measuring the likeability of the film

Please rate the following on 1-7 scale (1- completely agree and 7 completely disagree)

Following 22 variables were selected.

- Picturisation of hero is good.
- Graphics are good.
- Songs picturisation is good.
- Dialogues are good.
- Fights or action is good.
- Music is very pleasing.
- It has revival of old hit song
- Screenplay is very good.
- Direction is good
- Last song features all the members of the crew.
- Every character has done well

- It is a family entertainer.
- It is a different film
- It is a fantasy film after long time.
- It is based on re birth
- Heroine is talented and acted very well
- I am fan of hero
- Costumes are good.
- Photography was good
- 1st half and second half are well connected.
- Hero does horse riding and motor cycle racing very well
- It is a love story depicted differently.

Table1: Test Score Statistics

	Total	Average	Half1	Half2
Mean	50.065	2.276	23.065	27.000
Standard Deviation	15.903	0.723	7.783	9.343
Standard Error	2.903	0.132	1.421	1.706
Maximum	77.000	3.500	43.000	43.000
Minimum	22.000	1.000	11.000	11.000
No. of Cases	31.00	31.00	31.00	31.00

Table 2: Approximate Standard Error of Measurement of Total Score for 15 z score Intervals

z-score	Total Score	N	Standard Error
-3.750	-9.571	0	.
-3.250	-1.620	0	.
-2.750	6.332	0	.
-2.250	14.283	2	0.000
-1.750	22.235	4	1.871
-1.250	30.186	1	3.000
-0.750	38.137	4	1.500
-0.250	46.089	6	9.583
0.250	54.040	7	9.761
0.750	61.992	4	8.426
1.250	69.943	3	9.557
1.750	77.894	0	.
2.250	85.846	0	.
2.750	93.797	0	.
3.250	101.749	0	.

Internal Consistency Data

Coefficient Alpha - Half2 Items

Split-half Correlation : 0.722

Spearman-Brown Coefficient : 0.839

Guttman (Rulon) Coefficient : 0.831
 Coefficient Alpha - All Items : 0.877
 Coefficient Alpha - Half1 Items : 0.765
 Coefficient Alpha - Half2 Items : 0.813

Table 3: Item Reliability Statistics

Item	Label	Mean	Standard Deviation	Item Total R	Item Reliability Index	Excl Item R	Excl Item Alpha
1	V1	1.710	0.850	0.531	0.451	0.491	0.872
2	V2	1.516	0.911	0.312	0.284	0.258	0.877
3	V3	2.000	1.107	0.473	0.523	0.416	0.873
4	V4	2.129	1.129	0.492	0.555	0.435	0.873
5	V5	1.968	1.177	0.514	0.605	0.456	0.872
6	V6	1.839	0.883	0.400	0.354	0.352	0.875
7	V7	2.935	1.883	0.472	0.889	0.372	0.877
8	V8	1.581	0.752	0.471	0.355	0.433	0.874
9	V9	2.226	1.601	0.555	0.888	0.479	0.871
10	V10	2.806	2.007	0.689	1.382	0.613	0.867
11	V11	2.355	1.233	0.670	0.826	0.624	0.867
12	V12	2.032	1.031	0.464	0.479	0.411	0.873
13	V13	2.129	1.238	0.424	0.525	0.357	0.875
14	V14	2.419	1.642	0.517	0.848	0.435	0.873
15	V15	2.806	2.147	0.618	1.327	0.524	0.872
16	V16	2.774	1.475	0.668	0.985	0.611	0.867
17	V17	2.677	1.305	0.593	0.774	0.536	0.870
18	V18	2.290	1.141	0.591	0.674	0.541	0.870
19	V19	2.129	0.870	0.706	0.614	0.676	0.869
20	V20	2.387	1.287	0.585	0.753	0.528	0.870
21	V21	2.742	1.703	0.660	1.125	0.593	0.867
22	V22	2.613	1.538	0.447	0.687	0.364	0.875

Exploratory Factor analysis

Exploratory factor analysis was performed on the variables and six factors are obtained. (Tables 4-10 and Figures 1&2)

▼ Factor Analysis

IMPORT successfully completed. Processed 22 variables and 110 cases.

Table 4: Latent Roots (Eigenvalues)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
6.20	3.63	2.32	1.93	1.15	1.09	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29

Table 5: Component Loadings

	1	2	3	4	5	6
V1	0.566	0.172	-0.346	0.005	-0.298	-0.126
V2	0.334	0.488	0.215	-0.537	0.074	0.001
V3	0.549	0.385	-0.340	0.266	0.095	0.315
V4	0.610	0.434	-0.314	0.247	-0.367	0.180
V5	0.642	0.489	-0.314	-0.195	-0.079	0.255
V6	0.525	0.128	-0.277	0.434	-0.502	-0.147
V7	0.288	-0.401	0.205	0.570	-0.290	-0.200
V8	0.573	0.059	0.221	-0.155	-0.020	-0.667
V9	0.550	-0.564	0.105	-0.418	-0.207	0.131
V10	0.637	-0.630	0.235	0.012	-0.191	0.119
V11	0.779	0.166	0.391	-0.147	-0.077	-0.085
V12	0.394	0.354	0.625	0.402	0.110	0.004
V13	0.325	0.317	0.667	0.377	0.240	-0.004
V14	0.390	-0.740	0.123	0.054	-0.088	0.238
V15	0.509	-0.753	0.133	-0.040	0.025	0.157
V16	0.690	-0.368	-0.253	-0.356	0.148	-0.099
V17	0.392	-0.327	-0.283	0.182	0.572	-0.150
V18	0.674	0.307	0.174	-0.238	0.259	0.080
V19	0.548	-0.095	-0.488	0.024	0.239	-0.274
V20	0.315	-0.149	-0.373	0.377	0.550	-0.040
V21	0.198	-0.108	0.137	0.203	0.265	0.358
V22	0.697	0.389	0.141	-0.115	0.091	0.074

Table 6 : Variance Explained by Components

1	2	3	4	5	6
6.202	3.639	2.323	1.913	1.598	1.087

Table 7: Percent of Total Variance Explained

1	2	3	4	5	6
28.189	16.539	10.559	8.694	7.262	4.940

Table 8: Rotated Loading Matrix (VARIMAX, Gamma = 1.000000)

	1	2	3	4	5	6
V1	0.666	0.119	-0.087	0.183	0.122	0.247
V2	0.044	-0.088	0.110	0.784	-0.162	0.166
V3	0.657	-0.076	0.169	0.272	0.331	-0.307
V4	0.912	-0.010	0.124	0.188	0.016	-0.062
V5	0.666	-0.010	-0.033	0.628	0.100	-0.103
V6	0.838	0.117	0.130	-0.207	0.048	0.228
V7	0.240	0.427	0.388	-0.542	0.057	0.216
V8	0.124	0.184	0.278	0.288	0.170	0.782
V9	0.046	0.868	-0.159	0.262	-0.036	0.123
V10	0.142	0.920	0.176	-0.013	0.070	0.075
V11	0.292	0.378	0.473	0.527	-0.022	0.305
V12	0.131	-0.016	0.896	0.147	-0.037	0.025
V13	-0.014	-0.038	0.908	0.156	0.019	0.001
V14	-0.008	0.851	0.031	-0.164	0.119	-0.122
V15	-0.049	0.900	0.045	-0.034	0.234	-0.031
V16	0.163	0.587	-0.224	0.387	0.458	0.231
V17	-0.022	0.220	0.038	0.000	0.820	0.019
V18	0.196	0.152	0.330	0.704	0.201	0.051
V19	0.342	0.143	-0.149	0.149	0.662	0.246
V20	0.124	0.023	0.090	-0.087	0.809	-0.141
V21	-0.023	0.206	0.283	0.047	0.195	-0.382
V22	0.377	0.108	0.367	0.615	0.117	0.070

Table 9: "Variance" Explained by Rotated Components

1	2	3	4	5	6
3.395	4.028	2.625	3.047	2.341	1.324

Table 10: Percent of Total Variance Explained

1	2	3	4	5	6
15.432	18.309	11.932	13.851	10.640	6.020

Total % variance explained is 74%

Factors

$V1+V3+V4+V5+v6=F1$ = (picturization of hero ,Dialogues, ,songs,music and fights)

$F1$ = Entertainment value

$F2=v9+v10+v14+v15$ =(Direction,last song,fantasy and rebirth) = Direction and Genre

$F3=V12+V13$ (Family entertainer and out of the box film)= Unique family entertainer

$F4=V2+V18$ = (graphics and photography) = Technology

$F5=v17+v19+v20$ = (Fan of hero,costumes ,connection)= Fan factor and coherence

$F6= (v8)$ =Screenplay

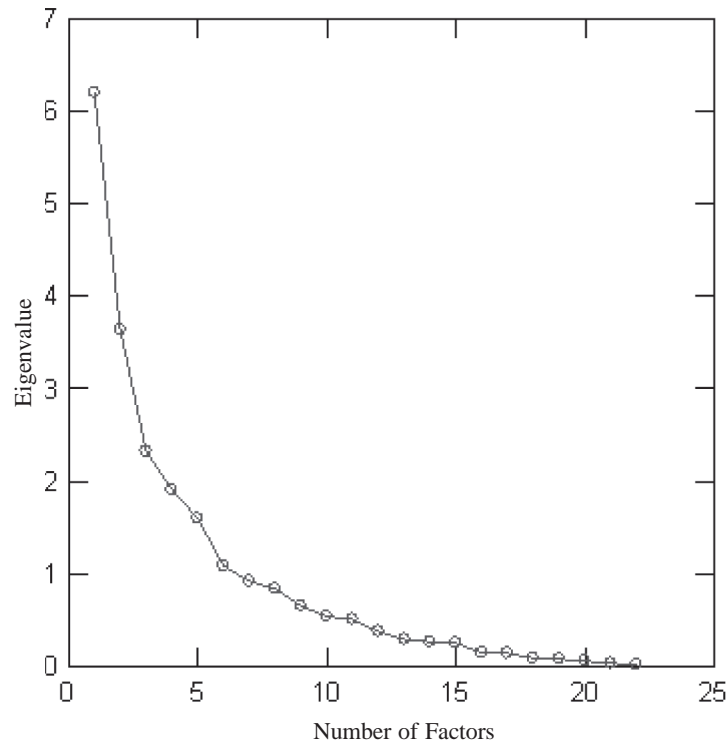
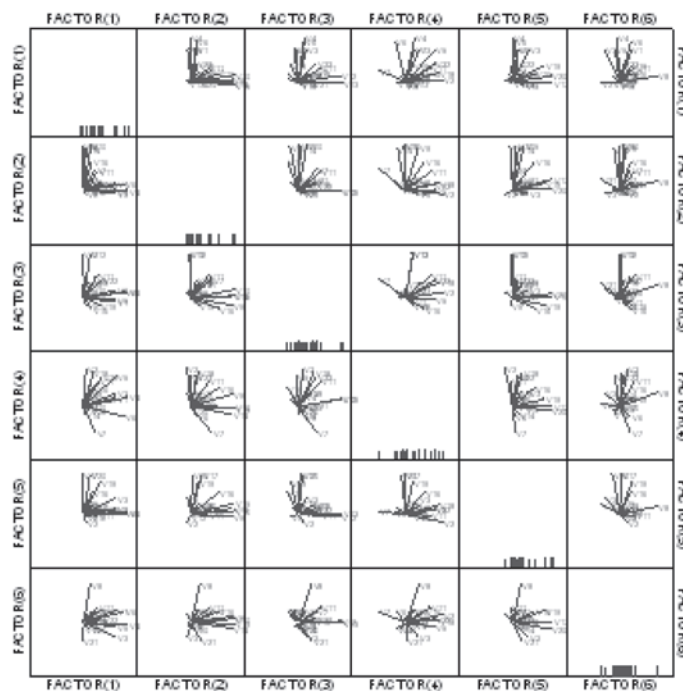


Figure 1: Scree Plot



Loadings have been saved.

Figure 2: Factor Loadings Plot

Discriminant analysis

Using the factors derived from factor analysis, 10 successful and 9 unsuccessful movies are selected. These movies belong to different genres and different production budgets. The discriminant analysis was performed to identify the discriminating variables between successful and unsuccessful movies.

Table 11: Input for discriminant analysis

EV	D&G	UFE	TA	H&C	Screenplay		Films
(songs, dialogues music etc) 6	5.54	5.4	5.54	5.36	5.68	s	Maghadheera
3	4	2	4	3	3	u	Eenadu
6	6	6	7	6	7	s	Aurndhati
4	4	3	3	3	3	u	Evarina epudina
6	4	4	3	2	3	s	Kick
4	4	5	3	4	2	u	Maska
6	5	6	4	4	5	s	Kocham istam kocham kastam
3	2	3	1	2	3	u	Josh
5	4	7	4	4	5	s	Akasamantha
5	5	4	5	3	3	u	Oye
4	3	3	4	3	2	s	Ride
4	3	2	1	2	3	u	Bumper offer
5	5	5	7	6	5	s	ARYA2
5	4	4	3	4	3	u	Kurradu
6	4	5	2	2	4	s	Bendu apparao
4	4	3	3	4	4	u	Ekniranjan
4	3	4	4	5	5	s	Gopigopika godawari
2	1	1	1	1	2	u	Saleem
4	5	4	2	3	4	s	Village lo vinayakudu

EV-Entertainment value

D& G- Direction and Genre

UFE- Unique family entertainer

TA- Technical Aspects

H& C-Hero and Coherence

Screenplay

s- Successful film

u- Unsuccessful film

The successful (10) and unsuccessful (9) films are rated on scale of 1-7 (1 low, 7- high) for the above parameters or factors which are derived from factor analysis. The mean score for 30 respondents were taken. The above data was taken as a input for discriminate analysis.

Results

The paper has explored factors for the likeability of the film, some of them are part of Extrinsic and Intrinsic cues such as story, technical aspects which are also part of attitudinal elements towards the movie. These six factors include Entertainment value, Direction and Genre, Unique family entertainer, Technical aspects, Hero& Coherence and Screenplay.

Factor Analysis

Exploratory factor analysis was performed on the variables capturing likeability and six factors are obtained:

EV-Entertainment value

D& G- Direction and Genre

UFE- Unique family entertainer

TA- Technical Aspects

H& C-Hero and Coherence, and Screenplay

Discriminant Analysis

▼ Classical Discriminant Analysis

Table 12: Group Frequencies and Group means

	Success (10)	Unsuccessful(9)
Entertainment_value_songs_dialogues	5.200	3.778
Direction_and_genre	4.454	3.444
Unique_family entertainer	4.940	3.000
Technical_aspects	4.254	2.667
Hero_and_coherence	4.036	3.111
Screenplay	4.668	3.111

Table 13: Between-Groups F-matrix df: 6 12

	Success	Unsuccessful
Successful	0.000	
Unsuccessful	2.630	0.000

Wilks's Lambda

Lambda : 0.432

Df : (6, 1, 17)

Approx. F-Ratio : 2.630

Df : (6, 12)

p-Value : 0.073

Table14: Classification Functions

	Success	Unsuccessful
CONSTANT	-18.699	-11.596

Table 15: Classification functions

	Success	Unsuccessful
Entertainment_value_songs_dialogues	6.372	5.741
Direction_and_genre	-1.803	-0.752
Unique_family entertainer	-0.336	-1.610
Technical_aspects	-1.369	-2.663
Hero_and_coherence	2.585	4.174
Screenplay	1.704	0.531

Table16: Variable

	Variable	F-to-Remove	Tolerance
1	Entertainment_value_songs_dialogues	0.166	0.320
2	Direction_and_genre	0.591	0.279
3	Unique_family entertainer	1.683	0.426
4	Technical_aspects	1.305	0.185
5	Hero_and_coherence	1.018	0.138
6	Screenplay	1.303	0.496

Table 17: Classification Matrix (Cases in row categories classified into columns)

	Success	Unsuccessful	% correct
Success	8	2	80
Unsuccessful	1	8	89
Total	9	10	84

Table18: Jackknifed Classification Matrix

	Success	Unsuccessful	%correct
Success	7	3	70
Unsuccessful	1	8	89
Total	8	11	79

Eigenvalues	1.315
Canonical Correlations	0.754
Cumulative Proportion of Total Dispersion	1.000

Table 19 : Test Statistic

Statistic	Value	Approx. F-Ratio	df	p-Value
Wilks's Lambda	0.432	2.630	6 12	0.073
Pillai's Trace	0.568	2.630	6 12	0.073
Lawley-Hotelling Trace	1.315	2.630	6 12	0.073

Table 20 : Canonical Discriminate Functions

	1
Constant	-3.327

Table 21: Function co-efficients

	1
Entertainment_value_songs_dialogues	0.290
Direction_and_genre	-0.484
Unique_familyentertainer	0.587
Technical_aspects	0.596
Hero_and_coherence	-0.731
Screenplay	0.540

Table 22: Canonical Discriminate Functions: Standardized by Within Variances

	1
Entertainment_value_songs_dialogues	0.274
Direction_and_genre	-0.544
Unique_family_entertainer	0.713
Technical_aspects	0.966
Hero_and_coherence	-0.999
Screenplay	0.589

Table 23: Canonical Scores of Group Means

	1
Successful	1.029
Unsuccessful	-1.143

Analysis: FUNCTION

$Y = -3.327 + 0.290(\text{Entertainment value}) - 0.484(\text{Direction and genre}) + 0.587(\text{Unique FE}) + 0.596(\text{Technical Aspects}) - 0.731(\text{Hero \& coherence}) + 0.540(\text{Screenplay})$

The variables which impact or discriminate between unsuccessful and successful film are (in the order of importance) are Hero and coherence, technical aspects, unique family entertainer ,screenplay ,direction and genre, last is entertainment value.

Significance- the value is significant at 10 % level of significance as p value is 0.07 is 0.10 and as wilkerson lamda is close to zero indicating good significance.

$Y = -3.327 + 0.290(\text{Entertainment value}) - 0.484(\text{Direction and genre}) + 0.587(\text{Unique FE}) + 0.596(\text{Technical Aspects}) - 0.731(\text{Hero \& coherence}) + 0.540(\text{Screenplay})$.

The variables which are best predictors (impact or discriminate between unsuccessful and successful film are Hero and coherence, technical aspects, unique family entertainer, screenplay, direction and genre, last is entertainment value.(in the order of importance).

Implications

The model can be used to predict the success of the new movie or existing movie. The movie directors/ producers need to ensure maximum likeability or optimize likeability to ensure the success of the movie, given the constraints for example hero factor or technical (as everybody cannot rope in the big hero or big budget). The onus of coherence falls on the story writers and good screenplay ensuring attention and interest of the viewers. The movie should be different and entertaining. There is need for experimentation and calculated risk to break the clutter and ensure distinctiveness. Likeability factors can be taken as largely controllable elements (similar to marketing mix) each individual or group being responsible for success of the factors (director, story writer, songwriter, music director, and singers etc) and should integrate with others in enhancing the likeability of the movie. Genres have to redefined and new genre need to be created.

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The “Big Five”: an Indicator of Academic Performance

K.Narendranath¹ Sreelakshmi Shanker² and Sofia Jasmeen³

Abstract

Why is each individual’s behavior unique and distinct from that of others? Why do certain individuals achieve success and manage their lives better while others struggle to sort out worries everyday. It’s personality that makes all the difference. The present study examines the big five personality traits among seventy two University students with the help of a structured questionnaire. The results of the study indicate that the association between academic consistency and personality traits such as openness and neuroticism is significant. Further it points to the need for developing emotional intelligence amongst the present generation.

Keywords: Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism, Academic Consistency

Introduction

Personality is the state of being a person. Our personality traits make us unique and distinguish us from others. We observe the behavior patterns of all our acquaintances and notice behavior differences among individuals. We use words such as talkative, ruthless, cheerful, disorganized, impulsive, intellectual, shrewd, generous and to describe the individuals we know. Gordon Allport, the father of Personality research has extracted 17,953 such personality-describing words. Personality has been defined as a dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviors in various situations (Ryckman, 2004). Personality research has led to the development of a number of theories that help explain how and why certain personality traits develop. The pioneering American psychologist, Gordon Allport (1937) described two major ways to study personality, the nomothetic and the idiographic. Nomothetic psychology seeks general laws that can be applied to many different individuals, such as the principle of self-actualization, or the trait of extension

The author describes idiographic psychology as an attempt to understand the unique aspects of a particular individual. Human Personality is vividly explained by the “big five” factors of personality. The big five factors are the five broad dimensions of personality; Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism. While the “Big 5” personality model is empirically driven, there are other research mechanisms that emphasize theory development such as psychodynamics.

Recent Studies

Lewis R. Goldberg (1992) investigated new sets of Big-Five factor markers. In studies of adjective-anchored bipolar rating scales, he found a transparent format to produce factor markers that were more univocal than the same scales administered in the traditional format. However, even the transparent bipolar scales proved less robust as factor markers than did parallel sets of adjectives administered in unipolar format. A set of 100 unipolar terms proved to be highly robust across quite diverse samples of self and peer descriptions. These new markers were compared with previously developed ones based on far larger sets of trait adjectives, as well as with the scales from the NEO and Hogan personality inventories. Phillip R. Shaver and Kelly A. Brennan (1992) have identified three adult attachment styles corresponding to the infant-mother attachment patterns observed by Ainsworth and associates in the first year of life: secure, avoidant, and anxious-ambivalent. These three styles are related to a wide variety of close relationship processes and outcomes. The study examined

¹ Professor of Management, Department of Management, Osmania University, Hyderabad.

² Junior Research Fellow, Department of Commerce, Osmania University, Hyderabad.

³ Research Scholar, Department of Commerce, Osmania University, Hyderabad.

associations between attachment measures, relationship quality and outcome measures, and the ‘Big Five’ personality traits.

