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COUNTRY CHARACTERISTICS AND INFLATION: A PANEL ANALYSIS

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ABSTRACT

This paper uses panel regression analysis on annual data across countries for the period 1996 to 2008 to look at the potential effect of four country characteristics, economic development, corruption, government size, and military size, on inflation. The central hypothesis is that some country attributes are likely to make countries more inclined to inflate, while other country characteristics are apt to make countries less inclined to inflate. The findings indicate that statistically each of these four country traits affects a country's propensity for inflation. Although policy makers may have the power and the technical know how to control inflation, the extent to which they do depends on the pressures and incentives on policy makers within the country to do so. These in turn depends on a country's personality or a country's DNA. There are many traits or attributes of countries that may make them more or less prone to inflation. Four potential country characteristics that are likely to influence inflation are the extent of economic development, the amount of corruption, the size of government, and the size of the military. The purpose of this paper is to use cross country panel regression analysis to empirically access whether or not any of these country characteristics have inflationary implications. The paper is broken down into five sections. The first section reviews a few relevant economic articles on inflation. The second section provides a country attributes model of inflation, and, within the framework of the model, discusses the four country attributes considered in the paper. The third section identifies the variables that are used in the empirical analysis and their sources. The fourth section shows the results of cross country weighted panel regressions of inflation on country characteristics. The fifth section concludes.

KEYWORDS

Inflation, Economy, Policy, Country.

I. LITERATURE HIGHLIGHTS

In the spirit of the present study, Aisen and Veiga are concerned with going one step beyond just simply explaining differences in inflation performance between countries as resulting from differences in the conduct of monetary and fiscal policy, but want to explain why countries differ in the conduct of monetary and fiscal policy (Aisen and Veiga 2006). Using a system-generalized method of moments estimator that can account for endogeneity between variables on a panel of one hundred seventy-eight countries for the years 1960 to 1999, they look at the effect of political instability, as measured by the number of government crises and by the frequency of cabinet changes, as well as a host of other variables, including the percentage of agriculture to GDP, the percentage of trade to GDP, and a measure of economic freedom, on inflation. Their results indicate that political instability is not just statistically relevant, but also quantitatively weighty. They suggest that greater political instability is likely to increase inflation because it makes governments more likely to use seigniorage instead of taxes to finance expenditures.

Early on, Kydland and Prescott noted, that, when inflationary expectations of the public are based on policy choices, decisions of policy makers can have an inflationary bias that is out of tune with the desires of the public (Kydland and Prescott 1977).

Under an implicit presupposition that the central bank has the power over inflation through monetary policy, Hammermann and Flanagan design their empirical model to look at factors influencing the central bank's decision of how much to inflate, its incentives, and the weight given to inflation control (Hammermann and Flanagan 2007). In their empirics, they set up a panel consisting of nineteen transition economies for the years 1995 to 2004, and consider a whole host of variables that could cause inflation differentials between countries. Some of the variables that they find to be important inflation determinants include liberalization and trade openness, the terms of trade, publicly administered prices, political stability, public debt, and financial market development.

Mafi-Kreft and Kreft test the hypothesis that limiting discretionary power in monetary regimes in transition economies disciplines monetary policy leading to lower inflation (Mafi-Kreft and Kreft 2006). Controlling for the budget deficit, real GDP growth, trade openness and agricultural share, they do panel regressions on twenty five transition economies for the years 1995 through 2001 of inflation, as measured by the depreciation of the real value of money, on central bank independence, on exchange rate flexibility, and on two dummy variables, one identifying whether a country is on a hard peg regime and the other whether a country is on a fast track to join the EMU. In support of their hypothesis, they typically find the appropriate signs and statistical significance for each of the latter four variables in their equations.

In a nice little article, Al-Marhubi focuses on economic freedom as a potential underlying cause of differences in inflation performance of countries (Al-Marhubi 2006). After providing several reasons why greater country freedom might lead to lower inflation, he runs cross country regressions of inflation on economic freedom for one hundred and eight countries on average annual data over the period 1970 to 2000. He finds a negative and statistically significant relationship between inflation and economic freedom when inflation is regressed on freedom alone and when controlling for other variables such as the level of economic development, trade openness, and central bank independence. From his results, Al-Murhubi concludes that economic freedom is certainly one of the important factors that need to be evaluated when considering whether a country will pursue enough monetary restraint to keep inflation under control.

Joshi and Acharya look at the effect of trade openness on inflation for a single country hypothesizing that greater trade openness generates conditions that reduce upward pressure on prices thereby lowering inflation (Joshi and Acharya 2010). They use cointegration analysis on quarterly data for twenty one years for India for the period 1984-85 to 2004-05 and find evidence for the presence of a long term positive relationship between inflation and openness when using alternative measures of trade openness and when including and excluding traditional money supply variables.

Based on an inflationary model that allows, under certain circumstances, government bond issue, as well as the money supply, to have inflationary consequences, Kwon, McFarlane and Robinson look at public debt as a potential source of inflation (Kwon, McFarlane and Robinson 2009). Using regression analysis on a panel consisting of seventy one countries over a period of forty-two years from 1963 to 2004, they find, that while increases in public debt is not typically inflationary for developed countries, it is generally inflationary for developing countries, especially for highly indebted developing countries.

Staehr uses panel estimation on annual data from 1997 to 2007 for ten new European Union members from central and Eastern Europe, and finds, among other things, that countries with large government debt tend to experience higher inflation than other countries (Staehr 2010).

II. THE VARIABLES AND THEIR DATA SOURCES

As is typical case for international data, there are a lot of missing values. The data set consists of annual data from 1996 to 2008 on a maximum of one hundred and ninety countries. The measure of inflation is the annual percentage rate of inflation using the GDP deflator. It comes from the World Bank's World Development Indicators (World Bank 2009). The measure of corruption (CORRUPT) is based on the corruption perception index of Transparency International (Transparency International 2009). It is computed as ten minus the corruption perception index and ranges from a low value of zero to a high value of ten with higher values indicating greater corruption. The proxies for the level of economic development, the size of the government, and the size of the military are, respectively, real per capita GDP in 2000 U.S. dollars (GDPPC2000), the percentage of government spending to GDP (%GOVGDP), and the percentage of military spending to GDP (%MILITARYGDP). The data for the three variables comes directly from the World Bank's World Development Indicators.

III. THE COUNTRY CHARACTERISTICS INFLATION MODEL

The model consists of a single equation. The equation is as follows.

I = f (**T**)

In the equation, I represent a country's inflation rate, and **T** is a set, or vector, of country characteristics. The model merely puts forth the hypothesis that inflation, or the inflationary tendency of countries, depends on country traits. The basic notion is that different country characteristics are not only essential sources or causes of inflation but that they are also associated with different mosaics of incentives and pressures on inflationary decision makers with regard to how much to inflate.

Among the many possible characteristics with inflationary consequences, four potentially important country attributes are the level of economic development, the extent of corruption, the size of the government, and the size of the military. It is anticipated that there will be a negative relationship between the level of economic development and inflation, and a positive relationship between corruption and inflation, the size of the government and inflation, and the size of the military and inflation.

Different levels of development are likely to influence whether a country has a bigger or smaller proclivity for inflation. Inflation occurs when aggregate demand is greater than aggregate supply, or, dynamically, when the increase in aggregate demand is greater than the increase in aggregate supply. Poor developing countries have low productivity, and generally experience little or no productivity increases over time. Rich developing countries, on the other hand, have high productivity and established institutions and research organizations that insure growth of productivity. Thus, any upward shift in aggregate demand is likely to have greater inflationary repercussions for developing than for developed countries.

Corruption is apt to have inflationary consequences for several reasons. First, corruption places an added burden, in one form or another, on society. Someone is going to have to bear the cost of those living by corruption, and, as a general rule, higher costs spell higher prices. Second, there is a reduction in overall production (increased inefficiency in the overall economy) from corruption, as resources devoted to corruption are not used for productive activity. Third, from witnessing people living 'unfairly' from corruption, corruption dampens the incentives of those engaged in productive activities and gives them an incentive to switch to corrupt activities.

One reason why bigger government may have negative inflationary consequence is that, given a constant level of aggregate demand, bigger government can be inflationary if it transfers resources from more productive private uses to less productive public uses. Such a misallocation is likely to occur with increased frequently as the government grows in size due to the presence of diminishing returns in the two sectors. As the government grows, the government will have to dip more and more into activities in the private sector that have higher and higher profitability and use them for less and less valuable functions in the public sector.

Studies have found that the size of government has a negative effect on economic growth beyond an optimal size and that a large number of countries in the world are currently operating beyond their optimum. Because government size has a negative effect on economic growth, one of the channels by which government size may have a negative impact on inflation is through its negative effect on economic growth.

If the government expands for regulatory purposes, and the regulation, in line with capture theory, is ineffective, then the result is a higher cost of doing business and higher prices along with a greater expansion of a burdensome do nothing government bureaucracy.

There is also an inflationary bias in the way government pays for its factors of production and prices its goods and services. The pay of government workers, of fireman, of policeman, and of military personnel rarely, if ever, goes down, but rather, it is a matter of how much the increase in their pay there will be. In terms of the price of government goods, a similar phenomenon occurs. Now, the bigger the size of the government, the more this inflationary governmental bias in wages and prices takes hold of the economy.

What's more, the government tends to prop up or maintain industries, especially big industries, that otherwise would be declining in response to changes in relative scarcity prices. By so doing, the government prevents resources from properly reallocating to their current highest valued uses and artificially supports wages and prices above their true equilibrium values in these industries.

In addition, most governments have a series of programs such as unemployment insurance, minimum wage laws, and welfare that tend to make wages and prices slow their rate of decrease less than they would otherwise in the face of adverse circumstances.

Finally, but by no means of least importance, the government needs to finance its expansion. Increases in government spending can only be financed in three ways, by increasing taxes, by increasing public debt, or by printing money. All three of these have potential inflationary consequences.

As with the expansion of the government, and, perhaps, even more so, the expansion in the size of the military is a real potential inflationary danger. Most of the reasons offered as to why the growth in government size is inflationary are applicable with even greater force for military size. Political leaders are often enamored with the power that accompanies military expansion. Weapons are expensive and quickly become obsolete, and the military can easily become a perpetual sink hole for scarce resources. In the middle of the twentieth century, U.S. President Eisenhower coined the phrase *military industrial complex* to characterize, once established, the stubborn entrenchment, perpetuation, and growth of the military within the economy and the political system.

IV. PANEL REGRESSION RESULTS

Table I shows the results of cross country weighted panel regressions on annual country data from 1996 to 2008.

TABLE I: CROSS COUNTRY WEIGHTED LEAST SQUARES PANEL REGRESSIONS OF INFLATION ON COUNTRY CHARACTERISTICS

	(1)	(2)	(3)	(4)
CONSTANT	29.53 (34.24) *	20.60 (24.06) *	19.81 (23.96) *	21.39 (26.18) *
LOG(GDPPC2000)	-2.757 (-30.09) *	-1.338 (-10.24) *	-1.458 (-12.77) *	-1.863 (-15.48) *
CORRUPT		.6853 (8.54) *	.6364 (8.36) *	.3402 (4.21) *
%GOVTGDP			.1012 (5.60) *	.0768 (3.67) *
%MILITARYGDP				.3414 (4.97) *
RSQ	.283	.358	.528	.547
DURBIN WATSON STATISTIC	.956	.862	.822	.857
COUNTRIES	190	172	161	141
OBSERVATIONS	2361	1464	1334	1196

The table contains four equations. The first runs inflation on the level of economic development alone. The second adds the extent of corruption as an explanatory variable. The third adds the size of government, and the fourth tacks on the size of the military.

The equations are labeled in the first row of the table. The first column of the table identifies the explanatory variables. The list of explanatory variables is followed by a few relevant statistics. Each of the subsequent columns in the table shows the results of a single regression run. The body of the table shows, for any given equation and explanatory variable, the estimated coefficient (the top value) and its associated individual t-statistic (the value below the estimated coefficient in parenthesis). If a variable is significant at the one percent level or better in an equation, then an asterisk appears under the individual t-statistic.

The results indicate that all four attributes of the economy are important for inflation, with higher levels of economic development leading to lower levels of inflation, and greater corruption, government size, and military size, leading to higher levels of inflation. Each of the four nationwide characteristics are significant at the one percent level of significance or better in every equation in which they appear and their coefficients always have their theoretically expected signs.

The magnitude of the estimated effect of each of the variables is also quite substantial. Examining equation four, the equation containing all the explanatory variables, shows that an increase in the level of economic development brought about by a jump in per capita GDP from one hundred dollars per capita to one thousand dollars per capita is associated with almost a one and nine tenths reduction in the inflation rate. A one percentage point increase in the size of the government, which is measured by the percentage of government to GDP, leads to around an eight one hundred percent jump in the inflation rate. The make-up or composition of the government seems to really matter for inflation. The effect of the size of the military is about five times that of the size of the government. A one point upward jump in the size of the military that is calculated by the percentage of military expenditure to GDP causes the inflation rate to go up by over there tenths of a percent.

V. CONCLUSION

There is a tradition in western society, that if we understand the cause of something and how it works, then we can put it under our conscious control for our benefit. However, sometimes the very conscious control, not the knowledge of how something works, is the real problem. In this case, it is character that comes into play. Almost everyone, and certainly almost all economists, knows that inflation is caused by too much money chasing too few goods. However, given we have the knowledge of how inflation works, the real question is the search for the underlying factors as to why some countries tend to readily put themselves in an inflationary state, while other countries have less of a tendency or predisposition to do so. This study has found that four country traits, the level of economic development, corruption, the size of government, and the size of the military matter for inflation. If a country desires to be less inflation prone in the future, it would do well to promote economic growth and development, to come up with ways and means to reduce corruption, to undertake measures to keep the size of government under control, and to establish methods for keeping military expansion in check.

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ROLE OF FINANCIAL MANAGERS IN GLOBAL FINANCIAL CRISIS

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ABSTRACT

Now day's world perceived that situation of financial statements in enterprises are critical and companies where most of them escaped from primary effect of credit crisis observe that to make their required capital has been more difficult. If we add increasing prices and decreasing demand to this difficulty, we can find out that why the role of financial managers and need of changing of perception of shares' owners from their traditional role into a financial engineer thinker will rapidly day-by-day. The objective of this paper is to study the role of financial managers in recent global financial crisis and challenges & opportunities in front of financial managers of enterprises in different industries .In regard to existence circumstance of this crisis and changing role of financial managers will be discussed. The present article is based on research of descriptive kind and its information collecting tools is library method. The obtained results of the accomplished studies indicates that global recession comprises the opportunities such as: access to cheap financial sources - accessing possibility to more liquidity - stock price stabilization - stock better performance - the possibility of communicating development with other efficient global stock exchange - making pattern from foreign enterprises. The global crisis also involves the challenges alike: informing power development and information technology -transparency in produced information in to stock market -the necessity of observance of accepted accounting standards - the existence of more analyzers in market and generally it comprises increases quality level of decision making for financial managers in market. the results of this research is used for financial and economical politicians and decision makers in capital market, investment companies, users of security exchange market, insurance companies, top managers and also financial managers of various industries. Therefore in this paper has been tried to identify the fundamental challenges in front of financial managers and with study of performance of financial managers' various duties in financial crisis, the relation quality among these areas will be analyzed. Undoubtedly examine of potential of every of theses area can clarify the basic challenges in strength and weakness of financial managers' performance. Because the main challenge of financial managers in any organization can be qualitative empowerment and promotion of financial managers in financial area for continuous solving of unexpected events such as recessions.

KEYWORDS

Recession, crisis, Financial Crisis, Financial Managers, capital Market, Market knowledge, challenges& opportunities, Globalization.

INTRODUCTION

The concept of global crisis can be in meaning of deviation of common balance situation of organizations' relation with global environment in manner that they have to be aware of it.

Lary Smeet Manager of crisis institute has defined the word of recession as a main confusion in countries, where is under expanded news coverage and curiosity of people incite them regarding to particular matter in common activities of organization this factor can have political, financial, governmental and focal effect on leading structure of organizations into their goals .The global financial recession is a phenomena with much effectiveness probability that threat the executive capability of organizations in many countries. And its specification factor indefinite and ambiguous of its solving tools effectiveness and decisions regarding facing to it should be taken rapidity. Any how the financial crisis do not reveal suddenly and most of them are having warning signs that shows the potential difficulties and complexities and it has interesting similarity with a biology model .

In other side nowadays in each institutes including private, cooperative or public whether with profitability or non-profitability purpose financial management perform a principal role. Financial management considered as a scientific filed because financial affairs is set of reality, facts and Principles that related with providing and Applying financial resources through people and business organizations, government,

Since the financial affairs are lifeblood of all activates in any organization and their control and protection is with financial managers, it is quite clear that the matter of control and directing of financial sources and its important role in life of organization has created many expectations from financial managers.

So due to all these the role of financial managers has considered very important in recent years.

Due to ever increasing of enterprises' need to redesigning of philosophy and policy of management for constant making competition continuation leads to a global enterprise in real meaning.

So to have strong team of empowered and efficient financial managers is of numerous advantages that with their beneficial performance will assist the company in challenging with financial global crises and passing it and also to compete in this new time for achieving the feature of companies.

Therefore to have powerful and strong human resource in financial affairs part that is most important department of any organization cause that individuals in this section have ownership feeling in decision making and be obliged towards its result and also increase their productivity and efficiency and whereas the top managers of companies can facilitate their experiences to subordinates through training in order to make their decisions rapidly and correctly.

Therefore if financial managers learn the necessary training for empowerment and effectiveness so they can be able help to external as well as internal clients and respond their demands.

Since financial managers can take necessary decisions there is no need to permanent presence of top managers to guide in any case .financial managers when take decision on their own initiative in regarding matters will have well perception toward themselves and having motivation and appear their inherent talents and ownership feeling and organizational belonging will be dehiscent in them and consider themselves participant in their company's destiny.

At present the conditions, specification and identification of financial managers is developing rapidity and numerous expectations have been appear from financial managers because the financial analyzing techniques have been more complicated and most of enterprises are acting in global level or financing their required financial sources in that level .

Therefore, financial managers should be acquainted with market conditions and capital and its risk and fluctuation.

Financial manager usually is a specialist that has general knowledge in various area of financial affairs and undertaking the main duties such as budgeting, financing, evaluating the capital projects, planning marketing strategies ,products pricing and financial analysis . The role of financial managers is so important that its place will elevate to directing manager and be suitable replacement. In fact, the top management of enterprises will have confidence to those who protect from their companies in bad situation of credit and finance and could attract the market confidence.

Therefore, with this preface financial managers should consider following three main processes in order to analyze the global financial crisis and forecast its effect on their organizations:

- *Management of Crisis before occurrence.*
- *Management of Crisis during occurrence.*
- *Management of Crisis after occurrence.*

But it should be considered that observing to each of above processes themselves contains of particular arrangement regarding preventing and or minimizing the effect of financial recession in order to be able to keep the organization secure.

THE REASONS, KINDS, SIGNS AND CONSEQUENCES OF FINANCIAL CRISIS

The study of west financial crisis and its effect on economy of countries is the issue of the day of most of economical, scientific and financial gathering.

The appearance of financial recessions put the financial managers in inculpation exposure and reduce the confidence to self disciplinary to financial profession in other side the crisis arising reveal the necessity of identify necessary substructures to carry out the accounting and auditing standards by financial managers who in fact are main executives, and special attention in to confidence crisis in global markets. The financial crisis is the case that money demand increases towards money supply rapidly or the case that the value of financial institutes or financial assets mainly decreases.

But in ***Ferdirk Michkan***'s belief that the financial crisis is the non linear break that causes the financial market not to be direct the funds in to yield investment opportunities, in this manner it is said that the crisis signs are :

- *Bonds decline*
- *Stock market decline*
- *Credits market decline*
- *Exchange rate decline (National money decrease more than 25%).*

These are some of financial recession signs .Therefore the financial crisis contains the forms such as exchange crisis, banking crisis, liabilities crisis or mix of these three cases.

From other side the financial crisis consist of essential and non-essential reasons and rupture of economical policy containing of money growth, inflation, tax increase, budget shortage and business circles are of essential reasons and market psychological aspects such as news importance or hearsays on market atmosphere and psychological mechanisms like non harmonic information, market following and morosely in depending markets are of non-essential reasons of financial crisis. The transmission channels of recession are also the financial and business channels, economical similarity and geographical nearness or political coordination.

Also the financial crises are havening the following issues:

- *Stock value reduction, users' confidence reduction and economical stagnancy of Europe and U.S.A.*
- *Reduction of demand, oil and mettle and petrochemical products price.*
- *Developing budget reduction in inside Arabic countries and reduction of new appearance economical growth.*

THE GLOBAL FINANCIAL RECESSIONS AND CHALLENGES IN FRONT OF FINANCIAL MANAGERS

The financial recession has some consequences for financial managers in its follow that can be indicate to some of them as: The starting of government's interference in financial and accounting affairs, completion of securities law in 1933, law of securities exchange market and organizing the securities and Exchange Commission (SEC) in 1934 and assignment of responsibility of accounting standards completion and supervising on reporting to SEC, considering importance of financial managers' role in application of capital market ,auditing necessity in stock exchange market of New York, professional initiative and accepting the completion responsibility of accounting principles &methods , try for standardizing the accounting methods and demand increases for accounting and finance services all are of advantages and disadvantages of financial recession's occurrence in finance &accounting profession.

FINANCIAL INFAMIES AND CONFIDENCE CRISIS

The financial reporting crisis of 1999 to 2001, insolvency of companies like Anron, Worldcum, profit management increases and deception and responsibility recession in auditing and financial management are causes so that the confidence to financial affairs and financial managers is reduced.

The consequence of confidence crisis for finance affairs was confidence reduction to self disciplinary and reassessment in accounting standards and approval of the Sarbanes –Oxley Act in 2002. This event was considering to leadership of companies and responsibility of Board of Directors in creating and preserving internal control systems and reporting and also increases in financial managers' responsibility in reporting. And the dependence of Financial Accounting Standards Board of U.S.A (FASB) in to Securities and Exchange Commission (SEC) in financing was created and the supervision board on financial affairs of enterprises was organized

THE FINANCIAL CRISIS OF 2007 TO 2009

The house price rectification in America leaded to second grade crisis of mortgage loans and then causes for crisis occurrence in area of liquidity, energy and price of food products ,stock markets and automobile manufacturing so that the area economical stagnancy and crisis be expanded in this way financial recession of U.S.A was exposure to whole world, the final data of 2007 showed that foreign investments in American securities were $6ooo billion (except investment in treasury securities) and more than $6500 billion American investment in Foreign securities was estimated on the other side the volume of Import& Export of U.S.A was more than $3000 billion in 2007.

THE RECESSION CRIMINALS AND ITS LEARNING

The legislators, stewards, international financial system, companies, Managers of enterprises, Ranking institutes and also auditors and financial managers are as an examples of responsible and criminals in Occurrence of recent financial recession.

Neglect of risk, Liquidity consideration and cashable, accounting economical consequence and suitable sub structures of market are lessons of recent financial crisis.

The case of neglect of risk was one of the basic matters in recession in manner that inattentive in to various dimensions of risk, more optimism, too much relying on mathematical models and moral slant (the loan giving model for its sale vis-à-vis giving loan for its receipt) causes crisis.

Anyhow all aforesaid channels should be studied and analyzed by financial managers of developing countries and they can disclose more the effect of these elements on growth and economical development and assist the managers in solving the problem of global financial crisis , therefore the countries which have not taken rapid steps regarding globalization have been less involved in difficulty and the countries where their economy have been combined or more depended in global economy been more damaged because of negative consequence of financial recession although we cannot forgo of this important matter that the extent of vulnerability of every country depending on policies of financial managers of various organization and institutes of those countries and the strategic decisions that they can take for confront with crisis .

Financial managers analyze the effect of internal as well as external factors on creation of recession and make use of challenges and opportunities and with strategic management' perception specify the securing plan and way of meeting with crisis and make best use of necessary financial technique.

PERFORMANCE OF FINANCIAL MANAGERS IN FINANCIAL RECESSION

Role of financial managers have been involved abundant changes during passing time in organization the financial techniques have been complicated fundamentally most of companies have activity with several objectives some of them working in international level and others are doing business at same time with so many organizations all of these organizations need to financing their required financial resources so here is necessary that financial managers be known about capital market conditions and the method of keeping asset and clarifying the method liabilities combination budgeting, financing, investment project evolution ,planning for marketing strategies all are important role that the financial managers undertaking nowadays. The global economic crisis of today and credit bad condition and complicating nature of enterprises have created the competitive area among financial managers so that the company will give the administrating affairs to those who can able to protect and defend of his company's credibility in bad financial and credit conditions The new performance of financial managers can be expressed in following categories:

ROLE OF FINANCIAL MANAGER IN ENTERPRISE'S LEADERSHIP

Financial Managers discharge key role in leadership of enterprises and they will be enterprise's main helmsmen practically along with managing directors. Axial role of trading and work model scenarios designing and activities and strategic programs compilation of enterprise will be in financial managers, undertaking. The following two important events will effect on output and future of enterprise:

- *Planning and strategic management on resources in direction to value creation for all users will be put in enterprises, work order.*
- *Strategic management forwarding responsibility on resources and enterprise's goals certainty will be in leadership team undertaking of organization.*

Financial managers will have axial and active role in leadership of organization and therefore they should necessarily have expand and aware vision to concept of strategic management on sources and apply it.

RISK MANAGEMENT

Due to competitive aggravation and contortion of work& business environment the risk of enterprises have been increased and will be and the permanence and continual activities of enterprises will be faced to ever increasing dangers.

Financial managers at present are member risk committee in most of companies and some time they are undertaking the main responsibility of risk management dep. of enterprise.

The financial management will undertake larger duty and role in modeling and future probable risks evaluation, determine effect of kinds of risk effect on progressing an occurrence of strategy and determining profit and analyzing and reporting risk to interested parties.

INFORMATION TECHNOLOGY

The information technology and application of computer has fundamental role in financial manager's performance as follows:

the possibility of financial accounting &management accounting acquisition will be fully available and in addition to extent of reporting scope, the consolidating and more effective information providing filed to management of organization and external users(shareholders mostly) will raised.

Whenever we will the accounts will be closed and financial statements will be preparedly and profitable immediately

This will added on time value of reports and help to management controlling exercise and shareholders decision making.

With developing data processing capacity and giving most of voluminous and timely affaires to computer, financial managers will find opportunity to do speared duties and responsibilities that delegated on them in new condition strategic management to resources and implemented it.

MARKET KNOWLEDGE

The element and factor of accounting in duty collection and role of financial managers has been faint-colored and their role will be relief as financial engineers and market analyst.

In financial reporting market, analyzing and customer valueless measurement is un-ignorable and financial managers in exercising customer management will play effective role. Since duties such as internal control exercising still will remain as basic parameter of role and duties of financial managers

SHAREHOLDERS

The decision made by financial managers about profit apportion is their most important duties. In whole of the world the profit apportion proposal will be determine by board of directors and on the bias of liquidity considerations and surplus fund and on market reasoning but in some countries like Iran such kind of decisions is under Assembly's responsibility and those individuals who are not much familiar with enterprises, investments and also liquidity position will make decisions about it, so it is of financial managers, association to remove existence problems because the decision making about profit apportion through shareholders is not in part of correct method. some of investment enterprises available in bourse, their stocks are less than logical value per share so the solution of this matter for financial managers is that to sell their portfolio stocks and with its determined cash buy the subsidiary stock which is available in market in this case the regarding difficulties will be solved .

Financial managers Communication with share holders will be close more rather more variety and information expedition which financial managers will give to share holders and in general to capital market in feature will not comparable with today,

Providing profitable information about value creating of enterprise for shareholders and analyzing that, feature income delivering potencies reflection of enterprise and or adventure and risk which threat enterprise, will propound financial managers as most effective informer to shareholders and capital market

REPORTING

Various accounting standard which are usual in today's word, will come closer and similar to each other, hence financial reporting will enjoying of more absolutely, and coordination. Accounting will find great lore as common language of business work in world- wide. Capital market and shareholders as more important users will determine more various information products from financial report. this will find large scope especially whit devolving and promoting work out reporting from management accounting area and necessity of providing them to shareholders will get more scope and speed the anther element which effect on financial reporting expand the necessities of capital market on performance reporting organization corporate ion that causes that organization cooperate be evaluated and measured from various dimensions and reflecting regularly to shareholders.

The other main change in financial reporting is on time reporting facility and shorting of reporting intervals that as mentioned before it will be possible because of information technology application and will develop continuously.

It is obvious that financial report validity and relining depend on level of internal control quality system that its exercising as basic duty still will remain with financial managers.

FINANCIAL MANAGERS' ACTIVITIES FOR CULTURE MAKING

Financial managers have undertaken the decision-making in enterprises, value and due to skill that they have in financial analysis and assets value determination, they are able to measure the effect of these decisions on enterprises, value. Financial Managers in Iran have not found their value and place and this is duty is in financial managers, undertaking that to act in direction of enterprises, culture making.

THE OTHER CHANGES &DUTIES

With increasing importance of biological environment al sociology responsibilities the enterprises, stability will be depending on social responsibilities fulfillment by organizations. The financial managers will have more role in exercising social responsibility accounting and environmental accounting and organization share reflection in fulfilling this responsibilities.

Regarding to organizations, emphasis on value based management exercising, Applying tools and techniques progressing of value creation by financial managers is enjoying of special importance.

Some of works and activities of enterprise is other subject that it wills more developing and spreading in future. Financial analysis regarding to warped matters of acquisition and absorption of companies and works outsourcing and show for decision making will be of main duties of financial managers.

One of other main areas of feature financial managers, work is allocating of capital recourses and capital management and will help to run enterprise with minimum capital expenditures end.

At end that with impetrating of enterprise governance; future financial managers will undertake the measurement and reporting responsibility of executive managers and top manageress performance in compellation of favorable strategies of organization, progressing and accordance of strategic goals and management exercising.

However, the reality is that today's Financial Officer is much more than a cruncher of numbers. The Financial Officer of today is a dynamic part of any program team. He or she may still come from an accounting or business background but the nature of the work in today's public sector environment means that simply knowing numbers is not enough. Financial Officers are called to provide insights along with their numbers –they have to know how their calculations are applied within the context of a program or department.

In fact, Financial Officers are likely some of the best-informed, most broadly focused individuals in any given department or project team. This basis makes them the logical leaders of this burgeoning century. Indeed, steps are already in place to ensure that these financial professionals are better integrate and better utilized – but more must be done.

CONFRONTING WITH RECESSION

As It has been indicated in to main global financial crisis of past century and its consequence in previous parts and subsequent to that the performance of financial managers at the time of recession in various area were analyzed and evaluated and it was stated that economical stagnancy and present global financial crisis causes the increase of financial managers' role in enterprises and in compare to past years some more financial managers participated in strategies completion and risk management prioritized .

Therefore here in this part the actions that has taken place and the recommended solutions stated and therefore in beginning, the most factors of recession confronting will be indicated which are used strategies by financial managers in a control effective and role plying they are as follows:

- *Reduction of interest rate.*
- *New liquidity infusion to financial institutes.*
- *Purchasing of problem financial assets.*
- *Financial policies such as tax reduction and increase in construction costs.*

So in this regard financial managers with make use of necessary financial tools should assist the top managers of enterprises in optimum use of internal as well as external financial sources , financial managers instate of focusing on companies' strategy, should do for processes that through them the organization could provide their sources in suitable way and since the knowledge and power have been dispersed the financial managers should be able and urge that be effective on strategies of organization. In some cases his judgment of financial managers and their analysis for arbitration regarding judgment is more important that figures expressed. The prosperity is that we empower financial managers even with limited authority so that they can be able to have innovation and creativity and providing suitable innovation in financial amazement and crisis.

Financial managers estimate the probability of financial crisis occurrence with use of financial techniques such as financial ratios and breaks even point through combination of group of these techniques and with use of statistical multiple variables. When a set of financial variables will be consider for financial recession forecasting, the choosing of a suitable statistical method for determining of financial recessions and insolvency is very important.

CONCLUSION

With structural and principle changes which have been appeared in business conditions and, it will be continued and the basic changes have been created in expectation of users of financial reports, the financial manages' role faces with significant changes and their role enjoy of more complexity and more importance consequently in such situations financial managers as vigilant conscience of organizations with observance of professional ethic and trustee keeping can provide the financial clear and reliable reports to all users of financial information particularly stockholders.

In any case financial managers should have active presence in fields' activity and as effective member of organization' leadership perform their role in achieving organization's goals and provide the expectations of various users.

Financial managers when can enjoy of this capability be converted in to joint point of elements and parts of organization and relation of institute with its surrounding environment through conversant to knowledge and various marketing learning ,human resource management ,capital market ,financial knowledge area and information technology and etc.

In this regard financial managers for encountering with global financial crisis should consider particular planning and arrangement l the in their organization for control the recession, these are can be summarized as follows:

- **Financial crisis forecasting and study of critical and vulnerable points:** *For examine the recession by financial managers for finding critical and ulnerable points there will be used of logical methods ,when financial managers with propounding the particular systematic questions (systematic thought) consider and forecast the scenario (unpleasant event) and will assist the top managers with their experiences . In fact financial managers as main steersman of life blood of every organization that indeed is financial affairs, considering all affairs and they do necessary forecasting for probable recession.*
- **Economical program provision for confrontation with global financial crisis:** *The necessity programs should organize and complying by financial managers in a manner so that specify all crisis warning signal as much as possible and they should take actions for nullifying or modifying of crisis situation and forecast the expected results of each action.*
- **Organizing the team of crisis management and training of human resources:** *The team of crisis management use the various specializations according to kind of crisis which their probability and effectiveness are more so that they can recognize the speedy and affective reflection of crisis so that here financial managers as a members of aforesaid team are intending and facing challenges to find suitable and optimum way for facing this recession.*

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PATIENT SATISFACTION IN TERTIARY PRIVATE HOSPIATL IN DHAKA: A CASE STUDY ON SQUARE HOSPITAL LTD.

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ABSTRACT

There is always dispute that private health sector offers better service to the patients than public sector. People ready to disburse extra currency from their wallet in exchange of tenable treatment. The upper class of the country has been increasing due to open market economy, thus creating the needs of establishing tertiary hospital. The objective of this study is to find out factors which mostly contribute on patients' satisfaction in newly established tertiary hospital in Dhaka. Square Hospital Ltd was selected for the study to identify whether they satisfy patients' needs or not. An analysis covering 100 patients revealed that cost of treatment, physical evidence, doctor services, nurse services and feedback from patient lead to a higher level of patient satisfaction.

KEYWORDS

Patient satisfaction, Private hospital, Service.

INTRODUCTION

Health and Socio-economic developments are so closely intertwined that it is impossible to achieve one without the other (Ramani and Mavalankar, 2006). Health care for population is primarily the responsibility of state in most of the countries around the world including Bangladesh. Even in the highly free market economies like USA and Singapore, the government play very important role in health sector to ensure healthcare to population. But state sponsored health services are often unable to meet demand of country due to a set of factors like capacity constraints (Hasan and Rahman, 2002).

To face this challenge, Government of developing countries allocating more funds in health sector to curtail the sufferings of her citizens. Nevertheless, public services are experiencing more discerning and discriminating patients, who may choose between private and public sector services (Rowly, 1998). Several studies have also shown that people in general have a preference to seek healthcare services from the private sector (Ramani and Mavalankar, 2006). Hence, the private sector is viewed as inherently more efficient (Awio and Northcott, 2001).

The quality of services provided by the hospitals is contingent on market incentives: because private hospitals are not subsidized and depend on income from clients, they will be more inclined than public hospitals to provide quality services and to meet patients' needs better. By doing so, they will not only be able to build satisfied and loyal clients who will revisit the same facility for future needs; the clients will also serve as a source of referrals to recommend the private establishments to friends and family, thereby sustaining the long-term viability of private hospitals (Andaleeb et.el, 2007).

Since 1990 Bangladesh economy started to experience flourishing due to adopting free market economy. Certain number of middle class family entered into upper class during this period. This upper class visit neighboring country particularly in India for their medical needs. They are ready to spend money for the betterment of their health. Identifying this need, Lab Aid hospital was established to cater these patients. Moreover, seeing the success of Lab Aid, other company jointly or individually established tertiary hospital like Apollo, Square and United Hospital. Consequently, patients are taking medical services from these hospitals other than going outside the country and saving national currency.

Andaleeb (2007) undertook a research with his colleagues regarding patient satisfaction on public, private and some foreign hospitals operating in Bangladesh. A search of the literature suggests that no research, however, has been conducted on newly established tertiary hospitals about patient satisfaction. The reasons of patients return into these hospitals are yet to be discovered. It is likely that the patients revisit hospital either for better quality and satisfaction provided by the hospitals or no choice left for them to have treatment other than these establishments. With the development of private health care amenities, particularly in Dhaka city, it is imperative to assess the quality of services delivered by these institutions and determine the level of satisfaction perceived by the patients. If satisfaction issues are being compromised by these establishments, it calls for the re-evaluation of policy measures to redefine their role, growth and coverage, and to seek appropriate involvements to ensure that these institutions are more quality-focused and better able to meet the needs of their patients.

Consequently, this study was designed to determine whether patients are satisfied with the quality services of hospitals or deficiency of opportunities of tenable treatment in public and other private hospitals compelling them to revisit these institutions.

The study also attempts to find out the factors which mostly contribute in patients' satisfaction and encouraging them to visit domestic hospitals other than foreign.

PRESENT SCENARION OF HEALTH CARE IN BANGLADESH

Private providers are more diverse in terms of the services offered, training level of the medical staff, legal organizational status, system for medicine use and whether or not the doctors also have public sector employment. Private providers range from NGOs, mainly offering promotional and family planning services, for-profit providers (both very small practices and large modern health facilities) to traditional healers and homeopathic providers as well as licensed pharmacists and unlicensed drug sellers (World Bank paper, 2005).These can be shown in the following table:

TABLE – 1: KEY HEALTHCARE PROVIDERS IN BANGLADESH

Government of Bangladesh	Private	NGOs
University and Medical College Hospitals	Private Clinics and Hospitals	NGO Hospitals
District Hospitals	Private practitioners	NGO Clinics
Upazilla Health Complex	Traditional Providers	
Union Health and Family Welfare Center	Homeopathic Providers	
Community Clinics	Unqualified providers	
Specialized Hospitals	Drug Retail Outlets	
Other Facilities	Retail Sale of Other Medical goods	
Health Facilities in other Ministries and Autonomous Corporations		

Source: World bank Paper, 2005

A striking feature in the composition of health spending in Bangladesh is the large share of drugs in the total out of pocket expenditure. Over 70 percent of the household out-of-pocket expenditure is on medicines and almost 46 percent of total health expenditure (THE) is attributed to drug retail expenditure. The large shares of drugs in the total expenditure suggest a high degree of self-medication and the pre-dominance of pharmacists in the delivery of outpatient services. While the public sector is used in particular for inpatient services and preventive care, the private sector provides the large majority of outpatient curative care

(90 percent of ARI and diarrhea of children is treated in the private sector). NGO activities are concentrated on family planning and immunization services (World Bank paper, 2005).