Murray R. Barrick and Michael K. Mount (1993) investigated the moderating role of autonomy on the relationships between the Big Five personality dimensions and supervisor ratings of job performance. On the basis of data from 146 managers, results indicate that 2 dimensions of personality, Conscientiousness and Extraversion were significantly related to job performance. Marvin Zuckerman, Michael D Kuhlman, Jeffrey Joireman, Paul Teta and Michael Kraft (1993) compared major factors from 3 models of personality: H. J. Eysenck’s Three Factor model, P. T. Costa and R. R. McCrae’s version of the Big Five, and M. Zuckerman and D. M. Kuhlman’s Alternative Five. The first study describes the development of a questionnaire measure for the Alternative Five and the reliability assessments of the scales. The second study used factor analysis to compare the factors among the scales from the 3 models. Extraversion and Neuroticism were found to be quite similar across all 3 models. Eysenck’s Psychoticism scale marked a factor that included Conscientiousness and Impulsive Sensation seeking factors from the other 2 models. Agreeableness and Aggression-Hostility formed a fourth factor. Openness could be identified as a factor using facet scales, but it showed no convergence with other factors. Four of the five factors showed convergence across at least two of the models. Mark J. Schmit and Ann M. Ryan (1993) conducted a study that used confirmatory factor analysis to examine the fit of the 5-factor model to NEO Five-Factor Inventory test data from student and applicant samples. The 5-factor structure fit the student data but did not fit the applicant data. The existence of an ideal employee factor in the applicant sample is suggested. The findings are discussed in terms of both construct validity issues and the use of the Big Five in personnel selection. Richard Lippa (1995) in two studies assessed men and women on the Big Five, masculinity (M), femininity (F), gender diagnosticity (GD), and a broad array of adjustment measures, including a circumplex measure of interpersonal problems. The first study showed that M and F but not GD have strong Big Five and circumplex representations. Also, M and F but not GD correlates with Negative Affectivity and various interpersonal problems, and M correlates with aggressiveness in men. The second study replicated the main findings of Study 1 with a larger sample of participants and showed additionally that GD, but not M or F, correlates with authoritarianism and social dominance in men. Results show that the Big Five and circumplex models can be used to conceptualize gender-related individual differences, psychological adjustment, and their interrelationships.

B.A. Druschel and M.F. Sherman (1999) explored the relationship among disgust sensitivity, the Big Five, and gender using a sample of 132 men and women undergraduates. Results indicated that disgust sensitivity does vary according to gender, which is consistent with previous research, with women reporting greater sensitivity to disgust stimuli than do men. The data also supported the hypothesized positive relationship between neuroticism and disgust sensitivity as well as a negative relationship between openness to experience and disgust sensitivity. In addition, positive relationships were found between two other Big Five factors (Agreeableness and Conscientiousness) and disgust sensitivity. These results suggest that a better understanding of the disgust sensitive individual may come about by studying accompanying personality characteristics. Stephen Soldz and George E. Vaillant (1999) tested one hundred sixty-three men who have been followed prospectively for over 45 years and rated them on a set of 25 personality traits at the end of their college careers and took the NEO-PI at approximately ages 67–68. They used a rating procedure to transform college traits and assessed each of the Big Five dimensions and related to the NEO-PI. Three traits—Neuroticism, Extraversion, and Openness—exhibited significant correlations across the 45-year interval and trait profiles remained relatively stable over that interval. They found that conscientiousness in college was the best predictor of what happened to the men in the future, whereas Neuroticism in late midlife was the best correlate of life course functioning across a variety of domains. Gregory M. Hurtz, John J. Donovan (2000) sought to provide a meta-analytic estimate of the criterion-related validity of explicit Big 5 measures for predicting job performance and contextual performance. The results for job performance closely paralleled 2 of the previous meta-analyses, whereas

analyses with contextual performance showed more complex relations among the Big 5 and performance. They have presented a more critical interpretation of the big 5-performance relationship and provided suggestions for future research aimed at enhancing the validity of personality predictors are provided. Sampo V. Paunonen and Michael C. Ashton (2001) compared the Big 5 factors of personality with the facets or traits of personality that constitute those factors on their ability to predict 40 behavior criteria. The criterion variance accounted for by the personality facets often included large portions not predicted by the personality factors. The narrow facets, therefore, were able to substantially increase the maximum prediction achieved by the broad factors. The results of this study are interpreted as supporting a more detailed approach to personality assessment, one that goes beyond the measurement of the Big 5 factors alone. Julie Holliday Wayne, Nicholas Musisca and William Fleeson (2002) investigated the relationship between each of the Big Five personality traits and conflict and facilitation between work and family roles. Extraversion was related to greater facilitation between roles but was not related to conflict, whereas neuroticism was related to greater conflict but only weakly related to facilitation. Conscientiousness was related to less conflict, presumably reflecting efficient time use and organizational skills. In general, conflict was negatively related to work–family outcomes whereas facilitation was positively related to the same outcomes. Conflict and facilitation were shown, however, to be orthogonal rather than opposite constructs.

Li fang Zhang (2006) explore the utility of measuring intellectual styles in addition to measuring personality. He verified the prior claim that the theory of mental self-government is applicable to non-academic settings as well as to academic settings. The Thinking Styles Inventory and the NEO Five-Factor Inventory administered to 199 parents of secondary school students in mainland China. The findings of his study suggested that it is meaningful to investigate intellectual styles in addition to examining personality. In addition, results supported the assertion regarding the validity of the theory of mental self-government in both academic and non-academic settings. McAdams, Dan , Jennifer L Pals (2006) highlights the most promising empirical and theoretical trends in personality psychology today to articulate 5 big principles for an integrative science of the whole person. Personality is conceived as (a) an individual’s unique variation on the general evolutionary design for human nature, expressed as a developing pattern of (b) dispositional traits, (c) characteristic adaptations, and (d) self-defining life narratives, complexly and differentially situated (e) in culture and social context. They inferred that the five principles suggest a framework for integrating the Big Five model of personality traits with those self-defining features of psychological individuality constructed in response to situated social tasks and the human need to make meaning in culture. Paula M Caligiuri (2009) proposed and tested the hypotheses that each of the Big Five personality characteristics (Extroversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness or Intellect) predicts two criteria of expatriate success: (a) desire to prematurely terminate the expatriate assignment, and (b) supervisor-rated performance on the expatriate assignment. The study included 143 participants who were expatriate employees (and 94 supervisors) from a U.S.-based information technology company. Results from correlation and regression analyses suggest that Extroversion, Agreeableness, and Emotional Stability are negatively related to whether expatriates desire to terminate their assignment. Conscientiousness is positively related to the supervisor-rated performance on the expatriate assignment. Meera Kommaraju, Steven J Karau and Ronald Schmeck (2009) reported the college grade point average of College students (308 undergraduates) using the Five Factor Inventory and the Academic Motivations Scale . They did a correlation analysis which revealed an interesting pattern of significant relationships. Regression analyses indicated that conscientiousness and openness explained 17% of the variance in intrinsic motivation; conscientiousness and extraversion explained 13% of the variance in extrinsic motivation; and conscientiousness and agreeableness explained 11% of the variance in amotivation. Further, four personality traits (conscientiousness, openness, neuroticism, and agreeableness) explained 14% of the variance in GPA; and intrinsic motivation to accomplish things explained 5% of the variance in GPA. In their study, conscientiousness emerged as a partial mediator of the relationship between intrinsic motivation to accomplish and GPA. They

interpreted the results of their study within the context of what educators could do to encourage and nurture student motivation and achievement. Hyun Jeong Kim, Kang Hyun Shin and Nancy Swanger (2009) focuses on job burnout, job engagement, and their relationships with the Big Five personality dimensions. They collected data from employees working for quick-service restaurants and found that the most critical personality trait affecting burnout is neuroticism and the most eminent traits predicting engagement are conscientiousness and neuroticism. This study did not validate the effects of positive personality traits such as extraversion and agreeableness on burnout and they are found to be weakly related to employees’ work engagement, as well. Nick Haslam, Jennifer Whelan and Brock Bastian (2009) studied personality traits and values. Both these variables were found to predict subjective well-being (SWB), but the two sets of predictors have rarely been investigated together. They studied 180 undergraduates compared their predictive contribution and examined whether associations between values and subjective well-being are mediated by traits. They associated several values from Schwartz’s model with subjective well-being, but these associations were weaker than those between Big Five traits and subjective well-being. These traits mediated all associations between values and SWB. By implication, associations between values and subjective well-being were found to be largely indirect effects of stronger and more basic associations between traits and subjective well-being.

The above studies concentrated on construction of instruments, their validity and their ability in predicating the behavior. Most of the studies are conducted outside India. Therefore, present study is conducted in the Indian context.

Objective

This paper examines the prevalence of the five big personality traits amongst university students and its association with their academic consistency. It disaggregates the personality traits of the respondents in relation to their profile such as gender, place the respondent hails from, age, number of siblings they have and the religion they follow.

Methodology

The study is an empirical one. It is based on primary data collected with the help of a structured questionnaire. The sample for the study has been chosen randomly and includes 72 students pursuing post-graduation courses. The questionnaire is an adapted version of Oliver P. John’s Big Five Inventory (1999). The study aims at measuring the big five personality traits in terms of openness, conscientious, extravert, agreeableness, and Neuroticism. Based on the scores, the respondents’ personality is analyzed. Further, the study examines the association between Personality Traits and their performance with the help of chi-square test. For the purpose of measuring performance Academic Consistency is taken as the criterion. Academic Consistency has been segregated as Consistent and Inconsistent. Respondents who scored 60 percent and above at their School, Intermediate and Graduation examinations are categorized as academically consistent while the others are categorized as academically not-consistent.

The “Big five” dimensions in personality:

Openness to experience : Openness is the trait that distinguishes creative people from the conventional ones. People who are open to experience have utmost curiosity in intellectual discussions. They are appreciative of natural beauty, art and aesthetics. Such people are inclined to be adventurous. People open to experience are more likely to hold unconventional beliefs. Conversely, people with low scores on openness tend to have more conventional and traditional interests. They prefer the simple and straightforward over the complex and ambiguous. They rarely enjoy sports, art or creativity. Some self-statements pertaining to openness include:

- I have a vivid imagination.
- I have wonderful ideas.

- I spend time with myself.
- I like spending time outdoors with friends.

Conscientiousness : Conscientiousness is a tendency to show self-discipline, act dutifully, and aim for achievement. The trait shows a preference for planned rather than spontaneous behavior. It influences the way in which we control, regulate, and direct our impulses. Conscientiousness includes the factor known as Need for Achievement. Few self-statements of conscientious people are:

- I am very systematic in whatever I do.
- I follow a schedule.
- I don't procrastinate
- I like tidiness.
- I pay attention to details.

Extraversion: Extraversion is characterized by positive emotions, and the tendency to seek the company of others. The trait is marked by pronounced engagement with the society. Extraverts enjoy being with people, and are often perceived as full of energy. They tend to be enthusiastic, action-oriented individuals who are likely to say “Yes!” or “Let's go!” to opportunities that are exciting. They like to talk to people and assert themselves at every possible occasion. Conversely, people who score low on extraversion tend to seem quiet and less involved in the social world. They lack the social exuberance and activity levels of extraverts. Introverts simply need less stimulation than extraverts. Few self statements by people who are extraverts are:

- I grab the attention of people wherever I go.
- I enjoy being in the limelight.
- I love being with people.
- I do the ice breaking at every event and start conversations.
- I talk to a lot of different people at parties.

Agreeableness : Agreeableness is a tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others. Individuals who score high on agreeableness generally value getting along with others. They are generally helpful, generous, considerate, friendly, and willing to sacrifice their enjoyments for others. Agreeable people are optimistic and believe that people are basically honest, decent, and trustworthy. Disagreeable individuals place self-interest above getting along with others. They are generally unconcerned with others' well-being, and are less likely to extend themselves for other people. They are skeptical about others' motives, hence making them more unfriendly. Few agreeableness items are:

- I am generous
- I feel others' emotions.
- I listen to people and their worries.
- I make people comfortable.
- I take time out for others.

Neuroticism : Neuroticism is the tendency to experience negative emotions, such as anger, anxiety, or depression. It is sometimes called emotional instability. Those who score high in neuroticism are emotionally reactive and vulnerable to stress. Thus, they are more likely to find difficulties in clear thinking, decision making and stress management. Their mood swings are due to the negative emotional reactions. Problems in emotional regulation

can diminish the ability of a person scoring high on neuroticism to think clearly, make decisions, and cope effectively with stress. Individuals who score low in neuroticism are less easily upset and are less emotionally reactive. They tend to be calm, emotionally stable, and free from persistent negative feelings. Some self-statements of people lacking emotional stability are:

- I have mood swings
- I get irritated often.
- I get stressed out easily.
- I get upset easily.
- I worry about everything.

Profile of the Respondents : The respondents are from different cross sections of the society. Age- wise classification indicates that all of them belong to the age group of 20 to 27 years. The responses mainly reflect the personality of the younger generation. The sample includes both the genders. Majority of them (64 per cent) are male respondents. One third of them hail from city and the remaining two thirds are either from rural or urban areas. Religion-wise it may be observed that a vast majority of the respondents constituting 81 per cent are Hindus, followed by Muslim (12.2 per cent). Christians and others constitute not significant proportion in the sample. All the respondents are students pursuing post-graduation courses. Further it is observed that a significant majority (62.2 per cent) of the respondents have siblings not more than three.

Results and Discussion

Mean Scores and Standard Deviations of Big Five Personality Traits (Table 1): An overview of mean scores indicates that the respondents scored high on openness with a mean score of 3.72 and a standard deviation of 0.48. This is followed by agreeableness and conscientiousness. It is also found that the mean score is lowest in the case of neuroticism. This indicates the need to develop emotional intelligence among the present generation.

Table 1 - Mean Scores and Standard Deviations of Big Five Personality Traits

	Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism
N Valid	74	74	74	74	74
Missing	0	0	0	0	0
Mean	3.6487	3.3937	3.7076	3.0855	
Std. Deviation	.48522	.71404	.66581	.67789	.83129

Source: Primary Data

Gender and Big Five Personality Trait (Table 2): In the present times where social and cultural inhibitions are minimal, both the genders get equal opportunities. Against this backdrop we have examined whether there is a difference in the personality of men and women. The study shows that women scored higher than the mean in all the five traits of personality while men scored below the overall mean. The study also revealed that women are more agreeable, while men are more open. In our sample, both men and women scored less on neuroticism, thereby indicating the need for emotional stability.

Table 2 - Gender and Big Five Personality Trait

Gender of		Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism
Male	Mean	3.7137	3.6396	3.3538	3.5976	3.0295
	N	48	48	48	48	48
	Std. Deviation	0.52575	0.76669	0.60816	0.7311	0.8301
Female	Mean	3.7385	3.6656	3.4675	3.9106	3.1888
	N	26	26	26	26	26
	Std. Deviation	0.40916	0.61905	0.76835	0.52049	0.83982
Total	Mean	3.7224	3.6487	3.3937	3.7076	3.0855
	N	74	74	74	74	74
	Std. Deviation	0.48522	0.71404	0.66581	0.67789	0.83129

Source: Primary Data

Respondent’s Origin and Big Five Personality Trait (Table 3): The place where each individual hails from is reflected in his or her personality and behavior. This study analyses the distinction in personality among students hailing from rural areas, urban areas and cities. Results reveal that students hailing from rural areas are more conscientious, but less agreeable. However, they are more emotionally stable. Residents of urban areas appear to be more open to experience, moderately agreeable, but least conscientious in comparison to residents of rural areas and cities. Individuals hailing from cities are found to be highly agreeable. This could be associated with the varied culture found in cities where people live in apartments and work with varied workforce.

Table 3 - Respondents origin and Big Five Personality Trait

Hail from		Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism
Rural	Mean	3.7217	3.7039	3.4537	3.5677	3.0149
	N	35	35	35	35	35
	Std. Deviation	0.44965	0.76963	0.60425	0.73776	0.73096
Urban	Mean	3.7813	3.5678	3.2294	3.7113	3.0655
	N	16	16	16	16	16
	Std. Deviation	0.45894	0.6158	0.4525	0.53778	0.95018
City	Mean	3.6826	3.6212	3.4167	3.9179	3.207
	N	23	23	23	23	23
	Std. Deviation	0.56656	0.71233	0.86089	0.63959	0.90997
Total	Mean	3.7224	3.6487	3.3937	3.7076	3.0855
	N	74	74	74	74	74
	Std. Deviation	0.48522	0.71404	0.66581	0.67789	0.83129

Source: Primary Data

Age of the respondents and Big Five Personality Trait (Table 4): Table 4 indicates that students in the age group of 20 years to 23 years scored more on Openness, Conscientiousness, Extraversion and Neuroticism than those in the age group of 24 years to 27 years. However, the latter scored more on Agreeableness. This shows that youngsters are more social, friendly and energetic. As individuals mature, they understand the feelings of

others, become more empathetic and compromise their self-interests to a considerable extent. Agreeableness is characterized by qualities which indicate care and concern for fellow beings.

Table 4 - Age of the respondents and Big Five Personality Trait

Age of the respondents		Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism
20 to 23 years	Mean	3.7322	3.7145	3.4071	3.6586	3.154
	N	64	64	64	64	64
	Std. Deviation	0.49694	0.7096	0.69461	0.69787	0.86602
24 to 27 years	Mean	3.66	3.228	3.308	4.021	2.6475
	N	10	10	10	10	10
	Std. Deviation	0.41952	0.6191	0.45698	0.43824	0.32966
Total	Mean	3.7224	3.6487	3.3937	3.7076	3.0855
	N	74	74	74	74	74
	Std. Deviation	0.48522	0.71404	0.66581	0.67789	0.83129

Source: Primary Data

Number of Siblings and Big Five Personality Trait (Table 5): Research shows that the number of siblings one grows up with has a direct link with his or her personality. Table 5 shows that individuals with fewer siblings scored higher on Openness, Conscientiousness, Extraversion and Agreeableness. This indicates the effect of family size on personality. Students who have siblings are more open in their approach, learn to be agreeable and amicable with others and grow up to be social in nature. Further, the study also revealed that students with fewer siblings were emotionally stable and less neurotic, indicating a greater sense of security and well-being.

Table 5 - Number of Siblings and Big Five Personality Trait

Number of Siblings		Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism
Upto 3	Mean	3.7355	3.6786	3.4808	3.7707	2.9669
	N	46	46	46	46	46
	Std. Deviation	0.49835	0.77053	0.70484	0.6114	0.77684
Above 3	Mean	3.7009	3.5997	3.2507	3.6038	3.2804
	N	28	28	28	28	28
	Std. Deviation	0.47104	0.62044	0.58003	0.77556	0.894
Total	Mean	3.7224	3.6487	3.3937	3.7076	3.0855
	N	74	74	74	74	74
	Std. Deviation	0.48522	0.71404	0.66581	0.67789	0.83129

Source: Primary Data

Religion of the respondent and Big Five Personality Trait (Table 6): Personality is highly influenced by the cultural and religious background that students belong to. The fact that religious beliefs shape personality has urged this study to analyze the association between an individuals’ faith and his or her personality traits. The results of this study show that Hindus scored high on openness to experience; Muslims scored high on Extraversion and Agreeableness. The results indicate that people acquire traits which are highly spoken of in their religious preaching and intentionally let go of traits which their faith disapproves off.

Table 6 - Religion of the respondent and Big Five Personality Trait

Religion		Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism
Hindu	Mean	3.7377	3.6482	3.3788	3.6792	3.0961
	N	60	60	60	60	60
	Std. Deviation	0.51419	0.7088	0.68465	0.66618	0.81748
Muslim	Mean	3.7111	3.5483	3.6028	3.8867	3.0344
	N	9	9	9	9	9
	Std. Deviation	0.33333	0.39399	0.64183	0.71065	0.824
Christian	Mean	3.6	4.2	3.275	3.575	3.1875
	N	4	4	4	4	4
	Std. Deviation	0.41633	0.06771	0.47697	0.91788	1.313
Others	Mean	3.4	3.38	2.88	4.33	2.5
	N	1	1	1	1	1
	Std. Deviation
Total	Mean	3.7224	3.6487	3.3937	3.7076	3.0855
	N	74	74	74	74	74
	Std. Deviation	0.48522	0.71404	0.66581	0.67789	0.83129

Source: Primary Data

Academic Consistency and Big Five Personality Trait (Table 7): Lastly we have examined the association between big five personality traits and academic performance in terms of academic consistency. Results show that traits of openness and neuroticism have a significant association with academic success. Table 6 indicates that the association of academic consistency with conscientiousness, extraversion and agreeableness is not significant. The key indicator of the study has proven that individuals who are emotionally stable and less neurotic are more consistent in their academic endeavors. This study may be replicated in other places too in order to validate our conclusions.

Table 7 - Academic Consistency and Big Five Personality Trait

Academic Consistency	Openness		Conscientiousness		Extraversion		Agreeableness		Neuroticism		Total
	Low	High	Low	High	Low	High	Low	High	Low	High	
Consistent	22	15	19	18	19	18	17	20	25	12	37
	59.5	40.5	51.4	48.6	51.4	48.6	45.9	54.1	67.6	32.4	100.0
	%	%	%	%	%	%	%	%	%	%	%
Not-consistent	12	25	15	22	18	19	17	20	13	24	37
	32.4	67.6	40.5	59.5	48.6	51.4	45.9	54.1	35.1	64.9	100.0
	%	%	%	%	%	%	%	%	%	%	%
Total	34	40	34	40	37	37	34	40	38	36	74
	45.9	54.1	45.9	54.1	50.0	50.0	45.9	51.1	51.4	48.6	100.0
	%	%	%	%	%	%	%	%	%	%	%
Chi-Square	5.441		0.8706		0.0540		0.0000		7.7890		
df	1		1		1		1		1		
p value	0.02		0.351		0.816		1.000		0.005		

Source: Primary Data

Conclusion

The present study has examined the personality traits of students and has analyzed the significance of the association between big five personality traits and academic consistency. This study has also analyzed the association of the respondents' personality with factors such as gender, the place respondents hail from, their age, number of siblings they have, and the religion they follow. Results of this study indicate that there is a significant association between an individual's academic success and his or her being more open and emotionally stable. The association of academic consistency with conscientiousness, extraversion and agreeableness is not significant. The study clearly indicates that personality traits vary with religious beliefs and the place the individual hails from. It has also been found that age and gender influences an individual's personality to a certain extent. Youngsters are found to be more open, energetic and sociable, whereas students who are a little older are more agreeable and mature. Also the scores of the respondents indicate a glaring need to develop the emotional intelligence as the scores on neuroticism is low. Gender studies in personality indicate that women are more agreeable than their male counterparts and men are found to be more open. Personality traits are intrinsic differences between people. They are constant aspects of one's individuality and become more pronounced under certain circumstances. Research has demonstrated that traits and groupings of characteristics tend to occur together in many individuals. For example, individuals who are extroverts tend to be more sociable. However, these traits do not always occur together. Personality is complex and varied. It varies with age, gender, region and socio-economic conditions. This analysis undermines the fact that academic consistency and achievement go hand in hand only when there is a fair balance of positive personality traits. However, introspection on the big five personality traits and an understanding of the same enables individuals to display behaviors across several of these dimensions carving a unique personality for themselves.