TABLE-2: SELECTED INDICATORS OF HEALTH FINANCING IN BANGLADESH, 2003

Indicator	Value
Total expenditure on health as percent of GDP	3.2%
Total per capita spending in average exchange rate	US$ 12
Public health spending as percent of total	44.2%
Public health spending as percent of total government budget	8.7%
External resources as percent of total of public health expenditure	13.3%
Private health spending as percent of total	55.8%
Out-of-pocket expenses as percent of total private spending	93.2%

Source: NHA 2003, WHO, 2001

The health sector, public and private is increasing its capacity to meet the needs of growing population in urban and rural areas. The actual fact is difficult to obtain as the research by BBS is undertaken once in a while. In earlier, it was witnessed that public sector was still dominating in providing medical facilities to its populace. Some key information regarding health sector can be noticed in the following table.

TABLE 3: PRESENT SCENARIO OF HEALTH SECTOR

1. No. of Beds in Health Sector	38,171	MIS/2008
2. No. of Beds in Private Sector	36244	DGHS/2009
3. No. of Registered Physicians	49,994	BMDC/2009
4. No. of Hospitals in Public Sector	589	DGHS/2009
5. No. of Clinics/Hospitals in Private Sector	2271	DGHS/2009
6. Population per Physicians	2860	DGHS/2008
7. Physicians per 10,000 population	03	MIS/2008
8. Population per Bed	1860	DGHS/2009
9. Physician to Nurse Ratio	2:1	DGHS/2008
10. Population per Nurse	5720	DGHS/2009

Source: Health Information Unit (MIS), Directorate General of Health Services,Mohakhali, Dhaka –1212.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Patient satisfaction is vital for a number of reasons. For one, today's buyers of health care services in developed countries are better informed, more discerning, knowing exactly what they need (Andaleeb et al., 2007). Customer satisfaction is also a valuable competitive tool; hospitals that are customer focused have been able to increase capacity utilization and market share (Gregory 1986; Boscarino 1992). Recent research has shown that service satisfaction can significantly enhance patients' quality of life (Dagger and Sweeney, 2006) and enable service providers to determine specific problems of customers, on which corrective action can then be taken (Oja et al., 2006).

Patient satisfaction is generally defined as "the patient's fulfillment response" (Oliver, 1997). It is a judgment that a health care gives service in a pleasurable level of consumption-related fulfillment. In other words, it is the overall level of contentment with a service/product experience (Andaleeb et al., 2007). Cheryl L. Stavins (2004), R.N., FACHE, senior vice president, Texas Children's Hospital, mentioned that there is hardly any one-time fix and sustainable approach to patient satisfaction. She considered training of the concerned employees as an essential integral part to improve patient satisfaction. She also indicated the necessity of a torch-bearer group who would be dedicated to keep the effort in the forefront of the organization to deliver the highest level of satisfaction to the patients.

Jerry Spicer (2002) showed that there are seven factors are vitally important as to deliver the highest satisfaction; (i) the consistency of measuring the reliable statistics regarding the patients' condition, (ii) level of dissatisfaction around the environment, the improvements tools and the infrastructure (as part of Six Sigma Philosophy) (iii) the level of monitoring at several points throughout the treatment, (iv) program regarding the clinical outcome, (v) aid structure regarding customer perceived services along with marketing programs, (vi) quality improvement strategy that includes the act of caregivers and (vii) the positive "word-of-mouth" about the staff members.

Monnin and Perneger (2002) developed 14-item scale, which can be used to assess the level of satisfaction of patient especially in the physical therapy area, (i) simplicity of administrative procedure, (ii) courteousness and helpfulness of secretary, (iii) ease of scheduling, (iv) skill and ability of physical therapist to put patient at their comfort level, (v) explaining what the patients will go through during the treatment, (vi) receiving worthy information any patients need at the end of their treatment concerning their future,

(vii) the sense of security at every level of period of the treatment, (viii) degree to which treatment meet the need of to patients' problem, (ix) effortlessness of access of physical therapy facilities, (x) helping patient find patients' way around and in hospital buildings, (xi) level of Comfort of the relaxing atmosphere, (xii) calmness of the rooms, (xiii) overall treatment and (xiv) 'word of mouth'. The important component of health services in the context of tertiary hospital, as derived from theoretical considerations is as follows.

FACTORS INFLUENCE ON HEALTH SERVICES

Doctor Services

Patients' satisfaction is created through a combination of responsiveness to the patient's views and needs, and continuous improvement of the healthcare services, as well as continuous improvement of the overall doctor-patients relationship. Moreover, sustainable relationship depends on reliability between each other. But in Bangladesh, reliability of the doctor is often perceived as low for various reasons, such as the accusation that doctors recommend unnecessary medical tests, supervision of patients by care providers is irregular, and specialists are unavailable (Andaleeb et al., 2007). Perceptions of reliability are also attenuated when doctors do not provide correct treatment the first time. In view of these reliability drivers, the more reliable the doctor, the greater the patients' satisfaction.

Communication

Communication is also vital for patient satisfaction. If a patient feels alienated, uninformed or uncertain about her health status and outcomes, it may affect the healing process. When questions of concern can be readily discussed and when patients are consulted regarding the type of care they will be receiving, it can alleviate their feelings of uncertainty (Cohen, 1996). Also, when the nature of the treatment is clearly explained, patients' awareness is heightened and they are better sensitized to expected outcomes. Appropriate communication and good rapport can, thus, help convey important information to influence patient satisfaction. In particular, patients expect from doctors to listen carefully to the patients, explain things in a way so that patients could understand, show interest for what the patients say, spend enough time with patients, visits sufficiently to the patients, consult with patients relatives regularly.

Nurse Services

Professionals nurse can deliver better quality service to the patients. On the other hand, Knowledge, skill and courtesy of the nurses can provide a sense of assurance that they have the patient's best interest in mind and that they will deliver services with integrity, fairness and beneficence. In the health care system, assurance is embodied in service providers who correctly interpret laboratory reports, diagnose the disease competently, provide appropriate explanations to queries, and generate a sense of safety (Andaleeb et al., 2007). Nurses also play an important part in providing additional support to patients' feelings of assurance by being well-trained and by addressing their needs competently.

Nurse empathy and understanding of patients' problems and needs can greatly influence patient satisfaction. Moreover, patients expect nurses to provide personal care and mental support to them. The greater the care to the patients, the greater the satisfaction of the patients.

Health Care Time

A busy doctor is often a popular doctor with a great reputation. However, by waiting too long for an appointment, patients may compromise their health. The one consistent feature of dissatisfaction which has been expressed with the out-patient service is the length of waiting time in the clinic (Hart, 1995). Patient satisfaction in hospitals will be achieved when the needs of patients will be fulfilled. Regular visits of doctors are one of the existent demands among patients.

Staffs Empathy

Health service quality is multi-dimensional. Besides medical care, patients also want comfortable rooms, courteous and empathetic staff (Angelopoulou et al., 1998), Lochman (1983) and Gibbs (1989). The success of health sector whether public or private is totally determined on the way service providers offer it to the patients. It is said empathic behavior reduce half of disease. Consequently, assuring the good quality of health care services is an ethical obligation of health care providers. (Zineldin, 2006).Therefore, Good quality of care is considered to be the right of all patients and the responsibility of all staff within the hospital.

Physical Evidence

Physical evidence that the hospital will provide satisfactory services is very important to patient satisfaction judgments. Generally, good appearance (tangibility) of the physical facilities, equipment, personnel and written materials create positive impressions. A clean and organized appearance of a hospital, its staff, its premises, restrooms, equipment, wards and beds can influence patients' impressions about the hospital (Andaleeb et al., 2007). However, in Bangladesh, most of the hospitals/clinics are lacking in many of the above attributes, thereby attenuating patient satisfaction. However, private hospitals which were established within 5 years have better physical facilities than other hospitals. So, it can be said that better the physical evidence greater the patient satisfaction.

Feedback from Patient

The marketer's job does not end when the product is bought. After purchasing the product, the consumer will be satisfied or dissatisfied and will engage in postpurchase behavior of interest to the marketer (kotler and Armstrong, 2006). Patients always expect the hospital staffs especially doctor and nurse will communicate and listen their feedback after leaving hospital. Sudden call from hospital to know patient health condition delight them certainly. Although, very few hospitals take this relationship building measure with their ex-patient. It can be posited that more call from staffs to know patients condition, the greater the patient satisfaction.

Cost of Treatment

In addition to service factors, perceived treatment cost is another factor that patients may perceive as excessive. In the more affluent Western world, Schlossberg (1990) and Wong (1990) suggest that health care consumers have become much more sensitive to costs, despite health insurance coverage. Wong also predicts that consumers will shop for the best value. In the developing world, especially Bangladesh, cost is a perennial concern among those seeking health care service, given their low earnings. Such costs include consultation fees, laboratory test charges, travel, drugs and accommodation. While basic health care service is supposed to be free in public hospitals, patients end up bearing the costs of medicine and laboratory tests, as well as some additional unseen costs. Private hospitals are not free but their costs vary markedly across hospitals.

Sufficient Human Resources

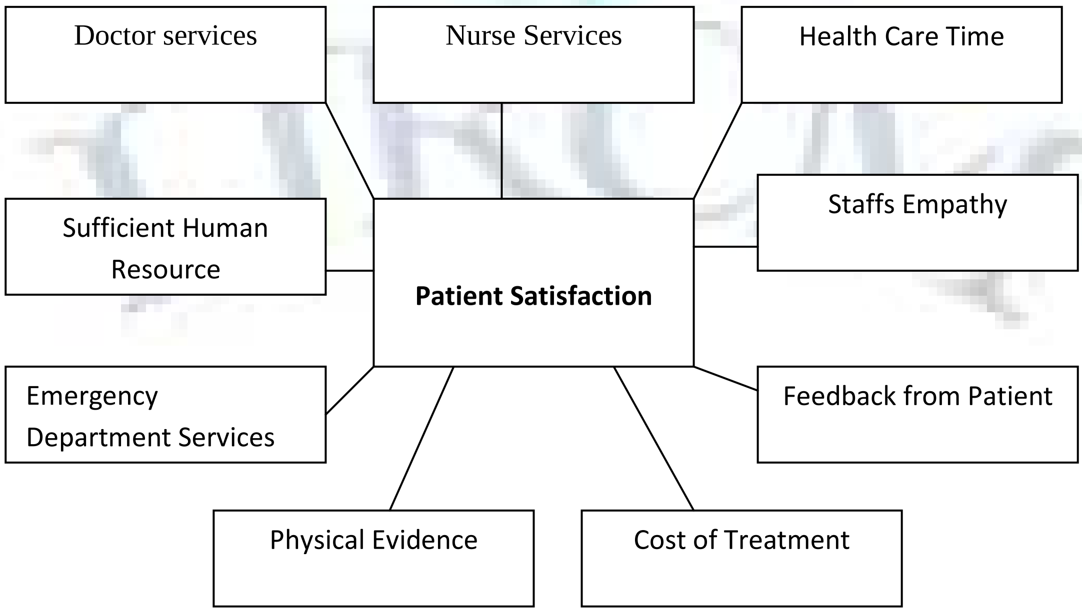
Hospital with sufficient human resource signified as good hospitals (Lam, 1997). This resource includes doctor, nurse, ward boy, maid servant, administrative staff and receptionist. Patient satisfaction will be enhanced for the availability of sufficient resources as it help hospital to execute the services promptly and efficiently.

Emergency Department

Patients arrive at emergency departments in distress. Physical needs are addressed, but less pressing emotional and social needs often go unrecognized. Although patients may not articulate their concerns, they may later feel dissatisfaction if needs were unmet (Hostutler et al., 1999). Rapid and well-organized service of emergency department increases the patient satisfaction.

Therefore, the basic model being tested in the study is as follows:

FIGURE – 1: CONCEPTUAL MODEL OF PATIENT SATISFACTION



Patient Satisfaction = a + b 1* Doctor services+ b 2* Nurse Services + b 3* Health Care Time
+ b 4* Sufficient Human Resource +b 5* Staffs Empathy
+ b 6* Emergency Department Services + b 7* Feedback from Patient
+ b 8* Physical Evidence + b 9* Cost of Treatment + error

OBJECTIVES

Under these circumstances, this study attempts to find out the factors that influence patients' satisfaction in square hospital ltd. in Dhaka. A better understanding of the determinants of patient satisfaction should help policy- and decision-makers adopt and implement effective measures to improve health care services in the country. The following are the main objectives of this study:

- find out the key factors that affect patients' satisfaction;
- find out whether patients are satisfied or not;

RESEARCH METHODOLOGY

The study was conducted on four major hospitals in Dhaka, over a four-week period from July 18 to August 15, 2010. Square Hospital Ltd was selected as sample hospital for the study. Both primary and secondary data have been used for conducting present research. Primary data have been collected by using direct interview and questionnaire method. A pilot test was conducted on selected samples. On the basis of respondents opinion from pilot testing necessary modifications of questionnaire was done. Non-probability Judgment sampling is the sampling technique in this research.

Sample Size and Data Collection

Total samples respondents are 100, comprising 40 female and 60 male patients, 58 patients under age 65 and 42 patients above 65. To be selected in the survey, patients had to be adults (age 18 and older) and admitted for at least a one night stay in the hospital. The sampling procedure began with the lists of respondents in 12 locations such as Purana Paltan, Dhanmandi, Mohammadpur, Lalmatia, Mirpur, Gulshan, Banani, D.O.H.S, Uttora, Mohakhali, Rampura and Malibagh. Interviews were taken in the residents of inpatients after 10 days of their hospital leave. The addresses of the inpatients were collected from the concerned hospitals with the permission of the authority. Interviewers were given a letter of introduction from a well recognized private university and guaranteed complete confidentiality so residents could see that the study was authentic. Finally, a telephone number was provided for respondents with questions or concerns.

As researcher anticipated some respondents would not be able to appear in interview due to their prolonged illness or disinclination about the study, primarily 120 samples were determined for the survey to avoid the incomplete questionnaires and missing data. At last 100 complete questionnaires were selected after the interview in selected locations for final input.

The secondary data have been collected through text books, journals and websites.

Sample Hospital

Square Hospital, Dhaka, Bangladesh, a concern of Square Group is a 300 bed tertiary care hospital. The hospital is an affiliate partner of Methodist Healthcare, Memphis, Tennessee, USA, Christian Medical College, Vellore and Care IVF (Invitro fertility centre) Centre.

Data Analysis

To analyze the data multiple regressions stepwise forward selection have been used. Stepwise forward selection, which involves starting with no variables in the model, trying out the variables one by one and including them if they are 'statistically significant'. If adding the variable contributes to the model then it is retained, but all other variables in the model are then retested to see if they are still contributing to the success of the model. If they no longer contribute significantly they are removed. Thus, this method should ensure that end up with the smallest possible set of predictor variables included in model.

RESULTS AND DISCUSSIONS

Personal Characteristics of the Respondents

Table (Appendix: 1) provides a socio-demographic profile of the respondents who participated in the study. As shown in the Table, the distribution of respondents' gender is quite balanced but their age, profession, income, house, living place and education is somewhat skewed. The age of respondents varied from 18 to more than 65 years old, but the highest percentage of respondents is in the age group 65 and above (42%). The percentage of respondents in other age groups is as follows: 14% ranging from 18 to 30 years old, 21 % from 31 to 45, and 23 % from 46 to 65 years. Nearly half of the sample of respondents are businessman (56 %) and 22% service holder, others are housewives and students. From the table it is evident that upper class and higher middle class are the patients of this hospital. Among the respondents 62% respondents have monthly income more than 75000 taka. Only 10% respondents have income ranging from 30000 to 50000. Since most of the respondents of the survey have higher income, they have their own house or apartment accounted for 87%. However, only 13% respondents live in rented house. Most of the respondents live in Dhanmondi (12) %, Gulshan (13%), Banani (10%), D.O.H.S (11%) and Mirpur (10%) respectively. Approximately 75 % of respondents have higher education, in which undergraduate level accounted for 30%, posgraduate-37%, Ph.D-8%.Together, SSC and HSC accounted for 25% of the sample. The study results tend to agree with current research that well-educated and rich people are most likely to visit this tertiary hospital.

Regression Analysis

Before conducting the regression analysis, the assumptions underlying multiple regression analysis were examined. Many scholars use Cohen's criteria for identifying whether the relationship between dependent and dependent variable is strong or weak (Cohen, 1983). Applying Cohen's criteria for effect size (less than .01 = trivial; .01 up to 0.30 = weak; .30 up to .50 = moderately strong; .50 or greater = strong), the relationship in this study was correctly characterized as strong (Multiple R = .751).

A model with a large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable. A model with a large regression sum of squares (53.855) in comparison to the residual sum of squares (41.700) in model 6 indicates that the model accounts for most of variation in the dependent variable. Here, Model 1, 2, 3 and 4 have a large residual sum of squares than regression sum of squares. However, Model 5 and 6 have large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable.

The t statistics can help to determine the relative importance of each variable in the model. If the significance value is small (less than says 0.05) then the coefficient is considered significant. Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are strong. Tolerance is a statistic used to determine how much the independent variables are linearly related to one another (multicollinear). A variable with very low tolerance contributes little information to a model, and can cause computational problems. VIF or the variance inflation factor is the reciprocal of the tolerance. As the variance inflation factor increases, so does the variance of the regression coefficient, making it an unstable estimate. Large VIF values are an indicator of multicollinearity. VIF of independent variables in all regression models ranged from 1.000 to 2.744 (Table-6). As a rule of thumb, a VIF value for a variable of less than 10 is deemed acceptable (Neuman, 2000; Hair et al, 1998.

TABLE – 6: FACTORS INFLUENCE ON PATIENTS' SATISFACTION

Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.977	.324		6.109	.000		
	Cost of treatment	.444	.084	.511	5.281	.000	1.000	1.000
2	(Constant)	.453	.473		.957	.341		
	Cost of treatment	.467	.077	.537	6.074	.000	.995	1.005
	Physical Evidence	.369	.090	.365	4.123	.000	.995	1.005
3	(Constant)	.189	.465		.406	.686		
	Cost of treatment	.439	.075	.505	5.881	.000	.976	1.025
	Physical evidence	.313	.089	.309	3.537	.001	.941	1.063
	Doctor Services	.322	.119	.238	2.708	.008	.932	1.073
4	(Constant)	.378	.487		.775	.441		
	Cost of treatment	.344	.079	.396	4.373	.000	.803	1.246
	Physical Evidence	.268	.086	.264	3.104	.003	.908	1.101
	Doctor Services	.422	.119	.312	3.548	.001	.851	1.176
	Nurse Services	.265	.093	.263	2.854	.006	.778	1.285
5	(Constant)	.283	.476		.594	.554		
	Cost of treatment	.417	.083	.481	5.032	.000	.684	1.463
	Physical Evidence	.332	.088	.328	3.754	.000	.817	1.224
	Doctor Services	.370	.118	.274	3.139	.002	.819	1.221
	Nurse Services	.352	.098	.349	3.592	.001	.662	1.511
	Feedback from Patient	-.253	.110	-.240	-2.296	.024	.568	1.759
6	(Constant)	1.468	.693		2.119	.037		
	Cost of treatment	.381	.082	.438	4.631	.000	.658	1.520
	Physical Evidence	.372	.088	.368	4.241	.000	.784	1.275
	Doctor Services	.404	.116	.298	3.489	.001	.807	1.240
	Nurse Services	.346	.095	.342	3.626	.001	.661	1.512
	Feedback from Patient	-.438	.134	-.416	-3.268	.002	.364	2.744
	Emergency Department	.627	.273	.269	2.300	.024	.432	2.314
a. Dépendent Variable: Patient satisfaction.								

After checking linearity assumption and multicollinearity problem satisfactorily, the multiple regression analysis of research models was run to test the expected relationships for predicting Patient Satisfaction. The regression model was run by simultaneously forcing all the independent variables in the model. The overall results from the regressions are reported in Table 1, 2 and 3. The overall regression model is statistically significant (*p*-value for the ANOVA F statistic is less than 0.001). The independent variables together explained 52.8 of the variance in Patient Satisfaction.

In table-3, the standardized coefficients (the betas), *t*-value for the significance test and significance value are reported. The absolute value of beta reflects the relative importance of a variable, thus the characteristic with the highest absolute beta is the most important variable in explaining the variance of the dependent variable. The findings indicate that among the nine variables that were expected to be related to Patient Satisfaction, only five were found to be significantly related to this dependent variable: Doctor Services ($b1=0.298$, $p<0.01$), Nurse Services ($b2=0.342$, $p<0.01$), Physical Evidence ($b5=0.368$, $p<0.001$), Feedback from Patient ($b6=0.41$, $p<0.01$), and Cost of Treatment ($b7=0.438$, $p<0.001$). This can be showed in the following table:

TABLE – 7: VARIABLE RELATIONSHIPS AND SUMMARY OF THE FINDINGS

Relationships	**Status**
b 1* Doctor services → Patient Satisfaction	Supported
b 2* Nurse Services → Patient Satisfaction	Supported
b 3* Health Care Time → Patient Satisfaction	Not Supported
b 4* Sufficient Human Resource → Patient Satisfaction	Not Supported
b 5* Staffs Empathy → Patient Satisfaction	Not Supported
b 6* Emergency Department Services → Patient Satisfaction	Not Supported
b 7* Feedback from Patient → Patient Satisfaction	Not Supported
b 8* Physical Evidence → Patient Satisfaction	Supported
b 9* Cost of Treatment → Patient Satisfaction	Supported

Therefore, Doctor Services, Nurse Services, Physical Evidence, Feedback from Patient and Cost of Treatment lead to a higher level of Patient Satisfaction. Patient considers these factors while choosing hospital for health care. Based on sample, the cost of treatment has the greatest effect on patient satisfaction in the hospital. This factor deserves the most attention from administrators and policy makers responsible for building a better and more patient-centric health care delivery system. Since, the patients of the hospital are rich and ready to spend any amount for their better health and they never compromise their health for the higher cost. They admit hospital due to better treatment in reasonable cost from their perspective. Moreover, they can stay with family; therefore, psychological cost is avoided. Feedback from patient positively increases patient satisfaction. In most of the hospitals, especially in public hospitals patient do not have any opportunity to express their views after taking services. This tertiary hospital is exceptional and it encourages patients' keeping their feedback after the service. This opportunity leads to higher patient satisfaction. If hospitals are neat and clean, doctors and nurses are well dressed certainly leads to patient satisfaction. Most of the hospitals, especially public hospitals do not have satisfactory environment which will appease someone mind and ease the illness considerably. The square hospital has notable and pleasing physical environment which lead satisfaction to the patient. Finally, doctors and nurse services are vital determinant for patient satisfaction. If doctors and nurses listen carefully, concentrate on patients' problems and conduct compassionately, patients' become undoubtedly satisfied. These factors deserve the most attention from administrators and policy makers responsible for building a better and more patient-centric health care delivery system.

However, Health Care Time, Sufficient Human Resources, Staffs Empathy, Emergency Department Services do not have impact on patient satisfaction. This finding is counterintuitive. It can be analyzed that patients in Bangladesh are mostly doctor and nurse oriented. If they find doctors and nurses satisfying them, they ignore other determinants. Therefore, sufficient human resources, staffs empathy, emergency department services are not primarily considered by the patients of these tertiary hospitals.

RECOMMENDATIONS AND CONCLUSION

The general quality levels of the hospitals were concluded to be very good, thus confirming the success of the use of quality service in these organizations. Hospital requires patients to run it business; patients, however, require satisfaction to meet their problems. When hospital services and patients expectations are matched, patients undoubtedly satisfied. The study findings indicate that patients in this hospital is highly satisfied and this satisfaction mostly comes from doctors and nurse services, reasonable cost, physical evidence as well as feedback from the patients. It is matter of pleasure that Bangladesh right now has some high-quality hospitals which serving nation in better way, refraining patient to visit hospitals in abroad. When patient leaves the country he/she bears financial and psychological cost, in addition, anxiety and insecurity about their family members. There is also a fear not to come back again in home country. Seeing the success of the tertiary hospital, successful and health conscious entrepreneur about to set up more sophisticated hospital like this hospital. Although, the public sector may have a role in the financing of health care; this can be coupled with private sector provision, or a public/private mix. The government should strive to increase the strength and the competitive environment of the private sector. Moreover, the cost of treatment is unaffordable for the major portion of the nation; the hospitals authority should take some footstep to bring them under the umbrella of their health care services.

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APPENDIX

APPENDIX: 1: PERSONAL CHARACTERISTICS OF THE RESPONDENTS

Measures	Items	Frequency	Percent
Gender			
	Male	60	60.0
	Female	40	40.0
Age			
	18-30	14	14.0
	31-45	21	21.0
	46-64	23	23.0
	65 and Above	42	42.0
Profession			
	Student	9	9.0
	Service holder	22	22.0
	Businessman	56	56.0
	Housewife	13	13.0
Monthly Income			
	30000-50000	10	10.0
	50001-75000	28	28.0
	75001-100000	24	24.0
	100001 and Above	38	38.0
House			
	Own	52	52.0
	Own apartment	35	35.0
	Rented apartment	13	13.0
Education			
	SSC	12	12.0
	HSC	13	13.0
	Undergraduate	30	30.0
	Postgraduate	37	37.0
	Ph.D	8	8.0
Living place			
	Purana paltan	3	3.0
	Dhanmandi	12	12.0
	Mohammadpur	7	7.0
	Lalmatia	6	6.0
	Mirpur	10	10.0
	Gulshan	13	13.0
	Banani	10	10.0
	D.O.H.S	11	11.0
	Uttora	9	9.0
	Mohakhali	8	8.0

CAPITAL STRUCTURE PATTENRS: A STUDY OF COMPANIES LISTED ON THE COLOMBO STOCK EXCHANGE IN SRI LANKA

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ABSTRACT

A sound or appropriate capital structure of a firm is significant, because of the interrelationships among capital structure and various other financial decisions variables. Therefore, an ability to assess the firm's capital structure and to understand its relationship to risk, return and value is a necessary skill. So, the present study aimed to investigate the capital structure patterns of the selected companies listed with the Colombo Stock Exchange (CSE) in Sri Lanka and to test the extent of variations among industries as also among individual firms/companies within the same industry. The resulting inferences were that the capital structures among sampled industries investigated were significantly different except beverage, food and tobacco industry.

KEYWORDS

Capital Structure; Financial Decisions; Colombo Stock Exchange (CSE)

INTRODUCTION

Capital structure is one of the most complex areas of financial decision making due to its interrelationship with other financial decisions variables. Capital structure is the composition of debt and equity capital that comprise a firm's financing its assets and can be rewritten as the sum of net worth plus preferred stock plus long-term debts. Given the objective of maximization of shareholders' wealth, the need for an appropriate capital structure cannot be overemphasized. A sound or appropriate capital structure of a firm is significant, because of the interrelationships among capital structure and various other financial decisions variables. Therefore, an ability to assess the firm's capital structure and to understand its relationship to risk, return and value is a necessary skill. An acceptable degree of debts for one industry or line of business could be highly risky in another because of differing operating characteristics between industries or line of business. Of course, differences in debt positions are likely to exist within an industry or line of business as well. The amount of debt within a given firm is largely the result of the decision maker's attitude toward risk. Thus, a firm's capital structure must be developed with an eye toward risk because it is a direct link to the overall performance of the firm. Since the level of risk and the associated level of return are key inputs to the valuation process, the decision maker must estimate the potential impact of alternative capital structures on these factors and ultimately on value in order to select best capital structure.

JUSTIFICATION OF THE STUDY

Not the choice between debt and equity but the proportion between them is the crucial problem in financial management. A high ratio shows the claims of creditors are greater than those of owners. A very high ratio is unfavourable from the firm's point of view. This introduces inflexibility in the firm's operations due to the increasing interference and pressures from creditors. During the periods of low profits, a highly debt-financed company suffers great strains; it cannot earn sufficient profits even to pay the interest charges of creditors. As a result, their pressure and control are further tightened. However, from the shareholders point of view there is a disadvantage during the periods of goods economic activities if the firm employs a low amount of debt. Thus, there is a need to strike a proper balance between the use of debt and equity. The present study aims at investigating the capital structure patterns of companies listed on the CSE Limited.

LITERATURE REVIEW

The essence of financial management is the creation of shareholder value. According to Ehrhard & Bringham (2003), the value of business based on the going concern expectation is the present value of all the expected future cash flows to be generated by the assets, discounted at the company's weighted average cost of capital (WACC). From this it can be seen that the WACC has a direct impact on the value of business (Johnannes & Dhanraj, 2007).

The choice between debt and equity aims equity to find the right capital structure that will maximized stockholder wealth. WACC is used to define a firm's value by discounting future cash flows. Minimizing WACC of any firm will maximize value of the firm (Messbacher, 2004). Debt policy and equity ownership structure 'matter' and the way in which they matter differs between firms with many firms with few positive net present value project.

In their second seminal paper on corporate capital structure. Modigliani and Mill (1963) show that firm value is an increasing function of leverage due to the tax deductibility of interest payments at the corporate level. In the 30 years since, enormous academic effort has gone into identifying the relevant costs associated with debt financing that firms presumably trade off against this substantial corporate tax benefit. Although direct bankruptcy costs are probably small, other potentially important factors include personal tax, agency cost, asymmetric and corporate control considerations [Bradley, Jarrell & Kim (1984); Harris & Raviv (1991); Masulis (1988) & Miller (1977)].

Early empirical evidence on the trade-off theory [e.g., Bradley, Jarrell and Kim, (1984)] yield mixed results. However, recent studies examining capital structure response to change in corporate tax exposure. Mayer (1986) argues that the trade-off theory also fails to predict the wide degree of cross-sectional and time variation of observed debt ratios. Return on stock increases for any announcement of issue exchange offers. Overall, 55 percent of the variance in stock announcement period returns is explained (Masulis, 1998). Under some conditions capital structure does not affect the value of the firm. Splitting a fund into some mix of shares relating to debt, dividend and capital directly add value to the company (Gemmille, 2001).

Sina & matubber (1998) observed the adverse position in the industry's managerial performance, profit earning capacity, liquidity etc that are the result of operational inefficiency , effective credit policy, improper planning and controlling of working capital, increased cost of raw materials, labour and overhead. Choudhury (1993) mentioned that the decreased use of debt tends to decrease profitability of a company. Because due to lack of adequate finances it has to give up some of the profitable opportunities and vice-versa. Banu (1990) stated that the capital structure of a firm has a direct impact on its profitability. She suggested that the concerned financial executives should put emphasis on various aspects of capital structure. Otherwise the capital structure of the enterprise will be unsound producing adverse impact on its profitability. Rahman (1995) identified the various aspects of problem of the sugar mills in Bangladesh and particularly of Kushtia Sugar Mills Ltd.

Based on the above literature, we can say that several studies have been done on this area, but a comprehensive study has not yet been conducted, in Sri Lankan perspective. Hence, the present study aimed to investigate the capital structure patterns of the selected companies listed with the CSE and to test the extent of variations among industries as also among individual firms within the same industry.

OBJECTIVES

The following objectives have been taken for the study.

1. To investigate the capital structure patterns of the selected companies enlisted with the CSE limited';
2. To test the extent of variations among industries; and
3. To examine the extent of variations among individual companies within the same industry in the same industry in respect of capital structure.

HYPOTHESES

With the above objectives in mind attempts had been made to test the following hypotheses.

Ho_1: Capital structures as measured by debt ratios (percentage of long-term debts to total permanent capital employed) did not vary significantly among individual companies within the same industry.

Ho_2: The average debt ratios did not vary among industries such as banking, finance and insurance; beverage, food and tobacco; chemical and pharmaceuticals; and manufacturing.

MATERIAL AND METHODS

This section is divided into five sub-sections. The first sub-section presents the scope. The sub-second section discusses the period of the study. In the sub-third section, data sources are discussed. The sub-fourth section illustrates the reliability and validity whereas the last sub-section highlights mode of analysis.

SCOPE

The scope of the study is listed companies on CSE in Sri Lanka. There are twenty sectors [i.e., (1) Bank, Finance & Insurance; (2) Beverage, Food & Tobacco; (3) Chemicals & Pharmaceuticals; (4) Constructing Engineering; (5) Diversified Holdings; (6) Footwear & Textile; (7) Healthcare; (8) Hotels & Travels; (9) Information Technology; (10) Investment Trust; (11) Land & Property; (12) Manufacturing; (13) Motors; (14) Oil palms; (15) Plantations; (16) Power & Energy; (17) Services; (18) Stores & Suppliers; (19) Telecommunications and (20) Trading listed under CSE. Only four sectors are selected as random sampling (i.e., banking, finance and insurance; beverage, food and tobacco; chemical and pharmaceuticals; and manufacturing) for study purposes. Only five companies are selected from each sector. Hence, ultimate sample is 20 companies (04X05=20).

DATA SOURCES

In order to meet the objectives of the study, data were collected from secondary sources mainly from financial report of the selected companies, which were published by CSE in Sri Lanka.

RELIABILITY AND VALIDITY OF THE DATA

Secondary data for the study were drawn from audited accounts (i.e., income statement and balance sheet) of the concerned companies as fairly accurate and reliable. Therefore, these data may be considered reliable for the study. Necessary checking and cross checking were done while scanning information and data from the secondary sources. All these efforts were made in order to generate validity data for the present study. Hence, researchers satisfied content validity.

MODE OF ANALYSIS

We used one-way Analysis of Variance (ANOVA) along with necessary ratio analysis. The period of the study was five years from 2003 to 2007. The following capital structure ratios are taken into accounts which are given below.

TABLE-1: CALCULATIONS OF CAPITAL STRUCTURE RATIOS

Capital Structure Ratio	
1. Debit Ratio (D/R Ratio	= Long term debts/ Total Permanent Capital X100
2. Debt Equity Ratio (D/E Ratio)	= Long term debts/ Shareholders Equity X100

RESULTS AND DISCUSSION

This section presents the findings of the study and is divided into two-sections. Section one begins with capital structure patterns. The final section presents the capital structure variations with hypotheses testing.

CAPITAL STRUCTURE PATTERNS

Table-2 illustrates the capital structure ratios of the selected industrial enterprises.

Table-2: Capital Structure Ratios of the Selected Industries from 2003-2007

igures in percentage)

Year / Industries	2003		2004		2005		2006		2007	
	D/R	D/E	D/R	D/E	D/R	D/E	D/R	D/E	D/R	D/E
Bank, Finance and Insurance	76.54	468.40	77.98	503.92	78.3	469.87	80.40	677.28	77.83	369.50
Beverage, Food & Tobacco	17.14	23.29	9.90	12.13	14.36	17.19	15.56	19.59	24.44	29.49
Chemicals & Pharmaceuticals	36.44	-53.63	28.62	-140.79	26.16	-4164.38	26.42	108.75	19.38	42.28
Manufacturing	20.85	37.58	18.55	29.42	24.79	34.77	19.68	27.75	23.51	34.52

Source: Calculated from the figures available in the income statements and balance sheets of the companies concerned.

Table-2 reveals that banking, finance and insurance industries used more long-term debts in the range of 76.54 to 77.83 for debt ratio and 468.40 to 369.50 for debt-equity ratio, followed by manufacturing industries (20.85 to23.51 for debt ratio and 37.58 to 34.52 for debt-equity ratio), beverage, food and tobacco (17.14 to 24.44 for debt ratio and 23.29 to 29.49 for debt-equity ratio) and so on. Further, chemicals and pharmaceuticals industries used long-term debts in the range of 36.44 to 19.39 for debt ratio but in case of debt-equity ratio, it used less long-term debts in their capital structures.

CAPITAL STRUCTURE VARIATIONS

From the earlier analysis, it was observed that capital structure varied in different industries. In this section, an attempt has been made to test statistically the variations among industries as also among individual companies with the same industry with regard to the capital structure.

CAPITAL STRUCTURE VARIATIONS AMONG INDIVIDUAL COMPANIES WITHIN THE SAME INDUSTRY.

H_{01}: Capital structures as measured by debt ratios do not vary significant among individual companies within the same industry.

BANKING, FINANCE AND INSURANCE

Table-3 illustrates the debt ratios of the sampled companies within banking, finance and insurance.

Table-3: Debt ratio of the selected companies within the banking, finance and insurance.

(Figures in percentages)

Company / Year	ALLI	CFIN	CSF	DFCC	LOLC
2003	90.69	75.25	87.01	72.03	57.70
2004	91.12	74.10	88.30	74.34	62.03
2005	89.69	74.85	87.49	75.14	64.67
2006	82.48	75.52	95.28	77.12	71.59
2007	84.36	73.78	74.10	80.91	76.02

Source: Calculations based on data from annual reports of Companies.

TABLE-4: ANOVA

Source of Variance	SS	df	Ms	F	P	F critical value
Between Groups	1570.84	4	392.71	13.96	0.000	2.87
Within Groups	562.34	20	28.11			
Total	2133.18	24				

From the table-4 it is seen that the debt ratio of the selected companies within the banking, finance and insurance is highly significant (F=13.96; P=0.000) at 1% level which indicates that the debt ratio of the selected companies differs significantly. Therefore null hypothesis is rejected.

BEVERAGE, FOOD AND TOBACCO

Table-5 presents the data on debt ratios of the selected companies in beverage, food and tobacco industries from 2003-2007.

TABLE-5: DEBT RATIO OF THE SELECTED COMPANIES WITHIN THE BEVERAGE, FOOD AND TOBACCO.

(Figures in percentages)

Company / Year	BFL	CARG	BREW	CCS	COCO
2003	6.15	19.77	30.30	0	29.46
2004	10.32	22.79	16.41	0	0
2005	18.01	12.96	19.94	16.05	4.84
2006	23.48	22.86	20.99	5.06	5.42
2007	14.14	25.44	26.72	19.04	36.88

Source: Calculations based on data from annual reports of Companies.

TABLE-6: ANOVA

Source of Variance	SS	df	Ms	F	P	F critical value
Between Groups	680.02	4	170.06	1.86	0.156	2.866
Within Groups	1827.02	20	91.352			
Total	2507.04	24				

From the table-6 it is seen that the debt ratio of the selected companies within the beverage, food and tobacco is not significant (F=1.86; P=0.156) which indicates that the debt ratio of the selected companies does not differ significantly. Therefore null hypothesis is accepted.