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The Need for Teaching Business English as part of B-School Curriculum : A Statistical Study

Ivaturi Padmini¹

Abstract

English is the 'global language' of business and international relations, for so many countries worldwide. In spite of the rapid growth of technology for global communications, there are still many companies and individual professionals who fail in their quest for business or professional success and often the failure primarily lies on one of the most basic foundations-the language spoken. Any problem in communication translates to business losses. The lack of proper communication skills creates barriers and distortion leading to miscommunication and breakdown in meaning which can have some very negative repercussions for any company or business set-up. English is not a trend, fad or an up market pursuit in India. It helps one to face interviews, read the best academic books available and access the world offered by the internet. There is a tiny minority of business students who are extremely fluent in English and irrespective of their academic performance get frontline jobs across various industries. On the other hand, there are a large number of those who are technically familiar with the language and even understand it but are unable to communicate though they may be equally intelligent, creative and hardworking. No matter how well they can analyze a company, they are not able to put a sentence together. The present study focuses on examining the scope for integrating Business English with the B School curriculum, thereby increasing the employability skills of the management students and grooming them for corporate environment.

Key Words: Business English, Curriculum, Training, Pedagogy, Communication skills, Employability

Introduction

Communication has enabled mankind to progress and become advanced societies. Highly specialized skills, advances in technology, amazing inventions, spectacular breakthroughs in arts and sciences have limited value unless it is communicated effectively to its intended audience and communicated precisely for specific purposes.

Business English refers to the English language used in trade or business. It focuses on the techniques of business presentations, negotiations, correspondence, writing and other skills needed for business communication. Communication is very important not only for smooth running of a business enterprise but it is also equally, if not more, important for the success and growth of individual executives and professionals.

Employers expect the workforce to possess excellent communication skills apart from knowledge and expertise in their respective technical field. In the present day workplace, individuals require a range of occupationally specific knowledge and skills, personal attributes and attitudes, the ability to transfer knowledge and skills to different situations, etc. Most industry is quite concerned about the noticeable gap in Spoken and Written English. Large scale surveys of language and literacy skills reveal that the work force needs have to be constantly upgraded in terms of appropriate skills required.

Objectives

The Primary objective of the research is to examine the relevance of Business English as a course in B School curriculum and its role in enhancing the employability skills of the management graduates. The study

¹ Senior Assistant Professor in Business English and Soft Skills, Vignana Jyothi Institute of Management, Vignana Jyothi Nagar, Bachupally, Via Kukatpally, Hyderabad-90, Andhra Pradesh. Email ID: i.padmini@vjim.edu.in

also aims at exploring the whole gamut of communication skills –from speaking to writing, the need to acquire the right skills and behaviors to manage efficiently and achieve a high performance level in today’s competitive business scenario.

Data

Both primary and secondary data were collected for the study. Secondary data was in the form of literature review. Primary data was collected by conducting a sample survey using questionnaires to B-School students in Hyderabad who had Business English as a credit course in their curriculum. The data have been analyzed using statistical techniques.

Literature Review

Francis W.Weeks, executive director emeritus of the Association for Business Communication found in a 6- year study of job listings at the University of Illinois Coordinating Placement Office that 340 jobs in 30 fields required communication ability. In addition, Vanessa Dean Arnold’s analysis of communication requirements listed in the job descriptions of National Business Employment Weekly found that of 120 listings, 85 emphasized communication skills.

Dowd, K.O (1994) *says* “the most common skill sought by MBA hiring organizations is communication (verbal and nonverbal) with 85% of respondents including this characteristic on the candidate evaluation form.

In a study of 139 Texas business executives, (1994) knowledge of business communication was rated very important by 85%, far ahead of knowledge of principles of management at 20%. The skills that require attention, according to 100 randomly selected Fortune 500 companies are oral presentations, memo-writing, basic grammar and report writing.

Robert Half International (1998) conducted a study of the 1,000 largest employers of the USA in which 96% of the executives reported that today’s employees must have good communication skills. In a survey conducted by the Jones Graduate School of Management, Rice University in 2000, the deans of 96 programs reported that they see communication as one of the greatest teaching priorities of an MBA program.

According to D.Perry (2002) “To stand out from the competition, you must demonstrate the unwritten requirements that are now most in demand: leadership and communication skills....”

National Knowledge Commission (2009), in its report mentioned that command over the English language is perhaps the most important determinant of access to higher education, employment possibilities and social opportunities.

N.R. Narayana Murthy, founder Chairman of Infosys Technologies Limited (2009) opines that a major leadership challenge in the present day business leaders is to successfully address diverse global audiences simultaneously and suggests that in such situations “communication is most impactful and yields best results when you use simple, direct and powerful statements to convey your ideas.”

According to NASSCOM-McKinsey report (April 2009) approximately 75 per cent of fresh graduates from India are not directly employable as they lack communication skills.

A recent survey conducted by FICCI and the World Bank(November 2009) revealed that 64 per cent of the surveyed employers felt that recruits lack basic communication skills like reading, listening and writing, and higher order communication skills which would include influencing, negotiation, etc both written and non-written. According to the FICCI survey, the three most important general skills are integrity, reliability and teamwork, and English communication.

Data Analysis

Exhibit 1: Areas that showed improvement

Respondents were asked to rate themselves on the following parameters as per their improvement on a scale of 1-5 with 1 being the **least** and 5 being the **highest** after taking Business English course for 3 terms.

1. confidence level
2. communication skills
3. listening skills
4. reading skills
5. writing skills
6. fluency in speaking
7. body language
8. vocabulary
9. voice modulation

Factor Analysis:

The TWO factors identified that showed improvement are:

Factor 1 – Presentation skills (Fluency and Body Language)

Factor 2 – Basic Communication Skills in English (Listening, reading, writing skills)

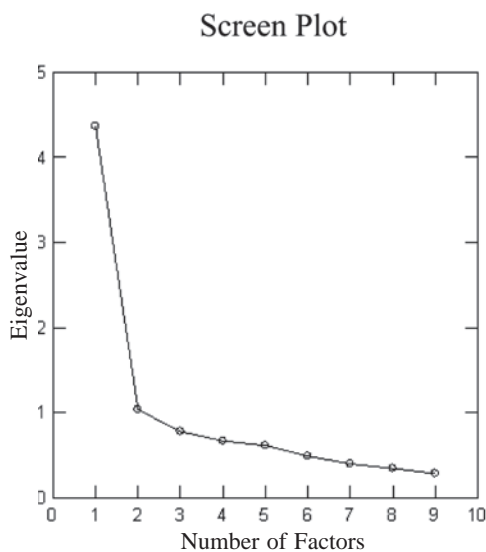


Figure-1

The foundation for a successful manager is proficiency in the written and spoken word. He should be able to organize and express ideas in writing and speaking. In addition, a business student also needs proficiency in oral presentations; Presentations are one of the first managerial skills that a management student needs to acquire. Right or wrong, people form a perception about how competent you are by how you present yourself when you stand and speak (Figure-1). They also form perceptions about the company you represent based on your performance. In fact, public speaking is an easy way to set yourself apart from your competition. A person who is confident in front of a group gives off an air of competence. Management is the art of getting things done. A presentation is a fast and potentially effective method of getting things done through other people. In

managing any project, presentations are used as a formal method for bringing people together to plan, monitor and review its progress. The graph indicates improvement in all the basic skills essential for a B School graduate.

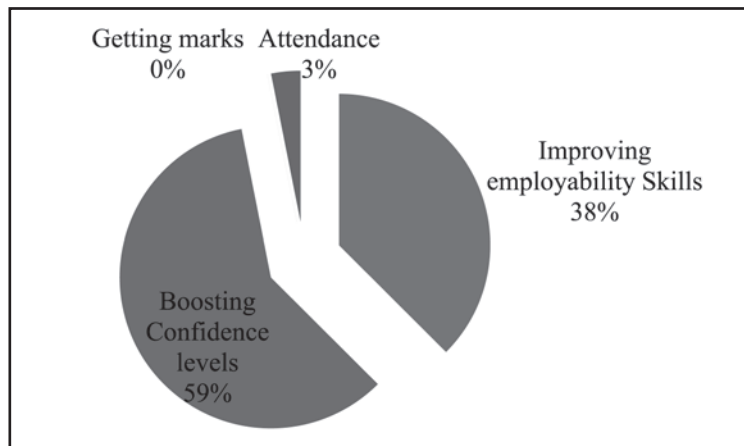


Chart 1: Motivation to attend Business English Sessions

The above diagram shows that 59% attend the Business English Sessions as it boosts their confidence levels. Most of the students are nervous when it comes to speaking in public and expressing their ideas. These sessions provide a platform for ideation and slowly make them come out of their shells. 38% feel that the motivation to attend the Business English sessions is to polish their employability skills. Communication skills are essential for career growth and these sessions make students industry ready. Only 3% come for attendance and nobody attends the sessions only for marks. This shows the take away from the sessions is much more than marks.

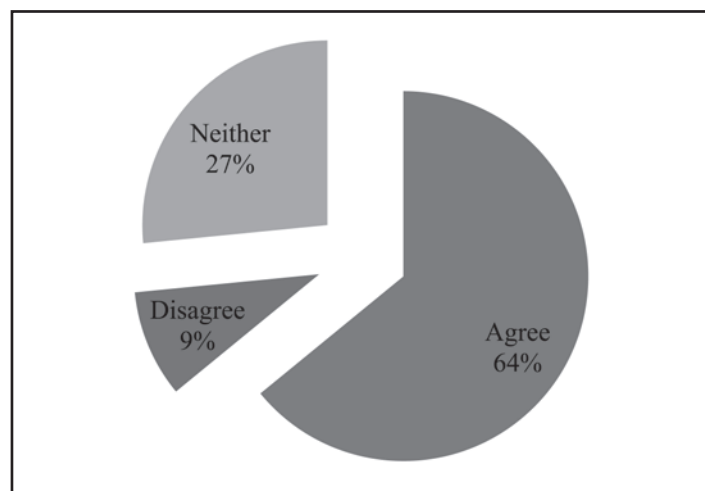


Chart 2: Business English helped in better performance in core Management subjects

64% of the respondents agree that Business English helped them to perform better in core management subjects. The medium of instruction at PG level is English and various assignments and presentations have to be done in English language. The different modules covered in Business English improve their oral and written communication. 9% disagree and probably this group consists of students whose communication skills are above average. 27% are neutral in their opinion (Chart 2).

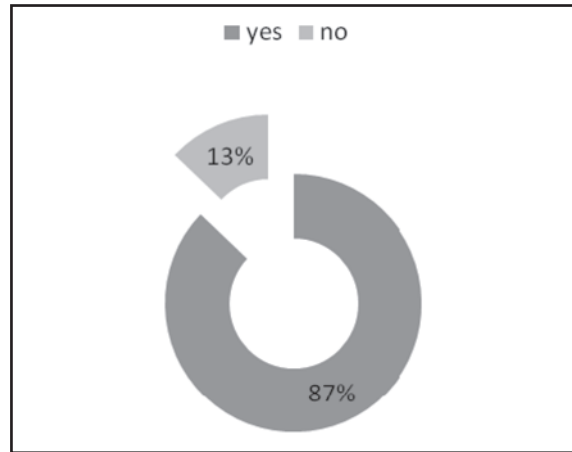


Chart 3: Fair chance of placement

When asked about Business English as a tool for enhancing employability skills, 87% responded positively. They felt that Business English Course would give them a fair chance of getting employed. 13% did not agree with this. (Chart 3)

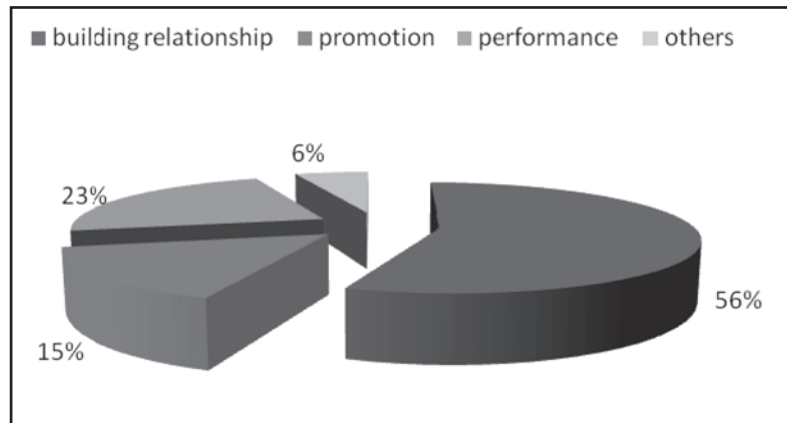


Chart 4: Impact of Business English in future performance

Respondents were asked to choose how the foundations laid by Business English in their PGDM programme would help them once they take up a job. In other words what impact it has on their performance. 56% felt that it would help in building relationships i.e networking which is very important for a manager. 23% stated that it would help them in job performance, followed by 15% who felt it would get them promotions. (Chart 4)

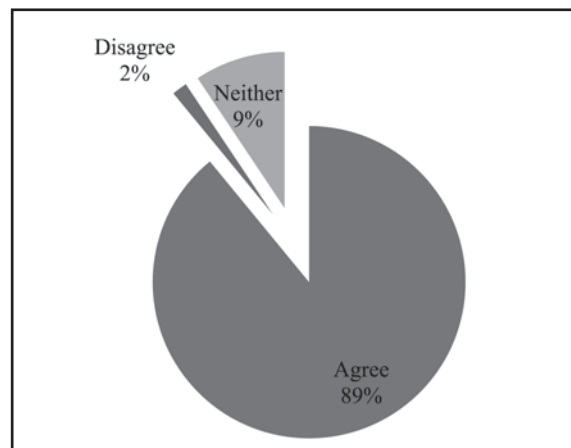


Chart 5: Business English should be a part of B-School Curriculum

The ability to express oneself is perhaps the most important of all the skills a person can possess. The figure shows that majority feels that Business English should be a part of curriculum as it helps them to communicate well. It is not enough if it is taught in the first year but it should continue as a course of study till the end of the programme. (Chart 5)

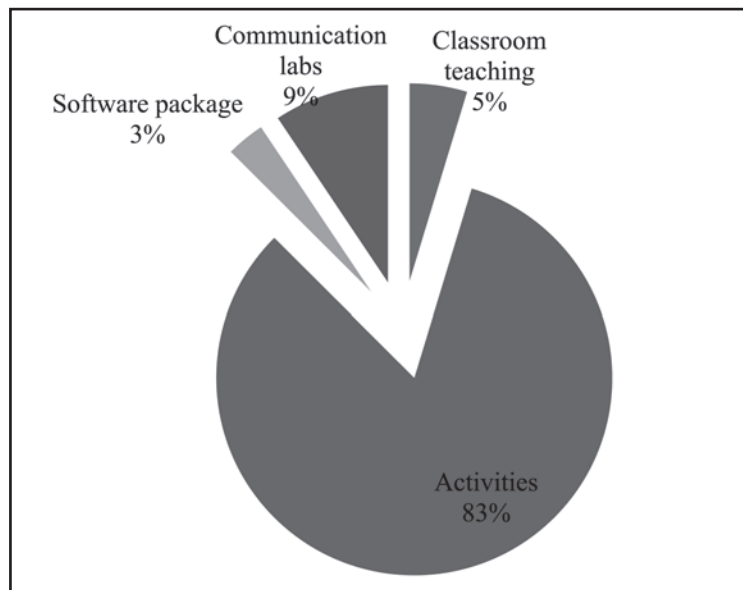


Chart 6: Ideal way to teach Business English

At the end of the questionnaire respondents were asked to suggest what they think as ideal methodology of teaching Business English. 83% felt that it should be taught through activities. The trainer should only be a facilitator. The idea of Communication Labs was advocated by 9% probably because it would help them in pronunciation and vocabulary building. 5% wanted classroom teaching and 3% felt that Business English can be learned with the help of software packages. (Chart 6)

Conclusion

According to the data given it can be concluded that majority of the respondents are in favour of having Business English as part of the B School curriculum. The course equips management students with a liberating confidence. It will be an advantage in interviews and gives more opportunities to widen career prospects. The repercussions of any lackadaisical approach towards this course are manifested in the poor performance of students in placement interviews and once they enter the corporate world. The study can be expanded by conducting surveys in B-Schools across A.P. Interactions with B School faculty members and industry experts will add value to the study.

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Appendix-1

"Variance" Explained by Rotated Components	
1	2
2.801	2.602

Appendix-2

Rotated Loading Matrix (VARIMAX, Gamma = 1.000000)		
	1	2
V1	0.612	0.320
V2	0.589	0.529
V3	0.135	0.770
V4	0.235	0.714
V5	0.193	0.764
V6	0.837	0.135
V7	0.770	0.119
V8	0.463	0.605
V9	0.680	0.367

Appendix-3

Percent of Total Variance Explained	
1	2
31.121	28.909

Does Education influence the Indian Banking Customers' Perception of CRM? A Study of Five Select Public Sector Commercial Banks in Andhra Pradesh State

Vutla Padmaja Rani¹ and V.Madhysudhan Prasad²

Abstract:

This research paper makes an attempt to analyze the Indian banking customers' attitudes towards customer relationship management (CRM) practices from five select public sector commercial banks that are located in Hyderabad and Secunderabad cities of Andhra Pradesh state. A survey instrument was developed to measure the attitudes of the banking customers' towards the CRM issues. A sample size of 2502 respondents was chosen and a research framework was constructed to extract the relevant factors affecting the customers' attitudes towards CRM practices across the five select banks. The respondents differed in terms of tenure of banking and educational levels. Five CRM indicators were considered for understanding the CRM aspects of the service delivery. Anova-I way test was performed to test whether any significant differences existed between the respondents with respect to the seven factors that are derived from this research study. Chi-Square test was also performed to assess the relationship between the respondents' educational background and their perception of CRM indicators. Suggestions were also offered to improve the quality of service delivery in the five select Indian banks.

Key words: Customer Relationship Management (CRM), and Principal Components Analysis (PCA), Automated Teller Machine (ATM), Electronic Data Interchange (EDI) and Corporate Banking Terminal (CBT).

Introduction

Global banking scenario has undergone fundamental transformation in line with the currently prevailing economic measures like liberalization, privatization and globalization that were introduced by various economies of the world and Indian banking industry is no exception to this ongoing trend. Prior to Liberalization of the Indian economy, public sector commercial banks in India functioned in a secluded environment and therefore the banking transactions were simple in nature, which were distinguished by less competition and customer focus. However, the phenomenon of Globalization has facilitated noteworthy changes in terms of the service offerings that are being put forward to the consumers of Indian Banks. As a consequence the basic features of the banking sector in India too have undergone a significant change in the last decade. The invasion of banking industry by technology has created an information age and it prompted public sector commercial banks to design world-class customer service systems and practices to meet the growing customer needs. It is against this background, research studies on understanding the attitudes of the customers and the need for designing effective customer service delivery interventions are gaining importance. Competitive spirit unleashed by the private and multinational banks also necessitated public sector banks to focus on designing effective customer relationship management (CRM) systems.

Contemporary research studies have revealed that the dynamic influences of the changes in the current Information Technology (IT) have redefined the service delivery trends in the service oriented organizations in general and public sector banks in particular. Several research studies that were conducted on the technology

¹ Assistant Professor, Department of Business Management, Institute of Computers & Business Management, Mehdipatnam, Hyderabad, E-Mail: pjr303@gmail.com

² Associate Professor, School of Management Studies, Jawaharlal Nehru Technological University, Kukatpally, Hyderabad, E-Mail: drvmprasad@yahoo.com.sg

aspect of the Indian banking scenario and have focused on the emerging technological issues which include the usage of Automated Teller Machines (ATM) and Corporate Banking Terminal (CBT) for the speedy transaction of banking services. Based on Reserve bank of India (RBI) guidelines, Internet banking, mobile banking and phone banking services are also incorporated to facilitate quick transactions. Of late, RBI has also introduced Electronic Data Interchange (EDI) service for overseas customers. It was also observed that technology played a vital role in supporting innovative service offerings, providing novel ways of service delivery and thereby enabling the customers in getting better customer service. The present research paper makes an attempt to understand the banking customers' attitudes towards CRM issues by addressing the issue of the existing relationship between the educational profiles of the respondents and their perception towards CRM indicators.

Literature Review

Several research studies that were conducted in India and abroad highlighted the need for designing effective CRM systems for modern manufacturing organizations in general and service oriented firms like commercial banks in particular in order to derive competitive advantage and higher revenues. Research studies also demonstrated that modern enterprises are implementing innovative CRM systems through multiple touch points of CRM systems such as call centers to disseminate information to customers, websites to enable flow of information from anywhere in the world, and interactive kiosks to cater to the ever changing customer needs across various service units.

Although there is a vast amount of literature review on the CRM aspects of banking sector, the following research studies have influenced the current research study. Ann, (2009), made an attempt to address the challenges that are faced by modern financial institutions while using mobile banking services through mobile banking. A similar study made by Lauren, (2009), revealed that mobile banking adoption is encouraged by the speed of the banking transactions, effectiveness in transaction of service and location advantages. His study was primarily focused on the need and importance of designing modern CRM interventions. Mariappan (2005) conducted another study about the attitudes of Non Resident Indians (NRI) towards CRM in the Middle East scenario.

Research study conducted by Elango & Gudep,(2006), highlighted the issues in delivering quality based service delivery with a focus on public sector commercial banks scenario in India. They made an attempt to analyze the Indian banking customers' attitudes towards the CRM Practices through a multivariate research design by using five CRM indicators. Their research findings revealed that the CRM aspect of banks is understood in terms of the software programs such as accounting systems software, which enables value addition over a long period of time. Padwal, (2004), conducted research on understanding attitudes of Indian banking customers' towards CRM in banks and usage of technology. His research findings revealed that the mobile technology has changed the design and delivery of global financial services. Ananthkrishnan (2004) also conducted a research study on the challenges faced by Indian banks in evolving effective service delivery systems. His research study highlighted the need for designing modern service delivery systems to ensure that the banking customers are satisfied. It was observed that the global scenario in the banking industry is influenced by the bank budgets and IT interventions that facilitate continuous customer satisfaction.

Need of the Study

The CRM related studies are gaining relevance in the current Indian banking scenario against the backdrop of the various challenges that are posed by multinational banks and private banks because of liberalization and globalization of the economy. The present study becomes important in the light of the observations made by different committees constituted by RBI, like Narasimhan committee on financial sector reforms, Gopiora committee on customer service, Rangarajan committee on mechanization and Talwar committee on customer service.

Objectives of the Study

The broad objectives of this research study are as following.

1. To identify the factors which reflect the CRM aspects in the select public sector commercial banks in India?
2. To test whether there is a significant difference among the respondents on the basis of tenure of banking with regard to seven factors that are derived from the study.
3. To assess the influence of respondents' educational background on the perception of CRM indicators.
4. To offer suggestions to improve the quality of service delivery in the select Indian public sector banks.

Scope of the Study

The scope of the study is limited to the survey of customers of five select public sector commercial banks namely State Bank of India (SBI), State Bank of Hyderabad (SBH), Andhra Bank, Punjab National Bank and Indian Overseas Bank of seven localities in Hyderabad and Secunderabad cities of Andhra Pradesh state.

Research Hypotheses

Hypothesis 1: There is no significant difference among the respondents on the basis of tenure of banking with respect to the seven derived factors.

Hypothesis 2: There is an association between the respondents' educational background and their perception of CRM indicators.

Sample Size and Nature of Respondents

The sample size is 2502. The respondents are Indian public sector banking customers, drawn from five select banks, who were holding a banking account in Hyderabad and Secunderabad cities of Andhra Pradesh state in India. Cluster sampling method was used for this research study. Seven banking locations (clusters) were considered from Hyderabad and Secunderabad cities in Andhra Pradesh state in India. These clusters are based on the north, south, east, west and central zones of the five select banks in Hyderabad and Secunderabad cities of Andhra Pradesh state.

The respondents were drawn from the five select banks located in two select cities and they differed in terms of four types of tenure of banking (1 year, 2 years, 3-5 years and above 6 years) and four types of educational background (Post Graduate, Graduate, Secondary and below Secondary). Based on the survey of literature review, five CRM indicators (Internet Banking, Phone Banking, Mobile Banking, ATM Banking and Relationship Banking) were considered for this study.

Sources of Data Collection

Research data was collected from both primary and secondary sources. The primary data was collected by administering questionnaire to the respondents. Questionnaires were administered to them by meeting them in their respective offices with prior appointment. In addition to this, personal interviews were also conducted to understand the respondents' attitudes towards CRM aspects in the five select banks. Secondary data sources were also used to collect the data for this research study. Bulletins from banking staff colleges which include RBI publications and manuals were major sources of secondary data. Various other sources like journals and magazines, which focus on the contemporary issues in the banking areas, were also referred.

Method of Research

A survey instrument of 49 statements (variables) was developed to measure the attitudes of the respondents' from five select banks towards CRM practices by using Principal Components Analysis (PCA) method. A

sample size of 2502 respondents was chosen and a research framework was constructed to extract the relevant factors affecting the customers' attitude towards CRM practices in the five select banks.

In line with the proposed research design, eigenvalue of more than 1 was identified and the relevant factors have been obtained accordingly by linking them to the corresponding statements in the questionnaire. Further analysis of the results has indicated that a total of 66.462% the variance (information from the original 49 statements) was observed. Seven factors were derived from this study. They are Service Delivery, Service Quality, Relationship Banking, Convenient Banking, Technology Savvy, Service Offerings and Traditional Banking.

Anova-I way test was performed to test the significant differences between the respondents with respect to the seven factors derived from this study. Chi-Square test was also performed to assess the association between the respondents' educational background and their perception of CRM indicators. Suggestions were offered to improve the quality of service delivery in the five select Indian banks.

Frequency Distributions

The frequency distribution of the respondents' hailing from five select banks is displayed below (Table 1). The frequency distributions of four types of tenure of banking account (Table 2), four types of educational levels (Table 3) and awareness of CRM indicators of the respondents (Table 4) are also displayed below.

Table 1: Distribution of Frequencies of Response Rate among five Select Banks

Banks	Frequency	Percent	Valid Percent	Cumulative Percent
Andhra Bank	446	17.8	17.8	17.8
State Bank of India	533	21.3	21.3	39.1
State Bank of Hyderabad	781	31.2	31.2	70.3
Punjab National Bank	379	15.2	15.1	85.5
Indian Overseas Bank	363	14.5	14.5	100.0
Total Respondents	2502	100.0	100.0	

Table 2: Distribution of Frequencies of Response Rate among four Types of Tenure of Bank Account

Tenure	Frequency	Percent	Valid Percent	Cumulative Percent
1 Year	672	26.9	26.9	26.9
2 Years	694	27.7	27.7	54.6
3-5 Year	622	25.1	25.1	79.7
Above 6 years	509	20.3	20.3	100.0
Total	2502	100.0	100.0	

Table 3: Distribution of Frequencies of Response Rate among the four Types of Educational Levels

Education	Frequency	Percent	Valid Percent	Cumulative Percent
Post Graduate	670	26.8	26.8	26.8
Graduate	673	26.9	26.9	53.7
Secondary	634	25.3	25.3	79.0
Below Secondary	525	21.0	21.0	100.0
Total	2502	100.0	100.0	

Table 4: Distribution of Frequencies of Awareness With Regard To Five CRM Indicators

Indicators	Frequency	Percent	Valid Percent	Cumulative Percent
Internet Banking	175	7.0	7.0	7.0
Phone Banking	340	13.6	13.6	20.6
Mobile Banking	224	9.0	9.0	29.5
ATM Banking	815	32.6	32.6	62.1
Relationship Banking	948	37.9	37.9	100.0
Total	2502	100.0	100.0	

Note: The percent and valid percent do not add up to 100 due to rounding off.

Anova for Respondents Based on Tenure of Banking

Both Null hypothesis and Alternate hypothesis are formulated to test the significant differences between the respondents based on the tenure of banking across the seven factors. They are as following.

H_0 : There is no difference among the respondents on the basis of tenure of banking with regard to seven factors.

H_1 : There is difference among the respondents on the basis of tenure of banking with regard to seven factors.

Table 5: Anova Table for respondents based on Tenure of Banking

Factors Derived from the Study	Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance
<i>Service Delivery</i>	Between Groups	0.087	3	0.029	0.029	0.993
	Within Groups	457.913	2455	1.001		
<i>Service Quality</i>	Between Groups	0.417	3	0.139	0.139	0.937
	Within Groups	457.583	2455	1.001		
<i>Relationship Banking</i>	Between Groups	1.202	3	0.401	0.400	0.753
	Within Groups	456.798	2455	1.001		
<i>Convenient Banking</i>	Between Groups	0.785	3	0.262	0.261	0.853
	Within Groups	457.215	2455	1.001		
<i>Technology Savvy</i>	Between Groups	0.442	3	0.147	0.147	0.932
	Within Groups	457.558	2455	1.001		
<i>Service Offerings</i>	Between Groups	1.923	3	0.641	0.641	0.589
	Within Groups	456.077	2455	1.000		
<i>Traditional Banking</i>	Between Groups	0.913	3	0.304	0.304	0.823
	Within Groups	457.087	2455	1.001		

Interpretation for respondents based on Tenure of Banking

For each of the factors I to VII mentioned in Table 5, the probability value (p) is higher than 0.05 (level of significance), and therefore the null hypothesis formulated for each factor (at 95% confidence level) may be accepted. Hence, it can be concluded that there is no significant difference among respondents with respect to the attitudes towards CRM for each factor i.e. Service delivery, Service quality, Relationship banking, Convenient banking, Technology savvy, Service offerings and Traditional banking.

Chi-square Test to Test the Association Between Educational Profile of Respondents and their Perception of CRM Indicators

Chi-Square test is used test the association between the educational profile of the respondents and their perception of CRM indicators. Both Null hypothesis (H₀) and Alternate hypothesis (H₁) are formulated and they are as following.

H₀: Educational Profile of the respondents has no influence on the Indian banking customers' perception of CRM indicators.

H₁: Educational Profile of the respondents has an influence on the Indian banking customers' perception of CRM indicators.

Table 6: Chi Square Table of Educational Profile of Respondents and CRM Indicators

			CRM Indicators					
Education			<i>Internet Banking</i>	<i>Phone Banking</i>	<i>Mobile Banking</i>	<i>ATM Banking</i>	<i>Relationship Banking</i>	<i>Total</i>
	<i>Post Graduate</i>	Count	42	96	65	208	259	670
		Expected Count	46.9	91.0	60.0	218.2	253.9	670.0
	<i>Graduate</i>	Count	49	98	54	220	252	673
		Expected Count	47.1	91.5	60.3	219.2	255.0	673.0
	<i>Secondary</i>	Count	50	84	48	215	237	634
		Expected Count	44.3	86.2	56.8	206.5	240.2	634.0
	<i>Below Secondary</i>	Count	34	62	57	172	200	525
		Expected Count	36.7	71.3	47.0	171.0	198.9	525
	<i>Total</i>	Count	175	340	224	815	948	2502
	Expected Count	175.0	340.0	224.0	815.0	948.0	2502	
<i>Pearson's Chi-Square Value</i>			<i>0.695 at Degree Of Freedom =12 (α = 0.05)</i>					

Interpretation

A higher value of Pearson's Chi Square Test (0.695) demonstrates that there is no significant interrelationship between the educational profile of the respondents and their attitude towards the CRM indicators. Since this value 0.695 is higher than both 0.05 and 0.10(levels of significance), the Null Hypothesis (H₀) is accepted.

Summary of the Research Findings

A summary of the research findings is presented below.

- 1) The respondents' attitude towards the CRM aspects in five select public sector banks is reflected in terms of seven factors (Service Delivery, Service Quality, Relationship Banking, Convenient Banking, Technology Savvy, Service Offerings and Traditional Banking) that have emerged from the analysis of the research data. Anova-I way test was performed to test the differences among these factors.
- 2) Analysis of the Anova-I way test results on four types of tenure of banking account(1 year period, 2 year period, 3-5 years and above 6 years) from five select banks have revealed that the respondents shared similar attitude towards the CRM aspects from the two select cities , across the seven factors.
- 3) Analysis of the Chi-Square test results on the interaction of four types of education (Post Graduate, Graduate, Secondary and Below Secondary) and five CRM indicators (Internet Banking, Phone Banking, Mobile Banking, ATM Banking and Relationship Banking) revealed that educational background does not influence CRM perceptions of the respondents.

Suggestions for Improving Service Delivery

The following suggestions are offered to improve the service delivery in the Indian public sector commercial banks.

- 1) Indian public sector banks may consider using the technology to increase the speed of the service delivery. Emphasis may be laid on phone banking, e-banking and mobile banking.
- 2) Bank employees may focus more on the relationship banking aspects such as greeting the customers with smile and making them aware of tax saving services offerings.
- 3) Indian public sector banks may design innovative services backed by modern facilities such as starter kit with net banking facility whenever a new account is opened by a banking customer.
- 4) Banking staff may make efforts to increase the quality of service delivery by reducing the waiting time of customers in the queue.
- 5) Indian public sector banks may focus on conducting staff development programs on a regular basis, in order to update them about the changing policies of various new service offerings. This will help the banking staff to respond to the customers' queries with speed and accuracy.
- 6) Public sector banks may also focus on designing visually attractive e-brochures on the existing and new service offerings. This will enable the customers to gain meaningful insights on the banking services that are provided by banks time to time.
- 7) Indian public sector banks may also consider conducting customer meets on regular basis in order to understand the customer issues. This will also help in increasing the banks' relationships with the existing customers.

Conclusion

The findings of this research study further revealed that the educational profile of the respondents has no influence on the perception towards CRM indicators. In line with the research findings, an effort was made to offer suggestions to strengthen the service delivery in the five selected public sector commercial banks in the two select cities. These suggestions are based on the findings of the current research study and the suggestions that are offered by the respondents. The suggestions mainly focused on the issues like banking staff interaction with customers on operational issues on technology usage, relationship banking and effective service delivery. This has implications for Indian public sector commercial banks which aim at designing and implementing

effective customer service interventions. Focusing on these suggestions would help the five select commercial banks in improving the quality of service delivery in the two select cities that are chosen for this research study.

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Impact of Financial Crisis on India's Merchandise Trade and Services Trade

Mohd. Akbar Ali Khan¹ and A. Kotishwar²

Abstract

India has adopted globalization policy since 1991. In this paper an attempt is made to examine the exports and imports behavior during pre and post financial crisis period. In the face of global slowdown and financial crisis, Indian exports have shown a good measure of resilience during 2008. In fact, India recorded a marginally higher growth rate of 21.8 percent during 2008 as compared to 21.5 percent during 2007. Trade driven globalization is also manifested in the changing geography of the world economy today. Its key features include the emergence of a dynamic South as an additional (to the North) motor for world trade and investment, and an expansion in South-South trade in goods, services and commodities

This paper also aimed to analyze factors contributing to financial crisis and its effect on international trade and to study trends in the Merchandise Trade performance in India before and after financial crisis to study trends in the Service Trade performance in India before and after financial crisis. The study revealed that India's services sector has matured considerably during the last few years and has been globally recognized for its high growth and development. The study also revealed that Imports of commercial services have become important in recent years reaching US\$ 52.5 billion in 2007-08 though its growth moderated to 18.5 per cent in 2007-08. The efforts are needed to balance the trade and consider expansion of trade in other countries of the world. Major trading partners should be given importance and more of liberalizing attitude is to be followed.

Introduction

The world is more closely knit, using different means of organization, communication and production, and it is more subject to rapid changes than ever before. Pattern of international trade, capital and competition have been changing dramatically in recent decades. In today's integrated world, the expansion of trade and commerce has provided numerous opportunities and at the same time enormous challenges have cropped up in the process. In the face of globalization many developing countries have increasingly adopted policies of economic liberalization and are focusing more on International Trade. The decade of 1990's opened with an unprecedented economic crisis, which turned into an opportunity to transit from an insular and import substituting to an outward looking and Export Oriented Economy. Today, India has a hub for International Trade and Business for several products and services (Mohd Akbar Ali Khan 2006).

Today no economy can afford to be in separation. The benefits of international trade are mainly in the form of foreign exchange and Technology Development resources utilization, which ensures general upliftment of the overall global economic standards. Exports and Imports are two sides of the same coin, and it is necessary to maintain a balance between the two for a sustainable economic development. We need to stress both on exports and imports to sustain growth and development in the long run. In fact, import should preferable of lead to further the export potential of an economy.

Financial Crisis: Origins of the Financial Crisis

The current financial crisis was triggered off by a fall down in the value of certain financial instruments relating to the housing sector of the United States of America that were held by banks and other non-banking financial institutions

¹ Professor & Head, Department of Commerce, Osmania University, Andhra Pradesh. E-mail: maakhan786@gmail.com

² Associate Professor & Head, Department of Master of Business Administration

After US house prices started falling and interest rates began rising, the least creditworthy (sub-prime) borrowers began defaulting, causing losses to investors in mortgage-backed securities. Although the potential losses from defaults could be absorbed by the system, the losses for some individuals were too big for them to bear. Unfortunately, the nature of the securities made it difficult for investors, institutions and authorities to know the scale and dispersion of exposures and potential losses throughout the financial system.

The reasons for the crisis are varied and complex. Some of them include boom in the housing market, speculation, high-risk mortgage loans and lending practices, securitization practices, inaccurate credit ratings and poor regulation.

The world economy is currently facing a severe global crisis that has spilled from the financial sector to the real economy, including international trade in manufactures, commodities and services. By virtue of globalization, the moment the financial crisis hit the real economy and became a global economic crisis, it was rapidly transmitted to many developing countries through a contraction in trade finance and a slowdown in demand affecting bilateral trade flows.

Literature Review

Economists pay attention to the role played by trade in financial crises for two reasons. First, trade imbalance has been shown to be one of the important factors that trigger financial crises. Current deficits may decrease foreign reserves. As Krugman (1973) pointed out, a currency crisis is more likely to happen in an economy which does not have enough foreign reserves. Second, financial crises may be transmitted through trade linkages from an affected country to others despite the latter's relatively good fundamentals. In explaining such contagion effects, economists have tried to identify the channels through which contagion was spread. As trade is the most obvious economic linkage between countries, much research has been devoted to this connection. While the importance of trade imbalance in triggering crises is widely accepted, there is no agreement on the importance of trade in transmitting financial crises.

Eichengreen and Rose (1999) used a binary-probit model to test whether bilateral trade linkages transmitted crises between industrial countries between 1959 and 1993. They found that the probability of a financial crisis occurring in a country increased significantly if the country had high bilateral trade linkages with countries in crises. They concluded that trade was an important factor.

Glick and Rose (1999) conducted a similar analysis with more countries between 1971 and 1997 and obtained a similar result. Forbes (2000) used company's stock market data to study the importance of trade in financial crises transmission and his result also showed that trade played an important role.

However, other papers have provided different answers to the problem. For instance, Goldstein, M (1998) thought that trade was unimportant in the East Asian Crisis because the direct bilateral trade volumes between these economies were very small. Masson (1998), analyzing the Mexican crisis and the Asian crisis, obtained similar results.

Fischer (1999) listed strong exports, expansionary domestic policies and stable foreign financial conditions as the key determinants of recovery after a financial crisis. Nevertheless, Hong and

We attempt in this paper to explain this fact by looking more closely at the channels which can affect trade's reaction to financial crises. We argue that while the exports' reaction is an important determinant of crises recoveries; some elements may affect negatively exports after such an event, thus preventing trade from having beneficial effects on the country's recovery.

Objectives of Study

This study has two main objectives

1. To study trends in the Merchandise Trade performance in India before and after Financial crisis.
2. To study trends in the Service Trade performance in India before and after Financial crisis.

Methodology

The present study is based on secondary data. Data have been collected from various issues of the Economic Survey, Government of India, Financial Express, Report of currency, Annual Reports of Reserve Bank of India (RBI), Statistics of the Foreign Trade in India, Foreign Trade Review, CMIE Reports, WTO reports and other relevant books and publications. It covers a period of study 2005-2009.

To analyze the data the average percentage growth in exports and imports has been calculated. To study the composition of India's exports and imports, selected commodity composition of exports and imports have been analyzed and average percentages share has also been calculated for comparison purposes.

India's Merchandise Trade-Export

In terms of export destination, the United States continued to be the principal destination accounting for 11.8 percent of India's total exports in 2007-08, followed by UAE (10.5%), China (5.6%), and Singapore (4.9%).

India's merchandise exports reached a level US \$ 177,499 billion during the year 2007-08 registering a growth of 22 per cent over the previous year. The performance has been very encouraging during the last year

Table No 2: Merchandise Trade: India's Export Trade Performance (2005-08)

	2005	2006	2007	2008
Merchandise exports (million US\$)	95,096	120,254	145,325	177,499
Annual percentage change	-	26.45	52.81	86.65
Share in world total exports	0.91	1.00	1.04	1.10
Breakdown In Economy's Total Exports				
By Main Commodity Group				
Agricultural products (%)	10.1	11.7	11.0	12.0
Fuels and mining products (%)	20.0	19.5	24.3	24.4
Manufactures (%)	69.4	68.0	63.6	63.2
By main Destination				
1. European Union	21.5	22.5	21.7	21.6
2. United States	16.5	16.9	13.8	11.8
3. United Arab Emirates	8.8	8.3	9.9	10.5
4. China	6.6	6.6	6.5	5.6
5. Singapore	4.8	5.3	4.4	4.9

Source: Compiled from the WTO Trade Profile reports (2005-08)

The export growth in India in the recent years is partly on account of a favorable international environment resulting from a sustained growth in average world real GDP by more than 5 per cent and world trade by more than 9 per cent since 2004. This has led to booming trade volumes in the world market. However, this alone does not entirely explain India's unprecedented export growth. In the recent years, Government has made a conscious and concerted effort to reduce trade barriers, bring down transaction costs and facilitate trade. Exports from India have also responded to these domestic reform measures and policy initiatives.

A deceleration in the growth of exports during the current year i.e. 2007-08. Indian rupee has been appreciating against major convertible currencies particularly US dollar since September 2006. Between December 2006 and December 2007, the rupee has appreciated by 13.17 per cent against US dollar. The recent

rupee appreciation has been a major source of slow down in the growth of exports particularly of products with low import intensity and high employment content. Quick estimates available for the month of December 2007 show negative export growth for important items such as Ready Made Garments (RMG); Cotton Yarn, Fabric, Made-ups, etc.; Iron Ore; Leather and Leather manufactures, Plastic & Linoleum; Man-made Yarn/fabrics, Marine Products; Carpet; Cashew; Handicrafts etc.