CHEMICALS AND PHARMACEUTICALS INDUSTRY

Table-7 presents the data on debt ratios of the selected companies in chemicals and pharmaceuticals industry from 2003-2007.

TABLE-7: DEBT RATIO OF THE SELECTED COMPANIES WITHIN THE CHEMICALS AND PHARMACEUTICALS INDUSTRY

(Figures in percentages)

Company / Year	CIC	HAYC	ASPH	MORI	LCEY
2003	13.09	7.39	2.68	10.33	148.70
2004	10.30	5.64	1.85	9.52	115.80
2005	20.33	3.87	1.51	4.60	100.50
2006	13.99	27.60	2.05	5.65	82.80
2007	11.69	17.48	0.77	3.67	63.30

Source: Calculations based on data from annual reports of Companies.

TABLE-8: ANOVA

Source of Variance	SS	df	Ms	F	P	F critical value
Between Groups	35444.97	4	8861.24	37.41	0.000	2.867
Within Groups	4737.71	20	236.89			
Total	40182.68	24				

From the table-8 it is seen that the debt ratio of the selected companies within the chemicals and pharmaceuticals industry is highly significant (F=37.41; P=0.000) at 1% level which indicates that the debt ratio of the selected companies differs significantly. Therefore null hypothesis is rejected.

MANUFACTURING INDUSTRIES

Table-9 presents the data on debt ratios of the selected companies in manufacturing industries from 2003-2007.

TABLE-9: DEBT RATIO OF THE SELECTED COMPANIES WITHIN THE MANUFACTURING INDUSTRIES

(Figures in percentages)

Company / Year	ABANS	ACL	ACME	CIND	DIPP
2003	3.64	0.57	55.22	14.94	29.90
2004	3.58	0	47.31	16.78	25.06
2005	17.83	18.87	36.02	16.98	34.27
2006	12.36	11.72	27.93	6.93	39.46
2007	37.32	6.35	9.27	29.25	35.38

Source: Calculations based on data from annual reports of Companies.

TABLE-10: ANOVA

Source of Variance	SS	df	Ms	F	P	F critical value
Between Groups	582.09	5	116.42	20.86	0.000	2.62
Within Groups	133.95	24	5.58			
Total	716.04	29				

From the table-10 it is seen that the debt ratio of the selected companies within the manufacturing industries is highly significant (F=20.86; P=0.000) at 1% level which indicates that the debt ratio of the selected companies differs significantly. Therefore null hypothesis is rejected.

VARIATIONS IN CAPITAL STRUCTURE AMONG INDUSTRIES

$H_{O2:}$ The average debt ratios did not vary among industries such as bank, finance and insurance; beverage, food and tobacco; chemicals and pharmaceuticals; and manufacturing.

Table-11 illustrates the average debt ratios of the selected industries from 2003 to 2007.

TABLE-11: AVERAGE DEBT RATIO OF THE SELECTED INDUSTRIES FROM 2003 TO 2007.

(Figures in percentages)

Company / Year	Bank, Finance and Insurance	Beverage, Food and Tobacco	Chemicals and Pharmaceuticals	Manufacturing
2003	76.54	17.14	36.44	20.85
2004	77.98	9.90	28.62	18.55
2005	78.37	14.36	26.16	24.79
2006	80.40	15.56	26.42	19.68
2007	77.83	24.44	19.38	23.51

Source: Calculations based on data from annual reports of Companies.

TABLE-12: ANOVA

Source of Variance	SS	df	Ms	F	P	F critical value
Between Groups	12282.44	3	4094.15	220.29	0.000	3239.00
Within Groups	297.36	19	18.59			
Total	12579.80	20				

From the table-12 it is seen that the average debt ratio of the selected industries is highly significant (F=220.29; P=0.000) at 1% level which indicates that the average debt ratio of the selected industries differs significantly. Therefore null hypothesis is rejected.

CONCLUSION

This effort was about the capital structures of the industrial enterprises listed on the CSE limited. In addition, an attempt was also made to present evidence on whether capital structures as measured by debt ratios vary significantly among industries as also among individual companies within the same industry. The analysis of data provided sufficient evidence that capital structures among sampled industries investigated were significantly varied.

It is clear from the analysis that various industries, subject to various degrees of risks, have indeed developed characteristically different capital structures. The one-way analysis of variance used in this study indicated that the sample means were not all equal. The resulting inferences were that the capital structures among sampled industries investigated were significantly different except beverage, food and tobacco industry.

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CORPORATE GOVERNANCE, COMPANY ATTRIBUTES AND VOLUNTARY DISCLOSURES: A STUDY OF NIGERIAN LISTED COMPANIES

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ABSTRACT

This study examines the association between corporate governance, company attributes and voluntary disclosures among Nigerian listed companies. In order to examine this association, two disclosure indexes were built using a sample of 50 listed companies in Nigeria. The first index contains twenty items which are mandatory according to a number of selected IFRSs but which are voluntary in Nigeria for the year 2008.The second index contains sixty voluntary accounting and non-accounting items. The study uses univariate, multivariate and cross-section models to explore the relationship between each disclosure index and corporate attributes. The corporate attributes are the independent variables comprising corporate governance and company characteristics. The results of the regression analysis reveal that only board size has a significant positive relationship with the extent of voluntary disclosures on the sample companies. The Board composition, leverage, company size, profitability, and auditor type have statistically positive and insignificant impact on disclosures. The effect of Board ownership is positive for IFRS disclosures but negative and insignificant for Non-IFRS disclosures while sector is negative for both disclosures but has a significant effect on Non-IFRS disclosures.

KEYWORDS

Corporate Attributes, Corporate Governance, International Financial Reporting Standard, Voluntary Disclosure.

INTRODUCTION

Information should be prepared, audited, and disclosed in accordance with high quality accounting standards. Stakeholders and potential investors require access to regular, reliable and comparable information in details for them to assess the stewardship of management, and make informed decisions. A strong disclosure regime enhances transparency, and it is a powerful tool for influencing the behaviour of stakeholders. It results in the attraction of more capital, sustains investors' confidence in the capital market, and possibly prevents fraud. Inadequate information may increase the cost of capital and result in a poor allocation of resources.

The business environment has witnessed changes over the years, mainly influenced by globalization and technological innovation. Companies worldwide are now vying to penetrate international capital markets. The disclosure of adequate and reliable information is necessary to penetrate these international markets. Those competing for funds in the international capital arena have been found to comply with disclosing mandatory requirements and in addition disclose significantly more voluntary accounting information that enables them compete globally(Meek, Roberts and Gray, 1995). Meek et al submit that effective functioning of capital markets, however, significantly depends on the effective flow of information between the company and its stakeholders.

Many studies have explored the association between corporate governance attributes, firm attributes and voluntary disclosure. Similar research methods were observed to have been utilized by various researchers in different context. However, it is observed that the result of the empirical studies vary country to country. This is expected because of the unique business environment attributable to each study. Studies have been conducted in Nigeria on corporate governance but to the best of the researcher's knowledge, no study relates to the effect of corporate governance on voluntary IFRS disclosures.

In this vein, the objective of this study is to explore the relationship between corporate governance, company attributes and voluntary disclosure of listed companies in Nigeria. The voluntary disclosure will include selected IFRSs disclosures which are currently on a voluntary basis in Nigeria, and other accounting and non accounting disclosures. The study is a cross sectional survey of fifty (50) selected and listed companies in Nigeria that involves a content analysis of the annual reports of the companies for the year 2008. Consequently this research provides empirical evidence from the Nigerian environment on the relationship between corporate governance, company attributes and voluntary disclosure. This study is of importance to scholars, researchers, policy makers and regulators.

The remainder of this paper is organized as follows. Section 2 explores the literature on corporate governance and corporate disclosure. Section 3 covers the research methodology. Section 4 presents the analyses of data and discussion. Section 5 gives conclusion and recommendation.

LITERATURE REVIEW

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

According to Hermalin and Weisbash (2010:1), increased disclosure can be likened to a two-edged sword. From a contractual perspective, increased disclosure allows principals (investors) to make informed decisions and monitor their managers. However, on the other hand increased monitoring can give management incentives to engage in value-reducing activities intended to make them appear more able. It can constitute additional agency problems and other costs for investors, including increased executive compensation. Consequently, there can exist a point beyond which additional disclosure makes costs outweigh benefits, thereby decreasing the value of the firm.

Considerable literature has emerged in the last forty years that examines the relationship between corporate characteristics and accounting disclosures in corporate annual reports. Early works on this subject was pioneered by Cerf (1961) and afterwards, many studies have examined the quality of information disclosures in various contexts. Each of these studies has been distinguished by differences in research setting, differences in definition of the explanatory variables, differences in disclosure index construction and differences in statistical analysis.

Research setting varied from developed to developing countries. Studies in developed countries include: United States (Singhvi and Desai, 1971; Buzby, 1975; Stanga, 1976, Street and Bryant, 2000); New Zealand (McNally et al , 1982); Sweden (Cooke, 1989); Spain (Wallace et al, 1994); Japan(Cooke, 1992); Germany (Glaum and Street, 2003);United Kingdom (Iatridis, 2006). While studies in developing countries include India (Singhvi,1968; Ahmed, 2005), Mexico (Chow and

Wong-Boren, 1987), Nigeria (Wallace, 1988; Ofoegbu and Okoye); Zimbabwe (Owusu-Ansah,1998; Chamisa,2000); Bahrain (Joshi and Ramadhan,2002); Jordan (Naser, 2002); Saudi (Naser and Nuseibeh, 2003) and Bangladesh (Akhtaruddin, 2005).

The researchers examined corporate characteristics that were used as predictors of the quality of disclosure. This ranged from two (Buzby, 1975) to thirty one (Haniffa and Cooke, 2002). The most popular corporate governance characteristics are board size, board composition, audit committee composition and ownership structure, while the most popular firm characteristics are company size, profitability, liquidity, gearing, audit size, listing status, multinational parent, and company age.. Studies on voluntary disclosure and corporate attributes are as shown in Appendix 1. The quality of disclosure in corporate annual reports and accounts has been represented in the literature by several constructs: adequacy (Buzby, 1974, Owusu-Ansah, 1998:609), comprehensiveness (Wallace and Naser, 1995; Barrett, 1976), informativeness (Alford et al., 1993), and timeliness (Courtis, 1976). Each construct suggests that the quality of disclosure can be measured by an index representing the dependent variable.

Some studies used weighted disclosure indexes while some others used unweighted disclosure indexes. Those that use indexes are of two strands, weighted (either subjectively by the researcher(s) alone or by the researcher(s) using weights elicited from surveys of users' perceptions), while some others were unweighted. Majority of the studies used a researcher created dependent variable. Chow and Wong-Boren (1987) have provided some proof that there may be no significant difference between weighted and unweighted disclosure indexes. In addition, weights do not usually affect real economic consequences to the subjects whose opinions were pooled nor do they reflect stable perceptions on similar information. The information items forming the basis of the index of disclosure were either voluntary or mandatory disclosures. The mandatory disclosures were basically international standards. While the voluntary disclosures were items across subjects, such as corporate information, corporate strategy, acquisitions and disposals, research and development, future prospects, corporate governance, social responsibility, financial review and capital market information Meek et al (1995), Chau and Gray (2002), Haniffa and Cooke (2002), Akhtaruddin et al (2009) and Yuen et al (2009).

While earlier studies used the matched-pair statistical procedures to test the difference between mean disclosure indexes of two or more groups of sample firms (e.g. Singhvi and Desai, 1971), all the recent studies, as indicated in Appendix I, have used the multiple regression procedure. The sophistication and rigour of analysis of the regression methodology are improving with time, for example, Cooke (1989) used different rigorous dummy variable manipulation procedures within a stepwise multiple (OLS) regression while Lang and Lundholm (1993) introduced the use of rank (OLS) regression to cater for the monotonic behaviour of disclosure indexes following a change in some independent variables.

Based on the results of theoretical and prior empirical literature nine variables were examined in the present study. The variables of interest and the hypotheses developed for this study are as follows.

CORPORATE GOVERNANCE VARIABLES

Three corporate governance variables has been identified in order to examine the association between corporate governance and voluntary disclosure practices in Nigeria. These variables are board size, number of non-executive directors to total board, and ownership structure and proportion of audit committee members to board size (Ho and Wong, 2001, Isenmila and Dabor, 2002; Akhtaruddin et al, 2009)

The hypotheses development of the corporate governance variables are discussed below:

BOARD SIZE

The size of the board is likely to affect the ability of the board to monitor and evaluate management (Zahra, et al., 2000 as cited in Akhtaruddin et al, 2009). Larger boards are expected to enhance monitoring. Empirical analysis by Akhtaruddin et al (2009), provide the most statistically significant corporate governance variable is board size at the 0.002 level. The coefficient for board size is found positive. This suggests that a larger board will provide more voluntary information than a smaller one. He opined that the level of disclosure is a strategic decision made by board of directors and the ability of directors to control and promote disclosure is more likely to increase with the increase of directors on the board. With more directors, the collective experience and expertise of the board will increase, and therefore, the need for information disclosure will be higher. Hence disclosures are expected to increase with board size. We therefore hypothesize that:

H_1: There is significant positive association between board size and the extent of voluntary disclosure.

BOARD OWNERSHIP

Companies with board of directors with concentrated shareholdings would have greater control over minority shareholders. This could result to diverging interests between management and outside shareholders which invariably can create agency problems (Jensen and Meckling, 1976). A company with a centralized ownership structure may be reluctant to disclose additional information. According to the efficient monitoring hypothesis as cited by Akhtaruddin et al (2009), increased outside ownership serves to monitor managers' actions and reduces the likelihood that managers will withhold information for their self-interest. Information disclosure is likely to be greater in firms where ownership is dispersed widely (Hossain et al., 1994). This view thus predicts a negative relation between board ownership and disclosure. Therefore we propose the following hypothesis.

H_2: There is significant negative association between board ownership and the extent of voluntary disclosure.

BOARD COMPOSITION

Board composition is the proportion of non executive (outside) directors to the total directors. The board composition indirectly reflects the role of non-executive directors (Haniffa and Cooke, 2002). Non-executive directors may be considered as decision experts (Fama and Jensen, 1983), independent and not intimidated by their executive counterparts (Haniffa and Cooke, 2002). The proponents of agency theory advocates that non-executive directors are needed to supervise and control the actions of executive directors due to their opportunistic behavior (Jensen and Meckling, 1976). Additionally, the non-executive directors constitute check and balances in enhancing board effectiveness (Haniffa and Cooke, 2002).

Thus, it is hypothesised that:

H_3: There is significant positive association between proportion of non-executive directors on the board and the extent of voluntary disclosure.

COMPANY ATTRIBUTES

The company attributes to be considered are company size, profitability, leverage, sector and auditor type. These attributes have been considered by other researchers in Appendix 1 employing agency, signaling and political costs theories. The hypotheses were developed for each attribute as below.

COMPANY SIZE

Large companies usually operate over wide geographical area and deal with multiple products and have several divisional units. They are likely to have well built information system that enables them to track all financial and non-financial information for operational, tactical and strategic purposes. With this type of well structured internal reporting system, it implies that incremental costs of supplying information to external users will be minimal. This will make them disclose more information than their smaller counterpart. Company size is a very important and the most consistently reported significant variable in previous empirical studies (Ho and Wong (2001), Hossain (2008) Street and Bryant, 2000; Meek et al,1995). According to Owusu – Ansah (1998:610), theory, intuition and empirical studies suggest that size is positively influences mandatory disclosure practices. Evidences in empirical research confirms the positive association between company size and overall level of disclosure (Cerf, 1961; Singhvi and Desai, 1971; Choi, ; Buzby, 1975; Firth, 1979; Chow and Wong-Boren, 1987). We therefore hypothesize that:

H_4: There is significant positive association between company size and the extent of voluntary disclosure.

PROFITABILITY

It can be argued that non-profitable firms may disclose less information in order to cover up losses and declining profit (Singhvi and Desai, 1971), whereas profitable ones will want to distinguish themselves by disclosing more information so as to enable them obtain capital on the best available terms (Meek et al, 1995). Corporate managers are usually reluctant to give detailed information about a non-profitable outlet or product, hence they might decide to disclose only a lump profit attributable to the whole company. Inchausti (1997) employing signaling theory, states that due to better performance of companies, management are more likely to disclose detailed information to the public than management with poor performance in order to avoid undervaluation of their shares. It can also be argued that unprofitable companies will be inclined to release more information in defense of poor performance. Singhvi and Desai (1971); Wallace et al, (1994); Karim, (1996), Owusu-Ansah, (1998); and Iatridis, (2006) find positive association between profitability and disclosure. However, our hypothesis is as follows:

H_5: There is a significant positive association between profitability and the extent of voluntary disclosure.

LEVERAGE

Prior studies had examined if there exists any association between leverage and disclosure levels Meek et al (1995); Chow and Wong Boren (1987); Hossain (1995) and Ferguson, 2002; Iatridis, (2006). According to Iatridis (2006) firms that provide extensive accounting disclosures tend to use more debt than equity to finance their operations. It appears, therefore, that firms are inclined to disclose information about sensitive accounting issues, such as gearing and risk profile in order to reassure investors and lenders that abide with the disclosure practices as enumerated by the accounting regulation. Provision of accounting disclosures reduces overall level of risk and allows for fund raising in the debts market. According to Jenson and Meckling (1976), agency costs are higher for companies with more debt in their capital structure and disclosures are expected to increase with leverage. Myers 1977 as cited in Ahmed (2004:188) states that firms with high debt tend to disclose more information to assure creditors that shareholders and management are less likely to bypass their covenant claims. Dumontier and Raffournier (1995) as cited in Ahmed (2004) argue that increased disclosure of IAS requirement the monitoring role of financial statements. That, in turn, reduces agency costs. Disclosures are expected to increase with leverage. This can be supported with the argument that firms will want to disclose detailed information to gain access to the money market. We therefore this study hypothesize that:

H_6: There is a significant positive association between leverage and the extent of voluntary disclosure.

SECTOR

Disclosure differential may be associated with the type of product line, nature of production and nature of service provided (Ahmed, 2004). The association between industry-type and disclosure is supported by empirical evidences, but the results are mixed. Ahmed (2005) finds industry-type to be a significant factor accounting for the differences in the disclosure levels of the companies in their sample. Cooke's (1989) findings report that manufacturing companies disclose more information than other types of companies. But the findings of Owusu-Ansah (1998) and Akhtaruddin (2005) reveals that company status has no effect on disclosure. Accounting policies and techniques may vary by industry and also the relevance of selected items of disclosure may vary across industries. According to Wallace et al (1994), because of the peculiarities of some particular industries they may adopt disclosing more detailed information than mandated. Political costs and competitive costs are expected to vary by industry. Higher potential political costs will make highly regulated industries to disclose more detailed information whereas competition may make some industries to curtail information to avoid information leakage (Ferguson et al, 2002). The industry type is believed to influence the amount and quality of information disclosed in annual reports. Therefore we state our hypothesis as below:

H_7: There is significant positive association between industry and the extent of voluntary disclosure.

SIZE OF EXTERNAL AUDITORS

Although company management is primarily responsible for preparing the financial report, the company external auditors play a major role in the disclosure policies and practices of their clients (Ahmed, 2005). Prior studies categorise audit firms on the basis of whether an auditor belongs to the 'Big Five' (Glaum and Street, 2003) 'Big Six (Wallace and Naser, 1995 or'Big Four' international audit firms or not. The size of the audit firm influences the amount and quality of information disclosed in annual reports. The Big Four accounting firms are PriceWaterhouseCoopers, KPMG, Deloite and Touche, and Ernst and Young. Prior studies provide evidence that type of auditor influences the overall level of disclosure. For instance, Singhvi and Desai (1971) and Street and Gray (2001) recognize positive association between audit firm size and the extent of disclosure. We therefore state our hypothesis as below:

H_8: There is significant positive association between size of audit firm and the extent of voluntary disclosure.

RESEARCH METHODOLOGY

SELECTION OF SAMPLES

The study focuses on the companies listed on the first tier market of the Nigerian stock exchange. Presently, 200 companies were listed on the NSE comprising the following industries - agriculture, footwear, automotives, banking, beverages, building materials and construction, chemicals, computer and technology, conglomerates, engineering construction, food, health care, hotels, insurance, investments, manufacturing, media, metals, natural gas, printing, real estate, services, textiles, telecommunication and transportation. Data were obtained from the annual reports of 50 (fifty) companies for the year 2008 using random sampling. The samples composed of fourteen companies from the banking sector and thirty two from the non-banking sector as highlighted on Table 1 below. The sector was classified into banking and non banking sector because the banking sector is distinguished from other sectors. According to research (Umoren, 2009), banking sector has maintained a high standard of compliance with accounting mandatory and voluntary disclosures, which is attributable to the reform, regulation and competition in this sector. The year 2008 is of interest because at the time of research the annual reports of year 2008 were the ones most readily available. Hardcopies of companies' annual reports were collected and where they could not be retrieved, softcopies were obtained alternatively through a website titled www.sbainteractive.com, which contains the database of annual reports of all listed companies in Nigeria.

TABLE 1: NUMBER OF SAMPLED COMPANIES

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non Banking sector	32	69.6	69.6	69.6
	Banking sector	14	30.4	30.4	100.0
	Total	46	100.0	100.0	

Source: Researchers (2010)

Measurement of Dependent Variables/ Scoring Method

Two checklists were created, one based on IFRSs disclosures which are voluntary in Nigeria in 2008 and the other on other voluntary accounting and non-accounting disclosures. The check list contains twenty items while the second check list contains sixty items, making a total of eighty items in all.

1. The first checklist contains selected IFRSs disclosures that are not contained in the Nigerian SASs (IAS 1, 10, 16, 18, 23, 24, 36, 38, 40 and IFRS 7)
2. The second checklist contains voluntary accounting and non-accounting items. These include accounting ratios, market data, corporate governance and social reporting items.

Cooke's (1989) approach was adopted in developing a scoring scheme to capture the levels of disclosure. It uses a dichotomous procedure in which each disclosure item on the checklist is assigned a value of '1' if it is disclosed and '0'if the item obviously relevant but not disclosed. Items obviously not applicable and the items that the researcher does not know will be coded not applicable (NA). The disclosure index or score for each company was calculated as the quotient of the items disclosed divided by the total number of items applicable for the company. The total score derives from the eighty items on the checklist. Disclosure index is computed for each of the subgroups separately i.e (i) IFRS index, (ii) Non-IFRS index.

REGRESSION ANALYSIS

Multiple regression analysis is used to assess the relation between the voluntary disclosures and the various corporate characteristics. The corporate characteristics contain corporate governance characteristics (board size, board composition and board ownership) company characteristics (company size, profitability, leverage, and sector and auditor type). The Variance Inflation Factor (VIF), tolerance and correlation matrix was analysed to diagnose any multicollinearity problem. Two regression models were utilized based on the score from the two disclosure indexes. They are as below:

$IFRS_j = \beta_0 + \beta_1 BS_j + \beta_2 BC_j + \beta_3 BO_j + \beta_4 CS_j + \beta_5 PR_j + \beta_6 LE_j + \beta_7 SEC_j + \beta_8 AUD_j + \varepsilon_j$......(1)

$NIFRS_j = \beta_0 + \beta_1 BS_j + \beta_2 BC_j + \beta_3 BO_j + \beta_4 CS_j + \beta_5 PR_j + \beta_6 LE_j + \beta_7 SEC_j + \beta_8 AUD_j + \varepsilon_j$.....(2)

Where $IFRS_j$ = Disclosure score for IFRS items for each listed company;
$NIFRS_j$ = Disclosure score for non-IFRS items for each listed company;
β_0 =the intercept; ε = the error term
Table 2 reports the proxies used for independent variables and the predicted direction of the relation with the extent of disclosure, for each hypothesis.

MEASUREMENT OF THE INDEPENDENT VARIABLES

TABLE 2: OPERATIONALIZATION OF INDEPENDENT VARIABLES

Corporate characteristics	Proxies	Code	Predicted Signs
Board size	Total number of executive and non executive board members	BS	+
Board composition	Ratio of non-executive members to the total Board size	BC	+
Board ownership	Ratio of Board share ownership to the total shareholdings	BO	-
Company size	Logarithm of total assets	CS	+
Profitability	Return on assets	PR	+
Leverage	Total liability to total equity	LE	+
Sector	1 for Banking industry, 0 otherwise	SEC	+
Auditor type	1 for Big 4, 0 otherwise	AUD	+

Source: Researchers (2010)

RESULTS AND ANALYSIS

DESCRIPTIVE STATISTICS

As seen in Table 3 below, the average disclosure for IFRS items is 26.58%, with a minimum index of 0.04 and a maximum index of 0.65. The non-IFRS voluntary disclosure index (0.3844) is higher than the mean of IFRS disclosure index (0.2658). This reveals that Nigerian companies disclose other voluntary accounting related disclosures more than the stipulated disclosures required by IASB. This is basically because IFRS disclosures are not mandatory in Nigeria.

TABLE 3: DESCRIPTIVE STATISTICS OF DEPENDENT VARIABLES

	N	Minimum	Maximum	Mean	Std. Deviation
IFRS index	50	.04	.65	.2658	.12910
Non-IFRS index	50	.18	.67	.3844	.10782
Valid N (listwise)	50				

Source: Researchers' survey (2010)

Table 4 presents the descriptive statistics of the independent variables. For the corporate governance variables, the board size ranged from 3 to 20 with a mean of 10.52, the board composition ratio ranged from .33 to .92 with an average of .6828, while the board ownership reveals a ratio of between 0 and .66 with an average of 0.8107. For the company attributes, company size, profitability, leverage the recorded mean is 7.6294, 0.1284 and 2.7203 respectively. Only leverage recorded a high variation of 6.6518 due to the fact that the financial sector by its operations recorded a higher leverage compared to other sectors.

TABLE 4: DESCRIPTIVE STATISTICS OF INDEPENDENT VARIABLES

	N	Minimum	Maximum	Mean	Std. Deviation
Board Size	50	3	20	10.52	3.950
Board Composition	47	.33	.92	.6828	.14917
Board Ownership	48	.0000	.6607	.081069	.1286224
Company Size	50	5.7839	9.2523	7.629432	.9320465
Profitability	50	-.1152	1.3100	.128416	.2492705
Leverage	50	-10.2545	41.5200	2.720358	6.6518907
Valid N (listwise)	45				

Source: Researchers' survey (2010)

Table 5 presents the cross tabulation of the sector and auditor type. The banking sector made up 28% of the sample while the non-banking sector is 72%. With respect to auditor type, 86% of the companies were audited by the big four audit firm while 14% were audited by the small firms. This reveal that predominantly listed firms in Nigeria are audited by the big four auditing international firms, viz, KPMG, Akintola Williams Delloite and Co, Ernst and Young, and PricewaterhouseCoopers Chartered Accountants.

TABLE 5: SECTOR * AUDITOR TYPE CROSSTABULATION

			Auditor Type		Total
			Non big four audit firm	Big four audit Firm	
Sector	Non Banking sector	Count	7	29	36
		% of Total	14.0%	58.0%	72.0%
	Banking sector	Count	0	14	14
		% of Total	.0%	28.0%	28.0%
Total		Count	7	43	50
		% of Total	14.0%	86.0%	100.0%

Source: Researchers' survey (2010)

Collinearity Diagnosis

The diagnostic tests conducted are: Pearson correlation matrix, VIF (Variance inflation factor) and tolerance. These tests enable us to know if there is any threat of multicollinearity. Traditionally, multicollinearity does not constitute a problem if the VIF does not exceed 10 and Tolerance for each of the variable is above 2. Pearson correlation matrix of the continuous independent variables are employed to measure the linear relationship between the independent variables.

TABLE 6: CORRELATIONS (A)

		Board Size	Board Composition	Board Ownership	Company Size	Profitability	Leverage
Board Size	Pearson Correlation	1	.086	.020	.754	-.166	.523
	Sig. (1-tailed)		.286	.448	.000	.138	.000
Board Composition	Pearson Correlation	.086	1	-.228	-.227	-.086	.199
	Sig. (1-tailed)	.286		.066	.067	.288	.095
Board Ownership	Pearson Correlation	.020	-.228	1	-.056	-.073	.145
	Sig. (1-tailed)	.448	.066		.357	.316	.171
Company Size	Pearson Correlation	.754	-.227	-.056	1	-.078	.309
	Sig. (1-tailed)	.000	.067	.357		.306	.019
Profitability	Pearson Correlation	-.166	-.086	-.073	-.078	1	-.087
	Sig. (1-tailed)	.138	.288	.316	.306		.286
Leverage	Pearson Correlation	.523	.199	.145	.309	-.087	1
	Sig. (1-tailed)	.000	.095	.171	.019	.286	

a Listwise N=45

Source: Researchers' survey (2010)

The table above presents the matrix of the linear relationships among the continuous independent variables. From observation, variables with high correlation above .5 are company size and board size (.754) and leverage and board size (0.523). Despite this result we think the threat is not grievous. The VIF score was between 1.287 and 4.931 while the tolerance was above 0.2, this further supports the fact that multicollinearity does not pose as a problem. The regression result is as below.

REGRESSION RESULTS

IFRS DISCLOSURES

TABLE 7: REGRESSION RESULT 1

Model				
		coefficient	t	Sig
1	(Constant)	-.262	-1.044	.304
	Board Size	.014	2.141	.039
	Board Composition	.043	.371	.713
	Board Ownership	.088	.750	.458
	Company Size	.039	1.190	.242
	Profitability	.027	.456	.651
	Leverage	-.002	-1.001	.324
	Sector	-.013	-.232	.818
	Auditor Type	.064	1.415	.166

a Dependent Variable: IFRS index

As we can see in the coefficient column of Table 7, the independence variables board size, board composition, board ownership, company size, profitability and auditor type are positive. While leverage and sector are negative. The only significant variable is board size at a significance of 5% level, while other variables are not significant. This reveals that board size is the only variable that explains the attitude of listed Nigerian companies. Therefore, the larger the size of the board, the more the tendency for the companies to voluntarily disclose IFRS requirements.

NON- IFRS DISCLOSURES

TABLE 8: REGRESSION RESULT 2

Model			.	
		Coefficient	t	Sig
1	(Constant)	-.028	-.122	.904
	Board Size	.012	1.982	.055
	Board Composition	.035	.322	.749
	Board Ownership	-.048	-.440	.663
	Company Size	.034	1.115	.272
	Profitability	.009	.171	.865
	Leverage	.001	.586	.561
	Sector	-.111	-2.072	.045
	Auditor Type	.045	1.061	.296

a. Dependent Variable: Non-IFRS index

From Table 8 above, the independence variables board size, board composition, company size, profitability, leverage, and auditor type are positive. While board ownership and sector are negative. The two significant variables are sector (significance at 5% level) and board size (significant at 10%). The board size seems to stand out for both IFRS and non-IFRS disclosures as a satisfactory explanatory variable for voluntary disclosures in Nigeria. Sector is also significant, this buttress the fact that banking sector has maintained a high standard of compliance with accounting mandatory and voluntary disclosures.

The positive and significant association with board size is in line with the empirical result of Akhtaruddin et al (2009). Empirical analysis by Akhtaruddin et al (2009), provide the most statistically significant corporate governance variable is board size. This suggests that a larger board will provide more voluntary information than a smaller one. He opined that level of disclosure is a strategic decision made by board of directors and the ability of directors to control and promote disclosure is more likely to increase with the increase of directors on the board. With more directors, the collective experience and expertise of the board will increase, and therefore, the need for information disclosure will be higher.

The significant association with sector is contrary with the findings of Owusu-Ansah (1998) and Akhtaruddin (2005) but similar to the findings of Haniffa and Cooke (2002). According to Wallace et al (1994), because of the peculiarities of some particular industries they may adopt disclosing more detailed information than mandated. Political costs and competitive costs are expected to vary by industry. Higher potential political costs will make highly regulated industries to disclose more detailed information.

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

This study contains an empirical evidence of the relationship between corporate governance, company attributes and voluntary disclosures of fifty companies quoted on the Nigerian Stock Exchange. A regression test is conducted to test the hypotheses developed in relation to the study. The result of the regression test indicates that board size is positive and significant at 0.05 level and 0.10 level for IFRS disclosures and Non-IFRS disclosures respectively. This result satisfies the hypothesis on the relationship between board size and voluntary disclosure. Therefore the hypothesis that there is a significant positive relationship between board size and the extent voluntary disclosure is accepted. This explains that size of the board influences the extent of voluntary disclosures made by Nigerian listed companies. Board composition, board ownership, company size, profitability, and auditor type are positive and insignificant for IFRS disclosures while leverage and sector are negative and insignificant. Whereas for the Non –IFRS disclosures, board composition, leverage, company size, profitability, and auditor type are positive while board ownership and sector are negative. For the Non –IFRS disclosures, sector is significant at 0.05 level. The regression analysis does not support the hypothesis that there is a significant positive relationship between board composition, company size, profitability, auditor type, leverage, sector and the extent of voluntary disclosure. This is because where the relationship is positive, it is not significant and where significant, it is negative as in the case of sector. The hypothesis on the significant negative relationship between board ownership and corporate governance should be rejected because the regression results show that there is an insignificant positive and negative relationship with voluntary disclosures. The implication of this empirical evidence is the explanation that board composition, board ownership, leverage, company size, profitability, and auditor type, sector have no significant impact on the extent of voluntary disclosures of listed companies in Nigeria. In this discussion, it is apparent that the only variable of corporate governance that influences the extent of voluntary disclosure is board size.

The limitations encountered in this study include the insufficient weighting of scores for disclosure criteria in the sense that companies were awarded 1 for disclosure of an item and 0 for non-disclosure without considering the depth of the disclosure of such item in the annual report. Also, the inability to access annual reports covering longer periods rather than just a year inhibits the generalization to an extent.

A suggestion for further studies is the study of the effect of corporate governance and company attribute on voluntary disclosure with a larger sample size. Also, the question of what is the optimal or appropriate board size required to enhance the extent of disclosure of companies in Nigeria can be studied. The weight of the scores can be increased to a scale of 0-2 or above so as to make the result more robust. A further empirical analysis can be done by increasing the time period of study suggestible a time series analysis or a longitudinal study so as to enable proper generalization of findings.

Based on the descriptive statistics, it is evident that Nigerian companies disclose 38% voluntary Non –IFRS disclosure and 26% IFRS disclosures which means that there is more voluntary disclosure of Non- IFRS disclosures than IFRS disclosures. This suggests that Nigerian companies do not disclose sufficient information in the annual reports for the use of the stakeholders since the disclosure rate is below 50%. Though some companies like First bank, GT Bank, and Oando Plc etc restate their annual reports in IFRS formats, the companies need to go the extra mile to disclose information whether voluntary or not for the existing shareholders and potential investors to take informed decisions.

A general recommendation based on the empirical findings is that Nigerian listed companies should have a board structure that accommodates a board size of 10 or 11 with an appropriate mix of executive and non executive directors since the average board size based on the descriptive statistics is 10.52. This is in conformity with the Securities and Exchange Commission Code of Corporate Governance that recommends that the board size of Nigerian companies should not exceed fifteen (15) persons.

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APPENDIX

APPENDIX 1: VOLUNTARY DISCLOSURE ITEMS

	IFRS Disclosure Items
1	Did the financial statement include a statement of all changes in equity? (IAS 1.8)
2	Did the company disclose the judgments made by management in the process of applying accounting principles? (IAS 1.113)
3	Did the company disclose average number of employees for the period or the number of employees at the end of the period? (IAS 1.102)
4	Did the company disclose the date the financial statements were authorised for issue? (IAS 10.17)
5	Did the company disclose the body that gave the authorisation? (IAS 10.17)
6	Did the entity disclose the existence of PPE whose title is restricted and pledged for security? (IAS 16.74a)
7	Did the enterprise disclose the accounting policy adopted for revenue? (IAS 18)
8	Did the enterprise describe each significant category of revenue? (IAS 18.35b)
9	Did the enterprise disclose the accounting policy adopted for borrowing costs? (IAS 23.29)
10	Are relationships between parents and subsidiaries disclosed irrespective of whether there are transactions between them? (IAS 24.12)
11	Did the entity disclose key management personnel compensation in total for different categories? IAS 24:16
12	Did the company disclose the policies adopted for impairment of assets (IAS 36)

13 Did the company disclose the policies adopted for intangible assets. (IAS 38)

14 Did the company disclose for each type of intangible assets the useful life or amortization rate? (IAS 38.118)

15 Did the company disclose the policies adopted for investment properties whether fair value or cost model is used. (IAS 40.75a)

16 Did the company disclose the accounting policies for financial instruments? (IFRS 7.21)

17 Did the company disclose the significance of each financial instruments for an entity's financial position and performance (IFRS 7.8)

18 Does the qualitative disclosures describe risk exposures for each type of financial instrument? (IFRS 7.33)

19 Does the qualitative disclosures describe management's objectives, policies and processes for managing these risks (IFRS 7.33)

20 Does the summary quantitative include disclosures about credit, liquidity and market risks and how they are managed? (IFRS 7.34)

Other Accounting Related Disclosure Items

21 Share price information (trend)

22 Share price at year end

23 Market capitalization (trend)

24 Market capitalization at year end

25 Profitability ratio

26 Cash flow ratio

27 Liquidity ratio

28 Asset ratio

29 Gearing ratio

30 Comparison of main performance indicators with budget

31 Sales forecast (quantitative)

32 Profit forecast (quantitative)

33 Cash flow forecast (quantitative)

34 Effect of inflation on performance (quatitative)

35 Dividend pay out policy

36 Advertising quantitative information

37 Restatement of financial information into IFRS

38 Net asset per share

39 Financial highlight

40 Financial highlight (Trend analysis)

Corporate Governance Disclosures

41 A statement of corporate governance policy

42 Classification of board members to executive and non-executive

43 Information regarding the remuneration commitee of the Board.

44 Number of Board meetings held in the accounting year.

45 Dates of Board meetings in the accounting year.

46 Details of attendance of each director at the Board meetings.

47 Highlights of various commitees of the Board.

48 Brief terms of reference on each committee

49 Information on membership of each committee

50 The educational qualifications of Board of directors

51 The work experience of members of the Board

52 Statement of relationship with shareholders

53 Picture of all Board members

54 Chairpersons of each committee

55 Information remuneration to all directors

56 Age of Board members

57 Loans to the Board members

58 Loans to the senior management

59 Duties and responsibilities of Board of Directors

60 Election and re-election of directors

Social Responsibility Disclosures

61 A statement of social responsibility policy

62 Policy regarding of employment of disabled persons

63 Health of employees

64 Environmental protection programme

65 Community service

66 Charitable donations

67 Training of Human Resources

68 Total number of employees

69 Employee classified by gender

70 Employee classified by function

71 Number of staff trained

72 Amount spent on training

73 Nature of training

74 Training policy

75 Categories of employee trained by function

76 Welfare Information (general)

77 Data on accidents

78 Recruitment policy

79 Safety policy

80 Remuneration policy

Sources: IAS 1, IAS2, IAS 16, IAS18, IAS 23, IAS 24, IAS 36, IAS 38, IAS 40, Meek et al (1995), Chau and Gray(2002), Haniffa and Cooke (2002), Akhtaruddin et al (2009) and Yuen et al (2009).