Table No 3: India's Share and Percentage Growth/Change of Major Exports

Commodity Group	(Percentage of Share)				Growth Rate (Per cent) *			
	2004-05	2005-06	2006-07	2007-08	2004-05	2005-06	2006-07	2007-08
I. Primary Products	15.4	13.5	15.57	16.87	18.9	18.5	20.20	39.81
Agriculture & allied	10.2	9.5	10.03	11.28	19.8	24.7	24.18	45.10
Ores & allied	5.2	4.0	5.54	5.59	17.4	6.0	13.61	30.24
II Manufactured goods	72.0	68.4	67.18	63.10	19.6	18.1	17.03	21.22
Textile incl. RMG	14.5	12.9	13.74	11.90	20.4	33.5	5.92	11.78
Gems & Jewellery	15.1	12.7	12.64	12.06	12.8	-0.6	2.88	23.17
Engineering and Goods	20.7	22.8	23.39	22.90	23.4	48.1	36.14	26.33
Chemical & related products	11.6	11.1	13.71	12.98	17.3	28.4	17.37	22.16
Leather & Leather Manufactures	2.6	2.4	2.39	2.15	11.1	7.7	11.82	16.10
Handicrafts (incl. carpet handmade)	1.2	1.1	0.35	0.31	30.3	5.2	-5.19	16.03
III Petroleum, Crude & Products (Including Coal)	11.5	16.5	14.78	17.39	66.2	106.2	60.48	51.85
Total Exports	100	100	100	100	23.4	27.3	22.62	29.05

Source : DGCI&S, Kolkata.and own calculations * Growth rate in US dollar terms

High export growth in 2007-08 was due to the high growth of all the three major category of exports, namely, petroleum products with 51.85 per cent growth, manufactured goods with 21.22 per cent growth and primary products with 39.81 per cent growth. In the primary products sector, exports of agricultural and allied products grew by nearly 45 per cent. Export growth in manufactures was powered by the high growth of important items like gems and jewellery at 23.2 per cent and chemicals and related products at 22 per cent and moderate growth of engineering goods at 14.5 per cent and textiles including RMG at 11.8 per cent.

India's Merchandise Trade- Import

There was relatively less change in the composition of imports than that of exports (Table No 6). POL continues to be the single major item of import with its share stabilized at the 30-31 per cent level prior to 2007-08. This share increased to 32.8 per cent in 2008-09 due to high rise in oil prices. The share of capital goods imports with high rise in 2007-08 fell sharply in 2008-09 to 13.4 per cent partly due to relatively lower growth in imports of machinery and transport equipment as a result of global recession and partly due to rise in shares of POL and fertilizers in the import basket.

Table No 4: India's Import Trade Performance (2005-08)

	2005	2006	2007	2008
Merchandise imports (million US\$)	134,831	174,845	216,622	293,374
Annual percentage change	37	39	23	25
Share in world total exports	1.25	1.41	1.52	1.79
Breakdown In Economy's Total Imports				
By Main Commodity Group (
Agricultural products (%)	5.1	4.2	4.4	4.0
Fuels and mining products (%)	38.4	38.7	40.2	45.6
Manufactures (%)	48.5	48.5	46.3	43.3
By main origin				
European Union (25)	17.1	17.2	14.8	13.9
United States	6.3	7.3	6.5	7.8
China	6.2	6.3	11.2	10.0
Switzerland	5.3	4.4	-	-
United Arab Emirates	4.2	3.3	5.4	6.2

Source: Compiled from the WTO Trade Profile reports (2005-08)

Table No 5: India's Share and Percentage Growth/Change of Major Imports

Commodity Group	(Percentage of Share)				Growth Rate *			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
I. Food and allied products.	2.5	2.9	2.3	2.2	-4.7	42.4	8.3	7.2
1. Cereals	0.0	0.7	0.3	0.0	36.8	3589.7	-46.8	-93.9
2. Pulses	0.4	0.5	0.5	0.4	41.3	53.8	55.2	-4.6
3. Edible Oils	1.4	1.1	1.0	1.0	-17.9	4.2	21.4	32.8
II Fuel of which	32.1	33.2	34.2	36.4	44.8	29.0	39.4	25.2
4. POL	29.5	30.8	31.7	32.8	47.3	30.0	39.4	22.4
III Fertilizers	1.3	1.6	2.0	4.8	59.4	52.4	66.2	164.2
IV Capital goods, of which	15.8	15.4	18.7	13.4	62.5	21.8	63.8	11.8
5. Machinery except electrical & Machine Tool	7.4	7.5	7.9	7.3	49.0	24.9	43.3	7.1
6. Electrical Machinery	1.0	1.1	1.2	1.1	25.9	30.3	53.3	12.7
7. Transport Equipment	5.9	5.1	8.0	2.8	104.2	6.8	113.1	-1.8
V Others, of which	43.7	43.8	38.9	39.0	21.1	24.6	20.2	15.2
8. Chemicals	5.7	5.2	4.9	5.3	23.2	14.1	25.9	24.3
9. Pearls, precious & semi-precious stones	6.1	4.0	3.2	4.9	-3.1	-18.0	6.5	76.5
10. Gold & Silver	7.6	7.9	7.1	6.8	1.5	29.4	22.0	10.1
11. Electronic Goods	8.9	8.6	8.2	7.4	32.5	20.6	29.3	6.4
Total Imports	100	100	100	100	33.8	24.5	35.4	21.8

Source: Calculated from DGCIS, Kolkata.

* Growth rate in US dollar terms

During 2008-09 high import growth was registered by fertilizers (164.2 per cent) and edible oils (32.8 per cent) to meet domestic demand; pearls precious and semi-precious stones (76.5 per cent) due to revival of gems and jewellery exports and chemicals (24.3 per cent). Cereals import growth was highly negative and pulses import growth was slightly negative. POL import growth which was robust at 46.3 per cent 2009 due to unusually high crude oil prices in the first half of 2008-09, moderated to 22.4 per cent in April-February 2008-09 due to fall in crude oil prices. However as the world recession worsened and import growth became negative from January to March 2009, negative growth was registered in both POL and non-POL imports. Even non-POL non-bullion import growth declined and became negative reflecting the fall in exports and fall in demand for imports by industrial sector.

Services Trade

Services contribute to economic growth and development through the creation of a competitive economy, by providing new jobs, by enhancing access to essential services, and by stimulating trade. Service sectors such as business and finance, telecommunications, construction, environment, distribution, healthcare, education, and cultural services provide the backbone of an integrated and effective economy, nationally, regionally and globally. An improved services economy contributes to improved performance in merchandise trade since the increased sophistication and availability of producer services enhances international competitiveness in the export of primary and manufactured goods. The informal services sector is also an important aspect of the services economy in developing countries.

Services, particularly finance (insurance) and transportation of goods, are traditional complements to goods trade. With the spread of telecommunications and computer technologies, virtually all commercial services have become tradable across borders. The trend of globalization, reinforced by liberalization policies and the removal of regulatory obstacles, has fuelled steady growth of international investment and trade in services.

India's - Export of Commercial Services

In less than two decades, India has become one of the top five exporters of services amongst developing countries, and has surpassed some of the other Asian countries that had dominated the services trade in the 1990s. India has been deemed as a major exporter of services in the world with a market share of 2.72 % in 2008 as against 0.6 % in 1995. India's services sector has matured considerably during the last few years and has been globally recognized for its high growth and development. U.S. is one of the major markets for export of services for India. Its share in total services exports has been around 10% with the growth of services exports to U.S. being higher than that to the world since 2005-06

Table No 6: India's Exports Commercial Services Trade Performance (2005-09)

	2005	2006	2007	2008
Commercial Services <i>exports</i> , (million US\$)	56,094	73,839	89,746	102,648
Annual percentage change			35	23
Share in world total exports	2.32	2.68	2.73	2.72
Breakdown In Economy's Total exports By Principal Service item				
Transportation (%)	10.4	10.5	9.8	10.8
Travel (%)	11.4	10.5	12.4	11.5
Other Commercial Services (%)	78.1	79.0	77.8	77.7

Source: Compiled from the WTO Trade Profile reports (2005-09)

India is a major services exporting country with around 3% of the world total service exports. India's exports of services are mainly to the EU and the US. The latter alone accounting for around 11% of India's total services exports.

Services exports have not been as affected as exports of merchandise. The sub-sectors within services exports that have registered some contraction are travel, insurance, business and communication services. Software services exports, which are for some reason classified under miscellaneous receipts for India have been a major contributor to the growth of services exports, accounting for as much as 45% of total exports, goods and services combined (2007-08). However the intensity of the adverse impact of the global economic downturn on India's exports is perhaps best demonstrated by noting that even India's software exports recorded a contraction in the fourth quarter of 2008-09 by more than 15%. While the actual decline was confined to only a single quarter, the growth of software exports in 2008-09 has been far from the levels achieved in the years preceding the global crisis.

Table No 7: India's Share and Percentage Growth/Change of Major Export Services

Commodity Groups	(Percentage of Share)				Growth Rate *			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
Travel	13.6	10.6	12.1	11.0	17.8	15.7	26.2	6.2
Transportation	11.0	11.3	10.7	10.7	35.1	27.1	18.4	16.3
Insurance	1.8	1.7	1.8	1.4	21.1	-4.5	37.0	-8.2
GNIE	0.5	0.3	0.4	0.4	-21.7	-18.5	34.0	22.2
Miscellaneous of which	73.0	76.1	75.1	76.5	37.5	44.0	26.7	18.4
Software services	40.9	42.9	42.9	46.4	33.3	37.2	26.3	25.9
Non-software services of which	32.1	33.2	32.2	30.0	43.1	54.0	27.2	8.5
Business services	16.1	24.1	19.1	17.1	80.1	138.1	16.4	3.9
Financial services	2.1	2.8	3.6	4.5	136.1	56.1	13.3	45.7
Communication services	2.7	3.2	2.7	2.4	13.8	90.3	5.2	4.1
Total	100	100	100	100	33.3	36.9	25.9	16.3

Source: Calculations based on RBI data.

GNIE : Government not included elsewhere * Growth rate in US dollar terms

Travel, which is represented by the Foreign Tourist Arrivals and Foreign Exchange Earnings, registered a higher year-on-year growth rate of 26.2% in 2007-08 as compared to the previous year growth rate of 15.7%. Foreign Tourist Arrivals during the year 2008 were 5.37 million as compared to Foreign Tourist Arrivals of 5.08 million during the year 2007. Foreign Exchange Earnings (FEE) in US\$ terms during the year 2008 were US\$ 11,747 million as compared to US\$ 10,729 million in 2007. During April-September 2008, However, the impact of global financial meltdown is evident in the latest numbers released by the ministry of tourism, India which reports foreign tourist arrivals at 1.461 million in 4Q 2008-09 were 13.75% lower as compared to 1.694 million in 4Q 2007-08. Also, foreign exchange earnings during the same period were lower at US\$ 2,731 million as compared to US\$ 3,935 million during January to March 2008.

Export of Transportation services had slowed down in past few years registering 26.5% year-on-year growth in 2007-08 as compared to a growth rate of 24.2% in 2005-06.

Non-Software services, under miscellaneous receipts, recorded a fall in year-on year growth rate from 49.3% in 2006-07 to (-7.9%) in 2007-08. Communication, business and financial services were the major contributors to the decline in non-software services. Though Communication and Financial services recorded positive growth rates in 2007-08, the growth rates were substantially lower than previous year growth rates and similarly the decline was also attributable to a major negative growth rate recorded in export of business services. This slowdown is the result of the banking financial services and insurance sector being at the core of global economic slowdown. However, services such as Construction, News Agency, Royalties, Copyrights and License Fees and Personal, Cultural Recreational services registered higher year-on-year growth rates in the non-software category. Amongst the export of business services- Business & Management Consultancy as well as Architectural, Engineering and Other Technical Services registered the largest decline.

In addition, Banking, Financial and Insurance (BFSI) sector which has been the epicenter of this global financial crisis accounts for approximately 50% of the revenues of IT & ITeS providers which makes IT & ITeS highly vulnerable to the current global slowdown in terms of delayed decision making and reduction in IT spending by customers of frontline IT companies.

Services exports reached US\$ 90.1 billion in 2007-08 with a sustained high growth of export of services, which however moderated to 22.1 per cent in 2007-08. Growth has been rapid in the miscellaneous services category particularly software services and business services. The annual average growth of miscellaneous services was 33.8 per cent during 2000-01 to 2005-06 and 31.2 per cent and 20.8 per cent respectively in 2006-07 and 2007-08.

The impact of global recession was relatively less on India's services exports till December 2008 although the services export growth rate during April-December (2008-09), moderated to 16.3 per cent. A negative growth rate of (-) 8.2 per cent in insurance and sharp fall in growth rate to 6.2 per cent in travel services was registered during this period. Even transport services and miscellaneous services registered lower growth. Software services grew at 26 per cent, while financial services registered a robust growth of 45.7 per cent despite the global financial crisis and fall in growth rate in world financial services exports. But business services growth was at a lower rate of 3.9 per cent.

India's - Import of Commercial Services

In terms of imports of services software, miscellaneous, business and financial services were adversely affected suffering a decline of growth rate 11% in 2008-09 compare to 2007-08 that is 33%.

While India's services exports have not been as adversely impacted as merchandise trade, an increasing number of legislative measures and restrictive conditions included in the stimulus packages of the US, the UK, etc. may aggravate the negative impact in the coming period. In the context the agreement at the successive G20 summits to prevent any move towards competitive protectionism is of major importance.

Table No 8: India's Imports Commercial Services Trade Performance (2005-09)

	2005	2006	2007	2008
Commercial Services <i>imports</i> (million US\$)	52,211	63,696	77,200	83,599
Annual percentage change	-	-	33	22
Share in world total <i>imports</i>	2.22	2.41	2.50	2.40
Breakdown In Economy's Total imports By Principal Service item				
Transportation (%)	38.0	39.4	40.3	49.5
Travel (%)	11.1	11.4	11.4	11.5
Other Commercial Services (%)	50.9	49.2	48.3	39.0

Source: Compiled from the WTO Trade Profile reports (2005-09)

The Indian policy response to the dropping of its exports has been principally to provide fiscal incentives in the form of reduced import duties on imports needed for exports and raising the rates of duty drawback available to exporters. In addition, exporters have been given a 2% interest rate subsidy on the refinancing of trade finance as well as for their working capital requirements. This may have helped in the slight recovery that is now being seen in the month on month de-seasonalised data. However, the refinance facility has been recently withdrawn and could affect the export effort.

Table No 9: India's Share and Percentage Growth/Change of Major Imports Services

Commodity Groups	(Percentage of Share)				Growth Rate *			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
Travel	19.2	17.8	19.0	18.3	26.5	12.6	31.1	5.9
Transportation	24.2	21.5	23.8	27.5	83.7	0.0	33.8	26.5
Insurance	3.2	1.5	2.1	2.1	54.6	-25.3	50.8	10.0
GNIE	1.5	1.1	0.9	1.2	28.7	-13.0	5.0	39.9
Miscellaneous of which	51.8	58.1	54.1	50.9	5.7	50.7	-3.0	3.1
Software services	3.9	4.4	6.8	6.3	67.3	71.2	55.1	1.2
Non-software services of which	47.9	53.7	47.3	44.5	2.7	49.3	-7.9	3.3
Business services	22.5	31.9	32.1	26.5	5.9	115.8	7.2	-9.3
Financial services	2.8	3.4	5.6	6.2	16.0	25.1	14.7	21.6
Communication services	0.8	1.5	1.7	2.0	-60.8	142.3	12.7	24.4
Total	100	100	100	100	24.0	26.4	10.7	9.7

Source: Calculations based on RBI data.

GNIE = Government not included elsewhere * Growth rate in US dollar terms

Imports of commercial services have become important in recent years reaching US\$ 52.5 billion in 2007-08 though its growth moderated to 18.5 per cent in 2007-08. Business service is the most important category of service in imports, followed by transportation and travel. However, with a high base rate of growth, business services grew by only 7.2 per cent in 2007-08. Transportation, travel and insurance registered robust growth partly due to lower base effect. In 2008-09 (April December), there was a sharp fall in the growth rate of business services imports (as in the case of business services exports) mainly due to the fall in imports of business and management services and relatively low growth in imports of architectural, engineering and other technical services. Import growth of travel services fell sharply to 5.9 per cent, while transportation import growth registered good growth though it moderated to 26.5 per cent. Interestingly, good growth of imports was registered in financial services and communication services despite the global financial crisis.

Impact of Global slow-down on India's exports

Global economy has witnessed one of the most severe downturn following the worsening of financial crisis since September 2008. WTO Press Release 23rd March 2009 has indicated deceleration in the growth of Real Global Output to 1.7 percent in 2008 as compared to 3.5 percent in 2007 and Merchandise Trade, in volume terms, to 2 percent in 2008 as compared to 6 percent in 2007. Similarly, IMF's World Economic Outlook, April 2009 has also estimated growth in World Output only by 3.2 percent in 2008 (down from 5.2 percent in 2007) and World Trade Volume, both Goods & Services, by 3.3 percent in 2008 (down from 7.2 percent in 2007).

The global slowdown has affected India's exports by way of:

- Default in payment or delayed realization for exports resulting in cash flow difficulties for the exporters;
- Difficulty in executing orders in hand owing to lack of additional credit limit;
- Difficulty in providing covers for high risk countries/ buyers by Export Credit Guarantee Corporation (ECGC);
- Reluctance of exporters to execute orders for fear of defaults; and
- Tougher 'due diligence' by Banks in extending Pre and Post-shipment credit and insurance cover by ECGC

Reasons for Trade Reduction

Trade growth data show declines that are larger than in past slow-downs. A number of factors may explain this.

1. One is that the fall-off in demand is more widespread than in the past, as all regions of the world economy are slowing at once.
2. A second reason for the magnitude of recent declines relates to the increasing presence of global supply chains in total trade. Trade contraction or expansion is no longer simply a question of changes in trade flows between a producing country and a consuming country — goods cross many frontiers during the production process and components in the final product are counted every time they cross a frontier. The only way of avoiding this effect — whose aggregate magnitude can only be guessed at on account of the absence of systematic information — would be to measure trade transactions on the basis of the value added at each stage of the production process. Since value-added, or the return to factors of production, is the real measure of income in the economy, and trade is a gross flow rather than a measure of income, it follows from the reasoning above that strong increases or decreases in trade flow numbers should not be interpreted as an accurate guide to what is actually happening to incomes and employment.
3. A third element in current conditions that is likely to contribute to the contraction of trade is a shortage of trade finance. This has clearly been a problem and it is receiving particular attention from international institutions and governments. The WTO has been playing a role as honest broker by bringing together the key players to work on ensuring the availability and affordability of trade finance.
4. A fourth factor that could contribute to trade contraction is protection. Any rises in protection will threaten the prospects for recovery and prolong the downturn. The risk of aggravated protectionism is rightly a source of concern going forward.

Findings of study

1. India's merchandise exports reached a level US \$ 177,499 billion during the year 2007-08 registering a growth of 22 per cent over the previous year. The performance has been very encouraging during the last year. The growth of exports, so far, has been in line with the targets set out in the Foreign Trade Policy 2004-09.
2. The study revealed that there was relatively less change in the composition of imports than that of exports (Table No 6). POL continues to be the single major item of import with its share stabilized at the 30-31 per cent level prior to 2007-08. The share of capital goods imports with high rise in 2007-08 fell sharply in 2008-09 to 13.4 per cent
3. The study revealed that during 2008-09 high import growth was registered by fertilizers (164.2 per cent) and edible oils (32.8 per cent) to meet domestic demand; pearls precious and semi-precious stones (76.5 per cent) due to revival of gems and jewellery exports and chemicals (24.3 per cent). Cereals import growth was highly negative and pulses import growth was slightly negative.
4. The study revealed that India has been deemed as a major exporter of services in the world with a market share of 2.72 % in 2008 as against 0.6 % in 1995. India's services sector has matured considerably during the last few years and has been globally recognized for its high growth and development.
5. The study revealed that India's exports of services are mainly to the EU and the US. The remaining countries exports accounting for around 11% of India's total services exports.

6. In terms of imports of services software, miscellaneous, business and financial services were adversely affected suffering a decline of growth rate 11% in 2008-09 compare to 2007-08 that is 33%.
7. Imports of commercial services have become important in recent years reaching US\$ 52.5 billion in 2007-08 though its growth moderated to 18.5 per cent in 2007-08.

The trends in India's exports and imports indicate that the impact of slowdown on India was felt with a lag probably due to overtime diversification in India's exports both in terms of composition and direction. However, there is a large scope for further diversification both in terms of composition and direction of exports. Around 30% of exports are still directed towards developed countries, which need to be diversified to developing countries. Share of fewer commodities in top 50% of India's exports at six digit level in 2007 as compared to earlier period reflects the need and scope for further diversification.

Suggestion and Conclusion

The study revealed that since 1991, there has been improvement in the exports which stood at 1.05 per cent of world trade which it is double the exports of 1990. Though, Indian economy has made rapid strides in the process of globalization, Globalization is increasing the integration of national markets and the interdependence of countries worldwide for a wide range of goods, services, and commodities. Several factors have engendered such a transition including the liberalization of tariffs and other barriers to trade; foreign direct investment through trade and investment agreements; autonomous unilateral structural reforms; technological innovations in transport and communications; international development cooperation; and the strategic use of policies, experimentation and innovation.

The study concludes that India's trade reform programme resulted in strong economic growth in the globalization age. The recent slowdown, although partly due to the overall slowdown in the world economy, has demonstrated the necessity of continuing these reform efforts. In particular, difficult decisions are required to redress the fiscal imbalance, by reducing subsidies, completing the process of tariff and tax reform, and stepping-up privatization of state-owned enterprises.

The efforts are needed to balance the trade and consider expansion of trade in other countries of the world. Major trading partners should be given importance and more of liberalizing attitude is to be followed.

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Internet Banking in India : Legal Issues

A. Sudhakar¹ and S. Brinda²

Abstract

Technology has enabled every branch of human activity to perform its required/desired functions with greater accuracy, enhanced speed and increased volume in shortest possible time. Boundaries of space and time have been totally eliminated in the changed scenario, thereby making the entire globe into a small village. Traditional banks being no exception to this change have adopted the technology and have brought in tremendous improvement in their delivery channels. New technology leads to new laws. Laws governing traditional banking services are well defined and are applied to all banking operations in a more or less systematized way. With advent of computers and network technology, banks introduced wide range of internet banking services through transfer of electronic messages between customers' computers and banks' web server.

Introduction

In internet banking, paper based transactions transform into electronic records, human interventions largely eliminated, and banking transactions carried out through the assistance of several third party vendors. In this scenario, fraudsters gain sufficient ground to intrude and carryout fraudulent activities, and thus increase the liability of the banks manifold in case they fail to comply with the provisions of the law. There is thus a need for enactment of adequate legal measures to address the challenges arising out of such situations. Legislation of appropriate laws should focus mainly on two factors, namely a) authentication of electronic record as legally valid document and b) identifying and preventing cyber/online crimes. Since e-commerce related activities have universal applicability, proper laws for cyber activities including internet banking need to be enacted by every nation to ensure that newer technologies do not become tools of exploitation in the hands of fraudsters. In addition, availability of adequate and comprehensive legal framework builds trust in the customers and justification of huge investments in the infrastructure from the banks' point of view. In this background IT Act of 2000 and IT (Amendment) Act 2008, have provided adequate legal support to technology in banking.

This paper attempts to study the legal issues involved in the internet banking and the various challenges faced by the banks in providing internet banking services in the paper less and open environment. Before analyzing the legal aspects a brief note on the existing and amended laws related to internet banking is presented.

Cyber Laws in India

Internet Banking which is an extension of traditional banking and which uses internet for receiving information from the customers and delivering services from the banks' side, had put to question the legality of certain types of transactions in the context of above statutes. There was thus a need to effect changes to the existing banking laws through suitable modifications and enact new laws wherever necessary to meet the varying requirements of cyber related activities.

To provide requisite legal support to business and other related activities in the cyber media, the Government of India enacted, the Information Technology Act 2000 and Information Technology (Amendment) Act 2008.

The content and scope of each of these Acts are briefly stated as follows:

Information Technology Act 2000: The Government of India enacted Information Technology Act, 2000 based on the provisions made in the Model Law on E-Commerce (UNCITRAL) and which came into force

¹ Professor and Dean, Faculty of Commerce, Dr. B.R. Ambedkar Open University, Hyderabad 500 033

² Lecturer, Wesley Degree College for Women, Secunderabad

from October 17, 2000. The Act consists of 94 sections segregated into 13 chapters. Four schedules form part of the Act.

The Act aimed to a) provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication b) facilitate electronic filing of documents with the Government agencies and c) amend the Indian Penal Code 1860, the Indian Evidence Act, 1872, the Bankers' Books Evidence Act, 1891 and the Reserve Bank of India Act, 1934 and d) for matters connected therewith or incidental thereto. The Act provided fillip to, a) growth of electronic based transactions b) legal recognition of e-commerce and e-transactions c) facilitate e-governance and d) prevent computer related crimes.

The IT Act 2000 provided requisite boost to e-commerce and also created an environment for e-governance in the country. Minor errors in the act were rectified by the Information Technology (Removal of Difficulties) order of 2002 which was passed on 19th September, 2002.

But the act was not without flaws. Several shortcomings and lacunae were noticed in the provisions of the IT Act 2000 and there was thus a need to bring in changes by way of modification of the existing provisions and incorporating new sections wherever deemed necessary.

Information Technology (Amendment) Act 2008: The Government of India, passed the Information Technology (Amendment) Act, 2008 (hereafter would be referred as, IT (Amendment) Act 2008) in the Parliament on December 23, 2008. After obtaining the assent of the President, the Act was notified on 5.02 2009 and the amendments were enforced from 27.10.2009.

The Department of Information Technology, Government of India, (2010) noted, "The Act upgrades the existing legal framework to instill confidence of the users and investors in the area of Information Technology in the country."

Legal Aspects in Internet Banking in India

Legal aspects in Internet Banking in India have been studied and reviewed with regard to, Review of the IT Act 2000 and IT (Amendment) Act 2008 and Hacking of Computer System.

Factors for Consideration : Internet Banking, though an extension of traditional banking, raises certain issues which require due attention of the law makers. Gupta, Aditya (2010) observed that, "The advent of the internet has resulted in the development of complex legal issues which has mandated a re-evaluation of traditional law and policy by courts and legislatures worldwide". Some of the major aspects which are covered in the enactment are stated as under:

Legal Validation of Electronic Records: The IT Act 2000 u/s 2(1)(t) has defined electronic record as, data, record or data generated, image or sound stored, received or sent in an electronic form or micro film or computer generated micro fiche. In internet banking scenario, the electronic record means, the digital messages sent/received between customers' computers and computers in the banks' internal network of computers.

Internet banking transactions are paperless transactions carried out in digital/electronic medium. From the legal point of view, these records shall meet the requirements of authenticity, data integrity, privacy, and non-repudiation. In addition, there is also a need to preserve the electronic records over a specified period of time as required under the law.

Enactment of laws for recognition of electronic record involves, a) identifying appropriate technology used for data transfer and data storage, and b) certification by the competent authorities to be appended for such records. The process of recognition of electronic record is carried out by way of digital signature or similar electronic authentication techniques, validated by a competent certifying authority.

Digital Signature: Digital signature is a) unique to the subscriber affixing it b) capable of identifying such subscriber and c) linked to the electronic record to which it relates. Controller of Certifying Authority noted, “The future of e-commerce and e-governance depends on the trust that the transacting parties place in the security of transmission and the content of communication. The paper based concepts of identification; declaration and proof are carried through the use of digital signatures in electronic environment. Digital signature, a form of electronic signature, is created and verified using Public Key Infrastructure (PKI) that is based on the concept of a key pair generated by a mathematical algorithm, the public and private keys.”

(Source: http://cca.gov.in/rw/pages/cca_pki_framework.en.do) Bhat (2010) stated, “In recent times, the incidence of cyber crime is increasing across the globe and this is posing a serious challenge to banks and their customers. All the banks are constantly improving their security platforms to protect their online banking transactions from cyber criminals”

Certifying Authorities and Controller of Certifying Authorities: Certifying Authorities are entities authorized by the law to issue digital certificates for use by the individuals/institutions. In India the Central Government established Controller of Certifying Authorities who in turn appoints Certifying Authorities. Certifying Authorities providing digital signatures in India are, a) TCS; b) N Code Solution; c) IDRBT; d) Safe Script; e) MTNL; f) National Informatics Centre (NIC); g) eMudhra and h) Central Board of Excise and Customs.

Offences and Adjudication: Fraudsters have designed multitude of techniques to commit cyber related frauds. McNiven, Valerie (2006), an advisor to the US Treasury Department noted, “Last year for the first time, proceeds from cyber crime was greater than proceeds from the sale of illegal drugs. Cyber Crime is moving at such high speed that law enforcement cannot catch up with it”. Macaffee (2005), noted that, “Information technologies change how societies operate, so it should be no surprise that they have changed crime as well”

Lack of clarity in defining crimes provide shelter for the fraudsters to escape from punishment and further makes the job of investigation officers a difficult proposal. Appropriate cyber laws need to be enacted by the concerned government, to a) provide compensation to the persons who have incurred loss on account of fraudulent withdrawal of money from their bank accounts and b) punish the fraudsters who have caused loss to the banks/banks' customers.

Review of Legal Aspects in Internet Banking in India

Enactment of the IT Act 2000 and IT (Amendment) Act 2008, Anti Money Laundering Act 2002, establishment of Adjudication Officers and Cyber Appellate Tribunal, Financial Intelligence unit – India, have facilitated in providing requisite legal framework to carry out the transaction in the internet media. In a nutshell the Act has provided the requisite legal recognition to the electronic records for the purpose of conducting e-commerce activities. Several offenses concerned with cyber media have been identified and requisite penalties in the form of imprisonment and/or with fine have been formulated to curb the cyber crime.

While it cannot be disputed that the Central Government has initiated wide range of measures to streamline the cyber related activities in the country, several shortcomings in the implementation of the Act are evidenced which has resulted in increased incidents of bank frauds and fraudulent withdrawal of money through online/internet banking transactions. Several lacunae and contradictions evidenced in the implementation of the Act are briefly stated as under.

i. Delay in the Process of Consolidation of Various Legal Measures: Information Technology has provided an equal opportunity to both banks and fraudsters to exploit the virtual environment to meet their desired objectives. While banks make efforts to enhance the security measures, the fraudsters strive to break the security chain through rigorous research and design activities. In such an environment, enactment of appropriate laws providing adequate support to the banks and help in curbing fraudulent activities is a prime requisite. It is also essential that such laws should be enacted well in time to facilitate the police and other investigation

agencies to initiate appropriate action against the fraudsters. Perusal of the several legal measures adopted by the Government of India has shown that there has been considerable delay in bringing changes in the laws promulgated during early 2000. The incidents mentioned below make this point clear.

The Information Technology Bill was drafted in 1998 but had to wait for 18 months before it was introduced in both the houses of Parliament. The Information Technology Act 2000 was found to be insufficient in certain areas of cyber crime and hence needed immediate amendments. The Government of India amended the IT Act in 2008 which was notified in the Gazette on February 5, 2009 and which became effective from October 27, 2009. It took nearly nine years to bring changes in the Act to make it more comprehensive in dealing with the cyber related activities.

The IT Act 2000 has identified the establishment of Certifying Authority to issue Digital Signature Certificates. The RBI Report (2005), noted that, "India does not have a licensed certifying authority appointed by the Controller of Certifying Authorities to issue digital signature Certificates". It is noted that no licensed certifying authority was appointed by the Controller of Certifying authority till 2005.

India till date is not a signatory to the International Cyber Crime Treaty, the treaty which seeks to intensify co-operation among different signatory nations for exchanging information concerning crime and cyber criminals.

It took nearly three years for the Government to appoint Adjudicating officers in each state. Under the directions of the High Court the Government passed order dated 23rd March, 2003 appointing the Secretary of Department of Information Technology of each state or of Union Territories of India as the Adjudicating Officers. The Office of the Cyber Appellate Tribunal was established in the year 2006 after six years of enactment of IT Act 2000. The Tribunal which had strength of one member as stipulated in the IT Act 2000 had to wait till 2009 to include several experts in the information technology and judiciary field in the Tribunal.

The Financial Action Task Force was established at G7 Summit in Paris in 1989 to develop a coordinated international response to Money Laundering. The Anti-Money Laundering exercise began in the year 1998 but was enacted through Prevention of Money Laundering Act, 2002 and the same came into force from 1st July 2005. The Act failed to address the developments which took place in seven years, which lead to the need for enactment of amendments through Prevention of Money Laundering (Amendment) Act, 2009 and has come into force from June 01, 2009. The Project FIN-net initiated by FIU-India during 2006 became operational in 2010.

It took nine years for Reserve Bank of India to include the complaints arising out of internet banking within the purview of Bank Ombudsman. Though a mention of it has been made to include internet banking, there was no mention of what kind of complaints to be included in the list of complaints attended by Bank Ombudsman.

The Reserve Bank of India (2005) has aptly summed up the lacunae in the legal framework in internet banking as "In India, the legal infrastructure for promoting e-banking has not yet been put in place in a comprehensive manner. India does not have a licensed certifying authority appointed by the Controller of Certifying Authorities to issue digital signature certificates. Also, India is not yet a signatory to the International Cyber Crime Treaty, which seeks to intensify co-operation among different signatory nations for exchanging information concerning crime and cyber criminals. Further, there are unresolved legislative issues related to the cyber crimes laws, clarification relating to regulatory authority over e money products, consumer protection and privacy laws. To make the e-banking operations in India more widespread, secure and efficient these issues need to be addressed by relevant authorities."

ii. Provisions in the IT Act and its implementation - Lacunae and Contradictions:

The IT Act 2000 and IT (Amendment) Act 2008 were enacted to provide recognition to electronic records and curb cyber crimes through identifying cyber offences and institutions for the purpose of adjudication and awarding punishment. It is to state that, a piece of text enumerated under each section of the Act, shall be amenable for implementation, failing which the purpose of legislating the Act itself would become futile exercise. Several sections in the Act as made applicable to the internet banking transactions and lacunae in their implementation are stated as under.

Digital/Electronic Signatures : The IT (Amendment) Act 2008 u/s (3) has stipulated that a user can authenticate electronic record through electronic signature or electronic authentication technique which are reliable and are approved by both houses of Parliament. A perusal of the Second Schedule of the IT (Amendment) Act 2008 revealed that no electronic authentication technology has been stipulated in the second schedule. This in turn means that though there is a mention of electronic signature and electronic authentication technique, the details of the same are not mentioned in the Second Schedule.

Flaw u/s 66 of the IT Act 2000: Section 66 of the IT Act 2000 dealt with 'Hacking with computer system' and this was the only provision available in the Act which could provide some sort of relief to the victims of cyber offence. Identifications of fraudsters indulging in hacking activities and punishing them in the courts of law had posed challenges in the implementation of this section. It is noted that during the period 2004 -2008, 215 cases of hacking were reported under the provisions of the IT Act 2000. Of this, the police could arrest only 82 persons (38.13%) during the period under consideration. (Source: National Crime Record Bureau 2008-09). Prosecution of the persons arrested poses further challenges for the investigation agencies. Nappinai, N.S. (2010) noted that, in September 2009, the Delhi High Court has quashed the criminal proceedings initiated during 2005 u/s 66 of the IT Act 2000 by M/s Parsec Technologies Ltd against some of its former employees. Similarly K.Mani (2008) has noted that, in case of Nirav Navinbhai Shah Vs. State of Gujarat , prosecution alleging commission of offence rw/s.34 and 120 B and also u/s 66 and 72 of the IT Act was quashed as the only allegation was that the main accused hacked with the help of the other co-accused the complainants' computers and stole important data. Entire dispute between the parties was resolved by amicable settlement. The above two incidents clearly indicate that hacking of computers as an offence did not have reasonable legal standing in the courts of law.

It was for these reasons, in the IT (Amendment) Act 2008, has substituted the Section 66 of the Act which earlier dealt with 'Hacking with Computer System' with new crimes like, phishing e-mails, sending false information through computer system, receiving or retaining stolen computers, dishonestly making use of the electronic signature password or any other unique identification feature of any other person, using communication device cheating by impersonation and cyber terrorism. Delay in the listing of these new crimes in the Act (during the period 2000 and 2009), provided ample opportunities for the fraudsters to commit crime and still get immunity from the due process of law.

Liability of the Body Corporate: The IT Act 2000 u/s 85 has dealt with issues relating to offences by Companies and the IT (Amendment) Act 2008 u/s (43A) has dealt with the liability of the Body Corporate in the event they fail to protect sensitive information held in their possession. These two provisions deal with body corporate and offences committed by the individuals in the company and liability of the body corporate as a whole. In the event, a body corporate is found responsible for online fraud related activities, whether the action against such body would be initiated u/s 85 or 43(A) is not made clear.

Adjudicating Officers: The IT Act 2000 u/s 46 (3) stipulates that, 'No person shall be appointed as an adjudicating officer unless he possesses such experience in the field of Information Technology and legal or judicial experience as may be prescribed by the Central Government'. Contrary to the provisions made in the

Act, the Principal Secretaries in the Information Technology Department have been designated as Adjudicating Officers for the purpose of adjudging whether any person has committed a contravention of any of the provisions of this Act or of any rule, regulation, direction or order made there under.

This arrangement made by the Government in identifying the ‘Secretary in the Information Technology Department’ contravenes with the provisions of Section 46 (3) of the Act. Basu and Jones (2005) observed that, “The search to find the right candidate with the legal and IT background in the rank of a Director in the Government became difficult, ultimately it was decided that the Secretary to the Information Technology Department in each state by designation would be appointed as the Adjudicating Officer in each State. This mechanism is not judicial but is merely an extension of executive power”.

Extradition of Fraudsters from Foreign Nations. The Information Technology Act 2000 u/s 1(2) has stated that the provisions of the Act apply to any offence or contravention there under committed outside India by a person. Further the Act u/s 75 has made provision for countering frauds taking place in extra territorial jurisdiction and it is applied to any person of any nationality anywhere in the world so long as the impacted computer is physically located in India. To implement the above provision in the Act, it is necessary that India is signatory to the International Cyber Crime Treaty. A review of the Council of Europe, Treaty on Cyber Crime revealed that India is not yet a signatory to the Treaty as on 1.6.2010. In such a situation, to get information on the cyber criminals operating from foreign soil and extradition of such fraudsters is a difficult process. Added to this, the provisions of the law shall also recognize the criminal act committed by the fraudster as criminal offence. Such a provision is unworkable unless accepted by other jurisdictions that are prepared to extradite their citizens for trial in India. Report on Internet Banking (2001) observed, “Cross border transactions carried through internet pose the issue of jurisdiction and conflict of laws of different nations”.

Delay and Difficulty in the Prosecution of Fraudsters: Section (77 B) of the IT Act 2000, states that offences punishable with imprisonment of three years shall be bailable. Except cyber terrorism all other offences mentioned in the Act are punishable with imprisonment up to three years, which mean that individuals arrested for any of the cyber related crime are entitled to bail which in other words mean they are free to indulge in further crimes.

Overriding Powers to Police. The IT Act 2000 under (section 80) has made provision for any police officer not below the rank of Deputy Superintendent of Police to enter any public place and search and arrest without warrant any person found therein who is reasonably suspected of having committed or of committing or of being about to commit any offence under this Act. Assigning the powers to the police officer who is in a rank of ‘Inspector’ to arrest a person from a public place who is about to commit a cyber crime has provided overriding powers to the police which are quite susceptible to misuse and is in violation of the Fundamental Rights.

Basu and Jones (2005) observed that, “the careless manner in which some of the prescribed offences have been defined and the sweeping powers granted to the police make it almost certain, in our view, that the law will be misused”.

Non-Availability of Adequate Police Officers to deal with Cyber Crimes : Lack of manpower in the Cyber Crime Police Stations and lack of Police Officials with requisite skills to deal with cyber related crimes are twin prohibitive factors severely hampering the cyber crime investigations by the police departments. The following statement made by the officials in the Police Department strengthens this argument. The Police Officer in the Cyber Crime Department in his interaction with the media stated that, “on any given day, they receive at least one complaint which could be booked under IT Act. But 90 per cent of the complaints would not be registered as cases by police due to lack of manpower”. (Source: The Times of India August, 19, 2010).

The Government of Andhra Pradesh has issued G.O. on January 16, 2010 sanctioning two cyber crime police stations (one each for Hyderabad and Cyberabad) with 40-member teams headed by an officer of the rank of ACP. It is observed that even after eight months, the police stations are yet to be inaugurated. Also the

two commissioners have assigned less than 10 members to each police station, hinting at the low priority they accord to cyber crimes. (Source: Times of India August 19, 2010)

iii. Lack of Awareness on the Availability of Reddresal Mechanism: Adjudicating Officers are required to review the cases submitted to them by the aggrieved parties and award compensation as is considered deemed fit in the matter. The award of punishment and imposing fines in cyber related crime is vested with the courts. A perusal of the incidents of the banking fraud reveals that there was no systematic way to deal with the cyber related activities as per the provisions of the IT Act 2000.

In case of Mr. Phutane Vs. HDFC Bank, the case was reviewed by District Consumer Complaints Reddresal Forum (Maharashtra). As per the provisions made in the IT Act 2000, the Consumer Forum has no role to play in the matters relating to the cyber related crimes yet it has considered and given verdict on the subject matter.

The Reserve Bank of India vide notification dated February 05, 2009, has widened the scope of its Banking Ombudsman Scheme 2006 to include deficiencies arising out of internet banking. Decision of the RBI to include Internet Banking services overlaps the jurisdiction of the Adjudicating Officer and any decision taken by the Banking Ombudsman in case of Internet Banking with regard to payment of compensation violates the Section (46) of the IT Act 2000.

The provisions of the IT Act 2000 are effective, only when those provisions are understood by the individuals who are affected by the cyber related crimes. The data was collected from 505 bank customers to assess their awareness of internet banking reddresal mechanism. The data analysis obtained from the present study revealed that 92 per cent of the bank customers surveyed had no information about the adjudication mechanism available and the existence of the Office of Adjudicating Officer to provide adjudication in online fraud cases. Further it is observed that, the Office of the Adjudication Officer, Andhra Pradesh has not received any cases pertaining to the internet banking fraud during the last five years. This is indicative of the fact that, the individuals are not aware of the availability of legal provisions in the event they fall victims of internet banking fraud.

Perusal of the webpage of the ICICI and SBI banks reveals that there is no mention of relevant provisions of the IT Act 2000 and IT (Amendment) Act 2008, which are applicable to the offences relevant to the internet banking.

The Bombay High Court directed the Central government to announce the appointment of Adjudicating Officers in the public media to make people aware of the appointments. Till date neither the government nor the banks have made any efforts to prominently publicize the details of Adjudication Officers in the public media.

Legal Aspects in Internet Banking: Challenges

The factors like, recognizing electronic records as legally valid documents, identifying offences and awarding adjudication and punishments in cyber related crimes pose several challenges in their implementations. The difficulties in the application of legal measures in cyber related issues and crimes are as follows.

Non-Implementation of Digital/Electronic Signatures: The IT Act 2000, u/s 3(2) provides for a particular technology (viz., the asymmetric crypto system and hash function) as a means of authenticating electronic record. The IT (Amendment) Act 2008 has made a mention of electronic authentication technique, the details of which however are not mentioned in the Schedule II of the Act. The digital signature technology identified in the Act needs to be compatible with the technology adopted by the banks. Additional expenditure required in the implementation of the digital signatures by the banks also poses serious challenge in its implementation.

Identifying the Fraudsters and Jurisdictional Problems: The virtual world in which internet banking operates provides ample opportunities to fraudsters to carryout the fraudulent activities unnoticed, and make the job of

the investigating officers a difficult proposition. Some of the difficulties in identifying the fraudsters are stated below.

Identity Theft: Identity frauds take place through a) opening of bank account and b) registering of mobile phones. Fraudsters open bank account in some fictitious name providing forged copies of the identity and residential proof and transfer amount fraudulently withdrawn to such account. Money laundering frauds extensively use the method of identity theft to carryout their fraudulent activities.

Jurisdiction and Dispute Resolution Procedure: Internet has provided opportunity for an individual residing in a country to commit fraud in another country. The difficulties in identifying fraudsters involved in cyber crimes is aptly summarized by the Chief Justice of India Justice Shri Balakrishnan (2010) as, “Nevertheless, there are several hurdles in identifying the perpetrators in the first place. Criminal laws usually operate over a defined territorial jurisdiction but the content of websites can be created and uploaded anywhere in the world. Even when the source of offensive material is located, the police will face several practical difficulties in proceeding against perpetrators located in foreign jurisdictions. Even with respect to perpetrators in a local jurisdiction, there are problems on account of the structure of the flow of information over the internet. End-users can post content through fake identities and proxy server locations to misguide the investigating agencies.”