APPENDIX II: PRIOR STUDIES ON THE ASSOCIATION BETWEEN CORPORATE GOVERNANCE, FIRM CHARACTERISTICS AND EXTENT OF VOLUNTARY DISCLOSURES

Researchers	Country	Data analysis	Significant variables (reported sign)	Non Significant variables(reported sign)
Khodadadi, Khazami, and Aflatooni (2010)	Iran	Logistic regression using unweighted disclosure index for voluntary disclosure	% of institutional investors' ownership (+)	% of non-executive directors(-)
			Firm Size(+)	CEO/chairperson duality (-)
			Auditor type (+)	
Apostolou and Nanopoulos (2010)	Greece	Multiple regression using unweighted disclosure index for IAS voluntary disclosure	Profits before interest and taxes (+)	Percentage of shares owned by a dominant personality (-)
			Number of shares in the stock exchange (+)	Percentage of shares owned by the public (+)
			Percentage of independent members in the Board of Directors (+)	Percentage of shares owned by a family (+)
				Note in the annual report that the company complies with the corporate governance law (-)
				Auditing firm (+)
Yuen and Liu (2009)	China	Multiple regression using weighted disclosure index for voluntary disclosure	Ratio of independent non executive directors (+)	Shares held by top 10 shareholders (+)
			Firm size (log of total assets) (+)	Shares held by government (+)
			Leverage ratio (total liabilities to total ratio) (-)	Profitability (Return on equity) (-)
			Tradable shares (+)	The existence of CEO duality. (+)
			The existence of an audit committee (-)	Industry type (-)
Akhtaruddin et al (2009)	Malaysia	Multiple regression using unweighted disclosure index for voluntary disclosure	Board size (+)	Proportion of audit committee members (+)
			Proportion of independent nonexecutive directors (+)	Nature of audit firms (+)
			Proportion of outside share ownership (+)	Total assets (log of total assets) (-)
			Family control (-)	Total capital employed (+)
			Total number of employees (+)	Leverage (+)

			Profitability (+)	
Hossain(2008)	India	OLS multiple regression approach using unweighted disclosure index for mandatory and voluntary disclosure	Size (Logarithm of total assets) (+)	Age (age of banks in years) (+)
			Profitability (return on assets) (-)	Complexity of business (no of subsidiaries) (-)
			Board composition(ratio of non executive directors to total directors) (+)	Asset in place(Book value of net fixed assets to total assets) (+)
			Market discipline (non-performing assets to total assets) (-)	
			Capital adequacy ratio (-)	
Collett and Hrasky(2005)	Australia	Multinomial regression using unweighted disclosure index for voluntary governance disclosure	Issued shares (+)	Issued debt (+)
			Return on assets (+)	Market capitalization (-)
			Industry group (+)	
			Stock exchange listing (+)	
Haniffa and Cooke (2002)	Malaysia	Multiple regression using weighted disclosure index for voluntary disclosure	Family members on Board (-)	Board Composition (+)
			Assets in place (+)	Role duality (+)
			Top ten shareholder (+)	Chairperson is NED (-)
			Foreign investors (+)	Directors with cross-directorship (+)
			Profitability (+)	Chair with cross-directorship (+)
			Industry type (-)	Size (Total assets) (+)
				Gearing (Debt/equity) (+)
				Diversification (+)
				Complexity of business (+)
				Institutional investors (-)
				Multiple listing (+)
				Type of auditor (+)
				Listing age(+)
				Foreign Activities (+)
Chau and Gray(2002)	Hong Kong and Singapore	Multiple Regression using unweighted voluntary disclosure	Ownership structure(+)	Auditor (+)
			Sale (+)	Leverage (-)
				Profitability (+)
				Multinationality (+)
				Industry- Hong Kong (+)
				Industry- Singapore (+)
Bujaki (2002)	Canada	Two stage OLS regression	Revenue (-)	Increase in share capital (+)
			Leverage (+)	Regulated industry (-)
			Independence of the directors (+)	
			Corporate governance (-)	
			Log of total assets (+)	
Ho and Wong(2001)	Hong Kong	Multiple regression using weighted disclosure index for voluntary disclosure	Audit Committee (+)	Independent non-executive directors (+)
			Percentage of family members on board (-)	Dominant personality (+)
			Firm size(Log of total asset) (+)	Leverage (Ratio of total debt to equity) (-)
			Manufacturing (+)	Asset in place(Ratio of NBV of fixed assets to total assets)(+)
				Profitability Return on capital employed) (+)
				Conglomerate(+)
				Banking/ Finance (-)
Raffournier (1995)	Switzerland	Multiple Regression on unweighted voluntary disclosure	Size(Total asset, Sales, Log of total assets, Log of Sales)(+)	Ownership structure (+)
			Profitability(+)	Leverage (+)
			Fixed Assets (-)	
			Internationality (+)	
Meek, Roberts and Gray(1995)	UK, US and Continental Europe	Multiple Regression on unweighted voluntary disclosure	Size (+)	Industry Metal(+)Consumer goods (-)
			Country (+)	Multinationality(+)
			Industry Oil (+)	Profitability (+)
			Leverage (-)	
			Listing Status(+)	
Wallace, Naser and Mora(1994)	Spain	OLS ranked regression	Log of total Assets(+)	Gearing (+)
			Liquidity (-)	Earning (+)
			Listed (-)	Profitability (+)
				Industry (+)
				Audit (-)

CURRENCY FUTURES TRADING IN INDIA

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ABSTRACT

Currency futures are new forex risk management insturment. It is one of the better tool to hedge the foreign risk for the companies who have an exposure to foreign exchange either because of export or import. As these days Indian export as well as import are booming with huge volume so it is risky for the companies to keep an huge open positions, which can result into huge losses so forex futures is a better hedging tool where one can book the profit even before the receivables has arrived. While the process for introduction of contracts in other currencies such as rupee-euro, or rupee-yen may soon be available, the government wants the product basket to be akin to the OTC markets. Indian financial sector regulators are set to launch currency options shortly. Introduction of options will be good development as it will lead to diversification. Futures with non-dollar currencies can minimize the risk also. The extension of working hours will also helpful in increasing the volume of currency futures trading. All residents Indians are allowed to participate in currency futures, but this is expected to change once the local market has reached a maturity level than NRIs and FIIs will also participate in currency futures in India. It is feasible to shift trading to other currencies to exchange platform as volumes have grown apparently. Greater trade and financial flows from Euro Zone and Japan can make standardized contracts possible.

KEYWORDS
Currency, Management, Foreign Exchange, Import, Export, Forex.

INTRODUCATION

The global liberalization and integration of financial markets has created new investment opportunities, which in turn require the development of new instruments that are more efficient to deal with the increased risks. Institutional investors who are actively engaged in industrial and emerging markets need to hedge their risks from these internal as well as cross-border transactions. Agents in liberalized market economics who are exposed to volatile commodity price and interest rate changes require appropriate hedging products to deal with them and the economic expansion in emerging economics demands that corporations find better ways to manage financial and commodity risks.

The most desired instruments that allow market participants to manage risk in the modern securities trading are known as derivatives. The main logic behind the derivatives trading is that derivatives reduce the risk by providing an additional channel to invest with lower trading cost and it facilitates the investors to extend their settlement through the future contracts. It provides extra liquidity in the stock market. Derivative products like futures and options on Indian stock markets have become important instruments of price discovery, portfolio diversification and risk hedging in recent times. The global liberalization has brought inherent risk, and as result, corporate and institutional investors are looking towards derivatives for hedging the risk. Due to the increasing volume of global trade the volume of capital flows is on rise and many more banks are getting exposure to different currencies and growing derivatives in foreign trade. The derivatives are immensely used by various banks to bring variations in the funds to improve the health of their portfolios. Futures trading, a popular financial instrument is the most important tool of derivatives through which the trading is done in the capital market.

ROLE OF FINANCIAL DERIVATIVES

Derivatives may be traded for a variety of reasons. Derivatives enable a trader to hedge some pre-existing risk by taking positions in derivatives markets that offset potential losses in the underlying or spot market. In India, most derivatives be used for hedging purposes only. Another motive for derivatives trading is speculation (i.e. taking positions to profit from anticipated price movements). In practice, it may be difficult to distinguish whether a particular trade was for hedging or speculation, and active markets require the participation of both hedgers and speculators.

It is argued that derivatives encourage speculation, which destabilizes the spot market. The alleged destabilization takes the form of higher stock market volatility. The reason behind it is informational effect of the futures trading. Futures trading can alter the available information for two reasons: first, futures trading attract additional traders in the market; second, as transaction costs in the futures market are lower than those in the spot market, new information may be transmitted to the futures market more quickly. Thus, future markets provide an additional route by which information can be transmitted to the spot markets and therefore, increased spot market volatility may simply be a consequence of the more frequent arrival and more rapid processing of information.

The volatility on the Indian stock exchanges may be thought of as having two components. The volatility arising due to information based price changes and volatility arising due to noise trading/speculative trading, i.e., destabilizing volatility. As a concept, volatility is simple and intuitive.

Introduction of derivatives in the Indian capital market was initiated by the Government following, L C Gupta Committee Report on Derivatives in December 1997. The report suggested the introduction of stock index futures in the first place to be followed by other products once the market matures. Following are the recommendations and pursuing the integration policy, futures on benchmark indices (Sensex and Nifty 50) were introduced in June 2000. The policy was followed by introduction of index options on indices in June 2001, followed by options on individual stocks in July 2001. Stock futures were introduced on individual stocks in November, 2001 (Nath 2003).

By definition, derivatives are the future contracts whose value depends upon the underlying assets. When derivatives are introduced in the stock market, the underlying asset may be anything as component of stock market like, stock prices or market indices, interest rates, etc. Derivatives products are specilized contracts which signify in agreement or an option to buy or sell the underlying asset to extend up to the maturity time in the future at a prearranged price.

Only futures and options are used in this analysis, so these are introduced in brief:

OPTIONS

An Option is a contract which gives the right, but not an obligation, to buy or sell the underlying asset at a stated date and at a stated price. While a buyer of an option pays the premium and buys the right to exercise his option, the writer or an option is the one who receives the option premium and therefore obliged to sell/buy the asset if the buyer exercises it on him.

FUTURES
A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. Presently Index futures on S&P CNX NIFTY and CNX IT, Futures are available for trading at NSE. All the futures contracts are settled in cash.. A futures contract is a forward contract which trades on an exchange. Futures markets feature a series of innovations in how trading is organized. Futures contracts are exchange-traded derivatives. The exchanges clearing house acts as counterparty on all contracts, set margin requirement and crucially provides a mechanism for settlement. There are three types of persons who deal in futures- **Speculators, hedgers and arbitrator**.

OBJECTIVE
The present study is focused on the following objectives:
1) To offering insight into currency futures derivatives market in India.
2) To study the future prospects of currency futures trading in India.
3) To do a critical analysis of currency futures.
4) To study the various instrument, i.e. options, futures and swaps.

RESEARCH METHODOLOGY
The present study is based on Descriptive Research with the help of secondary data. The secondary data is published reports of NSE, RBI, MCX-SX and Newspaper. The area under study is BSE-Sensex, Reserve Bank of India (RBI) and S&P Nifty.

CURRENCY FUTURES
A currency future is a future contract to exchange one currency for another at specified date in the future at a price on which a specific currency can be purchase or sold at future date. When the underlying is an exchange rate, the contract is termed a "currency futures contract". In other words, it is a contract to exchange one currency for another currency at a specified rate and at a specified time in the future. Therefore, the buyer and the seller lock themselves into an exchange rate for a specific value and exceed 12 months. Most of the contract has physical delivery, so for those held at the last day, actual payments are made in each currency.

PRICING
The pricing of a currency futures contract is completely determined by the prevailing spot rate and interest rates. Otherwise, investors would be able to arbitrage the difference between the futures and spot prices. The futures price is given by:
where:
F = futures price
S = spot price
rT = interest rate of the term currency
rB = interest rate of the base currency
T = tenor
Users of Currency Futures
Currency Future is a derivative instrument that can be used by hedgers, speculators, and arbitrageurs.
A Hedger uses the instrument to reduce risk by locking on to a future exchange rate and mitigate the risks due to adverse movements of the exchange rate. This can also reduce his profits. For example, Jenson is a investor in America. Who will receive £1,50,000 on January 1. The current exchange rate implied by the futures is $1.7/£. He can lock in this exchange rate by selling € 1,50,000 worth of future contract expiring on January 1. That why, he is guaranteed an exchange rate of $ 1.2/€ regardless of exchange rate fluctuations in the meantime.
A Speculator the instrument to take a risk by betting on a position based on his view on the future exchange rate between two currencies. In other words Currency futures can also be used to speculate and, by incurring a risk, attempt to profit from rising or falling exchange rates.
An Arbitrageur takes arbitrage as the strategy of taking advantage of difference in price of the same or similar product between two or more markets. That is, arbitrage is striking a combination of matching deals that capitalize upon the imbalance, the profit being the difference between the market prices. If the same or similar product is traded in say two different markets, any entity which has access to both the markets will be able to identify price differentials, if any. If in one of the markets the product is trading at higher price, then the entity shall buy the product in the cheaper market and sell in the costlier market and thus benefit from the price differential without any additional risk.

HISTORY
Currency futures are being increasingly used as hedging tool. Currency futures were first started in 1972 at the Chicago Mercantile Exchange (CME), less than a year after the system of fixed exchange rates was abandoned along with the gold standard. International Monetary Market (IMM). It was launched for trading in seven currency futures on May 16, 1972. Today the IMM is a division of CME.

CURRENCY FUTURES IN INDIA
Currency futures were launched only a year ago in 2008 with NSE starting trade towards end of August and Bombay Stock Exchange and the MCX-SX following closely in October. It has been observed that average turnover of these instrument in the NSE and MCX-SX in December was nine times higher than a year earlier. These exchanges are currently clocking an average daily turnover of Rs. 20,000 crore in currency products while it was just Rs. 2400 crore in January this year. The turnover in NSE and MCX-SX has increased tremendously but the turnover on BSE has been negligible in the second half of 2009 and the exchange has announced plans to shift its currency future platform to the new exchange. The participation of investors and traders has been increasing sharply due to volatility in dollars between Rs. 49 and Rs. 46 over the last few months. Reserve Bank of India has proposed for permitting the three recognized stock exchanges to trade currency futures.
Markets regulator SEBI has said that the exchange-traded currency futures market is more efficient than the over-the-counter (OTC) interbank. The bid-ask spread gives an indication of the cost and ease with which a contract can be traded, essentially a proxy for a market's liquidity. In a recent research paper, Gurnain Kaur Pasricha, a senior analyst at bank of Canada said Brazil is the only country in the world, prior to India, where the currency futures market has become more liquid than the forward market.
"Once the exchange (traded market) becomes liquid, the network externality of market liquidity sucks in further order flow and preserves the domination of the exchange, even after these rules (helping the segment) are removed," she concluded in the paper. The SEBI study also says the share of merchant (corporate) transactions in the OTC market has fallen from 63% in November 2008 to 30% in November 2008. This could mean that as a hedging tool, merchants are probably moving to the futures market, the memorandum said. U. Venkatraman, Executive Director, MCX Stock Exchange attributes this to banks offering the product to customers encouraging participation from exporters, importers and other small and medium enterprises.

The government is looking to deepen the currency futures market by allowing trading in more currencies including the Euro and Yen and on the exchanges, giving companies more options to hedge their exchange rate risks.
This will also help currency futures market move away from the opaque over-the-counter market (OTC) to more transparent and efficient exchange-traded platform. It would also bring down the cost of exchange rate hedging for companies.
Currently only Rupee-Dollar contracts are traded on the exchanges. Though, RBI has consented to introduction of INR-Euro contracts on exchanges, there is some resistance towards introducing Euro-Dollar and other such contracts, a move that would broaden the currency futures market in the country.
"The opinion in favour of exchange-traded products has strengthened after the financial crisis and it is viewed as more transparent and efficient." Moreover, exchange traded currency products has reduced the costs substantially.

CURRENCY FUTURES PROSPECTS

Currency futures are new forex risk management insturment. It is one of the better tool to hedge the foreign risk for the companies who have an exposure to foreign exchange either because of export or import. As these days Indian export as well as import are booming with huge volume so it is risky for the companies to keep an huge open positions, which can result into huge losses so forex futures is a better hedging tool where one can book the profit even before the receivables has arrived.
Prime Minister Manmohan Singh had in his speech at the India Economic Summit said: "We need to improve futures markets for better price discovery and regulation."
While the process for introduction of contracts in other currencies such as rupee-euro, or rupee-yen may soon be available, the government wants the product basket to be akin to the OTC markets.
Indian financial sector regulators are set to launch currency options shortly. Introduction of options will be good development as it will lead to diversification. Futures with non-dollar currencies can minimize the risk also. The extension of working hours will also helpful in increasing the volume of currency futures trading. All residents Indians are allowed to participate in currency futures, but this is expected to change once the local market has reached a maturity level than NRIs and FIIs will also participate in currency futures in India.
It is feasible to shift trading to other currencies to exchange platform as volumes have grown apparently. Greater trade and financial flows from Euro Zone and Japan can make standardized contracts possible.
A move is also a foot to clean up the regulation for all exchange trade derivative products by bringing them all under one regulator. Inter-ministerial consultations have already been initiated in this regard.

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IMPACT OF CASA DEPOSIT GROWTH ON THE PROFITABILITY OF NSE LISTED NATIONALIZED BANKS AND NEW GENERATION BANKS IN INDIA - A COMPARATIVE STUDY

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ABSTRACT
CASA stands for current account and savings account deposits which are offered by the banks. It is fortunate that only the financial service company which is registered under banking Regulation Act1939 is eligible to offer this type of deposits. It is otherwise called as Low cost deposits. Because this deposits are offering 3 to 3.5% interest to the depositors rather than recurring and fixed deposits. When these deposits are utilized for loans and advances, bank is charging minimum 8% interest. So the minimum interest spread for every bank will be 4.5% on all types of loans and advances schemes provided they are dependent on this type of deposits. This study is made to visualize how much is the growth of CASA deposits over the period of time and how it helps the banks increase their interest spread and thereby making their profit position comfortable. For this study, 10 years CASA deposit growth of 25 banks was taken for analysis. By the use of correlation technique, the degree of relationship between CASA growth and interest spread, CASA Deposit ratio growth and operating profit, CASA Deposit ratio growth and branch growth were found out.

KEYWORDS
Casa, Deposit, Growth, Saving, Financial.

INTRODUCTION
The government has asked public sector banks (PSBs) to increase focus on attracting low-cost current account, savings account (CASA deposits) in order to contain their cost of funds. It will also enable them to maintain a softer interest rate regime. The government has asked for specific CASA targets from public sector players, which have been provided by the banks as part of the discussion on statement of intent setting the targets for the current financial year. Bankers said that most public sector players had indicated a CASA growth of 17-20 per cent for the current financial year.

While the banks earlier focused on deposit growth, CASA deposits are coming into prominence for the first time. The move comes amid expectations of hardening of interest rates. "The government wants banks to increase their CASA deposits. These low-cost deposits will help us to contain costs, which means that a softer interest rate regime can be maintained," a banker said. Over the last three years, the share of low-cost deposits for public sector banks has dropped from 39.95 per cent at the end of March 2006 to 32.66 per cent at the end of March 2009.This year; Corporation Bank and Allahabad Bank have projected a 17-18 per cent growth in low-cost deposits. For Corporation Bank, the share of CASA in total deposits fell to 23.84 per cent in June as against 31.44 per cent at the end of March. The bank expected to close the current financial year with CASA deposits of 25 per cent.

Even banks such as State Bank of India have witnessed a fall in the share of CASA to total deposits and have initiated steps to increase it. In case of SBI, the share of CASA in total deposits fell to 38.45 at the end of June this year as against 39.26 per cent in March due to a decline in current account balances. An increase in low-cost deposits would also help banks to improve their net interest margins (NIMs) which came under severe pressure in the first quarter.

Repeated cuts in the benchmark prime lending rates since October-November last year also brought pressure on it. This declining has revealed in all the correlation analysis done in the analysis part of the study. In aligning with Branch growth, Net interest margins and operating profit, CASA deposits are shown negative relationship. It seems that Branch expansion and profitability do not support Current and savings account deposits.

On the other side, the fate of private sector banks is totally other way around. There is the perfect correlation between CASA and branch growth; between CASA and Net Interest Margin and in between CASA and operating profits. It seems that Branch expansion and profitability do support Current and savings account deposits.

CONCEPTS USED IN THIS STUDY
1. Net Interest Margin: It is the difference between the interest rate of banks' offer of loans and advances and the interest rate of banks' borrowings**.**
2. Branch growth ratio: It is the connection between the total number of individual branches and total number of all branches of all the sample banks across the bank industry.
3. Operating Profit: It is the Earnings before interest and taxes.

RESEARCH METHODOLOGY
RESEARCH PROBLEM
Finding out the impacts of maintaining CASA deposits**.**
RESEARCH DESIGN
ANALYTICAL OR MODELING RESEARCH
It is nothing but a modeling research which is spelling out the present and future impacts based on past years information. The theme of the study is whether the CASA business proposition helps improve financial performance or not.
SIZE OF THE POPULATION
Total sample is 25 banks.
NAME OF THE SAMPLE TYPE
Proportionate Stratified random sampling
REASON FOR USING THIS TYPE IN THIS STUDY

This sampling method is used in this study because there are two segments namely nationalized banks and New Generation banks. Nationalized banks are government owned banks and administered by Government whereas new generation segment is owned by private and administered by private with surveillance of Reserve bank of India.

SAMPLE FRAME

NSE listed stocks

SAMPLE SIZE

8 banks in two groups; one group is nationalized banks segment which contains 4 banks and another is new generation segment which also contains 4 banks. The names of the nationalized banks are 1. Andhra bank, 2. Oriental bank of commerce, 3. State bank of India. 4. Indian overseas Bank. The names of the new generation segment are 1. HDFC bank, 2. ICICI Bank, 3.Axis bank. 4 .IDBI bank.

TOOLS USED FOR ANALYSIS

Researcher has used **Correlation Technique** to perform the study.

OBJECTIVES OF THE STUDY

1. To find out reasons for low growth of Nationalized Banks deposits
2. To find out the relationship between CASA deposit growth and Interest spread
3. To find out CASA deposit growth and Branch growth
4. To find out the relationship between Interest Spread and Operating Profit growth

SCOPE OF THE STUDY

This is the secondary data study which covers the period from 2001-02 to 2009-10. This study mentions only the **Impact of CASA Deposit growth on the Profitability of NSE listed Nationalized Banks and New Generation Banks in India**. It is a comparative study. As far as this study is concerned, only the branch expansion leads to the growth of deposits. In turn this deposit growth leads to the profitability of the banks. The scope of the study is confined to current and savings account deposits growth only.

LIMITATION OF THE STUDY

1. This study bears all the negative effects of secondary data analysis
2. The transactions before 2001-02 and after 2009-10 are not taken in to account.
3. With respect to branch growth, only as on 2009-10 the numerical strength of branch only is taken in to account for consideration. Yearly additions of branches are not taken.
4. The coverage of the analysis is limited to NSE listed banks. Other stock exchange listed and unlisted banks have not taken as the samples. So the findings of the study may not apply to them.

ANALYSIS AND INTERPRETATION

REASONS FOR HIGH GROWTH OF NATIONALIZED BANKS DEPOSITS

- The global financial crisis which triggered in September2008 in the US market and subsequently spread all over the world. It has impacted the Indian banking in several ways although the latter remained insulated from the severe jolt experienced by its counterparts, particularly in advanced countries.
- Depositors seem to have perceived more risk in depositing their money with private sector banks and shifted their loyalty to public sector banks. For instance, the share of public sector banks in total deposits which stood at 73.91 per cent before the crisis and this figure increased to 77.61 per cent as at the end of March2009 that is during the crisis and further increased to 77.68 per cent as at end March 2010 after recovery began. So the investors risk perception has been the reason for the increased growth of all nationalized (Public sector) banks and decreased growth of all private sector and foreign banks in India.

Source: www.businessline.in/banking

TABLE-1 SHOWING THE FINANCIAL PERFORMANCE OF SAMPLE BANKS FOR THE AVERAGE OF 9 YEARS –NATIONALIZED SEGMENT

S.No.	Name of sample banks	CASA to total deposit ratio in times	Branch growth ratio in times	NIM to Total assets In times	Operating profit to total assets In times
1	State bank of India	0.39	24	2.87	2.08
2	Bank of India	0.32	3.67	2.92	2.92
3	Andhra bank	0.33	2.72	2.84	2.48
4	Oriental bank of commerce	0.28	8.25	2.94	2.51

INTERPRETATION

As far as CASA deposit ratio is concerned, State bank of India is leading tally. It is grown by 0.39 times, whereas Oriental bank of commerce is lowest among all banks. It is only 0.28. On the other side in the case of operating profit to total assets oriental bank of commerce is more than all other banks among samples. The result is 2.51 times. Whereas State bank of India is only 2.08 times. From this fact and figures, it is evident that CASA deposit is nothing to do with bank's profit position. It is clearly vindicated in Net interest margin also.

TABLE-1 B SHOWING THE FINANCIAL PERFORMANCE OF SAMPLE BANKS FOR THE AVERAGE OF 9 YEARS –NEW GENERATION SEGMENT

S.No.	Name of sample banks	CASA to total deposit ratio in times	Branch growth ratio in times	NIM to Total assets In times	Operating profit to total assets In times
1	ICICI Bank	0.24	2.69	2.02	1.99
2	HDFC Bank	0.50	2.68	3.92	3.00
3	IDBI bank	0.22	.28	1.49	1.43
4	ING Vysya bank	0.23	0.85	2.05	1.36

INTERPRETATION

In terms of financial performance, it is known that HDFC is found to be No I bank on all aspects. In the case of CASA to total deposit ratio, it is 0.5 which is higher than all other sample banks. In the case of branch growth (2.68), it is next to ICICI bank only and in terms of NIM to total assets and operating profits to total assets, the ratios are 3.92 times and 3.00 times respectively which much higher than all other sample banks. The least performing bank is IDBI Bank in terms all aspects be it CASA to deposit ratio(0.22), branch growth in times(0.28), NIM to total assets in times(1.49) and operating profit to total assets in times(1.43).

I.CASA GROWTH ANALYSIS THROUGH CORRELATION TECHNIQUE FOR NATIONALIZED BANKS SEGMENT

I. CASA deposit ratio growth Vs. Bank branch growth: Here the amount of relationship between bank branches and the amount of CASA deposit ratio is found out. It gives light on the contribution of bank branches expansion to deposit growth.

TABLE-2 SHOWING CORRELATION BETWEEN CASA DEPOSIT RATIO GROWTH AND BANK BRANCH GROWTH

S.No.	Name of sample banks	CASA to total deposit ratio in times	Bank branch growth
1	State bank of India	0.39	2.69
2	Bank of India	0.32	2.68
3	Andhra bank	0.33	.28
4	Oriental bank of commerce	0.28	0.85
	Correlation coeffiencient	-0.952	

Computation correlations through SPSS software

TABLE – 2A SHOWING THE CORRELATION DETAIL BETWEEN CASA & BRANCH GROWTH

SPSS details		CASA Deposits to Total Deposits	Branch growth ratio in times
CASA Deposits to Total Deposits	Pearson Correlation	1	-.952(*)
	Sig. (2-tailed)	.	.048
	N	4	4
Branch growth ratio in times	Pearson Correlation	-.952(*)	1
	Sig. (2-tailed)	.048	.
	N	4	4

* Correlation is significant at the 0.05 level (2-tailed).

INTERPRETATION

It is a negative relationship between **CASA** Deposits to Total Deposits and Branch growth ratio in times. The result is **-0.952.** It seems that the times increase in CASA deposit is less than the times increase in branch growth Therefore branch growth has nothing to do with Current and saving account deposit growth. This result is consolidated average for 4 banks, covering 9 financial years data from 2001-02 to 2009-10.

TABLE-3 SHOWING CORRELATION BETWEEN CASA DEPOSIT AND NIM / TOTAL ASSETS IN TIMES

S.No.	Name of sample banks	CASA to total deposit ratio in times	NIM / total assets
1	State bank of India	0.39	2.87
2	Bank of India	0.32	2.92
3	Andhra bank	0.33	2.84
4	Oriental bank of commerce	0.28	2.94
	Correlation coeffiencient	-0.641	

TABLE –3A SHOWING THE CORRELATION DETAIL OF CASA & NIM

SPSS details		CASA Deposits to Total Deposits	Net Interest Margin(**NIM)** to total Assets
CASA Deposits to Total Deposits	Pearson Correlation	1	-.641
	Sig. (2-tailed)	.	.359
	N	4	4
Net Interest Margin to total Assets	Pearson Correlation	-.641	1
	Sig. (2-tailed)	.359	.
	N	4	4

INTERPRETATION

Like the former one, It is also a negative relationship between **CASA** Deposits to Total Deposits and Net Interest Margin (NIM) to total Assets ratio in times. The result is -**0.641**. It seems that the times increase in CASA deposit has reduced the Net Interest Margin (**NIM)** growth. It may be because of consistent decrease in interest rates on Loans as well as Net interest Margin. Therefore Net Interest Margin (**NIM)** growth has nothing to do with Current and saving account Deposit growth. This result is consolidated average for 4 banks, covering 9 financial years data from 2001-02 to 2009-10.

TABLE-4 SHOWING CORRELATION BETWEEN CASA DEPOSIT AND OPERATING PROFIT/ TOTAL ASSETS RATIO

S.No.	Name of sample banks	CASA to total deposit ratio in times	operating profit/ Total assets ratio
1	State bank of India	0.39	2.08
2	Bank of India	0.32	2.92
3	Andhra bank	0.33	2.48
4	Oriental bank of commerce	0.28	2.51
	Correlation coeffiencient	-0.639	

TABLE-4A SHOWING THE CORRELATION BETWEEN CASA & OPERATING PROFITS

SPSS details		CASA Deposits to Total Deposits	Operating profits to total assets
CASA Deposits to Total Deposits	Pearson Correlation	1	-.639
	Sig. (2-tailed)	.	.361
	N	4	4
Operating profits to total assets	Pearson Correlation	-.639	1
	Sig. (2-tailed)	.361	.
	N	4	4

INTERPRETATION

The researcher is able to get the same negative effect of CASA deposit growth as it is in the case of its correlation with Branch growth in times and Net interest margin to total assets ratio. The correlation is **-0.639.** The fact is CASA deposit growth has pulled down the operating profit growth. So whenever there was a reduction in CASA Deposits, operating profits went up and vice versa. It had been the case from the reading of past nine years data from 2001-02 to 2009-10. This CASA deposit growth did not support operating profits to up. This result is consolidated average for 4 banks, covering 9 financial years data from 2001-02 to 2009-10.

II. CASA growth analysis through Correlation technique for New generation banks Segment

TABLE-5 SHOWING CORRELATION BETWEEN CASA DEPOSIT RATIO GROWTH AND BANK BRANCH GROWTH

S.No.	Name of sample banks	CASA to total deposit ratio in times	Bank branch growth
1	ICICI Bank	0.24	2.69
2	HDFC Bank	0.50	2.68
3	IDBI bank	0.22	.28
4	ING Vysya bank	0.23	0.85
	Correlation Coefficient	0.611	

TABLE – 5A SHOWING THE CORRELATION DETAIL BETWEEN CASA & BRANCH GROWTH

SPSS details		CASA deposits to Total Deposits ratio	Branch growth in times
CASA deposits to Total Deposits ratio	Pearson Correlation	1	.611
	Sig. (2-tailed)	.	.389
	N	4	4
Branch growth in times	Pearson Correlation	.611	1
	Sig. (2-tailed)	.389	.
	N	4	4

INTERPRETATION

It is a positive relationship between **CASA** Deposits to Total Deposits and Branch growth ratio in times. The result is **0.611.** It seems that the times increase in CASA deposit is much higher than the times increase in branch growth Therefore branch growth has something to do with Current and saving account deposit growth. This result is consolidated average for 4 banks, covering 9 financial years data from 2001-02 to 2009-10

TABLE-6 SHOWING CORRELATION BETWEEN CASA DEPOSIT AND NIM / TOTAL ASSETS IN TIMES

S.No.	Name of sample banks	CASA to total deposit ratio in times	NIM / total assets
1	ICICI Bank	0.24	2.02
2	HDFC Bank	0.50	3.92
3	IDBI bank	0.22	1.49
4	ING Vysya bank	0.23	2.05
	Correlation coeffiencient	0.981	

TABLE –6A SHOWING THE CORRELATION DETAIL OF CASA & NIM

SPSS details		CASA deposits to Total Deposits ratio	Net interest margin to total assets ratio
CASA deposits to Total Deposits ratio	Pearson Correlation	1	.981(*)
	Sig. (2-tailed)	.	.019
	N	4	4
Net interest margin to total assets ratio	Pearson Correlation	.981(*)	1
	Sig. (2-tailed)	.019	.
	N	4	4

* Correlation is significant at the 0.05 level (2-tailed).

INTERPRETATION:

Like the former one, It is also a positive relationship between **CASA** Deposits to Total Deposits and Net Interest Margin (NIM) to total Assets ratio in times. The result is **0.981**. It seems that the times increase in CASA deposit has driven the Net Interest Margin (**NIM)** growth to increase. Therefore Net Interest Margin (**NIM)** growth has something to do with Current and saving account Deposit growth. This result is consolidated average for 4 banks, covering 9 financial years data from 2001-02 to 2009-10.

TABLE-7 SHOWING CORRELATION BETWEEN CASA DEPOSIT AND OPERATING PROFIT/ TOTAL ASSETS RATIO

S.No.	Name of sample banks	CASA to total deposit ratio in times	operating profit/ Total assets ratio
1	ICICI Bank	0.24	2.08
2	HDFC Bank	0.50	2.92
3	IDBI bank	0.22	2.48
4	ING Vysya bank	0.23	2.51
	Correlation coeffiencient	0.945	

TABLE-7A SHOWING THE CORRELATION BETWEEN CASA & OPERATING PROFITS

SPSS Details		CASA deposits to Total Deposits ratio	operating profit to total assets
CASA deposits to Total Deposits ratio	Pearson Correlation	1	.945
	Sig. (2-tailed)	.	.055
	N	4	4
operating profit to total assets	Pearson Correlation	.945	1
	Sig. (2-tailed)	.055	.
	N	4	4

INTERPRETATION

The researcher is able to get the same positive effect of CASA deposit growth as it is in the case of its correlation with Branch growth in times and Net interest margin to total assets ratio. The correlation is **0.945.** The fact is CASA deposit growth has caused the operating profit growth. So whenever there was a increase in CASA Deposits, operating profits went up and vice versa. It had been the case from the reading of past nine years data from 2001-02 to 2009-10. This CASA deposit growth did support operating profits to up. This result is consolidated average for 4 banks, covering 9 financial years data from 2001-02 to 2009-10.

FINDINGS OF THE STUDY

1. After the recession, the risk perception of the depositors has turned positively towards nationalized banks as the growth increased from 73.91 per cent to 77.68 per cent.
2. In the case of nationalized banks segment, correlation between CASA and Branch growth is -0.952; CASA and Net interest margin growth is -0.641; CASA and Operating profit growth is -0.639. Here all the variables are negatively correlated.
3. In the case of new generation banks segment, correlation between CASA and Branch growth is 0.611; CASA and Net interest margin growth is 0.981; CASA and Operating profit growth is 0.945. Here all the variables are positively correlated

CONCLUSION

It is quite evident that only deposits growth and Credit demand will increase the profitability of any banks irrespective its size. Having got this assumption, the researcher has covered only deposits part for carrying out financial performance study. CASA is a low cost deposit as it offers only low interest rates to the deposits unlike term deposits. This kind of deposits increase will spell out positive growth in maintaining number of branches, increasing net interest margins as spread (Interest receipt –Interest payment) is increasing and it will result phenomenal growth in operating profits. What is concluded in this study is this CASA deposits had not created any kind of positive impacts on all three criterion variables in the case of nationalized banks. So profitability is achieved because of other factors only. Whereas in the case of new generation banks, CASA had created all kinds of positive impacts on all variables namely Branch growth, Net Interest Margin and Operating Profits.

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EMERGING NEW MARKET PENAEUS VANNAMEI CULTURE IN INDIA

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ABSTRACT

Shrimp culture is the biggest contributor to the coastal aquaculture throughout the world. The potential brackish water area available in coastal regions of country for shrimp culture is about 1.2 million hectares is under culture. The export of cultured shrimps from our country is about 50% of the total shrimp exports. Hence there is a vast potential for further development of coastal shrimp aquaculture in our country. But the rapid increase in shrimp farming in the last decade has resulted in environmental and social concerns. However these concerns are now largely taken care of and the social acceptability of shrimp farming has been attained. To increase the production of shrimp farming aquaculture many issues and ideas are being discussed in recent times and some of them have resulted in fierce debates and sharp polarization of views.

KEYWORDS

Liberalization and Globalization, Market Potential, Economic

INTRODUCTION

P. *vannamei* was introduced into Asia experimentally from 1978-79, but commercially only since 1996 into Mainland China and Taiwan Province of China, followed by most of the other coastal Asian countries in 2000-01. Experimental introductions of specific pathogen free (SPF) "supershrimp" *P. stylirostris* have been made into various Asian countries since 2000, but the only country to develop an industry to date has been Brunei.

Beginning in 1996, *P. vannamei* was introduced into Asia on a commercial scale. This started in Mainland China and Taiwan Province of China and subsequently spread to the Philippines, Indonesia, Viet Nam, Thailand, Malaysia and India. These introductions, their advantages and disadvantages and potential problems are the focus of this report.

China now has a large and flourishing industry for *P. vannamei*, with Mainland China producing more than 270 000 metric tonnes in 2002 and an estimated 300 000 metric tonnes (71 percent of the country's total shrimp production) in 2003, which is higher than the current production of the whole of the Americas.

Other Asian countries with developing industries for this species include Thailand (120 000 metric tonnes estimated production for 2003), Viet Nam and Indonesia (30 000 metric tonnes estimated for 2003 each), with Taiwan Province of China, the Philippines, Malaysia and India together producing several thousand tonnes.