Cyber Café: Investigations in internet fraud cases provide clues about the computer which has been used for conducting fraudulent activities. But the identity of the individual who used that computer at that point of time cannot be ascertained if such computers are operated from the Cyber café. Freely available and unguarded computers in cyber cafés provide ample opportunity to the fraudsters in performing the required online banking frauds and vanish into cloud leaving no traces behind. In addition to cyber café, fraudsters are also facilitated in committing internet banking frauds taking shelter in a rented house and obtain cable connection and carryout all the intended fraudulent activities. Once the crime is completed, the house and internet connectivity are abandoned by them. At a later date, the investigating team may visit such spot only to remain clueless as to further necessary investigation.

Use of Money Mules: Fraudster, who wishes to remain anonymous, appoints Money Mules (agents who open bank account in their name and transfer money received in these account through fraudulent means to fraudster’s account) and launder the funds obtained as a result of internet banking fraud. Once the money is transferred to the Money Mule’s account, the same is transferred to the fraudster’s account using non-conventional method of money transfers retaining a small percentage of the fraud money as commission amount. The Investigating agencies can trace the account held by the Money Mules, but cannot reach the real fraudster who vanishes in the cloud.

iv. Lack of Skilled Personnel in Investigating Agencies: Investigation of cyber related crimes necessitates the availability of investigating officers in requisite numbers who are well versed with the information technology and legal aspects covering cyber crimes. Review of literature revealed that the investigation officers are not adequately prepared to handle cyber related crimes. Honorable Justice M. Yatindra Singh observed, “Cyber crime cannot be investigated by everyone. A person should have special knowledge in order to investigate it. There is a lack of skilled police personnel to deal with the cyber crime.” Ankit Fadia (2009), a cyber security expert observed, “Although India is IT leader of the world, in computer security it is lagging far behind. Indian Police is not adequately equipped to handle cyber crime investigations” (Indian Express April 6, 2009). Chandrashekhar, R (2010) Secretary, Department of Information Technology, Government of India, observed that, “knowledge required to deal with cyber crime among the investigative or enforcing agencies is not adequate”.

All this goes to establish that lack of skilled personnel in the police department is one of the major concerns in dealing with cyber crimes in general and internet banking frauds in particular.

iv. Huge Backlog of Court Cases: The fraudsters even when arrested and sufficient evidences are gathered against them for prosecution are let off lightly due to two factors namely a) grant of bail to the persons so arrested and b) huge backlog of cases pending in the courts taking lot of time. These factors would certainly demoralize the investigating agencies while dealing with cyber crimes.

To sum up it becomes imperative to quote Singh, Talwant (n d) who observed that, “In many cases, law enforcement officers have lacked the tools needed to tackle the problem, old laws didn’t quite fit the crimes being committed, new laws hadn’t quite caught up the reality of what was happening, and there were few court precedents to look to for guidance. Furthermore, debates over private issues hampered the ability of enforcement agents to gather the evidence needed to prosecute these new cases. Finally there was a certain amount of antipathy – or at the least, distrust – between the two most important players in any effective fight against cyber crime: Law enforcement agencies and Computer Professionals”.

Hacking of Computer System

The IT Act 2000 u/s 66 has dealt with ‘Hacking of Computer System’. All cyber related crimes (other than pornography and tampering of records) were dealt under provision of this section. Award of punishment for internet banking frauds is covered in this section. The data on the number of hacking cases registered and the number of persons arrested, is presented in Table 1.

Table 1 - Cyber Crimes (Hacking) Registered and Persons Arrested under IT Act 2000

Cases Registered						Persons Arrested					
2004	2005	2006	2007	2008	Total	2004	2005	2006	2007	2008	Total
12	41	34	46	82	215	1	14	29	23	15	82

Source: National Crime Record Bureau, 2009

An analysis of the data in the Table 1 reveals that, 215 cases of Hacking were registered during the period 2004-2008, and the police could arrest only 82 persons during that period. Though the number of hacking cases increased during the period 2004 and 2008, the number of persons arrested by police was far less than the cases registered during the same period.

Conclusion

The IT Act 2000 through recognition of electronic records as legally valid documents and authentication of electronic records by way of digital signatures provided the much required boost to e-commerce activities in India. The Act further listed the cyber related crimes and identified machinery to award adjudication (civil) and punishments (criminal).

Despite the aforesaid IT Act 2000 was in place, banks failed to implement digital signatures as a method of authentication of electronic record. Delay in incorporation of requisite provisions through amendment to the Act, contradictions and lacunae in the provisions of the Act, loosely coined term ‘hacking’ u/s 66 of the Act, non-signatory to ‘Convention of Cyber Crime Treaty’, non-availability of adequate police personnel to handle the cyber crimes offence, and making most of the cyber crimes as bailable offences and huge backlog of court cases were stumbling blocks in curbing cyber crimes. These are some of the stumbling blocks in the implementation of the IT Act 2000 and IT (Amendment) Act 2008.

Recommendations

The IT Act, Prevention of Money Laundering Act, establishment of Financial Intelligence Unit- India, coordination between CBI and FIU-India, Project FIN- net to monitor suspicious transactions ought to have

been made functional in true spirit during the late 1990s itself. Having established the relevant institutions and enacted the laws, the concerned officials should adopt a pro-active role in carrying out the cyber related activities. General public would adopt the technology, if they are convinced that law and law enforcing agencies are adequate and efficient.

Reserve Bank of India vide its guidelines dated June 14, 2001, has made it mandatory for the banks to adopt digital signature as authentication tool/technique for the purpose of authentication and non-repudiation. Digital signatures apart from complying with the requirements of law, also provide requisite security for the transactions taking place in internet banking medium. It is noted that till date, Punjab National Bank and Corporation Bank alone have implemented digital signature for 'Corporate Banking' Sector. Banks failing to implement the digital signatures (in compliance with the provisions of the IT Act) shall be prohibited from carrying out the internet banking services.

The Banks, Police Department, and the concerned government machinery, have the responsibility to educate the general public detailing the techniques adopted by the fraudster and consequences thereof.

The Government of India shall consider signing the 'Convention on Cyber Crime' Treaty. Articles 23 through 35 of the Treaty outline measures for extradition, collection of computer based evidence in another country and a 24 x 7 network that can provide immediate assistance in international investigations

Provision of granting bail to the cyber crime offences (except cyber terrorism) could have valid grounds; but long pending court cases must be dealt in speedily. Backlog of cases pending before the courts is stumbling block and demoralizing factor for the law enforcing agencies in effective curbing of the crime rate. Timely pronouncement of judgments and quick execution of decrees need to be considered and implemented. Recent Supreme Court judgment making judges to possess computer knowledge at the time of appointment is much desired move. (The Times of India October 15, 2010).

There is dire need of technologically enlightened and skilled police personnel in dealing with cyber crimes. This lacuna to some extent can be dealt by National Police Academy, Hyderabad, and other Police Training Institutes functioning across the country, by playing a vital role in a) providing adequate training to the existing police personnel working cyber departments and b) developing requisite skills in cyber related activities in addition to the regular curriculum among the interns undergoing training in the academy.

The Government in the year 2003 has made the Principal Secretaries of Information Technology Departments in each State, to perform the duties of Adjudicating Officers whomay not possess requisite understanding of the intricacies involved in the Information Technology and Legal matters. The Information Technology (Amendment) Act, 2008 has strengthened the office of Cyber Appellate Tribunal with the officials from the Information Technology and Legal profession. The Office of the Adjudicating Officer should be expanded on lines of Cyber Appellate Tribunal, to include the officials/individuals possessing expertise in legal and Information Technology.

Men of caliber and high moral standards are needed to be appointed to the highest positions in the banks and income tax and other investigating departments like CERT-In, and FIU- India. The Government department and Reserve Bank of India shall provide adequate authority to these officials to carry out the assigned duties. These two factors are essential ingredients to curb the unethical practices being followed by a section of the officials in the banks and income tax departments.

Project FIN net initiated by the Financial Intelligence Unit-India though is a belated project (made effective in the year 2010) would certainly provide adequate measures to adopt industry best practices and appropriate technology to collect analyze and disseminate valuable financial information for combating money laundering and related crimes. Officials in these departments shall also be made accountable if any lapses in their functioning are noticed.

Banks shall list the redressal mechanism available to the bank customers under the IT Act 2000 and IT (Amendment) Act 2008 in the bank webpage in a prominent way. Provision of such information assists the bank customers to approach the adjudication officer and cyber crime cell in their area, in the event they are subjected to internet banking fraud. In addition, wide publicity of the redressal mechanism available to the bank customers shall also be made available in the leading newspapers and Television channels at regular intervals.

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Credit Flows and Their Uses in SMEs Sector in India in the Post WTO Era

G.S. Popli¹

Introduction

Small and Medium Enterprises (SME) all over the world have been recognized as the silent drivers of a nation's economy. Their enterprise is laudable and their ability to generate pools of growth and employment, invaluable. This is true for most developed, as well as developing economies. In the emerging economic order SMEs are the leading edge when it comes to innovation and entering new global markets. The SME story in India is no different. With over 50% of industrial output through 95% industrial units, SMEs form the backbone of the Indian economy. Their contribution to the economy is huge and hence they are entitled to their rightful share of attention from Financial Institutions.

Credit is undoubtedly, the jugular vein of small enterprise development in any economy. But, a major constraint in the development of Small and Medium Industries is inadequate credit to finance operations and expansions in our country. The difficulties in obtaining Institutional Credit largely stem from a lack of collateral and the inability to comply with documentation requirements. Simplification of procedures and flexibility in rules governing small borrowers would help to increase the flow of institutional funds required for increased investment in the post WTO regime.

Objectives of Study

1. To find out the problems being faced by the SME Unites.
2. To study the manner in which the available funds of the units are deployed on various items of Fixed and Current requirements.
3. To find out the financial requirements of the SME Units in the Pro W.T.O Era.
4. To examine the policies, procedures and practices being practiced by the Central Govt. and Financial Institutions in providing long term and short term funds to the SME Units.
5. To make suggestions for improving the Financial Support System for SMEs Sector in India.

Research Methodology

The study used the following techniques:

1. Experience Survey on SME Industries and Bankers/Policy Makers.
2. Pilot Testing through preliminary questionnaire and interviews.
3. Correlation,
4. Frequency and Percentages
5. Chi-Square
6. Factor Analysis

¹ Professor, Army Institute of Management & Technology, Greater Noida, NCR, Delhi, E-mail: gspopli@yahoo.in.

The Thesis has been submitted to for the award of Ph.D under the guidance of Prof. (Dr) Javaid Akhtar, Dean, Deptt of Managements Studies & Research, Aligarh Muslim University, Aligarh.

Sampling Procedure

Within the broadly defined set, the sample has been selected using Purposive Sampling and 80 Industries were chosen from Small scale sector and 80 Industries were chosen from Medium scale industries list. The geographical area of Research has been selected “National Capital Region of Delhi”. It includes Delhi, Faridabad, Gurgaon, Bahadurgarh, Ghaziabad, Noida and Bhiwadi.

Plan of the Study

The first chapter starts with an Introduction of the study. The second chapter brings out literature survey make on 99 studies conducted in India and abroad relating directly or indirectly to Small and Medium Enterprises have been reviewed (Year-wise) in order to determine the research gap and to establish the need for this study. The third chapter highlights the need, objective, organisation and scope of study. The fourth chapter the research design and the procedures for conducting the study have been described. It defines the instrument development, pilot testing, research design, data collection and data analysis procedure. The fifth chapter includes empirical study, feedback study and a comparative study. The sixth chapter deals with a case study of Comparison between one Good Account/Successful Entrepreneur and a Bad Account/Unsuccessful Entrepreneur : A thorough study have been done to find out the reasons for turning the account as bad. The last chapter lays down summary, findings and conclusion

Results and Discussion

The first part of empirical study had included the existing perception, definition, performance of SMEs and implications involved in the pro WTO regime. This has also taken in consideration the present status of SMEs Sector in some developing and developed countries of the world alongwith the credit flow available to this sector.

The second part of this research has included the feedback for the proposed framework from both SMEs as well as the Banking Industry/Policy-Makers of the country. The requisite information was gathered from 160 Small and Medium Enterprises and 25 experienced Bankers/Officials/Policy Makers selected for the study through questionnaires (separately) and detailed discussion. The results have been discussed accordingly.

The third part covers a study on the two SMEs accounts, financed by a nationalized bank. A comparison has been made between one well managed SME Account and another bad managed SME Account based on various management and financial parameters.

Comparative study of one Good Account/Successful Entrepreneur with another Bad Account/Unsuccessful Entrepreneur : A thorough study have been done to find out the reasons for turning the account as bad.

Conclusion

1. There is a need to upgrade the technology in the Indian SME Sector.
2. A strong and supportive Financial System is required for development of this sector in India.
3. Market research, welfare of employees and research & development are top ranking areas for making investments.
4. The requirement of finance for deployment in Fixed Assets, working capital and plant & machinery by SME Sector will increase sharply. The Financial Institutions and Commercial Banks should provide hassle-free finance on easy terms to this Sector.
5. The SMEs should make use of equity participation and Joint Ventures as alternatives sources of finance to strengthen their financial position.

6. The SMEs should select the location of their units very carefully. They should ensure that the law of the land is implemented properly.
7. The SMEs should focus on diversification of products and markets for their production.
8. There should be no diversification of funds.
9. The Govt. may consider waiver of collateral security upto some agreed amount.
10. The Govt. should provide some protection to SME Sector in India in the pro WTO regime.
11. Tax structure should be revised. Transparency and simplification in tax procedures be ensured. There should be a system of charging fewer taxes from Small and Medium Enterprises.
12. Increased use of Information technology by SMEs in all the spheres of the business activities should be encouraged.
13. There should be an overall Improvement in quality, cost and service to customers by the SMEs.
14. The Government Agencies should provide guidance to SMEs on regular basis in marketing strategy.

Contribution to New Knowledge

The present study on 'Credit flows and their use in SMEs in India in the post WTO era' would help in not only addressing the emerging trends and opportunities in the SME Sector but also would focus on providing an adequate financial support system for the smooth growth of this Sector in our country.

Directions for future Research During the course of study, the following issues have been identified but could not be attempted and are felt necessary for future research :

- (a) Issues involved in the need and adoption of technology by Indian SMEs.
- (b) Strategy development for internalization of Indian Small and Medium Industries.
- (c) Study on Sector specific SMEs Industries viz. Automobiles, Textile, Plastic, I.T. Sector and Iron & Steel.
- (d) Study on new sources of finance viz. Equity participation and Joint Ventures.
- (e) Application of Information Technology in Indian Small and Medium Industries.
- (f) Study on environment related issues in Indian Small and Medium Industries.

Human Resource Management in the Mirror Reflection of Cooperative Game Theory

Nishant Bhushan¹ and S. Anand Reddy²

Abstract

Human resource function in the organizations is undergoing profound change, every change leading to something better something creative and something new and innovative. to innovate HRM means crafting creative business strategies, organizational restructuring, creating social network, invoking new changes, shifting approach, enabling competencies to go global. According to professor Mintzberg, the depreciation of the sense of community in organizations has damaging and lasting effects. When there is no sense of community, individuals act out of self interest instead of focussing on developing the effectiveness of their organization as a whole. Employees do not feel bound to each other or to their organization. This article aims to show the effectiveness of employer and worker cooperation for the attainment of the organizational goal, by using the cooperative game theory. This article establishes the relationship between HRM and the cooperative game theory in the organizations for greater productivity. This study finds the relationship between various strategies of HRM and the principles and properties of cooperative game theory. The strategies which are worked upon are; Compensation designing for retaining the superkeepers in an organisation, talent retention strategies, Job rotation for better training and exploring the talent to its fullest and also to manage a team and keeping them close to the organisation, the strategy to deflate the intentions of the competitors to acquire ones talent has been dealt in this paper with clarity.

Keywords : Talent Strategies, Productivity, Game Theory, HRM planning, Retention.

Introduction

Game theory has been widely used in several domains of practices. Recently, game theory has obtained some attention in the field of neuroscience which has brought the application of Game Theory to Neuronal Networks. For instance the field of neuroeconomics combines the fields in experiments with human and nonhuman players.

Game theory also has its applications in wireless networks. Game theory techniques have widely been applied to various engineering design problems in which the action of one component has impact on (and perhaps conflicts with) that of any other component.

Its application to corporate finance has changed the way of practice corporate finance is specifically, game theory has helped explain the reasons companies might choose various capital structures and the agency costs between managers, equity holders, and debt holders. Application of game theory in managerial economics has also been into practice since few decades.

This study is a conceptual attempt to find the relationship between the cooperative game theory and the HRM strategies. The decision making of the worker/employees and the employer/management are seen closely and how they can be aligned by applying the principles and properties of cooperative game theory, are answered. This paper is only an initiation in this field as there is a huge possibility of further research in this area.

¹ Senior student PGDM (HR), Siva Sivani Institute of Management, Kompally, Secunderabad – 500014, Andhra Pradesh, E-mail: nishantbhushan3@gmail.com

² Lecturer (HR), Siva Sivani Institute of Management, Kompally, Secunderabad – 500014, Andhra Pradesh, E-mail: anandreddy@ssim.ac.in

Conceptual understanding:

Game - A game is a formal description of a strategic situation.

Game theory - Game theory is the formal study of decision-making where several players must make choices that potentially affect the interests of the other players.

Player - A player is an 'agent' who makes decisions in a game.

Strategy - In a game in strategic form, a strategy is one of the given possible actions of a player.

Rationality - A player is said to be rational if he seeks to play in a manner which maximizes his own payoff. It is often assumed that the rationality of all players is common knowledge.

Nash equilibrium - A Nash equilibrium, also called strategic equilibrium, is a list of strategies, one for each player, which has the property that no player can unilaterally change his strategy and get a better payoff.

Value – The amount (of money or goods or services) that is considered to be a fair equivalent for the exchange of services rendered by the employees to the organisation.

Return/payoff – The set of instruments which are used to pay the monetary and non-monetary benefits to the employees in return of their services.

Management - A team of individuals at the highest level of organization who have the day-to-day responsibilities of managing a company or corporation, they hold specific executive powers conferred onto them with and by authority of the board of directors and/or the shareholders. These are most often higher levels of responsibility, such as a board of directors and those who own the company (shareholders).

Worker – Generally, the term is used alternately for 'Employee'.

- a) An individual who works at a particular occupation or activity: *an office worker*.
- b) An individual who does manual or industrial labour.

Coalition – It is a pact or treaty among individuals or groups, during which they cooperate in joint action, each in their own self-interest, joining forces together for a common cause.

Imputation – It is the distribution of value among the individual players of a cooperative game which are efficient and individually rational.

Cooperative Game theory

Cooperative Game theory is the formal study of conflict and cooperation. Whenever the agents' interests are interdependent, the concept of game theory is applicable. These agents may be individuals, groups, firms, or any combination of these. The concepts of game theory provide a language to formulate structure, analyze, and understand strategic scenarios.

Cooperative game theory investigates such coalitional games with respect to the relative amounts of power held by various players, or how a successful coalition should divide its returns (1944). For example, Nash (1951) proposed a solution for the division of gains from agreement in a bargaining problem which depends solely on the relative strengths of the two parties' bargaining position.

The amount of power a side has is determined by the usually inefficient outcome that results when negotiations break down. Nash's model (1951) fits within the cooperative framework in that it does not delineate a specific timeline of offers and counteroffers, but rather focuses solely on the outcome of the bargaining process. The central concept of *Nash equilibrium* is much more general. The Nash equilibrium recommends a strategy to each player that the player cannot improve upon *unilaterally*, that is, given that the other players

follow the recommendation. Since the other players are also rational, it is reasonable for each player to expect his opponents to follow the recommendation as well.

Assumption: A central assumption in game theory is that the players are *rational*. A rational player is one who always chooses an action which gives the outcome he most prefers, given what he expects his opponents to do.

Mathematical definition – Game is a finite set of players $\{N\}$ called as grand coalition. Characteristic function ‘ V ’, where;

$$V: 2^N \rightarrow R, \text{ Satisfies } V(\phi) = 0$$

2^N -The set of coalitions.

R – The set of payments (Returns or payoffs)

V – Value Function

$V(\phi)$ – Value Function of Null sets.

Properties:

- **Super additivity.**

Let (S) and (T) be the sub set of the grand coalition $\{N\}$. (Figure 1)

$$V(S \cup T) \geq V(S) + V(T), \text{ whenever } S, T \subseteq N \text{ satisfy } S \cap T = \phi$$

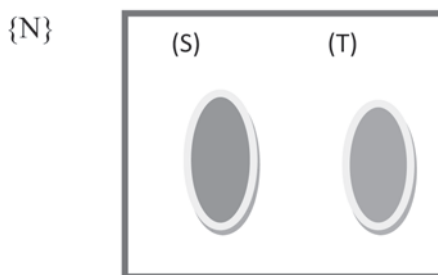


Figure 1

Value of $(S \cup T)$ is more than or equal to the sum of the coalition’s separate value. This means that the value generated by coalitions (S) and (T) by working together is more than or equal to the summation of the values added by them individually. So, higher value can only be achieved if the coalitions work together and not separately.

- **Mônotonicity**

$\{N\}$

Here in the figure 2, (T) is a sub set of Grand Coalition $\{N\}$ and (S) is the subset of (T) .

$$(S) \subseteq (T) \implies v(S) \leq v(T)$$

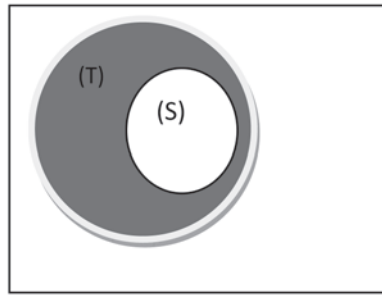


Figure 2

- **Larger coalition gains more:** *If the coalition (S) is a subset of the coalition (T) then the value generated by the larger coalition (T) will always be more than the coalition (S). Whatever the subset coalition (S) does its value cannot exceed the value of the coalition (T) because its value is inclusive.*
- **Solution Concept:** The solution concept focuses on the fairly allocation of returns/payoffs among the players of the game.

Challenge: To allocate the payoff to the members in such a way that the set of the payoffs (\mathbb{R}^N) of the grand coalition (N) is allocated fairly among them.

The solution concept is a vector $x \in \mathbb{R}^N$.

$x \in \mathbb{R}^N \longrightarrow$ Allocation to each player.

X \longrightarrow The payoff received by an individual.

$\mathbb{R}^N \longrightarrow$ The set of payoffs of (N).

Important properties of the solution concept:

- **Efficiency:** The payoff vector exactly splits the total value i.e. $\sum_{i \in N} x_i = v(N)$

[Summation of payoffs that individual receives is equal to the payoff of the (N), where 'i' is for individuals who are the elements of (N)]

The solution will be understood as efficient only if the summation of the payoffs received by each individual is equal to the total value of (N). That means in the other case the allocation is inefficient.

- **Individual Rationality:** No player receives less than what he could get on his own.

$$x_i \geq v(i), \forall i \in N$$

- *The property states that an individual must not receive fewer payoffs by being the member of the group than the payoff which he/she can generate by working separately.*

- **Existence:** The solution concept exists for any game.

- **Symmetry:** The solution concept 'X' allocates equal payments to two symmetric individuals. These two individuals can be said symmetric when:

$$v(S \cup \{i\}) = v(S \cup \{j\}), \forall S \subseteq N \setminus \{i, j\}$$

- *Suppose 'i' and 'j' are two individuals. Symmetric individual means the marginal value added by {i} is same to the marginal value added by {j} to (S), where the (S) is the set of players. Hence, 'i' & 'j' can be exchanged in any coalition without changing the payoffs. Here the payoff of 'i' is equal to that of 'j' [$X_i = X_j$] (as in figure 3)*

- Therefore ... $v(S \cup \{i\}) = v(S \cup \{j\})$

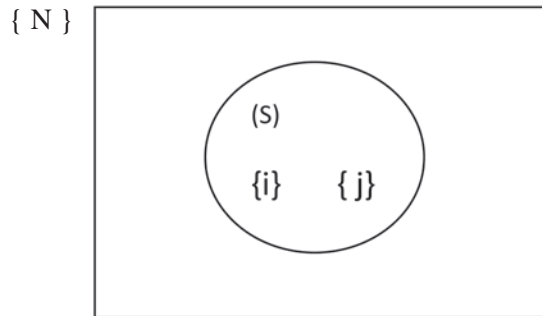


Figure 3

The role of Human Resource Management

Human resource function in the organization has lot of changes from its emergence. HRM is undergoing a profound change (beer 1997). It began with a change from personnel management to human resource management, in 1990s, a new emphasis on strategy and the importance of HR *systems* emerged and today we speak of HR as the strategic partner of the business function. HR profession is focussing on continuous innovation by responding positively to the new ideas and constantly keeping track of new trends. According to Kosseck (1989) to innovate HRM means crafting creative business strategies, organizational restructuring, creating social network, invoking new changes, shifting approach, enabling competencies to go global. According to Desseler (2005) there are various factors leading to change in the HR are: opening of the economy, globalization, entry of multination and the consequent increase in competition, changing business environment, boundryless organizations, cross functions etc., whatever may be the cause and whatever may be the change Most experts agree that there are six basic functions of Human Resource Management in today’s corporations. The diagram below shows the six functions.

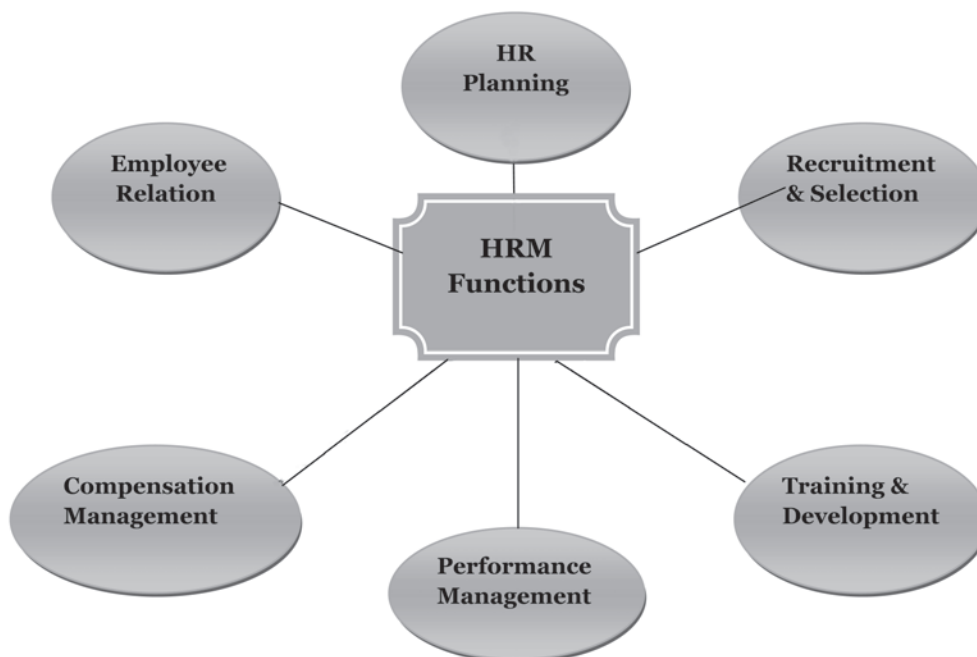


Figure 4 : Diagrammatic representation of various functions of HRM

Human resource Planning : The processes by which management ensures that it has the right personnel, who are capable of completing those tasks that help the organization reach its objectives. Rigorous HR planning links people management to the organization's mission, vision, goals and objectives, as well as its strategic plan and budgetary resources. A key goal of HR planning is to get the right number of people with the right skills, experience and competencies in the right jobs at the right time at the right cost.

Recruitment and selection : Recruitment and selection refers to the chain and sequence of activities pertaining to recruitment and selection of employable candidates and job seekers for an organization. The objective of recruitment function is to create the pool of right candidates for the job vacancies and the objective of Selection is to select the right candidate for the right job.

Training and Development: It is any attempt to improve current or future employee performance by increasing an employee's ability to perform a given task successfully, through learning, usually by changing the employee's attitude or increasing his or her skills and knowledge. **Training** refers to the process of imparting specific skills, knowledge and ability. **Development** refers to the learning opportunities designed to help employees grow in the career and to achieve work life balance.

Performance Management : Performance management system (PMS) is the heart of any "people management" process in organization. Organizations exist to perform. If people do not perform organizations don't survive. If people perform at their peak level organization can compete and create waves. It is the process that consolidates goal setting, performance appraisal, and development into a common system, the aim of which is to ensure that employee's performance is supporting the company's strategic aims.

Compensation Management : Under the jurisdiction of the Micro, Small and Micro-enterprises Act (2006), manufacturing companies with a maximum investment of Rs 2,500,000 in plant and machinery would be classified as micro-enterprises. Companies in the service sector, which have a maximum investment of Rs 1,000,000 in equipment would be considered micro-enterprises.

Today's compensation systems have come from a long way. With the changing organizational structures workers' need and compensation systems have also been changing. From the bureaucratic organizations to the participative organizations, employees have started asking for their rights and appropriate compensations. The higher education standards and higher skills required for the jobs have made the organizations provide competitive compensations to their employees.

Employee relations : Employee Relations involves the body of work concerned with maintaining employer-employee relationships that contribute to satisfactory productivity, motivation, and morale. Essentially, Employee Relations is concerned with preventing and resolving problems involving individuals which arise out of or affect work situations. It includes the processes of developing, implementing, administering and analyzing the employer-employee relationship; performing ongoing evaluation of it; managing employee performance; ensuring that relations with employees comply with applicable federal, state and local laws and regulations; and resolving workplace disputes.

To manage all these functions effectively and to adopt the changes that are happening in the field of HR we need to develop a sense of responsibility and community ship among the people in the organization for which there is need for effective leadership. In a unique and exclusive in-depth interview with Stéphan Bureau, Professor Mintzberg will illustrate how leadership may be better viewed as stemming from communityship. According to Professor Mintzberg, the depreciation of the sense of community in organizations has damaging and lasting effects. When there is no sense of community, individuals act out of self interest instead of focusing on developing the effectiveness of their organization as a whole. Employees do not feel bound to each other or to their organization. How can organizations ever become more productive and develop as a whole this way? The answer is that they can't. And Professor Mintzberg believes that this is at the heart of the economic downturn.

That is why communityship now needs to be reinforced within organizations more than ever. Based on this principle we have tried to show how the community ship i.e. employee employer relationship can be developed better through co-operative game theory in the field of HR

Discussion

Objective: To appreciate the theory of Management/Employer and Worker cooperation for the attainment of the organisational goal, with the reference of Cooperative Game Theory.

Assumptions:

- a. (N) → An organisation.
- b. (M) → Management/Employer
- c. (W) → The set of workers.

An organisation can earn higher value

It is possible when and only when worker and management are united (W U M) because,

$$v(W \cup M) \geq v(W) + v(M), \text{ whenever } W, M \text{ are subset of } N \text{ satisfy } W \cap M = \emptyset$$

The inequality demonstrates that although, their interest does not coincide with each others. The value ‘v’ of the united worker and management is always more than or equal to the summation of their individual values.

Here, worker and employer are disjoint sets, due to the consideration of their different interest.

1. Management cannot be a worker & vies-versa.
2. Workers’ interests are different from that of the management.

The second point is true because, naturally a worker’s interests are to earn higher compensation, benefits, social security, health & safety, better working condition, work life balance, to name a few. Whereas, the interest of the employer is to earn maximum profit with minimum cost.

Hence, both the sets are considered as disjoint sets (Figure 5)

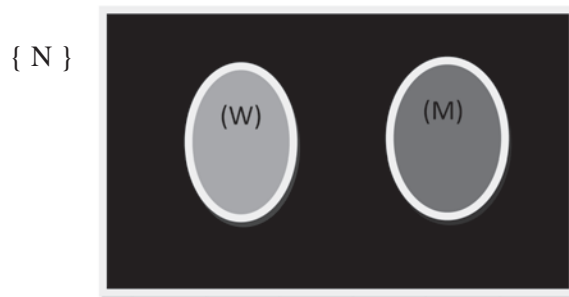


Figure 5

But, before we consider the value [v (W U M)], we must focus on the probability of getting the union of (W) and (M). **So, an obvious question which strikes is what is the factor which can create the union of workers and management?** The answer to the above mentioned question is as following:-

☞ **The probability of (W U M) can be defined as:**

$$\text{Probability } (W \cup M) = (W) + (M) + (W \cap M)$$

Read as, the union of worker (W) and management (M) is equal to the sum of management (M), worker (W) and their intersection ($W \cap M$). (Figure 6) In this equation, we can find the importance of HRM. The ($W \cap M$) is nothing else but the HRM.

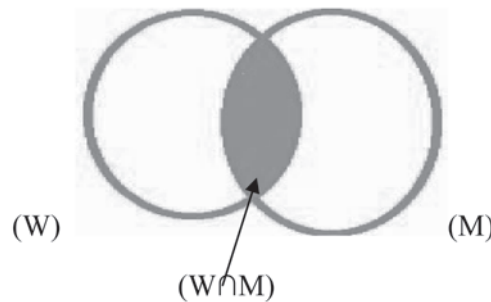


Figure 6

HRM is the liaison between the worker and the management. Hence, until and unless this intersection is effectively formed the probability of worker & employer working together is not possible. If, this union is formed successfully then only $v(W \cup E)$ is realistic.

With this discussion we understand the validity of the HRM as a function which can make the worker and management union. This further creates the higher value for the organisation.

The bigger coalition has higher value;

In an organisational set up the management is the custodian of the workers. It is the responsibility of the management to take care of its workers. So, here the set of the worker is the subset of the set of management.

$$(W) \subseteq (M) \longrightarrow v(M) \geq v(W)$$

Read as, set of Workers (W) is a subset or equal to the set of managers (M), where the value of the bigger coalition i.e. managers (M) is more than that of (W). (Figure 7)

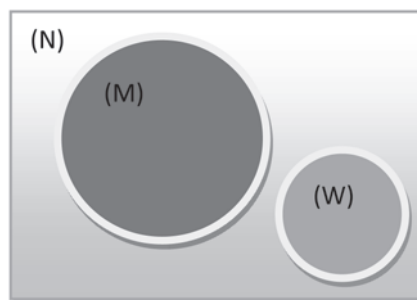


Figure 7

When this situation is found we get the coalition as an Organisation and we know that the value of the bigger coalition is more that the value of the individual set.

So, the value of the organisation is always more than the value of the management and the worker’s set individually.

We can also deduce that all the interest of workers is also the interest of the management. This is more acceptable as, management has its own interest but it is not denying the interest of workers.

So, now it substantiates that if the management or the worker works separately with their own interest the organisation cannot grow or transform or change or evolve. All these four words have different meaning and

relevance but are in ascending order. We can comprehend this understanding in miles and this is how even this game theory appreciates the theory of Strategic Human Resource Management.

Now, in the same concept if we apply the formula, $Probability (W \cup M) = (W) + (M) - (W \cap M)$

Read as, the union of worker (W) and management (M) is equal to the sum of management (M), worker (W) and their intersection (W ∩ M). (Figure 8)

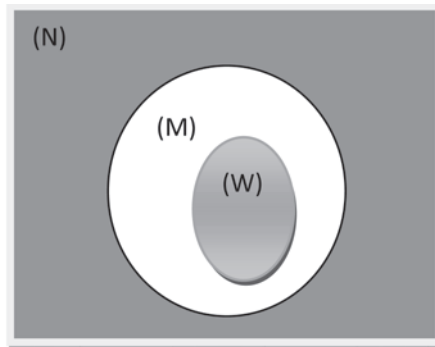


Figure 8

The whole set of workers becomes the intersection area.

As, I have mentioned above that the intersection area is nothing but the HRM.

Here, we notice that the coalition (W) becomes the HRM and this means that:-

- 1) Workers are working in the line with management under the guidance of HR Department.
- 2) Workers take initiative for their better work life & social life decisions.
- 3) Their objectives and behaviours are aligned with the management, due to the highly efficient HRM.

As per the concept of Monotonicity; when $(W) \subseteq (M)$ then $v (M) \geq v (W)$.

The assumption of $(W \subseteq M)$ is the key to substantiate the third point made above. (Figure 9)

We consider the second relation between (W) and (M) i.e. $(W = M)$. The figure bellow shows this relation.

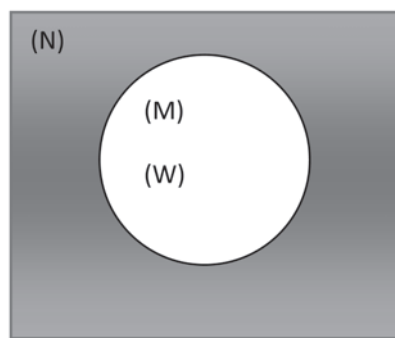


Figure 9

The figure shows that (W) is equal but a subset of (M). It means that:-

- Workers' interest and Employers' interest are same and equal.
 - a. Both want to maximize profit with minimum cost.
 - b. Maximize profit without any undue deductions or low quality of work life.

Note: (For this, they both have to decide their mutual cost considerations).

This situation is again very healthy as the employer accepts the interests of the worker and worker accepts the employers' interest. Hence, they both work towards attainment of the common organisational goal.

The organisational objective has to maximize profit via maximizing worker's Quality of work life and social life. This is the great situation as even the worker's interest becomes to maximize the profit. If they do so, they will be benefitted with higher payoffs and rewards. The motivational factor for the worker can also be to maximize the profit!

The discussion above appreciates the HRM theory of the employer-worker relation. Now let's see how this can be practically performed.

Solution concepts

Efficiency: An organisation can be said efficient, when

$$\sum_{i \in (N)} x_i = v(N)$$

Read as, the summation of the individuals of the subsets (W) and (M) is equal to the total value of the grand coalition (N), where each individual is an element of (N). (Figure 10)

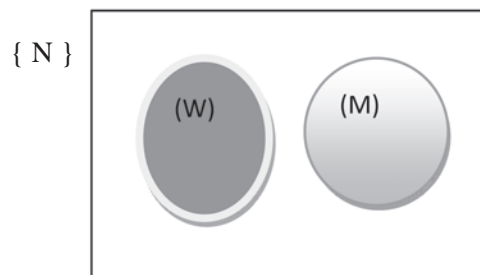


Figure 10

The value earned by the grand coalition (N) i.e. the specific organisation, has to be distributed among the individuals of a company {a subset of (N)} such that the summation of each individual's share of payoff be equal to the total share of the payoffs of the companies. (W) and (M) being the set of workers and the set of management respectively. This concept emphasises that the distribution of income among the workers and the management should sum to the total income of the organisation which has been allocated for distribution. If, the company practices this then it can be called as an efficient company. Efficient, in the terms of sharing wealth among the internal customers. Bonuses and the incentives are the tools which are effective in this regard. The other side of the coin can be a serious concern. Suppose, the company earns huge profit in a financial year but does not offer or offers a little bonuses or incentives to the employees. This will lead to dissatisfaction among the employees and create labour relation problems in a long run.

Individual rationality.: It means that, no individual gets fewer payoffs than what he/she can get outside the company by their own.

$$\text{So, } x_i \geq v(i), \forall i \in N$$

Read as, the individual's share (x_i) should be more than or equal to the possible payoffs that they can get by themselves ' $v(i)$ ', for all the individual who are the elements of (N).

This means that, an employee can earn more in another company but they should derive higher value in their current organisation so as to continue the employment. The value which is being talked here is the value

of the workers' interest. The payoff is not just the money but the quality of work life and social life and various other variables of the compensation plan.

Two individuals get same payoffs only when they are symmetric.: Let 'X_i' be the payoff of the individual 'i' (an employee).

And 'X_j' be the payoff of the individual 'j' (an employee).

Now, $X_i = X_j$ only when, $v(W \cup \{i\}) = v(W \cup \{j\})$

$v(W \cup \{i\})$ = Marginal value added by 'i' in $v(W)$.

$v(W \cup \{j\})$ = Marginal value added by 'j' in $v(W)$.

For a better understanding let me put an illustration.

'i' (an employee) is good at meeting the targets in the specified deadlines and 'j' (an employee) is equally good in cost control.

They both are skilful in their domains and add equal value in the form of output and low cost respectively. So, now if required they can be interchanged so as to benefit the cross departments.

- Here, Human Resource Planning comes into its vital role by reaping the advantage of transfer of such potential employees.
- Such situation also assists the Training and Development department to put such employees under Job Rotation.

Based on the above discussion, there are few solutions in the theory of Cooperative games and those are related to HRM as follows.

Stable set.

Truth: A company is not the single player (barring the monopoly market), competitors are ready to allure good performers of the company.

So, the possible strategy to fight back such threats could be based on the Imputations that the company offers.

Imputation is the Individually Rational Efficient Payoffs.

I use the formula for the better understanding of Imputation.

$$\text{Imputations} \Rightarrow \left\{ \sum_{i \in N} X_i = v(N) \ \& \ X_i \geq v(i), \text{ for all } i \in N \right\}$$

Read as, Imputations implies that, the summation of all the payoffs of employees should be equal to the value earned by the company and an individual payoff should be more than or equal to the value generated by the same individual outside of the company, for all 'i' (Individual) are elements of (N).

So, Imputation considers two situations as mentioned above.

- a) The summation of all the payoffs of employees should be equal to the value earned by the company.
- b) An individual's payoff should be more than or equal to the value generated by the same individual outside of the company.

On the basis of these two points, I take the discussion forward:

Now, assume that a company has two alternatives (X and Y) as imputations to offer to the employees.

Then, X dominates Y, if $(W) \neq \emptyset$ and satisfies $X_i > Y_i, \forall i \in W$ and $\sum_{i \in W} X_i \geq v(W)$

The payoff under the alternative 'X' is higher than 'Y'. Then 'X' imputation should be offered to a worker or else he/she might leave the company if 'Y' is offered. Because, under individual rationality the value created for themselves by themselves is at least equal to the returns they get under 'X' $X_i \geq v(i)$

So, they will not accept 'Y' and may leave the company.

This strategy has two facets, one at micro level and other at macro level.

Micro level: Internal stability is must. It can be created when no imputation dominates any other imputation. That means, all the alternatives of payment should be equivalent.

Macro level: External stability can be created when at least one imputation dominates the external alternatives to the workers i.e. (offerings propositions by the competitors) so that they don't leave the company.

I can very well now appreciate the concept and practice of Talent Retention in the Human Resource Practices.

In the continuity of Strategy of Talent Retention;

The core : Core is nothing but the set of payoffs.

$$C = \{ X \in \mathbb{R}^N : \sum_{i \in N} X_i = v(N) ; \sum_{i \in W} X_i \geq v(W), \forall S \subseteq N \}$$

'C' is the set of imputation under which no coalition has higher value than the sum of its members' payoffs.

So, the summation of compensation received by the workers should be more than the value generated by (W).

$$\text{i.e. } \sum_{i \in N} X_i \geq v(W)$$

Means that here should be no way that the share of value of worker coalition should be more than the sum of the each workers' value.

This is possible as:

$$\sum_{i \in W} X_i \geq v(W)$$

$$\text{i.e. } \sum \{ \text{Direct} + \text{Indirect compensation} \} \geq v(W)$$

If this is true then, there is very low chance of a team of workers leaving the company and joining another one for higher payoffs.

Conclusion

This discussion shows the vital relationship which HRM has with the cooperative game theory. The strategies namely; Compensation designing for retaining the super keepers in an organisation, talent retention strategies, Job rotation for better training and exploring the talent to its fullest and also the manage a team and keeping them close to the organisation, the strategy to deflate the intentions of the competitors to acquire ones talent has been dealt in this paper with clarity.

The role of HRM and the bond between the workers and the management is very crucial for the sustainable organisational growth. It is interesting to know that the interest of workers and the management can be one and the same i.e. Profit maximization without compromising on the quality of work life of the workers. The value of the team of workers and the management is paramount and might surprise few traditional practitioners too. There is a wide scope of work which can be done in this regard and this paper is just an initiation.

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