Total production of *P. vannamei* in Asia was approximately 316 000 metric tonnes in 2002, and it has been estimated that this has increased to nearly 500 000 metric tonnes in 2003, which is worth approximately US$ 4 billion in terms of export income. However, not all the product is exported and a large local demand exists in some Asian countries.

Thanks to SPF domesticated white shrimp , *Penaeus vannamei.* Suddenly the shrimp farming business is back on its feet again. The surge amongst farmers, hatchery operators, feed millers and the processing plants have renewed confidence and enthusiasm towards the shrimp industry. With the staggering white shrimp global production of 76 percent in 2007 from a mere 23 percent in 1996.

P.VANNAMEI IN INDIA

- ✓ During 2001 & 2002, both scampi culture and monodon culture had been come down due to severe disease out break in AP.
- ✓ Sharath Industries and BMR in Nellore, AP applied to Ministry of Agriculture for introducing *L. vannamei* in India. (2002)
- ✓ Sharath Sea Foods & BMR got permission for Vannamei culture in the terms of pilot project in year 2003.
- ✓ They can import brood stock & produce seed and culture only in their own farm.
- ✓ They can't sell the seed to the farmers.
- ✓ Sharath & BMR started each 50 acres for trial purpose with 50 pc stocking density in 2003 in second crop
- ✓ During the First crop, Harvest size was 20 g, survival rate was 90 % & their FCR was 1.5.
- ✓ Both Sharath & BMR has been doing culture in full swing.
- ✓ Sharath went for 100 pc/m2 stocking density on earthen pond culture(no P.E.line ponds).
- ✓ Harvest system – Partial harvest & Closed harvest. They used to do partial harvest when the animal reach 15 g size & then closed by when the size reach the 20 g.
- ✓ In 2004, Sharath supplied seed to 2 farms in Gangapatnam. Those farmers started with 40 pc/m2, harvest size was 20 gms with 130 DOC. They did 20 acres & got good success.
- ✓ BMR supplied seed to their close relatives in Iskapalli village and stocked with density of 20 to 30 pc/m2 & got good culture
- ✓ In 2008, Court issues the order to close the farms in particular village. Whereas in Iskapalli, farmers has been doing culture with out any social issues.
- ✓ During this year, In Iskapalli village farmers had failed in vannamei culture due to unidentified disease outbreak.
- ✓ In Mudivarthi Village, Big Farmers like Baskaraiah & Radhaiah started vannamei culture & got good success.
- ✓ Ministry of Agriculture issued notice through CAA to both Sharat Sea Foods and BMR, mentioned that they should stop all their activities before end of June 2009.

INDIA TO START WHITE PRAWN PRODUCTION

The Union government will allow cultivation of white prawn (*Penaeus vannamei*) in India from the ensuing stocking season in February 2010, according to NFDB chief executive officer, P. Krishnaiah.

India's *Business Standard* reports that *P. vannamei*, widely cultivated in the US, is seen as an alternative to tiger prawn (*P. monodon*), which is often afflicted by the white spot (virus) attacks. The demand for introduction of vannamei has been a long-pending demand of shrimp growers and traders as they feel there is a good export market for the species.

Shrimp culture in the country, predominantly black tiger prawn project (*P. monodon*), has declined from 106,165 tonnes in 2007-08 to 75,996 tonnes in 2008-09 – a fall of 28.4 per cent. The total export of shrimp and scampi (lobsters) from India during 2007-08 was valued at 28.36 billion rupees (INR), compared to INR 37.77 billion the year before and INR 36.05 billion in 2005-06.

Typically, a kilo of black prawn (20 to 25 prawns) fetches about INR 275 to 300. With the white spot virus becoming rampant among the wild species, the profitability decreased and many shrimp farmers have run into difficulties.

Keeping in view the demand for quality shrimp seed, the NFDB has decided to set up a specific pathogen-free (SPF) shrimp seed plant for the black tiger prawn project at Mulapolam village in Srikakulam district of Andhra Pradesh together with Moana Technologies, a Hong Kong-based company with a proven record in SPF research for the species. SPF does not mean that shrimp are completely disease-free.

The NFDB had already acquired 100 acres of private land for the project estimated to cost INR 40 million. NFDB's role is to create hatchery infrastructure and then lease out the facilities to Moana Technologies, which will have a production capacity of three billion SPF seed a year.

But now, the SPF project is in troubled waters, reports *Business Standard*. "The project is mired in technical issues as Moana is now looking at replacing its partners in India. The project is not off," Krishnaiah said, adding that NFDB had asked Moana to prove its funding capabilities before setting up the required infrastructure. The NFDB is now preparing to call tenders for the civil works of the project.

For some time, the Central Aquaculture Authority allowed *P. vannamei* to be cultivated in India but only after pilots. The Centre created a quarantine facility in Chennai and approved 24 hatcheries to supply the vannamei seed. In Andhra Pradesh, BMR and Sharath Industries have conducted pilots for *P. vannamei*.

A kilo of white prawn, even if the count is above 30, fetches a price of up to INR 200 in the export markets, Mr Krishnaiah said, adding that *P. vannamei* was low-cost, high-density species that could depend on bacterial, algal flocks and rotifers in the water. On the other hand, *P. monodon* is more carnivorous and requires higher protein feed. The SPF broodstock for *P. vannamei* is available from the US. However, without SPF and biosecurity, producing consistent post larvae will be difficult and will affect the farm economics, he said.

Andhra Pradesh, which has 50,396 hectares under shrimp cultivation with 199 hatcheries, contributes over 50 per cent to the country's shrimp production. Last year, the state produced 56,557 tonnes. The state also leads in scampi (lobster) production (19,887 tonnes last year) on 38,819 hectare.

The profits from *vannamei* farming were almost three times greater than those for *monodon.*

Comparison of *P. monodon* and *P. vannamei* Production in Thailand		
	P. monodon	*P. vannamei*
Density in Postlarvae Stocked Per Square Meter	40 to 50	120 to 200
Crop Duration in Days	110 to 140	105 to 120
Harvest Size in Grams	22 to 28	21 to 25
Yield in Metric Tons Per Hectare	8	24
Crop Value in USA Dollars Per Hectare	$45,000	$96,000
Crop Costs in USA Dollars Per Hectare	$32,000	$60,000
Production Profit	$13,000	$36,000

IMPORTANCE OF THE NEW MARKET IN INDIA

L. Vannamei culture should be allowed in our country for the following reasons:

1. L.Vannamei has now proved to be the best alternative for P.monodon (Black Tiger Shrimp) all over the world , particularly in Thailand, Vietnam and China,
2. It is very cost competitive in the World market.
3. The advantages of L Vannamei are the possibility of domestication of broodstocks, lower protein requirement in feeds, rapid growth rate, possibility of high stocking density and its registance to white spot disease.
4. In some areas of our country, like West Bengal and Orissa the cooler temperatures for about four months i.e. from 15th October to 15th February restrict the culture of P. monodon (black tiger shrimp). So only the crop/ annum is possible. In this case L Vannamei culture can help with the possibilities of 2 crops/ annum.
5. L.Vannamei is known to suffer from Toura syndrome virus (TSV) but there is no authentic record of TSV affecting P. monodon (black tiger shrimp). Hence the threat of TSV from L. Vannamei to P. Monodon (black tiger shrimp) is blown out of proportion.
6. The Shrimp hatcheries in our country , about 260 nos. in total, having the installed production capacity of 11.00 billion seeds / annum are performing well below their capacities which has made many shrimp hatcheries commercially unviable . Production of L Vannamei shrimp seeds can help the shrimp hatchery sector.
7. The shrimp processing plants in the country are also operating at only about 20% of their total installed capacities because of lack of raw-materials. Additional availability of cultured Vannamei shrimp can increase the processing industry and also can increase the export of shrimp from our country.
8. L. Vannamei shrimp has a lower unit cost compared to P. Mondon (black tiger shrimp). Hence it can be developed as an alternative for greater domestic consumption in our country.

STATEMENT OF PROBLEM

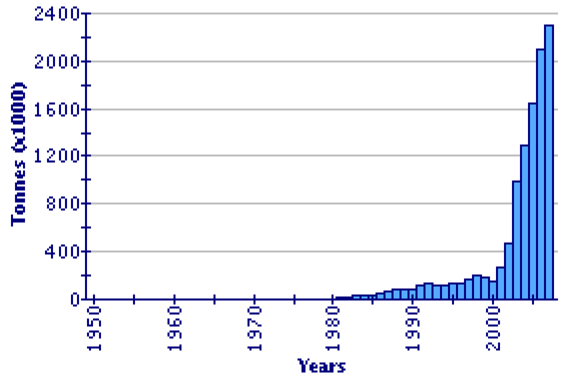
But to take an informed view, the following factors may be seriously considered before allowing L, Vannamei shrimp culture in India.

1. A comprehensive risk analysis study by a very competent agency should be carried out throughout our country from the very beginning.

2. A central quarantine facility with a large scale capacity is to be established to monitor all incoming L.Vannamei broods stocks from any/every source outside the country.
3. Only SPF (Specific Pathogen Free) certified brood stocks should be allowed in to the country only from approved and reputed suppliers .
4. A very few nos of Bio-secure hatcheries under strict selection procedures , should be selected as multiplication centers in order to produce SPF (Specific Pathogen Free) broodstocks only.
5. To produce L. Vannamei shrimp seeds, hatcheries only with complete bio-security facilities should be licenced to operate at different coastal states.
6. For the first year of vannamei shrimp culture , only a few approved farms in different states should be selected . The selection of such farms, depending on strict technical criterias, should be done in consulation with the state Fisheries Department, regional MPEDA offices and respective farmer's associations,
7. Continuous monitoring of such L Vannamei shrimp culture / SPF (Specific Pathogen Free) brood stock production facilities should be carried out throughout the first culture period by a national level committee.1.
8. all the above effects / activities should be completely reviewed after one crop in order to study its viability and risk potentials,
9. If the review supports L. vannamei shrimp culture in our country , then only it should be fully allowed to percolate down to small and medium farmers in all culture zones.
10. Then a set of suitable guidelines can be established for L. Vannamei shrimp culture in our country.

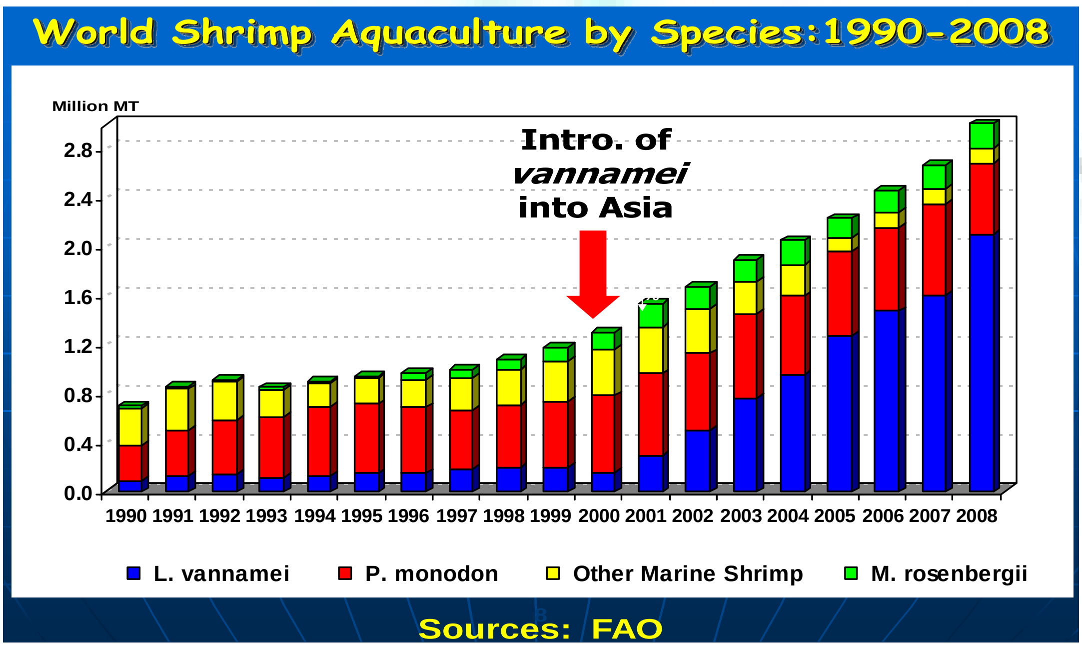
PRODUCTION STATISTICS

Global aquaculture production of Penaeus vannamei
(FAO Fishery Statistic)



FAO statistics show that the total farmed production of *P. vannamei* increased steadily from 8 000 tonnes in 1980 to 194 000 tonnes in 1998. After a small decline in 1999 and a more significant decline in 2000 due to the arrival of WSSV in Latin America, FAO data show a rapid increase in production to over 1 386 000 tonnes in 2004, due to the recent rapid spread of this species to Asia. Main producer countries in 2004 were: China (700 000 tonnes), Thailand (400 000 tonnes), Indonesia (300 000 tonnes) and Vietnam (50 000 tonnes).

STATUS AND TRENDS



DEVELOPMENT

While the expansion of P. vannamei culture has been rapid in recent years, particularly in Asia, it has led to reduced value of harvested shrimp. This trend is expected to continue. Under such circumstances, the less efficient producers may not be able to compete with those capable of producing either more eco-friendly or cheaper products. Recent worldwide trends have been towards the integration of the industry, in response to the ever increasing requirement for traceability and control within the culture system.

MARKET

There has been a slowly increasing demand for shrimp in world markets, as capture fisheries stagnate and people became more affluent and conscious of healthy food choices. Despite the increased demand, the price for P. vannamei has been declining steadily. In the future, the market for P. vannamei is expected to become more competitive, due mainly to the saturation of export markets and reduction in world economic growth, as well as the emergence of non-tariff barriers in shrimp trade. Additionally, the industry will need to accommodate importing countries requirements on:

- Chemical residues.
- Food safety.
- Certification.
- Traceability.
- Eco-labelling.
- Environmental sustainability.

RECOMMENDATIONS

All shrimp farmers are becoming acutely aware of the growing need to farm shrimp in a responsible, traceable and low impact manner which can enhance biosecurity, and help protect the environment, whilst producing shrimp in a cost efficient manner. The newly developed intensive bacterial floc and super-intensive systems may have potential to address all of these concerns and should be investigated more thoroughly. In order to continue the growth of shrimp farming smoothly in the long term, domestic consumption should be promoted (as in China) to supplement the problematic export markets.

CONCLUSION

The funding for the above studies, facilities and monitoring can be arranged from all possible sources such as Public Private participation, funds from national Fisheries Development Board (NFDB) and central funds. In fact the National Fisheries Development Board (NFDB) should take the lead to implement such a large scale operation over a time frame of 2-3 years.

Above all the cost benefit ratio of such a large scheme should be studied particularly with emphasis on its impact on small farms, social concerns and environmental aspects.

No doubt we need our country to grow socially and economically. Aquaculture of shrimp can definitely play a role in this direction . All negative aspects of growth are always to be addressed in a developing country and we have the benefit of learning from the mistakes and experiences of other Asian Countries who have already captured a major share of World shrimp export market through L Vannamei.

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PRICE DISCOVERY IN THE COMMODITY MARKETS: THE CASE OF FEEDER CATTLE AND LIVE CATTLE MARKETS

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ABSTRACT

This paper examines the relationship between the futures market and spot market for the feeder cattle and live cattle markets during the sample period January 2001 through May 2010 and quantifies the price discovery function of commodity futures prices in relation to spot prices of the sample markets. The cointegration tests and Vector Error Correction Models (VECM) employed in the study proved that both the selected futures markets share and provide certain long-run price information to cash markets and they have cointegrated. Both these markets were found to respond favourably to the price discovery mechanism and acted in a similar way.

KEYWORDS
Cointegration, Feeder Cattle and Live Cattle, Price Discovery.

INTRODUCTION
Futures markets generally perform two important roles, hedging of risks (in other words called as risk transfer) and price discovery. The efficacy of the hedging function is dependent on the price discovery process or how well new information is reflected in price. Price discovery, or transmission of information into prices, is a crucial function of any markets. Price discovery takes place when order flow from different types of traders is aggregated in a single market, which can be a physical exchange floor or an electronic trading system. This aggregation of trading interests allows for trade prices to correctly represent supply and demand, although market frictions, noise trading, and investor psychology ensure that observed prices are imperfect proxies for the underlying asset values. As markets evolve, it is imperative that the new market structures and trading protocols continue to provide reliable price discovery. In general, futures markets are found to respond faster to new information than spot markets since the transaction cost is lower and the degree of leverage attainable is higher. Whether the spot or the futures market is the center of price discovery in commodity markets has for a long time been discussed in the literature. Stein (1961) showed that futures and spot prices for a given commodity are determined simultaneously. Garbade and Silver (1983) (GS thereafter) developed a model of simultaneous price dynamics in which they established that price discovery takes place in the market with highest number of participants. Their empirical application concludes that “about 75 percent of new information is incorporated first in the future prices.” More recently, the price discovery research has focused on microstructure models and on methods to measure it.

SIGNIFICANCE OF THE STUDY AND OBJECTIVES
Price discovery is a concept used frequently, but seldom defined. Thomsen and Foote defined price discovery in 1952 as the process of buyers and sellers arriving at a transaction price for a specific quantity and quality of a commodity or product at a specific time and place. Their definition allows focusing on many interrelated components of the pricing process, and numerous topics may be categorized as price discovery research. Examples include studies of transaction prices and relationships with underlying supply and demand determinants; price relationships and dynamics between and among vertical stages in the marketing channel; spot versus forecasted or futures market prices; price impacts associated with market information, especially public reports; price and product characteristic relationships; spatial and temporal price patterns and dynamics; and price impacts associated with market structure and behaviour changes.

Price discovery research in commodity market has become an increasingly important, because of structural and behavioural changes in storable and non storable commodities, both horizontal and vertical, and the resulting potential price and market information impacts. Structural and behavioural changes in meatpacking and related stages in the livestock-meat subsector have raised questions about price discovery for various species and classes of livestock (Purcell and Rowsell, 1987). Hence, this study attempts to provide empirical evidence on the price discovery mechanisms, taking into consideration the feeder cattle and live cattle.

The objectives so framed for the study were as follows:
1. To examine the relationship between the futures market and spot market for the sample commodities;
2. To quantify the price discovery function of commodity futures prices in relation to spot prices of feeder cattle and live cattle; and,
3. To analyze whether the price information reflects first in futures market or in the spot market.

METHODOLOGY
JOHANSEN'S VECTOR ERROR CORRECTION MODEL (VECM)
Johansen's (1988) Vector Error Correction Model (VECM) was employed to investigate the causal relationship between spot and futures prices. The following steps were followed to estimate Johansen's Vector Error Correction Model (VECM).

Step 1: The stationarity of the data series was evaluated by Augmented Dickey-Fuller (ADF), and Phillips-Perron (PP) tests.

Step 2: Once the series were found integrated in an identical order, then Johansen Multivariate Maximum likelihood cointegration test was employed to investigate the long-run relationship between spot and futures prices and it is presented below.

$$\Delta X_t = \sum_{i=1}^{p-1} \Gamma_i X_{t-i} + \prod X_{t-1} + \varepsilon_t; \ \varepsilon_t = \begin{pmatrix} \varepsilon_{s,t} \\ \varepsilon_{F,t} \end{pmatrix} \approx N(0,\Sigma) \qquad (1)$$

Where $X_t = (S_t\ F_t)'$ is the vector of spot and futures prices, Δ denotes the first difference operator; Γ_i and Π are 2×2 coefficient matrices measuring the short-and long-run adjustment of the system to change in X_{ti} and ε_t is 2×1 vector of white noise error terms.

Step 3: The test results were quite sensitive to the lag length. Hence, the lag length P was selected on the basis of multivariate generalizations of Akaike's information criteria (AIC).

Step 4: The two likelihood ratio tests were employed to identify the co-integration between the two series. The first statistic λ_{trace} tests whether the number of cointegrating vectors is zero or one, and the other λ_{max} tests whether a single cointegrating equation was sufficient or if two were required.

In general, if r cointegrating vector is correct. The following test statistics can be constructed as:

$$\lambda_{trace}(r) = -T \sum_{i=r+1}^{n} ln\left(1 - \hat{\lambda}_i\right) \qquad (2)$$

$$\lambda_{Max}(r, r+1) = -T\ ln\left(1 - \hat{\lambda}_{r+1}\right) \qquad (3)$$

Where, n is the number of separate series to be examined, T is the number of usable observations and ($\hat{\lambda}_i$) are the estimated Eigen values (also called characteristic roots) obtained from the (i+1) × (i+1) 'cointegrating matrix.'

The first test statistic (λ_{trace}) tests whether the number of distinct cointegrating vectors was less than or equal to r. The second test statistic (λ_{max}) tests the null that the number of cointegrating vectors is r against an r+1. MacKinnon-Haug-Michelis (1999) provide the critical values of these statistics. The rank of Π may be tested using the λ_{max} and λ_{trace}. If rank (Π) =1, then there was single cointegrating vector and Π can be factored as Π=αβ′, where α and β′ are 2×1 vectors. Using this factorization β′represents the vector of cointegrating parameters and α is the vector of error correction coefficients measuring the speed of convergence to the long-run steady state.

Step 5: If spot and futures prices were cointegrated, then causality must exist at least in one direction (Granger, 1986). To test the causality, the following vector error correction model (VECM) is estimated by using ordinary least square (OLS) in each equation.

$$\Delta S_t = a_{s,0} + \sum_{i=1}^{p-1} a_{s,i}\Delta S_{t-i} + \sum_{i=1}^{p-1} b_{s,i}\Delta F_{t-i} + \alpha_s Z_{t-1} + \varepsilon_{s,t} \qquad (4)$$

$$\Delta F_t = a_{F,0} + \sum_{i=1}^{p-1} a_{F,i}\Delta S_{t-i} + \sum_{i=1}^{p-1} b_{F,i}\Delta F_{t-i} + \alpha_F Z_{t-1} + \varepsilon_{F,t} \qquad (5)$$

where $a_{S,0}$, $a_{F,0}$ are intercept terms; $a_{S,i}$, $b_{S,i}$, $a_{F,i}$, $b_{F,i}$ are the short-run coefficients and $Z_{t-1} = \beta' X_{t-1}$ is the error correction term from equation 1.

In terms of the vector error correction model (VECM) of equation 4 & 5, F_t Granger Causes S_t if some of the $b_{S,i}$, coefficients, i =1,2,…., p-1 are not zero and α_S, the error correction coefficient in the equation for spot prices, is significant at conventional levels. Similarly, S_t Granger causes Ft if some of the $a_{F,t}$ coefficients, i =1,2,…., p-1 are not zero and α_F is significant at the conventional levels. These hypotheses can be tested by using either t-tests or F-tests on the joint significance of the lagged estimated coefficients. If both S_t and F_t Granger cause each other, then there is a feedback relationship between the two markets. Therefore, the error correction coefficients, α_S and α_F serve two purposes.

They are (i) to identify the direction of causality between spot and futures prices and (ii) to measure the speed with which deviations from the long-run relationship are corrected by changes in the spot and futures prices.

The vector error correction model (VECM) equation 4 & 5 provides a framework for valid inference in the presence of I (1) variable. Moreover, the Johansen (1988) procedure provides more efficient estimates of the cointegrating relationship than the Engel and Granger (1987) estimator (Gonzalo, 1994). Also, Johansen (1988) tests are shown to be fairly robust to presence of non normality and heteroscedasticity disturbances (Lee and Tse, 1996).

Since the futures prices series and the spot prices series of both feeder and live cattle appeared to be non stationary, causality test had been ignored.

REVIEW OF RELATED LITERATURE

Many previous papers are focused on the price discovery of cross-listed stocks and assets with the same value base. The existence of a price discovery function in futures markets hinges on whether price changes in futures markets lead price changes in cash markets more often than the reverse. **Leuthold (1974)** investigated the price performance of Live Beef Cattle on the futures market. From the results it was found that Cash cattle prices were found to be more accurate indicators of subsequent cash cattle price conditions than are the futures prices for distant contracts. In other words, evaluation of live beef cattle price relationships revealed that for distant futures, the cash price is a more accurate indicator of future cash price conditions than is the futures price. Also, the futures price becomes less and less efficient both absolutely and relative to the cash price estimates. In other words, the cash price is more stable than the futures price for distant contracts. **Oellermann and Farris (1985)** investigated lead lag relation between change in futures and spot price for live beef cattle between 1966 and 1982. The futures price led spot price during nearly every sub period analysed. Based on Granger causality test for various sub samples of their data, they conclude that change in live cattle futures price led change in live cattle spot price. They also found that the spot market responded to change in futures price within one trading day. The authors conclude that futures market was the centre of price discovery for live cattle. They suggest that a likely explanation for the results is that the futures market serves as a focal point for information assimilation. They conclude that the cattle futures market contributes towards a more efficient price discovery process in the underlying spot market for live beef cattle.

A slightly different approach was adopted by **Koontz et al. (1990)** to study price discovery in the livestock market. Using weekly U.S. cash and futures prices from 1973 through 1984, they investigated the spatial nature of the price discovery process. They adopted the procedure proposed by Geweke (1982) to generate causality tests and measures of interaction between major cash markets, and between cash and futures markets. In general, their findings suggested that there was a high degree of interaction between cash and futures prices. They also identified that the pricing relationships changed over time, reflecting changes in the industry which suggests that the price discovery process is dynamic and is influenced by the structure of the underlying markets. **Bessler and Covey (1991)** studied the futures/cash price relationships for slaughter cattle, a non-storable commodity. They used daily settlement prices for the nearby live cattle futures contract from August 21, 1985 through August 20, 1986, and daily average cash prices (per cwt.) for direct sale of choice 900-1300lbs. slaughter cattle steers in the Texas-Oklahoma market. Their cash series reflected a direct rather than auction sales market for slaughter cattle. Thus, their cash series included sales throughout the entire five-day business week. For a sample of 261 observations on daily live cattle prices, they obtained mixed results. Within sample fits (conducted on the first 130 data points) indicated that both cash and futures prices were generated by processes not statistically distinguishable from a random walk. Tests for cointegration based on residuals from a static regression (using the same 130 data points) showed marginal support for the cointegration hypothesis between cash and nearby futures prices. No cointegration was discovered between cash prices and more distant contracts. The results are consistent with the suggestion that the greater the temporal spread between futures and cash prices, the greater the degree of independence. **Schroeder and Goodwin (1991)** studied the price discovery mechanism for livestock in the periods 1979-1986 and 1975- 1989, respectively. Both studies tested the extent of short-run price discovery, and found that information tends to be discovered first in futures markets and then transferred to cash markets. Both studies also adopted other procedures to verify their results in the long run. They used cointegration procedures to verify that daily cash and futures prices for live hogs didn't share a long-run relationship. They found a short-run relationship between cash and futures prices based on Garbade-Silber model, but failed to find a long-run relationship using either Granger-causality or cointegration procedures. Thus as the process of adding to the existing literature, the present study uses the cointegration tests and VECM tests to study the price discovery mechanisms in the feeder cattle and live cattle markets through the years 2001 to 2010.

EMPIRICAL RESULTS

DATA AND SAMPLE PERIODS

The study period of this research was made during 2nd January 2001 to 31st May 2010. The spot and futures prices of feeder cattle and live cattle were obtained from Multi Commodity Exchange of India (MCX).

UNIT ROOT TEST

A necessary condition to carry out a cointegration test in a time series data is that the data have to be non-stationary at the level, but stationary in the differences. Each series of feeder cattle and line cattle prices were first tested for the existence of a unit root by using Augmented Dickey and Fuller (ADF, 1981). The ADF test uses the existence of a unit root as the null hypothesis, that is:

H_0: $\alpha = 0$

H_1: $\alpha \neq 0$

TABLE 1: UNIT ROOT TEST RESULTS: AUGMENTED DICKEY AND FULLER (ADF) TEST

Commodities	Null Hypothesis	t-statistic	p-value*	Existence of Unit Root
Feeder Cattle	Futures prices series has a Unit Root	-1.934793	0.3164	Yes
	Spot prices series has a Unit Root	-1.888035	0.3382	Yes
Live Cattle	Futures prices series has a Unit Root	-2.700976	0.0740	Yes
	Spot prices series has a Unit Root	-1.609250	0.4777	Yes

Confidence level α = 0.05

The results from Augmented Dickey and Fuller (ADF) tests were reported in Table 1. The optimal number of augmenting lags was determined by using Akaike Information Criterion (AIC). The results show that both spot and futures prices of feeder cattle and live cattle were non-stationary (have unit roots).

TABLE 2: UNIT ROOT TEST RESULTS: PHILLIPS-PERRON (PP) TEST

Commodities	Null Hypothesis	t-statistic	p-value*	Existence of Unit Root
Feeder Cattle	Futures prices series has a Unit Root	-1.933917	0.3168	Yes
	Spot prices series has a Unit Root	-1.774476	0.3936	Yes
Live Cattle	Futures prices series has a Unit Root	-2.606832	0.0917	Yes
	Spot prices series has a Unit Root	-1.558817	0.5036	Yes

Confidence level α = 0.05

In order to double check the robustness of the results, the Phillips-Perron (PP) test was employed and the results were given in Table 2. As showed in Table 2, the ADF test fails to reject the null hypothesis of the presence of a unit root for the original-prices series.

COINTEGRATION TEST

Given that the spot and futures prices of feeder cattle and live cattle were integrated at the same order, cointegration techniques was used to determine if a long-run relationship exists between the spot and futures prices. Cointegration is an econometric property of time series variables. If two or more series are themselves non-stationary, but a linear combination of them is stationary, then the series are said to be co-integrated. In practice, cointegration is a means for correctly testing those hypotheses concerning the relationship between two variables having unit roots. The Engle–Granger two step methods (Engle & Granger, 1987) and the Johansen trace test

(Johansen, 1988; 1991) are the two main approaches for testing cointegration. Since the spot-futures prices of feeder cattle and live cattle were non-stationary, in this study, the Johansen trace test was adapted to test the presence of the long-run equilibrium relationship in the hourly prices and trading volume series in pairs. As stated by Johansen (1988), the likelihood ratio-test statistic for the hypothesis of the at most r co-integrated relationship and the at least m = n - r common trend is given by:

$$\lambda_{trace}(r) = -T \sum_{i=r+1}^{n} \ln\left(1 - \hat{\lambda}_i\right)$$

Where T is the sample size, and $\hat{\lambda}$ represents Eigen values of the squared canonical correlation between the two residual vectors from the level regressions. The results of the Johansen trace test were reported in Table 3.

TABLE 3: JOHANSEN COINTEGRATION TEST RESULTS

Commodities	Hypothesized No. of CE (s)	Eigenvalue	Trace Statistic	0.05 critical value	Max-Eigen Statistic	0.05 critical value	p-value*
Feeder Cattle	No cointegration*	0.061591	146.4872	15.49471	142.9048	14.26460	0.0001
	Atmost one Cointegration	0.001592	3.582444	3.841466	3.582444	3.841466	0.0584
Live Cattle	No cointegration*	0.010283	25.50765	15.49471	23.11238	14.26460	0.0011
	Atmost one Cointegration	0.001071	2.395265	3.841466	2.395265	3.841466	0.1217

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

** denotes rejection of the hypothesis at the 0.05 level*

As seen in Table 3, the rejection of the ''null hypothesis of no cointegration" indicates that the spot and futures price series of the feeder cattle and live cattle have a long-run equilibrium relationship.

VECTOR ERROR CORRECTION MODEL

A vector error correction model (VECM; Engle & Granger, 1987) can lead to a better understanding of the nature of any non-stationarity among the different component series and can also improve the longer-term forecasting over an unconstrained model. Because the spot-futures prices of feeder cattle and live cattle were co-integrated, the VECM was used to investigate the lead-lag relationship of spot and futures prices. Assuming that S_t is the spot prices series, and F_t denotes the futures prices series, and then the VECM in this study can be illustrated as follows:

$$\Delta S_t = a_{s,0} + \sum_{i=1}^{p-1} a_{s,i}\Delta S_{t-i} + \sum_{i=1}^{p-1} b_{s,i}\Delta F_{t-i} + \alpha_s Z_{t-1} + \varepsilon_{s,t}$$

$$\Delta F_t = a_{F,0} + \sum_{i=1}^{p-1} a_{F,i}\Delta S_{t-i} + \sum_{i=1}^{p-1} b_{F,i}\Delta F_{t-i} + \alpha_F Z_{t-1} + \varepsilon_{F,t}$$

where Δ is the differencing operator, p, q, m, and n are the orders of lag which were determined by Akaike's information criterion evidence, and $\varepsilon_{s,t}$ and $\varepsilon_{F,t}$ were white noises.

TABLE 4: VECTOR ERROR CORRECTION ESTIMATES RESULTS

Feeder Cattle			**Live Cattle**		
Cointegrating Eq:	**CointEq1**		**Cointegrating Eq:**	**CointEq1**	
FCFUTURES(-1)	1.000000		LCFUTURES(-1)	1.000000	
FCSPOT(-1)	-0.852299		LCSPOT(-1)	-0.578245	
	(0.02389)			(0.08764)	
	[-35.6824]			[-6.59774]	
C	2.820009		C	-18.81324	
Error Correction:	**D(FCFUTURE)**	**D(FCSPOT)**	**Error Correction:**	**D(LCFUTURES)**	**D(LCSPOT)**
CointEq1	-0.059775	-0.000866	CointEq1	-0.014528	0.005952
	(0.00533)	(0.00564)		(0.00344)	(0.00298)
	[-11.2225]	[-0.15360]		[-4.21917]	[2.00026]
D(FCFUTURES(-1))	0.032798	-0.041151	D(LCFUTURES(-1))	0.051287	-0.020475
	(0.02061)	(0.02180)		(0.02114)	(0.01827)
	[1.59174]	[-1.88759]		[2.42609]	[-1.12086]
D(FCFUTURES(-2))	0.022158	-0.002644	D(LCFUTURES(-2))	0.053896	0.017166
	(0.02063)	(0.02183)		(0.02115)	(0.01828)
	[1.07390]	[-0.12111]		[2.54771]	[0.93906]
D(FCSPOT(-1))	-0.058020	0.074044	D(LCSPOT(-1))	-0.028108	0.045975
	(0.02045)	(0.02164)		(0.02448)	(0.02116)
	[-2.83671]	[3.42158]		[-1.14810]	[2.17316]
D(FCSPOT(-2))	-0.049161	-0.011974	D(LCSPOT(-2))	-0.003819	0.028366
	(0.02054)	(0.02173)		(0.02450)	(0.02117)
	[-2.39389]	[-0.55111]		[-0.15591]	[1.34000]
C	0.001506	0.004093	C	0.003902	0.005906
	(0.02030)	(0.02148)		(0.02042)	(0.01765)
	[0.07421]	[0.19059]		[0.19108]	[0.33466]
R-squared	**0.054089**	**0.006771**	**R-squared**	**0.012595**	**0.005470**
Adj. R-squared	**0.051982**	**0.004558**	**Adj. R-squared**	**0.010383**	**0.003242**

As stated by Engle and Granger (1987), the error correction term S_{t-i} means a deviation from the long-run co-integrated equilibrium in the last period. This model interprets that the change in the spot-prices series (S_t) and the futures-prices series (F_t) was due to short-run effects from past ΔS_t and ΔF_t, and to the adjustment of the long-run equilibrium. The final results of the vector-error correction estimates were listed in Table 4. As seen in Table 4, the rejection of the null hypothesis of no VECM indicates that the spot and futures prices series of feeder cattle and live cattle have a cointegrated relationship.

CONCLUSIONS AND IMPLICATIONS

In this paper, an attempt was made to investigate the price discovery mechanisms in the feeder cattle and live cattle markets. Both these markets were found to respond favourably to the mechanism and act in a similar way. The futures and spot prices appeared to be non stationary for these commodities. The evidence obtained supports the fact that the forward pricing role may serve price discovery on commodity markets (Black, 1976; Peck, 1985). Consistent with this finding, in this study also the selected futures markets share and provide certain long-run price information to cash markets for both non storable commodities during the sample periods. The findings disagree somewhat with the prevalent suspicion that a price discovery function would not work at all for non storable commodities because of the lack of storage. However, it also cautions against the naive use of futures prices as expected cash prices for most livestock commodities. In sum it can be concluded that both of these markets share long run equilibrium and they have cointegrated relationships.

The study can be useful to the investors, producers and academicians who are very keen in observing the trend of these markets. Since the interests of the investors on the non storable markets are comparatively low when compared to the agricultural products, research contribution to the price discovery mechanisms on these markets can help in extending its market boundaries. At the same time, it is suggested that in future, the study can still be extended as the comparison between some of the storable assets and the non storable assets so that a clear understanding on whether asset storability impacts price discovery can be empirically proven.

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CUSTOMER RELATIONSHIP MANAGEMENT IN RETAILING WITH SPECIAL REFERNCE TO FAST MOVING CONSUMER GOODS IN ERODE DISTRICT, TAMILNADU, INDIA

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ABSTRACT

The most challenging aspect in a business, especially in a business that is highly dependent on the turnout of the volume of customers to a business organization, is attracting the customers and retaining them throughout. A Customer Relationship Management (CRM) system offers a solution to this challenge by scientifically analyzing the dimensions of this challenge and by enabling the business organizations, understand the complicated, multifaceted nature of its customers. Consequently, business organizations can evolve strategies based on the data of the above to attract the customers and retain them as well, by supplying them their wants and needs on analyzing the customers' business relationship with the business organization. CRM highlights the importance of using Information Technology in creating, maintaining and enhancing customer relationships. Thereby, the purpose of this study is to describe CRM and assess the possible ways of realization of CRM in a particular business segment namely retailing by using a CRM system. Particularly, the case of retail business organizations selling Fast Moving Consumer Goods(FMCG), with special reference to Erode district, Tamilnadu state, India are taken up for this study, from where both secondary and primary data are collected, from the retailers as well as customers, and have been used for analysis. The analysis is based on the empirical findings, as well as on the theoretical frame work for this study. The research in this study is considered descriptive. The Findings and Conclusion were drawn at the end of the research report. Necessary Suggestions were also given by the researcher in this study.

KEYWORDS:
Retailing, Customer, FMCG, Business, Erode.

INTRODUCTION

The most challenging aspect in a business is attracting the customers and retaining them throughout the period. A Customer Relationship Management (CRM) system offers a solution to this challenge by scientifically analyzing the dimensions of this challenge and by enabling the business organizations understand the complicated, multifaceted nature of its customers. Consequently, business organizations can evolve strategies based on the data of the above to attract the customers and retain them as well, by supplying them their wants and needs on analyzing the customers' business relationship with the business organization. This can make both the organization and the customers feel satisfied to their optimum level of satisfaction in their mutual business interaction. To sustain or survive and grow, business organizations find new ways of thinking which has led to new approaches, and has emerged in marketing research.

New technologies for distributing and collecting information have affected both companies and customers. Customers are continuously informed about products through different modes of communication. CRM highlights the importance of using Information Technology in creating, maintaining and enhancing customer relationships. However, it is not hassles free and there is a need to develop a better understanding of CRM and of how business concerns can use a CRM system to successfully ascend in business by wisely managing the data about the relationship between the customers and the business concern, largely depending upon the data pertaining to a particular business domain that could be effectively gathered.

Furthermore, this study will show that companies have a need for CRM functionality to support the Marketing, Sales, Order, Production, and Service Process. CRM functionality can be divided into three main categories which are Marketing Automation, Sales Force Automation, and Customer Service & Support where each category comprises a number of different functional groups. The fact that companies are operating within the service or production industry doesn't seem to imply that the need for CRM functionality differs noticeably. However, there are several other aspects that seem to have an influence on the needs, such as the stage in the CRM development process, and the process-orientation of the organizations.

IT affects business activities in many different ways. Primarily, it can facilitate communication, information sharing and collaboration processes with customers and within a company or network.

NEED FOR THE STUDY

In the Indian market, Customers are supposed to be treated as kings, following the business dictum given by the Father of this nation Mahatma Gandhi, who pointed out that `A shop keeper should not think that he is doing any service to a customer, but he shall always remember that only the customer is doing a service to the shop keeper by giving him an opportunity to do business with him`. As the nation prospers, and as the business expands with increasing competitiveness among the business players of a business domain this dictum gains more value since such customer-focus would not only fetch more profit but also would infuse some ethics and spirituality in business in the present cut-throat competitive scenario of business. Customer role is considered as the first requirement of business now. Therefore, every business concern is giving utmost importance to the customers' needs and wants, their immediate requirements, customers' perception on the products and its usage frequency. Due to increase in the level of education, exposure and the resultant expectations, most of the customers look for excellent quality in products and moderate price for them. They also seek the promotional offers like gift vouchers, extra contents added to the originally purchased item, price-off and attachment coupons, etc. as they believe the seller can afford to and the customers are worthy of it while they repeatedly shall have to do business with a seller.

The FMCG sellers normally do not and, in fact, cannot have a reliable customer data as they can do in other businesses like hotel industry, electronic goods suppliers/sellers, car and automobile agencies and real estate dealers etc. since the data of the customers are obligatorily obtained for some reason or the other in such businesses. Many of them either do not have any such data or know how to obtain any such data for the purpose of CRM, though all the retailers are selling the products with a focus on the customers' expectations. It is not known how far the customers' expectations are met by the retailers. To fill the void, this study is taken up, albeit in a smaller area, viz., Erode district as a descriptive endeavor.

STATEMENT OF THE PROBLEM

In today's world, the scope and use of Fast Moving Consumer Goods have expanded to such an extent that it is now claimed that this is considered to be the world's largest Industry with high rate of employee strength, and that which bring in a lot of revenue to the countries. On the other hand, the increased online price/product transparency and the new e-business modes (eg: Online trading) enhance customers' purchasing decision, scope, powers, who are becoming more price sensitive, less brand loyal, more sophisticated and experience seekers.

The Consumer Products are experiencing increased globalization (from imported Dates, Soaps, stationery items to hair dyes, inclusive of imported Chocolates and Soft drinks), and hence global competition; on the other hand, this business requires the management of higher customer turnover, the challenge of

convincing them within the shortest time they visit and transact their business, the growing customer acquisition costs and rising customer expectations. All this precisely means that the retailers' performance and competitiveness are significantly dependent on their ability to satisfy customers efficiently and effectively.
Erode District, which is a business and industrial area where the per-capita income is high (famous for Oil Industry, Cotton & Textile Industry, Turmeric Industry, Sugar Industry, some Fast Moving Consumer Products and manipulations of Agricultural Products) and it contributes considerably to the revenue of the state income, Rs.3296.09 crores. This is one of the main trading centres in India. Therefore, Retailers have started having increased avenues for selling, like Mega shopping Malls, Departmental stores, etc. In the current situation, most of the retailers of FMCG fill the needs and wants of the customers. And they seriously view customers' perception and opinion, satisfactory level of customers and the problems faced by them in doing business while the customers find difficulties in selecting the products in their selected retail stores and in obtaining satisfactory services from the retailers. These are the major issues faced by the retailers with customers.
Based on the above issues the following questions are probed in the present study:

1. To what extent do the FMCG retailers concentrate in establishing a good CRM practice in Erode district?
2. What are the factors that influence the customers for repeated purchase and retention of the same retail store?
3. What are the common problems faced by both retailers and customers?

OBJECTIVES OF THE STUDY

1. To evaluate the customers' opinion and expectations in FMCG retail business.
2. To identify the level of satisfaction perceived by the customers on CRM practiced by the retailers in the study area.
3. To study the retailers' perception in retailing of Fast Moving Consumer Goods.
4. To describe the retailers' style of building relationship with customers.
5. To identify the problems faced by both retailers and customers of FMCG.
6. To suggest better ways and means for developing good customer relationship.

RESEARCH METHODOLOGY

The validity of any research depends on the systematic method of collecting the data, and analyzing the same in appropriate order. In the present study, both primary and secondary data were collected. In this study, descriptive research was used.

SAMPLE DESIGN

Sampling is the use of a subset of the population to represent the whole population. For collecting primary data, field survey technique was employed in the study. First-hand information was collected from 510 retailers and 1140 customers of Erode district. The respondents were chosen from the entire Erode district, based on the members listed in the Retailers Association in Erode District. The respondents were selected through Probability method of Random Sampling technique for Retailers' survey and non-probability convenience sampling technique was adopted for collecting data from the Customers.

DATA COLLECTION

PRIMARY DATA

The primary data were collected from the Retailers and the Customers whoever were selling and buying FMCG in Erode District. The information was gathered through personal interview method. In order to fulfill the objectives set, a sample study was undertaken by using a well-framed questionnaire that was duly filled in by the respondents. Respondents with varying background were selected based on the important aspects of their gender, age, educational qualifications, occupation, income, etc. They are all situated throughout the Erode district. The specimen of the questionnaire given to the selected sample respondents is shown in the Appendix of this thesis.

SECONDARY DATA

The primary data were supplemented by a spate of secondary sources of data. The secondary data were gathered from the records of FMCG retailers Association and Erode Collectrate. Latest information in the FMCG sector was gathered from well-equipped libraries of Bangalore, Coimbatore and Chennai. Internet web resources were also used. Also the secondary data were collected from leading journals such as *The Indian Journal of Marketing, Journal of Indian Management, Customer Relationship Management Practices and Economic Survey Report.*

TOOLS OF DATA COLLECTION

By virtue of mass data obtained from the research survey as well as the data collected from secondary sources, descriptive and analytical research were considered the most appropriate for the study. The research problems and the questionnaire were all framed accordingly. The suggestions offered in the final chapter of the present research report emerged from the inferences drawn from the study of the sample respondents (the retailers and customers of Erode dist.). The researcher used both close-ended and open-ended questions in the questionnaire to collect the necessary primary data.

APPROACH TO THE ESTABLISHMENT OF RAPPORT WITH CUSTOMERS

The difference in the extent of service among the FMCG retailers is based on their year of establishment, experience in retailing business, number of retail outlets owned and mode of purchase and mode of deliverance to customers. These factors were studied through Percentage analysis, Averages, Weighted Average Analysis, Two-Way tables, Ranges and Standard Deviation. In addition, ranking positions of the specified problems were found using Henry Garrett Ranking Method was also employed.

HYPOTHESES

1. Implementation of CRM model will increase FMCG customers' satisfaction, loyalty, and retention.
2. Personalization of services according to customers' preferences and characteristics will increase their satisfaction.
3. A good customer support and services will increase customer satisfaction and loyalty.

SCOPE OF THE STUDY

In order to describe how companies can use a CRM system, this research gives a description of how CRM functionality can be used at different steps in the sales process. Certain functionality is generally applicable and can be used at many different steps in the sales process, while some functions can be connected to a specific step. The analysis will show that the functionality included in the main functional categories is used in all phases in the sales process. And also the study will help the FMCG retailers in formulating and enforcing CRM strategies in this sector.

PERIOD OF THE STUDY

The research was conducted for a period of three and half years. The period of the study was confined to October 2009 to September 2010.

LIMITATIONS OF THE STUDY

1. Market survey was conducted only in the Erode District of Tamilnadu. Further, the survey method which was adopted for collecting the data in this study has its own limitations.
2. Only 510 retailers and 1140 customers were selected for eliciting first-hand information. In view of the time and monetary constraints involved, it was not possible to contact more than the selected number of respondents.

DATA ANALYSIS AND INTERPRETATION

TABLE NO. 1: TYPES OF CUSTOMERS PURCHASE IN RETAIL STORE

S.No.	Type of customers	Total Score	Mean score	Rank
1	House Hold People	35325	69.3	I
2	Business People	26935	52.8	III
3	Professionals	27016	53.0	II
4	Employees	25099	49.2	IV
5	Tiny Shop Owners	22192	43.5	V
6	Others	16871	33.1	VI

INTERPRETATION

It is clear from the above analysis that most of the customers are 'Household People' which ranked first by them with Garrett scores of 35325 points. The second and third places of customers are 'Professionals' and 'Business people' with Garrett scores of 27016 and 26935 points. The fourth and fifth types of customers are 'Employees' and 'Tiny shop owners' with Garrett scores of 25099 and 22192 points. The retailers opined some other type of customers also purchase products ranked as sixth with Garrett scores of 16871 points. It is concluded from the above analysis that the retailers opined most of the customers are 'Household people' and 'Professionals'.

TABLE NO. 2: RETAILERS OPINION ON THE GIVEN FACTORS OF CUSTOMERS WHILE PURCHASING THE GOODS

S.No.	Factors	Respondents Opinion			WA	Rank
		Good	Moderate	Poor		
1.	Customers Expectations	428	72	10	340	I
2.	Customers Attitude	268	222	20	211	III
3.	Customers Queries	248	154	108	193	V
4.	Customer Perception	258	210	42	206	IV
5.	Customers Knowledge on Selecting the Products	307	175	28	217	II

3 – Good, 2 – Moderate, 1 – Poor; WA – Weighted Average.

INTERPRETATION

It is divulged from the above analysis that Majority of the retailers opined about Customers Expectations are good which stands at first rank. Following that Customers knowledge on selecting the products are also found good with the weighted score of 217 ranked at second. Retailers give third rank to the Customers attitude towards the products. And the retailers gave Moderate opinion on Customer Perception and Customers Queries which stand fourth and fifth ranks. It is concluded from the above analysis that majority of the respondents opined that the customers' expectations are good.

TABLE NO. 3: RETAILERS OPINION ON THE FACTORS OF PURCHASING

S.No.	Factors	Respondents Opinion					WA	Rank
		Very Good	Good	Medium	Poor	Very poor		
1	Customer Behavior	290	127	93	0	0	149	I
2	Customer relationship with Salesmen	237	180	60	33	0	143	II
3	Queries by Customers	242	152	78	25	13	141	III
4	Deal on Customers Complaints	163	94	94	118	41	117	V
5	Post Purchasing Behavior of the Customer	160	172	97	34	47	126	IV

5 – Very Good, 4 – Good, 3 – Medium, 2 – Poor, 1 – Very Poor; WA – Weighted Average

INTERPRETATION

It is noted from the above analysis, Most of the retailers opined that Customer Behavior is very good while selecting the products in the shop. More number of retailers opined about Customer relationship with salesmen and Customers queries are very good. Few retailers opined that the customers repurchasing behavior good. And very retailers opined that dealing of customers complaints are not good which is ranked at five. It is therefore concluded from the analysis, Most of the retailers opined that Customer Behavior is very good while selecting the products in the retail store.

TABLE NO. 4: MOST PREFERRED PRODUCTS BY THE CUSTOMERS

S.No.	Products	Total Score	Mean score	Rank
1	Toiletries	27246	53.4	III
2	Soaps and Cosmetics	32558	63.8	I
3	Teeth cleaning products	28469	55.8	II
4	Shaving products and Detergents	26295	51.6	IV
5	Glassware and Light bulbs	21949	43.0	V
6	Batteries	20148	39.5	VII
7	Paper products and Plastic goods	21528	42.2	VI

INTERPRETATION

The above table clearly showed the mostly preferred products by the customers in the study area. It could be noted from the above analysis that most of the customers preferred to purchase 'Soaps and cosmetics' ranked first by them with Garrett scores of 32558 points. The second and third preferred products are 'Teeth cleaning products' and 'Toiletries' with Garrett scores of 28469 and 27246 points. The fourth and fifth products preferred by the customers are 'Shaving products and detergents' and 'Glassware and light bulbs' with Garrett scores of 26295 and 21949 points. The sixth and seventh ranks occupied by the customers are 'Paper products and Plastic goods' and 'Batteries' with Garrett scores of 21528 and 20148 points. It is concluded from the above analysis that most of the customers preferred to purchase 'Soaps and cosmetics' and 'Teeth cleaning products'.

TABLE NO. 5: REASONS FOR CUSTOMERS' PREFERENCE OF THE SHOP

S.No.	Reasons	Total Score	Mean score	Rank
1	Products Availability	33487	65.7	I
2	Low price for the Products	29755	58.3	II
3	Credit system	22656	44.4	V
4	Good Service	29071	57.0	III
5	Prompt delivery	22083	43.3	VI
6	By good relationship	22907	44.9	IV
7	Near to house	18711	36.7	VII

INTERPRETATION

The above table gives the reasons for the retail shop being preferred by the customers in the study area. It could be observed from the above analysis that most of the customers preferred the retail shop for 'Products availability' with Garret scores of 33487 points. The customers preferred the retail shop for the second and third reasons 'Low price for the Products' and 'Good Service' with Garrett scores of 29755 and 29071 points. The customers preferred the retail shop for the fourth and fifth reasons 'By good relationship' and 'Credit system' with Garrett scores of 22907 and 22656 points. The sixth and seventh reasons are 'Prompt delivery' and 'Near to house' with Garrett scores of 22083 and 18711 points. It is concluded from the above analysis that most of the customers preferred the retail shop for the main reasons of 'Products availability' and 'Low price for the Products'.

TABLE NO.6: CUSTOMERS' OPINION TOWARDS THE RETAIL SHOP

S.No.	Towards Retail Shop	Customers Opinion					WA	Rank
		Very Good	Good	Medium	Poor	Very Poor		
1.	Retailers behavior	714	361	65	0	0	347	I
2.	Retailer's information about the product	605	427	108	0	0	337	II
3.	Customer – Retailers relations	578	452	104	6	0	335	III
4.	Product delivery	609	416	36	79	0	332	IV
5.	Quality maintenance	577	377	158	8	20	327	V

5 – Very Good, 4 – Good, 3 – Medium, 2 – Poor, 1 – Very Poor; WA – Weighted Average.

INTERPRETATION

It is found from the above table, Most of the Customers opined that the Retailers behavior is very good in the retail shop. More number of customers opined Retailers' information on the products is very good while selecting the products. More numbers of customers give third rank for Customers-retailers relations. And some Customers' opinion on Product delivery and quality maintenance stand at fourth and fifth ranks respectively. It is concluded from the above analysis that majority of the Customers opined that the Retailers behavior is very good in the retail shop.

TABLE NO. 7: CUSTOMERS OPINION TOWARDS THE SERVICES

S.No.	Towards the Services	Customers Opinion					WA	Rank
		Very Good	Good	Medium	Poor	Very Poor		
1.	Response	777	325	12	26	0	352	I
2.	Friendly approach	605	421	108	6	0	336	II
3.	Payment system	561	396	170	13	0	328	IV
4.	Delivery system	572	468	78	22	0	334	III
5.	Bills passing	613	269	234	16	8	326	V

5 – Very Good, 4 – Good, 3 – Medium, 2 – Poor, 1 – Very Poor; WA – Weighted Average.

INTERPRETATION

It is revealed from the above table, Most of the Customers opined that the Retailers give very good response towards services provided by them in the retail shop. More number of customers opined that the retailers approach friendly manner to their customers and the delivery systems are very good while purchasing them in the retail stores which stand at second and third ranks respectively. More numbers of customers give fourth rank to Payment system. And the number of customers opined about Bills passing by the retailers is moderate which stands at fifth rank. It is concluded from the above analysis that majority of the customers opined that the retailers give very good response towards services provided by them in the retail shop.

TABLE NO. 8: CUSTOMERS OPINION TOWARDS THE PRODUCTS

S.No.	Towards the Products	Customers Opinion					WA	Rank
		Very Good	Good	Medium	Poor	Very Poor		
1.	Product varieties	742	393	5	0	0	353	I
2.	Different sizes	674	384	82	0	0	344	II
3.	Package styles	609	376	143	12	0	334	III
4.	Product availability	198	837	81	12	12	308	IV
5.	Information about new products	44	652	360	16	68	267	V
6.	Information about free products	117	206	328	47	442	195	VI

5 – Very Good, 4 – Good, 3 – Medium, 2 – Poor, 1 – Very Poor; WA – Weighted Average.

INTERPRETATION

It is stated from the above analysis, Majority of the Customers opined that the Product varieties available in the retail shop are very good and which stands at first rank through weighted average score. More number of customers opined that different sizes of the products are also available and the package styles are also very good while selecting them in the retail stores which stand at second and third ranks respectively. More numbers of customers give fourth and fifth ranks for product availability and Information about new products. And the number of customers opined about Retailers' information on free products is moderate which stands at sixth rank. It is concluded from the above analysis that majority of the customers opined that the Product varieties available in the retail shop are very good in the retail shop.

TABLE NO. 9: CUSTOMERS OPINION TOWARDS THE PROMOTION STRATEGY ADOPTED IN THE RETAIL SHOP

S. No.	Promotion Strategy	Customers Opinion			WA	Rank
		Good	Average	Poor		
1	Price Discounts	836	300	4	519	I
2	Free Gifts	626	356	155	458	III
3	Free Coupons	617	368	155	457	IV
4	Samples	154	852	134	383	VI
5	Advertisements	623	331	186	453	V
6	Seasonal Offers	256	562	322	369	VII
7	Offers at Introduction Stage	760	348	32	501	II

3– Good, 3 – Average, 2 – Poor; WA – Weighted Average.

INTERPRETATION

It is noted from the above table, Majority of the customers opined that price discounts are good in the retail shop which stands at first rank with the weighted average score of 836. More number of customers opined that the offers at introduction stage are good with the weighted score of 760 which stands at second rank. More numbers of customers give third and fourth ranks for free gifts to original products and free coupons. And the number of customers opined about Advertisements and Samples given by the retailers and the manufacturers are moderate which stand at fifth and sixth ranks. Also the number of customers stated that seasonal offers given by the retailers are poor stands at seventh rank. It is concluded from the above analysis that majority of the customers opined that price discounts are good in the retail store.

TABLE NO. 10: CUSTOMER EXPECTATIONS IN RETAIL SHOP

S.No.	Expectations	Total Score	Mean Score	Rank
1	To maintain the Good relationship with Customers	68296	59.9	II
2	Effective Salesmen Support	61335	53.8	III
3	More response in retailer shop	58556	51.4	IV
4	Products availability	72702	63.8	I
5	Retail store Appearance and out look	48415	42.5	VI
6	Payment System in Prompt	52188	45.8	V
7	Credit purchase	35738	31.3	VII

INTERPRETATION

The above shows the expectations from the retail shops by the selected sample respondents. It could be noted from the above analysis that most of the selected sample respondents expected from the retail shop 'Product availability' with Garrett score of 72702 points. The respondents expected the second and third factors 'To maintain the Good relationship with Customers' and 'Effective Salesmen Support' with Garrett scores of 68296 and 61335 points. The respondents expected the fourth and fifth factors 'More response in retailer shop' and 'Payment System in Prompt' with Garrett scores of 58556 and 52188 points. The respondents expected sixth and seventh factors 'Retail store Appearance and out look' and 'Credit purchase' with Garrett scores of 48415 and 35738 points. It could be found from the above analysis that most of the respondents expected from the retail shops 'Product availability' and 'To maintain the Good relationship with Customers'.

TABLE NO. 11: PROBLEMS FACED BY THE CONSUMERS DURING PRODUCT PURCHASE

S.No.	Problems	Total Score	Mean Score	Rank
1	Poor Response of the employees	40845	54.61	II
2	Lack of knowledge about the new Products	37485	50.11	IV
3	Not providing the free gifts	36309	48.54	V
4	Salesmen's Mis-representation	34476	46.09	VI
5	Retailers Mis-behavior	46422	62.06	I
6	Price variation in different shops	37775	50.50	III
7	Unable to find the expiry date of products	29152	38.97	VII
8	Lack of parking facility	24222	32.38	VIII

The above table throws light on the problems faced by the selected sample respondents for the services offered by the retailer. It is clear from the above table that majority the respondents faced the first and second problems 'Retailers Mis-behavior' 'and Poor Response of the employees' with Garrett scores of 46422 and 40845 points. The third and forth problems 'Price variation in different shops' and 'Lack of knowledge about the new Products' are faced by the respondents with Garrett scores of 37775 and 37485 points. The respondents faced the fifth and sixth problems 'Not providing the free gifts' and 'Salesmen's Mis-representation' with Garrett scores of 36309 and 34476. The respondents faced the seventh and eighth problems 'Unable to find the expiry date of products' and 'Lack of parking facility' with Garrett scores of 29152 and 24222 points. It is concluded from the above analysis that most of the respondents faced the major problem is 'Retailers Mis-behavior'.

FINDINGS

1. It is concluded from the above analysis that the retailers opined most of the customers are 'Household people' and 'Professionals'.
2. It is divulged from the above analysis that Majority of the retailers opined about Customers Expectations are good which stands at first rank. Following that Customers knowledge on selecting the products are also found good with the weighted score of 217 ranked at second. Retailers give third rank to the Customers attitude towards the products.
3. It is noted from the above analysis, Most of the retailers opined that Customer Behavior is very good while selecting the products in the shop. More number of retailers opined about Customer relationship with salesmen and Customers queries are very good. Few retailers opined that the customers repurchasing behavior good.
4. It is concluded from the above analysis that most of the customers preferred to purchase 'Soaps and cosmetics' and 'Teeth cleaning products'.
5. It is concluded from the above analysis that most of the customers preferred the retail shop for the main reasons of 'Products availability' and 'Low price for the Products'.
6. It is concluded from the above analysis that majority of the customers opined that the retailers give very good response towards services provided by them in the retail shop.
7. It is concluded from the above analysis that majority of the Customers opined that the Retailers behavior is very good in the retail shop.
8. It is concluded from the above analysis that majority of the customers opined that the Product varieties available in the retail shop are very good in the retail shop.
9. It is concluded from the above analysis that majority of the customers opined that price discounts are good in the retail store.
10. It could be found from the above analysis that most of the respondents selected the major reasons 'Product quality' and 'Availability of the products'.
11. It could be found from the above analysis that most of the respondents expected from the retail shops 'Product availability' and 'To maintain the Good relationship with Customers'.
12. It is concluded from the above analysis that most of the Customers faced the major problems 'and 'Retailers Mis-behavior'.

SUGGESTIONS

Following are the suggestions from the findings for the further improvement of Customer Relationship Management system by the retailers of FMCG in Erode District.

1. In order to ensure a lasting and non-lasting customer relationship, the retailers should have a customer database, customer analysis, customer profiling, customer segmentation and campaign management. The company can ensure proper invoicing and maintenance a customer care wing and self service facilities.
2. From the analysis, it is observed that most of the customers are Household and Professionals. Therefore retailers may appoint the well qualified and well-mannered sales persons to sell the products in the retail shop.
3. Some of the customers felt that their expectations were not fulfilled by the retailers. Therefore, retailers can fix the permanent suggestion boxes in front of the retail shop to get the feedback from the customers about opinion, expectations, and attitudes of the retail shop concerned and also their likes and dislikes of the products available with the retailers as well as in the market.
4. From the finding, more number of customers give due attention on low priced FMC products and they do not seek quality of products much in the retail shop. This may be persuaded by retailers for giving the importance of quality of the products to the customers.
5. The Retailers face the problems with customers when they ask for different varieties of products then and there come up in the market and their persistent demand for free gifts which are normally given only for a limited period, current retail price for FMCG, availability of newly advertised products,

price off and seasonal offers for products, etc. This may be considered by the retailers as very urging factors for maintaining good relationship with customers.

6. Most of the retailers do not give any training for their customers about using newly launched products like, Shampoos, Soaps, Face creams, Toilet cleaners, way of brushing the tooth's, etc. These things can be demonstrated by the retailers in their store itself while opening a small R&D cell. It will boost the customers' opinion on increasing the image of the retail store in their mind.
7. Some of Retailers do not send any seasonal greeting or offers to their regular customers due to improper maintenance of customer data base. Therefore data base may also support for sending seasonal greetings like birthday greetings, wedding anniversary, etc. and some offers during festivals and also greetings on new products information. This will remind the customers about their regular retail shop and its image.
8. Most of the Consumers feel there are no good parking facilities for their Two-wheelers and four-wheelers near the retail store. This may be considered by the FMCG Retailers in order to increase rapport with the consumers.
9. Strategies to attract new customers like mailing invitations on offers, discounts, new arrivals, approaches through marketing executives, concession in tariff like VAT, MRP and value added services like door delivery may be implemented. Some other strategies which can be followed by the retailers to retain the existing customers through prompt delivery, regular touch with customers, compliments on every occasion, delivery with proper bills, sending proper invoice with thanks letter, etc.
10. Majority of the customers are satisfied with the services offered by the retail shops during their purchase in the retail store and the availability of the existing and new products, and these may also be continued in future. This may lead to increase the market share of the Products.
11. Many customers face the problems like retailers' response, return or exchange of defective items, Retailers' mis-behavior, Price variation in different shops and information on newly advertised products during the purchase. In order to maintain Customer Relationship Management, retailers should take immediate decisions in it.

CONCLUSION

Customer relationship Management (CRM) plays an important role in the retail market of Fast Moving Consumer Goods (FMCG). In Indian economy, there are varieties of Retail Stores including organized and un-organized sector that plays a crucial role in enhancing the economy of the country through its huge market share. In today's world, the scope and use of Fast Moving Consumer Goods have expanded to such an extent that it is now claimed that this is considered to be the world's largest Industry with high rate of employee strength, and that which bring in a lot of revenue to the countries. The Customers will be benefited while Retailers concentrate on CRM practice with latest technology. As for as retailers of Fast Moving Consumer Goods (FMCG) concerned, there is moderate level of CRM practices and the retailers interaction with the customers through traditional approach. Few retailers scientifically have not practised the CRM system in Erode District.

In this research, there are major problems faced by both the retailers and customers like maintenance of customer data base, information on free goods, parking facilities, customers' expectations, awareness on new products, adequate training on using new products, etc. The suggested recommendations may be governed by the retailers to create good rapport with their customers for increasing further strength of CRM system among Retailers and the Customers. To enhance profitability and customers' satisfaction in Marketing sector, the retailers must focus on implementing Customer Relationship Management (CRM) strategies like customer database, customer retention, data mining and tracking system that aim to seek, gather and store right information, India's FMCG sector faces stiff challenges in increasing the efficiency in several of its sub-sectors for improving the technology in Retailing and its process. Extension of such improvements to Consumers and Retailers apart from reformation of policy in the marketing of FMC Goods domestically and internationally, will increase the benefits of both retailers and customers.

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PRODUCT- THE FIRST 'P' (OF 7P'S) IN INDIAN LIFE INSURANCE SECTOR: AN EMPIRICAL STUDY

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ABSTRACT
With the onset of liberalization process, the life insurance sector in India was thrown upon to private players. Combined together, private companies numbering twenty three, are giving a close fight to the public sector behemoth L.I.C.I. in recent years. The market is evenly divided between them now. The players of this industry are developing new strategies to attract the customers. The concept of 7P's of services marketing mix comes in to the picture. Product- the first 'P' (which is the policy here) of this mix has become very important. The customer's perception of the numerous elements of the life insurance policy (product) and his/her subsequent decision is most important. The various elements of the policy and their impact on the customer's buying behaviour are the focal theme of this study. This study tries to investigate the differences in the perception of the customers (of the policy elements) with respect to their age, gender, education, choice of company, income and occupation.

KEYWORDS
7P's, India, Life Insurance, Product.

INTRODUCTION
Life insurance in India has its origins as early as 1818 when the Oriental Life Insurance company started business in Kolkata. Once the door of privatization was opened (with the passing of IRDA Act in 2000), in the last decade more than twenty players have joined the Indian life insurance industry. In 2000, Indian insurance market size was $21.71 billion. Between 2000 and 2007, it had an increase of 120% and reached $47.89 billion. Between 2000 and 2007, total premiums maintained an average growth rate of 11.96%. It was one of the most consistent growth patterns we have noticed in any other emerging economies in Asian as well as Global markets **(the knowledge centre,** 2006**)**. The post-globalization world has brought the customer in to the focus. Almost in all the major economies barring China, services sector is dominating over the traditional manufacturing sector and is growing phenomenally over the years since the concept of liberalization started to sweep the world economy. The traditional method of marketing strategy, i.e. S.T.P. (Segmenting, Targeting and Positioning) has become obsolete in this fast changing global scenario. Services marketing have become the preferred strategy in this modern era. While making strategies to market manufactured goods, marketers usually address four basic strategic elements: *product, price, place (or distribution), and promotion (or communication)*. These four categories are often referred to as the "**4Ps**" of the marketing mix. But in order to include the services sector, the marketing mix has added four more P's: *process, people, physical evidence and productivity* **(Lovelock, et al.** 2002**).** Now-a-days, the distinction between a product and service is not so easy. The line between a tangible product and an intangible service is blurring rapidly. But, generally, we can call the intangible offerings as service. The service product comes in three incremental features: the *basic service* through core benefit, the *expected service* of the customers and the *augmented service* differentiated from other competitive services **(Nargundkar,** 2007**).** Our main focus will be on the first 'P', i.e. the product which is the life insurance policy. While designing a policy, all the elements that create/add value for customers should be included. It is natural that the customers expect a reasonable return for their investment and the companies want to maximize their profitability. Hence, while deciding the policy portfolio of the policy-mix, the components should be influential on the buying behaviour of the customers. While initiating the innovative process, it is necessary to take into consideration the strategies adopted by the rival companies. Various elements of the life insurance policy which affects the customer's buying decision can be named as follows: brand name, features and options, usefulness, flexibility, comparatively better investment option and a good service line and support. Similarly, the various demographic characteristics of the customers which affect their perception of these elements are also taken in to consideration. These characteristics are categorized as: age, gender, education, choice of company, income and occupation. These above mentioned elements of the policy and the demographic characteristics of the customers are going to be examined thoroughly in this study.

REVIEW OF PRIOR STUDIES
Joy Chakraborty (2007) in his study **"Private Life Insurance Companies in India: Growing Prospects and Challenges"** traces the challenges faced by the private players while marketing their products and the measures they have taken for overcoming them. He critically analyzed the prevailing trends in Indian life insurance sector and found that the private players have been able to increase their market share primarily on account of highly customized products and aggressive marketing strategies. **E. Constantinides** (2006) in his path breaking study "**The Marketing Mix Revisited: towards the 21st Century Marketing**" has focused on the relevance of the MM (Marketing Mix) in the context of the marketing strategies of this new century. He went through an extensive review of literatures of prior studies of both the supporters and opponents of the MM. The findings of study support the frequently expressed opinion that marketing management and teaching is ripe for a paradigm shift, at least within the reviewed marketing domains. New concepts proposed should adequately deal with the new realities of marketing the old Mix was never meant to address. The study conducted by **M C Garg and Anju Verma** (2010) named as:" **An Empirical Analysis of Marketing Mix in the Life Insurance Industry in India**" discusses the problems of marketing mix in the life insurance industry in India. After a thorough analysis through various statistical tools, they commented that the insurance firms should focus on the concept of MM and implement the concept. They should quantify the level of expenditure for their mix ingredients, study elasticity of the mix ingredients, carry out careful analysis in order to identify the most effective and economic mix, analyze their competitors' mix while implementing MM, review the whole mix in detail so that each segment gets its own assemblage of mix components, and review their MM on a regular basis.

STATEMENT OF THE PROBLEM

Life insurance is one of toughest product to sell in this ever changing world. With the onset of liberalization, the Indian life insurance industry has gone through a huge change both in the numbers of players and their business figures. The first few years have seen a tremendous growth for almost all the companies. But with the global financial meltdown, the chinks in the armour have become exposed. The traditional marketing strategies adopted by the companies have become ineffective. The customer has become the focus of any marketing plan. Hence, it has become very important to know the customer's point of view regarding the product in question. In this study, the customer's perception of the various elements involved in a life insurance product shall be analysed. The various elements involved in a life insurance product can be outlined as: *Company/product's brand name, the features and options, usefulness, flexibility, better investment option* and *a good service line and support.*

RESEARCH METHODOLOGY

The major objective of this study is to find out the differences in the perception of the customers (of the various elements of the life insurance product) in accordance with their following demographic characteristics: *age, gender, education, choice of company, income* and *occupation*. The policy variables (adapted from product element of services marketing mix model by **Booms & Bitner***, 1981)* are put through following statements:

1. P1: Company/product's **brand name** affects me while buying a policy
2. P2: **The features and options** of a policy influences my choice
3. P3: The policy is **useful** to me as per my needs
4. P4: The policy is **flexible** as per my requirements
5. P5: It is a **better investment option** than other opportunities
6. P6: A **good service line and support** is available for the policy

Based on the above mentioned objectives, the following major hypotheses are set:
H1: Age does not affect the customer's perception of the various policy components.
H2: Both male and female customers' perceptions of the policy elements are same.
H3: Education does not affect on the customer's perception of the policy variables.
H4: There is no significant difference between public and private companies' customers' perception of the policy elements.
H5: Income level does not affect the customer's perception of the policy variables.
H6: Type of occupation has no significant impact on customer's perception of the policy elements.

Based on these major hypotheses, the respective sub-hypotheses are set for each demographic characteristics and their individual relationship with the various policy variables.
Regarding the data collection method, this study has adopted *primary data* collection approach to gather reliable and authentic first hand data. The sample has been collected from south Orissa spreading over five districts. More than 200 life insurance policy holders were put through the data collection process out of which 102 respondents belonged to L.I.C.I. whereas 104 respondents belonged to the private sector. A well structured questionnaire was framed with questions on their demographic variables as well as the various elements of the policy i.e. the product they are buying. The policy holders were classified into different classes on the basis of their age, gender, education, choice of company, income and occupation. For this purpose, a five-point scale (from 1 to 5) has been adopted which is scaled as: *Strongly Disagree-1, Disagree-2, Neither Disagree nor Agree-3, Agree-4* and *Strongly Agree-5.* After getting the desired data, various elementary statistical tools such as mean and variance were applied to find any variation among the different classes of respondents with regard to the various policy variables. Further, to find out significant variation among these different classes, one-way ANOVA and *t*-Test were applied. For gender-wise and company-wise analysis, t-Test was followed where as for age-wise, education-wise, income-wise and occupation-wise analysis, one-way ANOVA method was used to test the significance.

RESULTS AND DISCUSSION

Firstly, let us take a look on the demographic variables of the sample collected. The age group was divided into three parts. Out of 206 policy holders, 123 people belonged to "less than 35 years" group whereas 76 respondents belonged to "35-50 years" group and 7 respondents belonged to "above 50 years" group. Similarly, gender-wise, 138 respondents were male and 68 respondents were female. Based on the education qualification, the respondents were divided in to five groups such as: Illiterate (11), Undermatric (62), H.S.C. /+2 (85), Graduate (39) and Post graduate & above (9). Again, preferred policy selling company-wise, 102 respondents bought policy from L.I.C.I. whereas 104 policy
holders preferred the private companies. Based on the annual income of the policy holders, they were divided in to four categories such as: Below Rs. 50000 (57), Rs. 50001-Rs. 150000 (99), Rs. 150001-Rs. 300000 (44) and Rs. 300001 & above (6). Lastly, based on the occupation of the respondents, they were categorized in to four types: Government employee (59), Private employee (37), Self-employed/Business (95) and others (15). (See **table-A**)

TABLE-A

		P1						P2						P3					
		S.D.	D	N	A	S.A.	Total	S.D.	D	N	A	S.A.	Total	S.D.	D	N	A	S.A.	Total
AGE (YEARS)	21-35	7	13	19	32	52	123	15	8	22	50	28	123	7	17	46	32	21	123
	35-50	9	8	4	23	32	76	8	8	12	35	13	76	3	10	29	16	18	76
	51+	0	0	5	0	2	7	1	0	0	2	4	7	2	1	2	2	0	7
	Total	16	21	28	55	86	206	24	16	34	87	45	206	12	28	77	50	39	206
GENDER	MALE	9	11	17	42	59	138	15	8	26	62	27	138	7	17	55	31	28	138
	FEMALE	7	10	11	13	27	68	9	8	8	25	18	68	5	11	22	19	11	68
	Total	16	21	28	55	86	206	24	16	34	87	45	206	12	28	77	50	39	206
EDU-CATION	ILLITERATE	0	0	1	3	7	11	2	1	1	6	1	11	1	2	3	3	2	11
	UNDERMATRIC	4	7	7	15	29	62	5	8	11	20	18	62	0	9	21	22	10	62
	MATRIC+	7	8	14	21	35	85	12	6	10	38	19	85	5	11	35	16	18	85
	GRADUATE	5	4	3	12	15	39	4	1	9	19	6	39	3	6	16	7	7	39
	P.G.+	0	2	3	4	0	9	1	0	3	4	1	9	3	0	2	2	2	9
	Total	16	21	28	55	86	206	24	16	34	87	45	206	12	28	77	50	39	206
COMPANY	LICI	2	10	7	39	44	102	5	6	21	53	17	102	4	9	31	29	29	102
	PRIVATE	14	11	21	16	42	104	19	10	13	34	28	104	8	19	46	21	10	104
	Total	16	21	28	55	86	206	24	16	34	87	45	206	12	28	77	50	39	206
INCOME (Rs.)	0-50000	2	4	9	15	27	57	8	8	9	18	14	57	4	5	15	23	10	57
	50001-150000	8	11	11	30	39	99	11	6	14	47	21	99	3	14	48	17	17	99
	150001- 300000	6	4	5	9	20	44	4	2	10	20	8	44	2	9	12	10	11	44
	300001- 500000	0	2	3	1	0	6	1	0	1	2	2	6	3	0	2	0	1	6
	Total	16	21	28	55	86	206	24	16	34	87	45	206	12	28	77	50	39	206
OCCU-PATION	GOVT. EMPLOYEE	6	7	10	11	25	59	7	2	13	28	9	59	6	9	19	9	16	59
	PRIVATE EMPLOYEE	6	2	6	13	10	37	5	3	6	12	11	37	2	5	16	11	3	37
	SELF-EMPLYEDD. /BUSI.	4	11	12	27	41	95	11	8	14	42	20	95	3	13	41	23	15	95
	OTHERS	0	1	0	4	10	15	1	3	1	5	5	15	1	1	1	7	5	15
	Total	16	21	28	55	86	206	24	16	34	87	45	206	12	28	77	50	39	206

TABLE-A (COTINUED)		P4						P5						P6					
		S.D.	D	N	A	S.A.	Total	S.D.	D	N	A	S.A.	Total	S.D.	D	N	A	S.A.	Total
AGE	21-35	6	22	30	34	31	123	20	21	22	28	32	123	10	18	18	36	41	123
	35-50	6	11	16	16	27	76	8	11	21	17	19	76	7	6	16	23	24	76
	51+	0	2	1	1	3	7	2	1	0	1	3	7	0	0	2	1	4	7
	Total	12	35	47	51	61	206	30	33	43	46	54	206	17	24	36	60	69	206
GENDER	MALE	8	24	27	36	43	138	21	20	29	32	36	138	13	17	21	43	44	138
	FEMALE	4	11	20	15	18	68	9	13	14	14	18	68	4	7	15	17	25	68
	Total	12	35	47	51	61	206	30	33	43	46	54	206	17	24	36	60	69	206
EDU-CATION	ILLITERATE	1	1	3	1	5	11	2	1	3	3	2	11	0	1	2	5	3	11
	UNDERMATRIC	5	12	17	17	11	62	12	12	11	12	15	62	5	6	14	20	17	62
	MATRIC+	5	15	17	21	27	85	9	15	22	17	22	85	11	9	12	24	29	85
	GRADUATE	1	6	7	11	14	39	7	3	7	12	10	39	1	4	6	10	18	39
	P.G.+	0	1	3	1	4	9	0	2	0	2	5	9	0	4	2	1	2	9
	Total	12	35	47	51	61	206	30	33	43	46	54	206	17	24	36	60	69	206
COMPANY	LICI	2	15	25	32	28	102	8	13	21	32	28	102	9	15	18	31	29	102
	PRIVATE	10	20	22	19	33	104	22	20	22	14	26	104	8	9	18	29	40	104
	Total	12	35	47	51	61	206	30	33	43	46	54	206	17	24	36	60	69	206
INCOME (Rs.)	0-50000	7	6	16	12	16	57	7	10	11	14	15	57	4	7	9	19	18	57
	50001-150000	4	21	21	27	26	99	16	17	19	20	27	99	9	11	20	27	32	99
	150001- 300000	1	8	8	11	16	44	7	3	13	10	11	44	3	6	6	13	16	44
	300001- 500000	0	0	2	1	3	6	0	3	0	2	1	6	1	0	1	1	3	6
	Total	12	35	47	51	61	206	30	33	43	46	54	206	17	24	36	60	69	206
OCCU-PATION	GOVT. EMPLOYEE	2	10	13	18	16	59	9	8	13	13	16	59	3	9	10	14	23	59
	PRIVATE EMPLOYEE	2	5	8	10	12	37	2	12	10	1	12	37	5	7	5	7	13	37
	SELF-EMPLOYED/BUSI.	7	20	19	19	30	95	18	8	19	29	21	95	8	7	18	34	28	95
	OTHERS	1	0	7	4	3	15	1	5	1	3	5	15	1	1	3	5	5	15
	Total	12	35	47	51	61	206	30	33	43	46	54	206	17	24	36	60	69	206

SOURCE: PRIMARY DATA.

After getting the various demographic details of the policy holders, let us examine the relationship between these demographic variables and the policy elements which were explained through the statements P1-P6. *P1*: 86 policy holders strongly believe that the policy/company's brand name affects their buying behaviour whereas 55 respondents agree with it. 28 respondents have neutral opinion regarding this variable. At the same time, 21 policy holders do not believe that the brand name has an impact on their decision whereas 16 respondents strongly agree with it. *P2*: a huge chunk of the sample respondents agree (87) with the statement that the features and options of a policy influences their decision whereas 45 respondents strongly support it. 34 policy holders remain neutral. Again, 16 policy holders disagree with this variable's effect with another 24 respondents strongly disagreeing with it. P3: regarding the usefulness of the policy, 77 poly holders have no opinion whereas 50 respondents agree with this variable's impact on their buying decision and 39 respondents strongly agree with it. Again, there are few policy holders who do not agree (28) with its impact and another 12 respondents strongly disagree with it. P4: 61 policy holders strongly believe that the flexibility of the policy affects their buying decision with another 51 policy holders supporting it. 47 respondents remain neutral. The number of the respondents who strongly disagree with this variable is 35 with another 12 respondents disagreeing with the impact of the variable on their decision. P5: when the policy holders were asked about the policy to be a better investment option than other opportunities, 54 policy holders strongly agreed and another 46 respondents believed the same. A substantial amount of the policy holders neither disagreed nor agreed (43). But 33 respondents strongly refuted this concept with another 30 respondents joining their school of thought. P6: regarding the policy having a good service line and support and its impact on the respondent's buying decision, a large number (69) of policy holders strongly supported it with another 60 policy holders agreeing with them. A few number of policy holders (17) strongly disagreed with it and another 24 joining them whereas 36 policy holders offered no opinion.

1. AGE AND THE POLICY VARIABLES

The age-wise analysis for the different policy variables were carried out with comparing their means and standard deviations. To verify any significant difference, **One-way ANOVA** test was carried out. From the **table B**, it can be seen that the mean values with their standard deviations differ slightly from each other with respect to the three age categories. For P2, P3 and P6, the mean difference is more among the age categories (especially for the policy holders who are more than 50 years old). To verify the significance of the differences, F-value was calculated for each variable with keeping the value of significance level at 0.05. For all the variables, the value of significance level for the F-test were found to be greater than 0.05. Therefore, we can say that there is no significant difference between the perceptions of policy holders of various age categories regarding the policy variables. Hence, null hypothesis **H1** for all the policy elements, i.e. P1-P6 is **accepted** which implies that age has no effect on the perceptions of the policy holders regarding all the policy elements.

TABLE-B

Policy Variables	One-Way ANOVA Analysis for Age-Wise Analysis of the Policy Holders							
	AGE						F-Value	Sign. level
	Less Than 35 Years		35-50 Years		Above 50 Years			
	N=123		N=76		N=7			
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
P1	3.886	1.229	3.802	1.395	3.571	0.975	0.262	0.770
P2	3.552	1.255	3.486	1.205	4.142	1.463	0.893	0.441
P3	3.349	1.093	3.473	1.113	2.571	1.272	2.177	0.116
P4	3.504	1.189	3.618	1.316	3.714	1.380	0.259	0.772
P5	3.252	1.429	3.368	1.294	3.285	1.889	0.163	0.850
P6	3.650	1.299	3.671	1.258	4.285	0.951	0.824	0.440

*significant at 5% level

TABLE-C

Policy Variables	t-Test for Gender-Wise Analysis of the Policy Holders					
	Gender				Value of t-Test obtained	Sign. Level (2-tailed)
	Male		Female			
	N=138		N=68			
	Mean	S.D.	Mean	S.D.		
P1	3.949	1.210	3.632	1.402	1.676	0.095
P2	3.565	1.189	3.514	1.354	0.274	0.785
P3	3.405	1.098	3.294	1.146	0.676	0.500
P4	3.594	1.253	3.470	1.215	0.672	0.502
P5	3.304	1.396	3.279	1.391	0.121	0.904
P6	3.637	1.300	3.764	1.223	-0.672	0.502

*significant at 5% level

SOURCE: PRIMARY DATA.

2. GENDER AND THE POLICY VARIABLES

The gender-wise analysis for the different policy variables were carried out with comparing their means and standard deviations. To verify any significant difference, **t-Test** was carried out. From the **table C**, it can be seen that the mean values with their standard deviations differ marginally from each other with respect to the male and female policy holders. For P1, the mean difference is maximum. To verify the significance of the differences, t-value was calculated for each variable with keeping the value of significance level at 0.05. But for all the variables, the value of significance level for the t-test were found to be greater than 0.05. Therefore, we can say that there is no significant difference between the perceptions of both the male and female policy holders regarding the policy variables. Hence, null hypothesis **H2** for all the policy elements, i.e. P1-P6 is **accepted** which implies that both male and female policy holders' perceptions of the policy variables are same.

3. EDUCATIONAL QUALIFICATION AND THE POLICY VARIABLES

The education-wise analysis for the different policy variables were carried out with comparing their means and standard deviations. To verify any significant difference, **One-way ANOVA** test was carried out. From the **table D**, it can be seen that the mean values with their standard deviations differ slightly from each other with respect to the five categories of educational qualifications. For P1, P5 and p6, the difference of the means is more. To verify the significance of the differences, F-value was calculated for each variable with keeping the value of significance level at 0.05. But for all the variables, the value of significance level for the F-test were found to be greater than 0.05. Therefore, we can say that there is no significant difference between the perceptions of policy holders of five categories of educational qualifications regarding the policy variables. Hence, null hypothesis **H3** for all the policy elements, i.e. P1-P6 is **accepted** which implies that education has no effect on the policy holder's perception regarding the policy elements.

TABLE-D

One-Way ANOVA Analysis for Education-Wise Analysis of the Policy Holders

Policy Variables	Illiterate N=11 Mean	Illiterate S.D.	Up to H.S.C. N=62 Mean	Up to H.S.C. S.D.	H.S.C. /+2 N=85 Mean	H.S.C. /+2 S.D.	Graduate N=39 Mean	Graduate S.D.	P.G. and Above N=9 Mean	P.G. and Above S.D.	F-Value	Sign. level
P1	4.545	0.687	3.935	1.278	3.811	1.295	3.717	1.413	3.222	0.833	1.555	0.188
P2	3.272	1.348	3.612	1.259	3.541	1.305	3.564	1.119	3.444	1.130	0.192	0.943
P3	3.272	1.272	3.533	0.935	3.364	1.132	3.230	1.157	3.000	1.658	0.748	0.560
P4	3.727	1.420	3.274	1.203	3.588	1.265	3.794	1.173	3.888	1.166	1.403	0.234
P5	3.181	1.401	3.096	1.467	3.329	1.321	3.384	1.425	4.111	1.269	1.164	0.328
P6	3.909	0.943	3.612	1.219	3.600	1.390	4.025	1.135	3.111	1.269	1.392	0.238

*significant at 5% level

SOURCE: PRIMARY DATA.

4. CHOICE OF SELLING COMPANY AND THE POLICY VARIABLES

The organisation-wise analysis for the different policy variables were carried out with comparing their means and standard deviations. To verify any significant difference, **t-Test** was carried out. From the **table E**, it can be seen that the mean values differ slightly from each other (for P2, P4 and P6) with respect to the policy holders of the L.I.C.I and private companies whereas the mean values differ highly from each other (for P1, P3 and P5). To verify the significance of the differences, t-value was calculated for each variable with keeping the value of significance level at 0.05. For the variables P2, P4 and P6, the value of significance level for the t-test were found to be greater than 0.05. Therefore, we can say that there is no significant difference between the perceptions of the policy holders of both public and private companies regarding the policy variables P2, P4 and P6. Hence, null hypothesis **H4** for the policy elements P2, P4 and P6 is **accepted**. But for the policy variables P1, P3 and P5, the value of significance level for the t-test were found to be less than 0.05. Therefore, we can say that there is significant difference between the perceptions of the policy holders of both public and private companies regarding the policy variables P1, P3 and P5. Hence, null hypothesis **H4** for the policy elements P1, P3 and P5 is **not** fully **accepted**.

TABLE-E

t-Test for Company/Organisation-Wise Analysis of the Policy Holders

Policy Variables	L.I.C.I. N=102 Mean	L.I.C.I. S.D.	Private N=104 Mean	Private S.D.	Value of t-Test obtained	Sign. Level (2-tailed)
P1	4.107	1.033	3.586	1.445	2.973	0.003*
P2	3.696	0.982	3.403	1.444	1.694	0.092
P3	3.686	1.098	3.057	1.041	4.215	0.000**
P4	3.676	1.091	3.432	1.363	1.415	0.159
P5	3.578	1.238	3.019	1.481	2.937	0.004*
P6	3.549	1.286	3.807	1.254	-1.461	0.146

*significant at 5% level **significant at 1% level
**significant at 1% level

SOURCE: PRIMARY DATA.

5. INCOME AND THE POLICY VARIABLES

The annual income-wise analysis for the different policy variables were carried out with comparing their means and standard deviations. To verify any significant difference, **One-way ANOVA** test was carried out. From the **table F**, it can be seen that the mean values with their standard deviations differ slightly from each other with respect to the four categories of income levels. For P1, P3 and P4, the difference of mean values is more. To verify the significance of the differences, F-value was calculated for each variable with keeping the value of significance level at 0.05. But for all the variables, the value of significance level for the F-test were found to be greater than 0.05. Therefore, we can say that there is no significant difference between the perceptions of policy holders with various income levels regarding the policy variables. Hence, null hypothesis **H5** for all the policy elements, i.e. P1-P6 is **accepted** which implies that income level of the policy holder's has no impact on their perception of the policy variables.

TABLE-F										
Policy Variables	One-Way ANOVA Analysis for Income-Wise Analysis of the Policy Holders									
	Income (in Rupees)								F-Value	Sign. level
	0-50000		50001-150000		150001-300000		300001-500000			
	N=57		N=99		N=44		N=6			
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.		
P1	4.070	1.115	3.818	1.288	3.750	1.464	2.833	0.752	1.953	0.122
P2	3.386	1.372	3.616	1.209	3.590	1.127	3.666	1.505	0.454	0.715
P3	3.526	1.103	3.313	1.016	3.431	1.208	2.333	1.632	2.283	0.080
P4	3.421	1.335	3.505	1.206	3.750	1.203	4.166	0.983	1.128	0.339
P5	3.350	1.369	3.252	1.438	3.340	1.363	3.166	1.329	0.093	0.964
P6	3.701	1.238	3.626	1.290	3.750	1.278	3.833	1.602	0.136	0.939
*significant at 5% level										

SOURCE: PRIMARY DATA.

6. OCCUPATION AND THE POLICY VARIABLES

The occupation-wise analysis for the different policy variables were carried out with comparing their means and standard deviations. To verify any significant difference, **One-way ANOVA** test was carried out. From the **table G**, it can be seen that the mean values differ slightly from each other with respect to the four categories of occupations. For P1, the difference among mean values is quite high. To verify the significance of the differences, F-value was calculated for each variable with keeping the value of significance level at 0.05. For all the variables except P1, the value of significance level for the F-test were found to be greater than 0.05. Therefore, we can say that there is no significant difference between the perceptions of policy holders with these four categories of occupations regarding the policy variables P2, P3, P4, P5 and P6. Hence, null hypothesis **H6** for these policy elements, i.e. P2-P6 is **accepted**. But for P1, the value of significance level (0.044) for the F-test was found to be less than 0.05. Therefore, we can say that there is significant difference between the perceptions of policy holders with these four categories of occupations regarding the policy variable P1. Hence, null hypothesis **H6** for P1 is not fully accepted.

TABLE-G										
Policy Variables	One-Way ANOVA Analysis for Occupation-Wise Analysis of the Policy Holders									
	Occupation								F-Value	Sign. level
	Govt. Employee		Pvt. Employee		Business/Self-Employed		Others			
	N=59		N=37		N=95		N=15			
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.		
P1	3.371	1.390	3.513	1.386	3.947	1.188	4.533	0.833	2.748	0.044*
P2	3.508	1.165	3.567	1.365	3.547	1.244	3.666	1.345	0.068	0.977
P3	3.339	1.307	3.216	0.975	3.357	1.009	3.933	1.162	1.548	0.203
P4	3.610	1.159	3.675	1.225	3.473	1.327	3.533	1.060	0.291	0.832
P5	3.322	1.407	3.243	1.362	3.284	1.404	3.400	1.454	0.054	0.983
P6	3.762	1.264	3.432	1.482	3.705	1.210	3.800	1.207	0.602	0.615
*significant at 5% level										

SOURCE: PRIMARY DATA.

CONCLUSION

This study has discussed the various elements of the product, i.e. the life insurance policy and their perception by the customers with respect to their age, gender, education, income, choice of company and occupation. The various age categories across the policy holders have no significant difference in their perception of all the policy variables. Similarly, it is seen that differences in educational qualifications does not get reflected in perceptions of any of the six policy elements. Again, when the question of gender comes in to the picture, both male and female respondents have the same perception of the policy variables. Further, when compared to the annual income levels, the policy holders have no difference in their perception of the variables. But there is a huge difference between the perceptions of the policy holders of the L.I.C.I. and the private companies regarding the following variables: policy/company's brand name, usefulness and better investment option. Similarly, policy holders with different occupations differ significantly regarding the first variable, i.e. policy/company's brand name. This study focuses on an important dimension of buyer's perception of the life insurance policy and its variation across their own demographic variables. After looking at the results, some suggestions can be made regarding the perception of the life insurance customers. The life insurance companies should give more thrust on making the brand name of both the policy and company widely known through various promotional tools. The features and options of the policy should be made more appealing to attract a customer. The policy should be useful as required by the needs of the customer. It should also be flexible enough to be applicable to a wide range of different customers. The policy must be a better investment option than other investment opportunities available. The insurers must provide a good service line and support with the policy to the prospective buyers. Life insurance is one of the most difficult products to sell. But with a right mix of the policy variables, this barrier can be broken very easily.

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INVESTORS' PERCEPTION TOWARDS THE INFLUENCE OF SPERTEL RISKS ON THE VALUE OF EQUITY SHARES: A STUDY CONDUCTED AT COIMBATORE CITY

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ABSTRACT
The globalization of financial markets has been increasing the retail investors' community over the past two decades by providing a wide variety of market and investment options. However, it makes much more complex in their investment decisions process. The market conditions can be influenced by both fundamental factors of the company and external factors such as social, political, economic, regulatory, technological, environmental and legal (SPERTEL) that have an influence on the values of equity shares. The main objective of the study is to analyze the investors' perception in the influence of Social, Political, Economical, Regulatory, Technological, Environmental and Legal (SPERTEL) risks on the value of equity shares in the market. Based on the perception of the investors taken for this study in Tamil Nadu, SPERTEL risk has influence over the market price of the equity share. It is to be noted that except for the social factors between married and unmarried investors, political, regulatory and legal factors for age and occupation, all other factors seemed to be insignificant.

KEYWORDS
Investor, Globalization, Perception, Investment, SPERTEL.

INTRODUCTION
Research in behavioural finance is comparatively less in India, when compared to other foreign countries. Within behavioural finance it is assumed that information structure and the characteristics of market participants systematically influence individuals' investment decisions as well as market outcomes. The behavioral finance mainly focuses on how investors interpret and act on micro and macro information to make investment decisions. Behavioural finance is defined by Shleifer (1999) "a rapidly growing area that deals with the influence of Psychology on the behavior of financial practitioners". The globalization of financial markets has been increasing the retail investors' community over the past two decades by providing a wide variety of market and investment options. However, it makes much more complex in their investment decisions process.

The retail investors consider their investment needs, goals, objectives and constraints in making investment decisions, but it is not possible to make a successful investment decision at all times. They have to cautiously watch the market conditions and change their investment options in accordance to their risk tolerance level. The market conditions can be influenced by both fundamental factors of the company and external factors such as social, political, economic, regulatory, technological, environmental and legal (SPERTEL) that have an influence on the values of equity shares (Sugiharto et al, 2007). For example, Government of India publishes the inflation details every month. This in turn affects the interest rate. In order to regulate, the Central Bank (RBI), adjust according to the situation or bring a new monetary policy if need arises. This has a significant effect on the investors' sentiment (Alexander Kurov 2009). The various studies have been conducted in other countries but to the best of the researcher's knowledge. The researcher could not find any similar study in Tamil Nadu. Hence this study attempts to identify the individual investors' perception in identifying the influence of Social, Political, Economical, Regulatory, Technological, Environmental and Legal (SPERTEL) risks on the value of equity shares in the market.

REVIEW OF LITERATURE
In this paper a comprehensive literature review about behavioural finance has been carried out. **Petter Roger Eiving (1970)** carried out a study to identify those factors which motivate (or) Guide the investment decisions of the common stock investors. The study identified the factors (i) Income from dividends (ii) rapid growth (iii) purposeful investment as a protective outlet of savings (iv) Professional investment management. **Shanmugam** (1990) studied a group of 90 investors to examine the factors affecting investment decision. The study focused its analysis on the investment objective and the extent of awareness on factors affecting investment decision. The study found that the investors are high risk takers. Investors possessed adequate knowledge of government regulations, monetary and fiscal policy. **Nagy et. al., (1994)** tested whether there is a significant difference between the retail investors selects demographic characteristics (viz., age, gender, marital status, education, occupation, domicile and annual income) and consideration of SPERTEL risk on Value of Equity Shares. **Warren, et. al., (1996)** attempted to develop lifestyle and demographic profiles of investors based on the value and types of investment holding. **Krishnan and Booker** (2002) analyzed the factors influencing the decisions of investor who basically used analysts' recommendations to arrive at a short-term decision to hold or to sell a stock. **Merikas et. al.,** (2003) analyzed the factors influencing Greek investor behaviour on the Athens Stock Exchange. The results indicated that individuals base their stock purchase decision on economic criteria combined with diverse other variables. **Hussein A Hassan** (2006) identified the factors influencing the UAE investor behaviour. Six factors were found the most influencing factors on the UAE investor behaviour. The most influencing factors were expected corporate earnings, get rich quick, past performance of the firm's stock. On the other hand few factors were found to be least influencing like expected losses in international financial markets, family member opinion, gut feeling on the economy. **Kannadhasan. M** (2006) examined the factors that influence the retail investors decision in investing. The decision of the retail investors are based on their various dependent variables viz., Gender, age, marital status, educational level, income level, awareness, preference and risk bearing capacity. **Manish Mittal** and **Vyas R.K.** (2007) have investigated how investment choices have been affected by the demographics of the investors. Such knowledge would be highly useful to the financial advisors as it would help them advise their clients regarding investments which are appropriate with respect to their demographic profile. The salaried class people preferred to invest their money in equities and mutual funds while business classes have shown an inclination to invest their money in debenture/bonds and real estate/ bullions. **Totok Sugiharto, et. al.,** (2007) found that the investment practices and perceptions by major portfolio investors (fund managers) who were active at the Jakarta Stock Exchange (JSX) in Indonesia. The paper also proffers some initial interpretation and analysis of their perceptions of the most important metrics used in valuation and their observation on social, political, economic, regulatory, technological, environmental and legal (SPERTEL) factors that influence the fundamental factors (EM metric) and values of equity shares (EV) of LQ45 firms quoted at JSX. **Glaser, et. al.,** (2009) tested whether individual investor sentiment was related to daily

stock returns by using vector auto regressive models and Granger causality tests. They found out that there exists a mutual influence between sentiment and stock market returns, but only in the very short-run (one and two trading days). The returns have a negative influence on sentiment, while the influence of sentiment on returns is positive for the next trading day. The influence of stock market returns on sentiment is stronger than vice versa.

From the above review, it is clear that there are some differences among the retail investors in considering SPERTEL for valuing the share price of a company.

OBJECTIVE OF THE STUDY

The main objective of the study is to analyse the investors' perception in the influence of Social, Political, Economical, Regulatory, Technological, Environmental and Legal (SPERTEL) risks on the value of equity shares in the market at Coimbatore City.

HYPOTHESIS OF THE STUDY

The study tested the following hypothesis.

H_1: Retail investors firmly believe that SPERTEL risk factors have influence on their future investment i.e. value of equity shares.

METHODOLOGY

SOURCES OF DATA

The research design for the study is descriptive in nature. The researcher depended heavily on primary data. The required data were collected from the Retail Investors living in Coimbatore, Tamil Nadu. The study was conducted during the period between August and October 2010 through a structured questionnaire.

SAMPLING SIZE AND PROCEDURE

The sample size covered 160 investors belonging to Coimbatore city in Tamil Nadu. In order to collect information from the retail investors, the sampling design has been carefully decided and properly chosen for the study. The investors are mainly classified on the basis of sex. Questionnaires were mailed to the Retail Investors in Coimbatore. However, on a detailed scrutiny of the filled in questionnaires, it was found that out of 160, 8 of them had given incomplete information and hence the responses could not be used for further analysis. Thus, this study is based on 152 responses of respondents from the retail investors.

VARIABLES

Dependent Variables: The respondents were asked to evaluate the importance of 20 variables, identified from the literature and personal interviews as potentially influencing the value of equity shares, by making seven choices for every one of the 20 variables: "strongly agree" for the variables which had a strong influence on the value of equity shares and "strongly disagree" for the variables that does not have much influence on the value of the equity shares. The variables were grouped according to Social, Political, Economical, Regulatory, Technological, Environmental and Legal (SPERTEL) risks. The reliability value of Social, Economical, Political, Regulatory & Legal, and Technological scale used in this study were 0.637, 0.740, 0.786 and 0.731 respectively.

Independent variables: Demographic characteristics namely gender, age, marital status, educational qualification, occupation, number of family dependants, domicile and annual income were measured on nominal scale.

STATISTICAL TOOLS

The data collected have been analyzed though the application of statistical tools such as independent Samples T Test and One- Way ANOVA.

RESULTS AND DISCUSSIONS

This section presents the results and discussion of this study. The analysis of this section is given as follows.

a. RESULTS OF THE DESCRIPTIVE STATISTICS ON GENDER OF SAMPLE RESPONDENTS AND SPERTEL RISK

Table 1 shows the results of the Descriptive Statistics on Gender of Sample Respondents and SPERTEL Risk. It is understood that the mean score of men's perception towards social factors, economical factors, political factors, and environmental factors influencing the market value of equity share were 3.73, 4.96, 5.20 and 4.76 respectively with a Standard deviation of 0.64, 0.94, 1.04 and 0.94 respectively. The mean score for women's perception towards social factors, economical factors, political factors, and environmental factors influencing the market value of equity share were 3.83, 5.22, 5.10 and 4.97 respectively with a Standard deviation of 0.77, 0.86, 0.95 and 1.05 respectively. In order to know the significant difference between the mean score (male and female), this study employed independent sample T-test. According to T statistics, the value of all the independent variables (SPERTEL) was insignificant. This indicates that there is no significant difference between the gender with regard to the consideration of factors such as social, economical, political, regulatory, legal, environmental and technological factors while valuing the shares at 5 per cent level.

b. RESULTS OF THE DESCRIPTIVE STATISTICS ON MARITAL STATUS OF SAMPLE RESPONDENTS AND SPERTEL RISK

The results of the Descriptive Statistics on Marital Status of Sample Respondents and SPERTEL Risk are given in **Table – 2.** It is clear that the perception of investors (Marital status) was considered with regard to consideration of SPERTEL risk while valuing the shares. It is understood that the mean score of married investors' perception towards social factors, economical factors, political factors, and environmental factors influencing the market value of equity share were 3.63, 4.92, 5.24 and 4.81 respectively with a Standard deviation of 0.60, 0.97, 0.98 and 0.98 respectively. The mean score for unmarried (single) investors' perception towards social factors, economical factors, political factors, and environmental factors influencing the market value of equity share were 4.06, 5.24, 5.08 and 4.73 respectively with a Standard deviation of 0.74, 0.79, 1.10 and 0.96 respectively. It reveals that except social factors, all other results were insignificant at 5 per cent level. It means that married and unmarried investors give equal importance to PERTEL risks while valuing the shares. But there is significant difference between married and single in the case of social factors. However it is assumed that these overall factors (SPERTEL risk) have influence over the value of the equity shares.

c. RESULTS OF ONE WAY ANOVA WITH REGARD TO AGE OF SAMPLE RETAIL INVESTORS AND SPERTEL RISK

Table - 3 reveals results of One way ANOVA with regard to Age of Sample Retail Investors and SPERTEL Risk. It is understood that the mean square score of the respondent's age between the groups towards social factors, economical factors, political factors, and environmental factors influencing the market value of equity share were 0.785, 0.915, 3.561 and 0.341 respectively and within the groups of 0.439, 0.853, 0.953 and 0.940 respectively. The results of one way ANOVA between the age of the respondents with regard to consideration of Social factor, Economical factor, Political, Regulatory and Legal factors and Environmental and Technological factors were analysed. The results revealed that there is no significant difference in social, economical, technological and environmental factors between different age groups. But there is significant difference between the age groups in the case of political regulatory and legal factors. The overall analysis of perception of retail investors classified based on age reveals that SPERTEL risk has influenced the value of the equity shares in the market.

d. RESULTS OF ONE WAY ANOVA WITH REGARD TO EDUCATIONAL QUALIFICATION OF SAMPLE RETAIL INVESTORS AND SPERTEL RISK

Table – 4 exhibits the results of One way ANOVA with regard to Educational Qualification of Sample Retail Investors and SPERTEL Risk. It is noted from the table that the mean square score of the respondent's Educational qualification between the groups towards social factors, economical factors, political factors, and environmental factors influencing the market value of equity share were 0.306, 0.792, 1.801 and 0.301 respectively and within the groups of 0.451, 0.856, 1.006 and 0.937 respectively. An attempt is made here to know the difference between the level of education of investors with regard to consideration of SPERTEL risk while valuing the shares. According to Table – 4, the results of all the factors (SPERTEL) were insignificant at 5 per cent level. It shows that the perception of retail investors based on educational qualification with regard to consideration of Social factor, Economical factor, Political, Regulatory and Legal factors and Environmental and Technological factors are the same. In other words, there is no significant difference in SPERTEL factors between different levels of investors classified based on educational qualification.

e. RESULTS OF ONE WAY ANOVA WITH REGARD TO OCCUPATION OF SAMPLE RETAIL INVESTORS AND SPERTEL RISK

The results of one way ANOVA with regard to Occupation of Sample Retail Investors and SPERTEL Risk is provided in **Table – 5**. The perception differences between occupations of retail investors with regard to consideration of SPERTEL risk while valuing the shares were considered. It is understood that the mean square score of the respondent's perception based on their occupation between the groups towards social factors, economical factors, political factors, and environmental factors influencing the market value of equity share were 0.489, 0.143, 2.661 and 0.466 respectively and within the groups of 0.447, 0.869, 0.989 and 0.934 respectively. It reveals that the results of all the factors at 5 per cent level. The above Table shows the results of one way ANOVA between occupation of the respondents with regard to consideration of Social factor, Economical factor, Political, Regulatory and Legal factors and Environmental and Technological factors. The above analysis indicates that there is no significant difference in social, economical, environmental and technological factors between different occupations. But there is significant difference between occupation in the case of political, regulatory and legal factors. The overall analysis indicates that SPERTEL risk has influence over the value of the equity shares.

f. RESULTS OF ONE WAY ANOVA WITH REGARD TO DOMICILE OF SAMPLE RETAIL INVESTORS AND SPERTEL RISK

Table – 6 reveals the results of one way ANOVA with regard to domicile of investors and SPERTEL risk. It is noted that the mean square score of the respondent's Domicile between the groups towards social factors, economical factors, political factors, and environmental factors influencing the market value of equity share were 1.295, 1.178, 0.383 and 1.131 respectively and within the groups of 0.437, 0.850, 1.030 and 0.922 respectively. It shows the results of One way ANOVA between domicile of the respondents with regard to consideration of Social factor, Economical factor, Political, Regulatory and Legal factors and Environmental and Technological factors. The results revealed that there is no significant difference in SPERTEL factors between the places of living at 5% level.

g. RESULTS OF ONE WAY ANOVA WITH REGARD TO INCOME OF SAMPLE RETAIL INVESTORS AND SPERTEL RISK

The results of one way ANOVA between the Income of the respondents with regard to consideration of Social factor, Economical factor, Political, Regulatory and Legal factors and Environmental and Technological factors is given in **Table - 7**. It is understood that the mean square score of the respondent's income between the groups towards social factors, economical factors, political factors, and environmental factors influencing the market value of equity share were 0.985, 1.178, 0.806 and 0.128 respectively and within the groups of 0.434, 0.846, 1.027 and 0.946 respectively. It is inferred from the analysis that there is no significant difference in SPERTEL factors between different levels of Income groups. It is to be noted that SPERTEL risk has influence on the value of the equity shares in the market.

CONCLUSION AND SCOPE FOR FURTHER STUDY

The findings of this study are in line with the study of **Totok Sugiharto, et. al.,** (2007). Based on the perception of the investors taken for this study in Tamil Nadu, SPERTEL risk has influence over the market price of the equity share. It is to be noted that except for the social factors between married and unmarried investors, political, regulatory and legal factors for age and occupation, all other factors seemed to be insignificant. It is believed that the findings of this study can be complemented by further investigation on the areas of identifying other internal factors, Intra country; inter country, investor and managers, psychological factors such as heuristics, framing, mental accounting and so on.

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TABLES

TABLE 1: RESULTS OF THE DESCRIPTIVE STATISTICS ON GENDER OF SAMPLE RESPONDENTS AND SPERTEL RISK

Variable		Mean	SD	T –Value	Df.	Sig. (two Tailed)	Decision
Social	Male	3.73	0.64	-0.840	145	0.402	Insignificant
	Female	3.83	0.77				
Economical	Male	4.96	0.94	-1.265	144	0.208	Insignificant
	Female	5.22	0.86				
Political, Regulatory & Legal	Male	5.20	1.04	0.428	145	0.669	Insignificant
	Female	5.10	0.95				
Environmental &Technological	Male	4.76	0.94	-1.005	144	0.316	Insignificant
	Female	4.97	1.05				

Sources: Computed from Primary data

TABLE 2: RESULTS OF THE DESCRIPTIVE STATISTICS ON MARITAL STATUS OF SAMPLE RESPONDENTS AND SPERTEL RISK

Variable		Mean	SD	T –statistic	Df.	Sig. (two Tailed)	Decision
Social	Married Single	3.63 4.06	0.60 0.74	-3.78	149	0.00	Significant
Economical	Married Single	4.92 5.24	0.97 0.79	-2.19	111	0.31	Insignificant
Political, Regulatory & Legal	Married Single	5.24 5.08	0.98 1.10	0.90	149	0.37	Insignificant
Environmental &Technological	Married Single	4.81 4.73	0.98 0.96	0.53	148	0.60	Insignificant

Sources: Computed from Primary data

TABLE – 3 RESULTS OF ONE WAY ANOVA WITH REGARD TO AGE OF SAMPLE RETAIL INVESTORS AND SPERTEL RISK

Variables	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.	Decision
Social	Between Groups	3.138	4	.785	1.787	.134	Insignificant
	Within Groups	64.972	148	.439			
	Total	68.110	152				
Economical	Between Groups	3.658	4	.915	1.072	.372	Insignificant
	Within Groups	125.390	147	.853			
	Total	129.048	151				
Political Regulatory and Legal	Between Groups	14.244	4	3.561	3.737	.006	Significant
	Within Groups	141.034	148	.953			
	Total	155.278	152				
Technological & Environmental	Between Groups	1.363	4	.341	.363	.835	Insignificant
	Within Groups	138.216	147	.940			
	Total	139.579	151				

Sources: Computed from Primary data

TABLE – 4 RESULTS OF ONE WAY ANOVA WITH REGARD TO EDUCATIONAL QUALIFICATION OF SAMPLE RETAIL INVESTORS AND SPERTEL RISK

Variables	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.	Decision
Social	Between Groups	.917	3	.306	.678	.567	Insignificant
	Within Groups	67.193	149	.451			
	Total	68.110	152				
Economical	Between Groups	2.376	3	.792	.925	.430	Insignificant
	Within Groups	126.672	148	.856			
	Total	129.048	151				
Political Regulatory and Legal	Between Groups	5.404	3	1.801	1.791	.151	Insignificant
	Within Groups	149.874	149	1.006			
	Total	155.278	152				
Technological & Environmental	Between Groups	.904	3	.301	.321	.810	Insignificant
	Within Groups	138.675	148	.937			
	Total	139.579	151				

Sources: Computed from Primary data

TABLE – 5 RESULTS OF ONE WAY ANOVA WITH REGARD TO OCCUPATION OF SAMPLE RETAIL INVESTORS AND SPERTEL RISK

Variables	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.	Decision
Social	Between Groups	1.467	3	.489	1.094	.354	Insignificant
	Within Groups	66.643	149	.447			
	Total	68.110	152				
Economical	Between Groups	.430	3	.143	.165	.920	Insignificant
	Within Groups	128.618	148	.869			
	Total	129.048	151				
Political, Regulatory & Legal	Between Groups	7.982	3	2.661	2.692	.048	Significant
	Within Groups	147.296	149	.989			
	Total	155.278	152				
Technological & Environmental	Between Groups	1.397	3	.466	.499	.684	Insignificant
	Within Groups	138.182	148	.934			
	Total	139.579	151				

Sources: Computed from Primary data

TABLE – 6 RESULTS OF ONE WAY ANOVA WITH REGARD TO DOMICILE OF SAMPLE RETAIL INVESTORS AND SPERTEL RISK

Variables	Sources of variations	Sum of Squares	df	Mean Square	F	Sig.	Decision
Social	Between Groups	2.590	2	1.295	2.965	.055	Insignificant
	Within Groups	65.520	150	.437			
	Total	68.110	152				
Economical	Between Groups	2.357	2	1.178	1.386	.253	Insignificant
	Within Groups	126.691	149	.850			
	Total	129.048	151				
Political, Regulatory & Legal	Between Groups	.767	2	.383	.372	.690	Insignificant
	Within Groups	154.511	150	1.030			
	Total	155.278	152				
Technological & Environmental	Between Groups	2.262	2	1.131	1.227	.296	Insignificant
	Within Groups	137.317	149	.922			
	Total	139.579	151				

Sources: Computed from Primary data

TABLE – 7 RESULTS OF ONE WAY ANOVA WITH REGARD TO INCOME OF SAMPLE RETAIL INVESTORS AND SPERTEL RISK

		Sum of Squares	df	Mean Square	F	Sig.	Decision
Social	Between Groups	3.941	4	.985	2.273	.064	Insignificant
	Within Groups	64.169	148	.434			
	Total	68.110	152				
Economical	Between Groups	4.712	4	1.178	1.393	.239	Insignificant
	Within Groups	124.336	147	.846			
	Total	129.048	151				
Political, Regulatory & Legal	Between Groups	3.223	4	.806	.784	.537	Insignificant
	Within Groups	152.054	148	1.027			
	Total	155.278	152				
Technological & Environmental	Between Groups	.513	4	.128	.136	.969	Insignificant
Social	Within Groups	139.065	147	.946			
	Total	139.579	151				

Sources: Computed from Primary data

A STUDY OF CONSUMER ATTITUDE TOWARDS CHINESE PRODUCTS (TOYS) IN INDIA WITH SPECIAL REFERENCE TO JALGAON DISTRICT IN MAHARASHTRA

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ABSTRACT

Chinese products have entered in India in a big way. You will see them on roads. The hawkers, pull carts in addition to shops are selling them in India. Some have a fixed price tag like "Any item for Rs 30/-". Some sell different items for different prices. Some sell same items for different prices. Bargaining is also done. If you demand for low price, most probably you will get it. The products range from variety of toys like dolls, cars, motorcycles, railways, ludo games, balls, pens, etc. Why there are lot of Chinese products in India? What is the reason for their success in India? Do they manufacture quality products? This and many other questions come in the mind. The paper studies the attitudes of consumers towards these Chinese products (toys) in India. It will study why Indian consumer buy Chinese products in India.

KEYWORDS
Chinese toys, consumer attitude, satisfaction, quality.

INTRODUCTION
There are lot of consumer Chinese products in India. You will see them on roads. The hawkers, pull carts in addition to shops are selling them in India. Some have a fixed price tag like "Any item for Rs 30/-". Some sell different items for different prices. Some sell same items for different prices. Bargaining is also done. If you demand for low price, most probably you will get it. The products range from variety of toys like dolls, cars, motorcycles, railways, ludo games, balls, pens, automatic erasable boards, pencil radios, pencil batteries, home tools, feng Shui items, clocks and watches etc. Same is the case with mobiles and its accessories. You will see lots of mobile stores in India selling Chinese mobiles and accessories. There is variety of Chinese mobiles available. The features in them are same or you can say more than that in branded mobiles in India. Why there are lot of Chinese products in India? What is the reason for their success in India? Whether it is due to help from the government of china? Do they manufacture quality products? Is their marketing strategy different than marketing of similar Indian products? This and many other questions come in the mind.

STATEMENT OF PROBLEM
It is in the air that certain Chinese consumer and industrial products have captured a major share of Indian market. Various consumer products like toys, electronic products, locks, Umbrellas, leather products, batteries, bulbs, mobile phones and accessories, clocks and watches etc. have gained a sizeable market share in India. Indian consumers are buying these products as they are different and less costly than similar Indian products.

RESEARCH METHODOLOGY
We tried to find out the attitude of Indian consumers through this research paper. A questionnaire (schedule) was prepared containing 21 questions on various issues like quality, price, brand name etc and asked to 150 consumers of Chinese product (Toys) in Jalgaon district. Likert scale was used for this purpose. The data was analysed with SPSS software. The survey was conducted in the month of February 2011.

HYPOTHESIS
Following null hypothesis was set for the study
Indian consumers prefer Chinese products over Indian products only due to low prices of Chinese products.

DATA ANALYSIS AND INTERPRETATION
A) **ANALYSIS OF PERSONAL INFORMATION**
1) Education of Respondents-

Factor	Frequency	Percent
10th	24	16.0
12th	30	20.0
Graduate	44	29.3
Post Graduate	52	34.7
Total	150	100.0

It was found that 64% of the respondents were graduate and above and remaining were at least 10th pass.

2) Marital Status-

Factor	Frequency	Percent
Married	118	78.7
Unmarried	32	21.3
Total	150	100.0

It was found that 78.7 % of the respondents were married and remaining was not married.

Sex-

Factor	Frequency	Percent
Male	124	82.7
Female	26	17.3
Total	150	100.0

It was found that 82.70% of the respondents were male and remaining was female.

3) Age (Binned)

Factor	Frequency	Percent
21 - 30	60	40.0
31 - 40	48	32.0
41 - 50	42	28.0
Total	150	100.0

It was found that maximum numbers of respondents (72%) were up to 40 years age. Remaining was above 40.

4) Income per year (Binned)

Factor	Frequency	Percent
50001 - 240000	61	40.7
240001 - 430000	32	21.3
430001 - 620000	5	3.3
Total	98	65.3
MissingSystem	52	34.7
Total	150	100.0

Some respondents did not disclose their income. 98 of the respondents answered this question. Out of the answered questions, 40.7% have income range up to 240000/- per annum. Rest were above that income slab.

B) ANALYSIS OF QUESTIONS POSED TO RESPONDENTS

1) The Chinese products are cheaper compared to similar Indian products

Factor	Frequency	Percent
Fully Agree	81	54.0
Agree	54	36.0
Uncertain	9	6.0
Don't Agree	4	2.7
Totally Not Agree	2	1.3
Total	150	100.0

It has been general perception in the public that price of Chinese products are less compared to similar Indian products. So it was necessary to ask this question to the consumers. It is found that 90% of the consumers believe that prices of these Chinese products are lower compared to that of similar Indian products

2) Chinese products have innovative design than that of similar Indian products

Factor	Frequency	Percent
Fully Agree	49	32.7
Agree	60	40.0
Uncertain	18	12.0
Don't Agree	21	14.0
Totally Not Agree	2	1.3
Total	150	100.0

No products can survive today if it is not innovated according to changing taste of consumers. Innovative products have the capacity to sell themselves in the market. It is found that 72.7% of the consumers believe that these Chinese products are innovative in products design compared to similar Indian products

3) They are superior in performance compare to similar Indian products

Factor	Frequency	Percent
Agree	19	12.7
Uncertain	17	11.3
Don't Agree	66	44.0
Totally Not Agree	48	32.0
Total	150	100.0

It is important that performance of products should be consistent and superior, so as to succeed in the market. Durable products like mobiles and telephones should provide consistent service to the consumers. It is found that 76% of the consumers say that Chinese products are not superior and consistent in performance than similar Indian products. 11.3% are uncertain about this factor.

4) Chinese products are difficult to repair than similar Indian products

Factor	Frequency	Percent
Fully Agree	58	38.7
Agree	21	14.0
Uncertain	22	14.7
Don't Agree	30	20.0
Totally Not Agree	19	12.7
Total	150	100.0

Durable products should be repaired immediately to satisfy the customers. The product should be having less complicated parts so as to be repaired. It is found that 52.7% of the consumers believe that Chinese products are difficult to repair. But 32.7 % of the consumers don't agree with this view.

5) You are fully satisfied with Chinese products

Factor	Frequency	Percent
Fully Agree	4	2.7
Agree	27	18.0
Uncertain	49	32.7
Don't Agree	53	35.3
Totally Not Agree	17	11.3
Total	150	100.0

It is found that only 20.7% of the consumers are satisfied with Chinese products. But 46.6 % of the consumers don't agree with this view. 32.7% are uncertain about this factor.

6) There is no guarantee/warranty provided for Chinese products

Factor	Frequency	Percent
Fully Agree	79	52.7
Agree	38	25.3
Uncertain	14	9.3
Don't Agree	19	12.7
Total	150	100.0

Any company to earn the confidence of its consumers in its products provide warranty or guarantee to its products. This helps to increase the loyalty of consumers towards its products. But it is found that 78% of the consumers believe that Chinese products do not have Warranty /Guarantee.

7) Packaging of Chinese products is satisfactory

Factor	Frequency	Percent
Fully Agree	20	13.3
Agree	83	55.3
Uncertain	23	15.3
Don't Agree	14	9.3
Totally Not Agree	10	6.7
Total	150	100.0

Proper packaging of products is very necessary for tough handling. It should be such that the inside product is not damaged due to mishandling of product. It is found that 68.7% of the consumers believe that proper packaging is provided for Chinese products in India. 15.3% are uncertain about this factor.

8) There is no proper description of products, price, content, how to use etc. on the label of Chinese products

Factor	Frequency	Percent
Fully Agree	36	24.0
Agree	79	52.7
Uncertain	17	11.3
Don't Agree	14	9.3
Totally Not Agree	4	2.7
Total	150	100.0

The package should have proper label on it which gives complete information about contents of products, date of manufacturing and date of expiry, price of product etc. 76.7% of the respondents believe that there is no proper description of these Chinese products on label regarding price, contents, how to use etc. 12% don't agree with this view.

9) They are easily available on time in the market

Factor	Frequency	Percent
Fully Agree	41	27.3
Agree	82	54.7
Uncertain	12	8.0
Don't Agree	15	10.0
Total	150	100.0

Availability of products plays an important role in any product category. If products are not available on time, consumers will by other similar products of competitor. It is found that 82% of the consumers believe that these Chinese products are easily available from importers on time.

10) Chinese products offer better quality than similar Indian product

Factor	Frequency	Percent
Fully Agree	2	1.3
Agree	14	9.3
Uncertain	38	25.3
Don't Agree	71	47.3
Totally Not Agree	25	16.7
Total	150	100.0

Quality of a product plays an important role in its marketing. The better quality products are always a fancy for customers. Quality increases reliability of products. Here 64% of the consumers agree that quality of Chinese mobiles and telephones is not as good as similar Indian products. It means that quality is not the criteria for selling of Chinese products. 25.3% are uncertain about this factor.

11) You are loyal to Chinese products in India

Factor	Frequency	Percent
Fully Agree	12	8.0
Agree	39	26.0
Uncertain	50	33.3
Don't Agree	37	24.7
Totally Not Agree	12	8.0
Total	150	100.0

It is seen here that 34 % of the consumers are loyal to Chinese products in India. 33.3% are uncertain about this factor. 32.7% don't agree with this view.

12) There is more variety in Chinese products compared to similar Indian products

Factor	Frequency	Percent
Fully Agree	49	32.7
Agree	86	57.3
Uncertain	13	8.7
Totally Not Agree	2	1.3
Total	150	100.0

In India, there is a wide variety of customers. They range from people who earn Rs 50 per day to million per day. The products should be such that it should be able to cater to different segments of the population. It is found that 90% of the consumers believe that Chinese products have different varieties to cater to different needs of consumers in India.

13) Chinese products have more features compared to similar Indian products

Factor	Frequency	Percent
Fully Agree	48	32.0
Agree	36	24.0
Uncertain	16	10.7
Don't Agree	24	16.0
Totally Not Agree	26	17.3
Total	150	100.0

Consumer will buy a product if it provides more features in addition to its basic utility. Chinese mobiles and telephones provide more features than similar Indian mobiles within the given price. It is found that 56% of the consumers believe that these Chinese products provide more features than similar Indian products. 33.3 don't agree with this view.

14) There is no sales promotion offer like gift on purchase, exchange offer etc on Chinese products

Factor	Frequency	Percent
Fully Agree	54	36.0
Agree	23	15.3
Uncertain	38	25.3
Don't Agree	33	22.0
Totally Not Agree	2	1.3
Total	150	100.0

Today due to growing competition, promotion of products has become important. Products are promoted directly to consumers through various offers like discounts, coupons. It is found that 51.3% of the consumers believe that Chinese products are not promoted **to** Indian consumers through sales promotion tools like discounts, offer etc in India. 23.3% don't agree with this view.

15) Bargaining is possible on Chinese products in India

Factor	Frequency	Percent
Fully Agree	27	18.0
Agree	84	56.0
Uncertain	31	20.7
Don't Agree	8	5.3
Total	150	100.0

It is found that 74% of the consumers believe that bargaining is possible on Chinese products in India. 20.7% are unsure about this factor.

16) Chinese products are more durable compared to similar Indian products

Factor	Frequency	Percent
Agree	19	12.7
Uncertain	27	18.0
Don't Agree	71	47.3
Totally Not Agree	33	22.0
Total	150	100.0

It is found that 69.3% of the consumers believe that Chinese products are not durable compared to similar Indian products. Only 12.7% believe that Chinese products are durable compared to similar Indian products.

HYPOTHESIS TESTING-

For the above hypothesis, we would like to see whether Indian consumer prefers Chinese products only due to low price of Chinese products.

For this we have to test see that the mean of following factors is less than or equal to 2. If it is higher than 2 we have to use T test to see if it significantly differs from value 2. (Value 2 is for agreed).

For this hypothesis, following 5 parameters were considered-1) Price of product

2) Innovative design of product

3) On time availability of product

4) Different varieties of product

5) Features of product

If any two factors *(except for price)* have value less than or equal to 2, then we can say that Indian consumer do not prefer Chinese products over Indian products only due to low price of Chinese products. There are other factors also responsible for buying Chinese products.

Factor	The Chinese products are cheaper compared to similar Indian products	Chinese products have innovative design than that of similar Indian products	They are easily available on time in the market	There is more variety in Chinese products compared to similar Indian products	Chinese products have more features compared to similar Indian products
N	150	150	150	150	150
Mean	1.61	2.11	2.01	1.80	2.63
Median	1.00	2.00	2.00	2.00	2.00
Mode	1	2	2	2	1
Std. Deviation	.826	1.059	.871	.705	1.500
Variance	.682	1.121	.758	.497	2.249

From the above table it can be seen that the means of all the above variables are close to 2. But three variables are above 2. For this we can conduct a One sample T test for the above two variables to see if there is any significant difference between their means and the hypothesized mean (i.e. 2)

ONE-SAMPLE TEST

Factor	Test Value = 2					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Chinese products have innovative design than that of similar Indian products	1.311	149	.192	.113	-.06	.28
They are easily available at important market places in the town	-1.282	149	.202	-.080	-.20	.04
Chinese products have more features compared to similar Indian products	5.118	149	.000	.627	.38	.87

From the above table it can be seen that the significance is above 0.05 for innovative design and easy availability of products. So there is no significant difference between the means and the hypothesized mean for the above two cases.
Out of 4 factors, 3 factors have value less than or equal to 2.
Thus we can say that the Indian consumer prefers Chinese products over Indian products not only due to low price of Chinese products but also due to other factors like innovative design, variety of products and availability of Chinese products compared to similar Indian products.
So the null hypothesis is rejected.

MAJOR FINDINGS

1) The prices of Chinese products are lower compared to similar Indian products.
2) Chinese products are innovative in products design. They also have more features and variety compared to similar Indian products.
3) Consumers are also satisfied with these Chinese products due to its lower price and more features and variety than similar Indian products.
4) Indian consumers are not loyal to Chinese products. They only buy because similar Indian products are not so appealing.
5) Overall marketing strategy to market Chinese products in India is a combination of cost leadership strategy and differentiation strategy. Segmentation strategy was not noticed as both low and middle income people buy these products. Sometimes rich people also may be buying these products.
6) Chinese products are not durable compared to similar Indian products.
7) There is no specific branding strategy. But the only brand name that is popular for these Chinese products in India is 'Made in China'.

CONCLUSION

Chinese products are popular in India because in addition to low price they offer more features and variety compared to similar Indian products. Indian products are more durable but they are costly than Chinese products. So Indian companies should try to develop products which are innovative in design and are also less costly compared to similar Chinese products.

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A STUDY ON FACTORS THAT MOTIVATE IT AND NON-IT SECTOR EMPLOYEES: A COMPARISON

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ABSTRACT

The study was conducted to examine the ranked importance of motivational factors of employees in IT and non-IT sector. It is the descriptive survey addressed twelve motivating factors in the context of employee motivation theory. The sample consisted of 200 employees from IT and non-IT sectors. The purpose of this study was to identify how employees of both sectors rank the factors of Herzberg's Theory of motivation. The study produced different results between the IT and non-IT sector respondents. It was found that IT sector employees perceived the motivational factors: Growth, work and job responsibility as more important compared to non-IT employees, while, non-IT sector employee's perceived 'personal life' and 'work' as important and valuable motivational factors. On the other side they perceived the motivational factors: job responsibility and growth as less importance than other job factors. Rank correlation coefficient has been calculated and found that there is a negative correlation in the ranks assigned by the employees of two sectors. This study is also made comparison with the original study conducted by Herzberg and other related studies. As far as satisfiers are concerned, the study on IT sector and original study ranked motivators more important than hygiene factors, thus both the studies found positive relationship. With regard to non-IT sector study, some of the factors considered as "Hygiene factors" (personal life, status job, and job security) are considered by non-IT employees to be "motivators". The factors like achievement, recognition, growth, job responsibility are considered as least motivating factors in this study, which are motivators according to Herzberg study. Thus it is found that these two studies are in opposite directions in the rankings to motivational factors. Based upon the findings of the study, valuable suggestions have been given which makes the managers of both the sectors to take initiatives in both the motivators and hygiene factors to enhance the employees job satisfaction. It is concluded that the factors motivating employees depends upon the job, environment in which they work, employee need, managerial style, kind of organization and the culture prevailing in the organization and the country.

KEYWORDS
Comparison, Motivational Factors, Ranked importance.

INTRODUCTION
Motivation is one of the most important factors affecting human behaviour and performance. There were times when employees were considered as one of the resources and treated as a tool in the organisation. However, a lot has changed now. Elton Mayo conducted a research during the year 1924 and 1932 altered the way of thinking about employees. This research was known as Hawthorne Studies. According to this study, employees require much more than just money. The study introduced the human relations approach to a company's management (Nickson, 1973). The main focus was given to the basic requirements and motivation factors of employees. The publication of the Hawthorne Study facilitated the understanding of factors that helped in motivating employees. The need for motivation stems from the need for survival and motivated employees help organizations survive (Smith GP, 1994). Studies have proved that motivated employees are more productive. Managers should realize that finding out what motivates employees is the solution to achieve the performance that the business targets to and eventually job satisfaction. Managers must identify the factors that motivates employees with respect to the roles they perform. (Hedeian, 1993). Every business manager that wishes to achieve a high performance must influence the factors that motivate employees to higher levels of productivity.

Employee motivation is one of the key drivers of success in today's competitive environment. Relevant literature generally explains that motivated employees can perform their tasks much better than de-motivated workers. What motivates people changes constantly (Bowen BE, Radhakrishna RB, 1991). Some research suggests that as employees' income increases, money becomes less of a motivator (Maoch, 1988). Also, as employees get older, interesting work becomes more of a motivator.

DEFINING MOTIVATION
Motivation is the result of the interaction of the individual and the situation. Certainly, individuals differ in their basic motivational drive. Motivation is goal-directed. A goal is a specific result the individual wants to achieve (Locke and Latham1990). The level of motivation varies both between individuals and within individuals at different times. Motivation is defined as the willingness to exert high levels of effort, toward organizational goals, conditioned by the effort's ability to satisfy some individual need. The three key elements in the definition are effort, organizational goals, and needs. The effort element is a measure of intensity. When someone is motivated he or she tries hard. But high levels of effort are unlikely to lead to favourable job performance outcomes unless the effort is channeled in a direction and benefits the organization (Katerberg and Blau 1983). Needs such as esteem and self-actualization seem to become more important as people develop. One of the most interesting series of studies that concentrates heavily on these areas was directed by Frederick Herzberg (Herzberg et al 1959).

MOTIVATION THEORIES
A number of theories have been propounded to explain Why a person behaves the way he does. Motivational theories are categorized into content theories and process theories. Among the content theories, Maslow's need hierarchy, Herzberg's two-factor model and Alderfer's ERG approach are very popular. Maslow believes that there exists a hierarchy of needs, and a person gets motivated to satisfy them in the order of the hierarchy. Herzberg's two-factor theory explains factors that affect work satisfaction instead of needs (Herzberg et al 1968). The motivation-hygiene theory resulted from the analysis of an initial study by Herzberg and his colleagues at the Psychological Service of Pittsburgh. Frederick Herzberg and his associates (1959) conducted extensive interviews with two hundred engineers and accountants using the critical-incident method for data collection. Based on the description of situations when engineers and accountants felt exceptionally good or bad about their jobs, Herzberg found that certain characteristics tend to be consistently related to job satisfaction and

others to job dissatisfaction. Factors, having the potential to lead to job dissatisfaction, were called hygiene factors by Herzberg because, if they were present, they tend to provide the basic conditions needed in normal work environments. They satisfy the basic physiological, safety, and social needs in the workplace (Maslow 1954). Such factors include company policies, supervision, working conditions, salary and so on. If not adequately provided, hygiene factors contribute to dissatisfaction with work life. Factors, having the potential to lead to job satisfaction, were called motivators by Herzberg. They tend to be more intrinsic to or under the control of individuals and appeal to their need for growth and advancement, responsibility, achievement, and recognition. When motivators were present, individuals felt satisfied with their work, when absent, they felt not satisfied, but not necessarily dissatisfied either. Herzberg concluded that the presence of hygiene factors is necessary, but not sufficient for work satisfaction.

Alderfer has categorized the needs into three – existence, relatedness and growth needs. He argues that satisfied lower-level needs make an individual search for higher-level needs. At the same time, multiple needs can be operating as motivators. McClelland's achievement motivation theory is yet another content theory. The theory posits that individuals are motivated by three needs – need for achievement, need for power, and need for affiliation. Of the three, need for achievement has a greater significance.

Process theories include vroom's – expectancy approach, Adam's equity theory and Porter and Lawler's performance-satisfaction model. For Vroom, motivation is the product of three variables – valence, expectancy and instrumentality. The Adams' Equity (1965) Theory model extends beyond the individual self, and incorporates influence and comparison of other people's situations. The performance-satisfaction model of Porter and Lawler postulates that valence and expectancy lead to effort.

REVIEW OF LITERATURE

A large volume of research has been carried out in this theory. Few studies conducted on this theory are as follows. Dayal and Saiyadain (1970) collected data on 20 technical, and 20 non-technical personnel with work experience ranging from one to ten years. They found sufficient evidence to support the motivation-Hygiene Theory. Partial support to the theory comes from another study conducted by Pestonjee and Basu (1972). A comparative study in motivations of Indian executives was conducted with the help of a job satisfaction questionnaire. The results showed that motivators were found to contribute signficantly more towards satisfaction than hygiene in the public sector group. In the private sector group motivators contributed significantly towards the feeling of dissatisfaction than hygiene. Another study that shows the inapplicability of motivaton-hygiene theory was conducted by Agarwa (1978). Basically, he found that the percentages of satisfying and dissatisfying incidents among both the motivators and hygiene factors were more or less similar. Nirmala (1985) collected data on 104 junior and middle-level executives of a public sector unit. It is found that the relation with colleagues, promotion and monetary benefits were pointed out as most satisfying. Recognition, freedom and scope for innovation were ranked as the bottom three factors. Pandey (1997) collected data on 157 rail drivers. His results showed that affiliation topped the list followed by dependence, influence, extension, achievement and control.

The study of a group of supervisors in utility industry substantially confirms the findings of Herzberg (Schwartz et al 1963). Another study of scientists, engineers, manufacturing supervisors, hourly technicians and female assemblers (Myers) tends to confirm the results and theories from Herzberg's study. In this study there are differences among the various groups of individuals about the relative importance of various satisfiers and dis-satisfiers. In a study (Richard and Daphne 1966) it has been found that women employees perceive informal relationship with their fellow employees as motivational factor. In the study by Sawlapurkar (1968) of middle level managers, it was found that for the managers some of the maintenance factors such as job security, boss, company working conditions etc were satisfiers and motivating factors. In the study by Lahiri & Srivastava (1967) of middle level managers, responsibility, domestic life, accomplishment, job and the utilisation of abilities on the job were found to be motivational factors.

Thousands of the published research articles and dissertations report that job satisfaction is related to performance, productivity, organizational commitment, retention and turnover of the employees. Job satisfaction is regarded as a vital factor in almost all the Industries. Job satisfaction is an attitude which is formed when an employee takes into account his feelings, behaviours and beliefs of the job. Locke (1976) has defined job satisfaction as a pleasurable emotional state which results from the appraisal of one's job experiences. Porter, Lawler and Hackman (1975) have noted that the feeling of job satisfaction is realized by the difference between the amount of valued outcome that an employee obtains and the amount of outcome he feels he should receive. The biggest prelude to the study regarding job satisfaction was Hawthorne studies. In these studies (1924-1933) the researchers attempted to explore the impact of illumination on the productivity of the workers. The studies concluded that the novel changes in work conditions temporarily improve the productivity (called Hawthorne Effect).

The elusive nature of the job satisfaction advanced the development of number of different theories. Few theories of job satisfaction include Affect theory (Locke, 1976), equity theory (Mowday, 1992), and two-factor theory (Herzberg, Mausner, & Snyderman, 1959). According to affect theory, job satisfaction is determined by a discrepancy between what an employee desires from the job and what he gets in the job. Further, the theory states that how much an employee values a given factor of job moderates how satisfied/dissatisfied he becomes when expectations are/aren't met. Equity theory states that employees compare their inputs-outcomes ratios with the inputs-outcomes ratios of the other employees. If an employee perceives the ratio to be equal to those of relevant others then he perceives that justice prevails and a state of equity exists. However when the ratio is perceived unequal then inequity exists leading to the feelings of under-rewarded or over-rewarded. Perceptions of the equity are linked to job satisfaction, whereby the perceptions of inequity are related to job dissatisfaction. The two-factor theory of job satisfaction is credited with propelling and advancing research on job satisfaction (Steers & Porter, 1992). The premise of two-factor theory (Herzberg et al., 1959) is that job satisfaction and dissatisfaction are related to distinct job factors. The researchers theorized that the determinants of the job satisfaction are the factors which are related to the content of the job such as work itself, advancement, responsibility, achievement and recognition. The sources of job dissatisfaction are the factors which are linked to context of the job such as supervision, compensation, interpersonal relations, working conditions, and policy and administration.

Numerous studies have been conducted to replicate the findings of Herzberg et al. (1959) but to date there is no clear dismissal or support of the theory. Generally the findings of the surveys conducted on salespersons are not in agreement to two-factor theory however, few individual results do support it (Berl & Williamson, 1984; Winer & Schiff, 1980; Shipley & Kiely, 1988). Kapoor 1967 & Vaid 1968 indicated that Adequate earnings, housing, job security, opportunity for advancement and work group as top five factors contributing to job satisfaction. Although researchers have investigated job satisfaction in diverse range of the cultures, participants and occupation, yet a few of them attempted to describe the variability in overall level of job satisfaction by a linear relationship of motivator and hygiene factors. Lal and Bhardwaj (1981) found that what satisfied employees cannot be uniformly attributed to all classes of employees. Apparently people at various levels in organizations value different factors contributing to their satisfaction.

NEED FOR THE STUDY

Every business manager that wishes to achieve a high performance must influence the factors that motivate employees to higher levels of productivity. 'What motivates employees differs given the context in which the people work'. Managers in the particular sector need to identify the factors motivating the employees to accomplish the organizational and individual goals. In the last two decades, the Indian IT industry has contributed significantly to Indian economic growth in terms of GDP, foreign exchange earnings and employment generation. IT has speed up the structural transformation in different areas in the economic, social and cultural life in Indian economy. A society with a well-educated, technology-literate population is more likely to attract and sustain new businesses. Assuming that IT and non-IT firms in India differ with each other in terms of various Human Resources Practices and Policies particularly Motivational Factors, the study titled "A Study On Factors That Motivate IT And Non-IT Sector Employees: A Comparison" has been initiated to know whether the factors motivating the employees differ from sector to sector.

OBJECTIVES OF THE STUDY

The objective of the study is to describe the importance of the motivating factors to the employees in IT and non-IT sector. This study was conducted using IT and Non-IT sector employees to compare the two work environments and note differences in preference over job satisfaction factors. For this purpose, Two-

Factor Herzberg motivation theory has been used. The study investigated twelve factors include: work itself, recognition, advancement, responsibility, growth, achievement, boss, personal life, status job, work conditions, company policy and job security.

METHODOLOGY

The research method design employed is descriptive survey method, target population of study includes employees in IT and non-IT sector and sample size comprised of 200 employees in both the sectors situated in India. Data was collected through the questionnaire. The questionnaires have been distributed and the respondents have been asked to rank the importance of factors that motivated them in doing their job based on the scale 5 -very Important , 4-Important, 3-Neutral, 2- less important, 1- not important. To study the responses on rankings towards motivational factors by both sectors, means and percentages have been calculated. Higher the mean, higher is the rank and vice versa. To find out how far the rankings of both the sector employees for motivational factors go together, Spearman rank-order correlation is calculated.

RESULTS AND DISCUSSION

This paper has made an attempt to study the motivational factors the employees among the IT and non-IT sector rank as important. The respondents have been asked to give the rankings over the Herzberg's two-factor theory of motivational factors which motivates them and makes them to contribute highly towards the organization. In an attempt to answer the question "what motivates employees?,"the responses of the IT and non-IT sector employees to the ranking of expectations were collected and presented in fig-1 and fig.2. Fig.1 shows the factors motivating IT employees under study and fig.2 shows the factors motivating the non-IT sector employees. The study produced different results between the IT and non-IT sector respondents. The ranked order of motivating factors by IT sector respondents were (fig.1): (a) Opportunity to grow (Growth), (b) Work itself, (c) Job responsibility, (d) Opportunity for Advancement, (e) Recognition, (f) Personal Life, (g) Status Job, (h) Job Security, (i) Working conditions, (j) Company policies and procedures, (k) Good Boss, and (l) Achievement. The non-IT sector responses were slightly different from the IT sector responses. The ranked order of motivating factors for non-IT sector respondents were (fig.2): (a) Personal life, (b) Work itself, (c) Status job, (d) Job security, (e) Opportunity for advancement, (f) Working conditions, (g) Company policies and procedures, (h) Good Boss, (i) Achievement, (j) Recognition, (k) Opportunity to Grow, and (l) Job responsibility.

Results in fig.1 indicate that IT sector employees ranked the factor 'Opportunity to Grow (Growth)' with mean value 4.73, percentage score 93 (fig.1) as very important compared, while non-IT sector employees ranked the factor 'Personal life' with mean value of 4.48, percentage score 87 (fig.2). The results indicate that the employees of both the sectors under study have given second importance to "Work Itself". However, IT sector employees expressed lower value to the factors 'Achievement', 'Good Boss' and 'Company policies and procedures'. While the non-sector employees expressed lower value to the factors 'Job responsibility', 'Opportunity to grow' and 'Recognition'.

A comparison of the results of both the sectors (fig.1 and fig.2), show that the IT sector employees have ranked the motivators like Growth (mean 4.73), Work itself (mean 4.63), Job responsibility (mean 4.54), Opportunity for Advancement (mean 4.49), and recognition (4.46) as the most important motivational factors. While non-IT sector employees have ranked personal life, work itself, status job, job security and, opportunity for advancement as the most important motivational factors. Herzberg, Mausner, & Snyderman (1959) stated that to the degree that motivators are present in a job, motivation will occur. The absence of motivators does not lead to dissatisfaction. Further, they stated that to the degree that hygienes are absent from a job, dissatisfaction will occur. When present, hygienes prevent dissatisfaction, but do not lead to satisfaction. In our example, the lack of challenging and interesting job and opportunity for advancement (motivators) for the non-IT sector employees would not lead to dissatisfaction. Lack of good personal life, status job and job security (hygiene factors) may lead to job satisfaction. Similarily lack of growth, challenging job, responsibility, advancement and recognition (motivators) for IT sector employees would not lead to dissatisfaction. Employees will be motivated when they do challenging and interesting job, have an opportunity to grow, take the job responsibility, have an opportunity for advancement and recognized by giving monetary and non-monetary rewards for their contribution towards the job and the organization and but will not necessarily be motivated by good personal life, status job and job security.

In order to find out how far the rankings for different motivational factors by the IT and non-IT sector employees go together, rank correlation coefficient has been calculated and presented in table-1. In the table, rankings are used to compare the responses of IT sample with non-IT sample. The value of this coefficient lies between +1 and -1. When R is + 1, there is complete agreement in the order of the ranks and the ranks are in the same direction. When R is -1, there is complete agreement in the order of the ranks and they are in opposite directions.

The calculated coefficient of rank correlation is -0.042. This shows that the rankings of these IT and non-IT sector employees are not close as far as their preferences on motivational factors are concerned. Employees of both the sectors indicate that the ranking of the motivational factors is not similar, suggesting that people belonging to different sectors and the environment experience differences in indicating motivators and hygiene factors. Thus we find that there is a negative correlation in the ranks assigned by the employees of two sectors.

This study has been compared with the results of the original study by Herzberg and others (1959). IT employees drawn for study indicate that the motivators except achievement are the more interesting motivational factors similar to that of original study conducted by Herzberg and others, suggesting that people belonging to different professions and countries experience similarity in indicating motivators like recognition, work itself, responsibility, advancement, and growth as the most important motivational factors. As far as satisfiers are concerned, this study and original study ranked motivators more important than hygiene factors, but these two studies varied in their rankings towards the motivators. For example, growth is ranked as the first important motivator in this study, but ranked as sixth motivator by Herzberg. Achievement was ranked as one of the most important motivational factors by Herzberg study, but was ranked least among twelve factors in this study. Though the rankings varied but there is a positive correlation between the study on IT employees and the original study. Non-IT sector employees drawn for study indicate that personal life, work itself, status job, job security and opportunity for advancement are the important motivational factors. Some of the factors considered as 'Hygiene factors" by Herzberg (personal life, status job, and job security) are considered by non-IT employees to be "motivators". The factors like achievement, recognition, growth, and job responsibility are considered as least motivating factors in this study, which are motivators according to Herzberg study. Thus it is found that these two studies are in opposite directions in the rankings to motivational factors, suggesting that people belonging to different professions experience differences in indicating the motivational factors. Thus it can concluded that the factors motivating employees depends upon the job, environment in which they work, employee need, management support, organization in which they work and the culture prevailing in the organization and the country.

The rankings of motivational factors in this study have been compared with related research. Growth was ranked first by IT sector employees in this research, but was ranked fourth by Narain (1971) and fifth in Singhal and Upadhya (1972). Personal life was ranked first motivational factor by non-IT sector employees in this study and by Pestojee and Basu (1972), and Rao and Ganguli (1971), but was ranked third by Kumar, Singh & Verma (1981), fourth by Personjee & asu (1972). A study of technical supervisors, conducted by Dayal and Saiyadain (1970), yielded the following ranked order of motivational factors: achievement, work itself, recognition, responsibility and inter-personal relations; and study of non-technical supervisors yielded the ranking as achievement, work itself, recognition, advancement, and responsibility. In this study and the study by , work Dayal and Saiyadain (1970), work-itself ranked as the second most important motivational factor, but was ranked third by Rao (1970) and fifth by Lal and Bhardwaj (1981). The variations in these research findings support the idea that what motivates employees differs depending upon the need of the employees, context in which they work, type of organization etc. After analyzing this study and the various related studies, it is clear that employees rank motivators like responsibility, recognition, advancement, achievement and work itself as the top five motivational factors by most of the studies undertaken and the factors like salary, job security, working conditions, inter-personal relations, growth and personal life have been ranked among the top five motivational factors by very few studies. It shows that they are more interested to get motivated by fulfilling the motivators.

IMPLICATIONS AND SUGGESTIONS

For an organisation to be effectiveness, it must tackle the motivational problems involved in stimulating people's desires to be members of the organisation and to be productive workers. IT sector employees valued 'opportunity to grow' and 'work' as highly important than other factors. The management should therefore, provide a work climate in which everyone has a chance to grow and mature as an individual and as a member of a group. Non-IT sector employees preferred the factors 'Personal life' and 'Work itself' over other factors. It indicates that the employees would like to prioritize between 'Work' and 'Life'. Current and future entrants to the job market are also placing a higher priority on work-life balance and flexibility. Work-life balance is becoming a major challenge to HR manager as more women are taking up jobs to add to finances of their families or to become careerists. Organisations should undertake work-life balancing programmes, as in their absence people will be exposed to stress, depression and anxiety on one hand and lead to employee exit, absentism, and low productivity on the other hand.

The factor 'Work' has been ranked second by both the sector employees. The employees are expecting the job to be more interesting and challenging. This can be done by techniques like job loading, job enrichment etc. There are two techniques in job loading to make the job more interesting and challenging: horizontal job loading and vertical job loading. A horizontal job loading assumes that if employees are given more work at the same level at which they are currently performing, they will be motivated to work harder and also be more satisfied with their work. In a vertical job loading, changes in job include larger areas of responsibility. Jobs are restructured so that they will become intrinsically more interesting. The worker is motivated because his job is more challenging and more meaningful. He is given as much responsibility as possible, and is encouraged to be accountable for his work with little supervision. Also through job enrichment, the job is made more interesting and challenging as it implies a deliberate upgrading of responsibility, scope and challenge.

Recognition is ranked as one among the top motivators by IT employees. When an employee does his work well, he wants it to be praised and recognized by his boss and fellow-workers. It may be shown in the form of praise, promotion, assigning more interesting tasks, awards, etc. Status job is ranked as fourth by non-IT sector employees, therefore the management should try to satisfy these needs by establishing status symbols and distinctions in its organization to satisfy social and egoistic needs of an employee. For the employees to whom job security is important motivator, job security may be provided either by properly regularizing the amount of work that must be done by a fixing of the hours of work and by finding out work for those who have been rendered surplus because of changes in techniques of production or lines of production or recessionary conditions in the market, or by adoption of schemes of rationalization, modernization and automation.

On the other hand, the two factors 'achievement' and 'Boss' have been prioritized as low compared to other factors. In this competitive environment, without good superiors and their support to subordinates, organizations will suffer immensely. Management need to take care of superior and subordinate relationship which leads to individual and organisational goals. The factor 'Job responsibility' has been valued very low by the non-IT sector employees. This may be because of monotonous and uninteresting jobs assigned to the employees. There is a need for the management to assign the jobs considering the inputs and the interest of the individuals to take up particular job and also to take the steps towards the motivation so that the individuals show willingness to accept the responsibility. Job descriptions are essential for all people in work. Without a job description it is not possible for a person to properly commit to, or be held accountable for, a role. Job descriptions improve an organisation's ability to manage people and roles. Apart from the above factors, others factors should also be considered in order to reduce dissatisfaction and enhance satisfaction in the job and the organisation.

CONCLUSION

Productivity in an organization does not only depend on the ability to do but also will to do. An attempt has been made to study the preferences for job satisfaction factors among IT and non-IT sectors. It is found that IT sector employees preferred motivators than the hygiene factors, while non-IT sector employees preferred motivators as well hygiene factors. This indicates that the IT employees would like to enhance the job satisfaction by emphasizing more on motivators. Findings suggest Growth and Work are the key factors to higher employee motivation for IT sector employees, while Personal life and work are key to higher employee motivation for non-IT sector employees. There is a negative correlation in the ranks assigned by the employees of two sectors. Comparison of the study with original study concluded that the motivational factors depend upon the context in which the people work. For an organisation to be effectiveness, it must tackle the motivational problems involved in stimulating people's desires to be members of the organisation and to be productive workers. The techniques like job enlargement, job loading, etc can be implemented in an organization to see the high productive employees.

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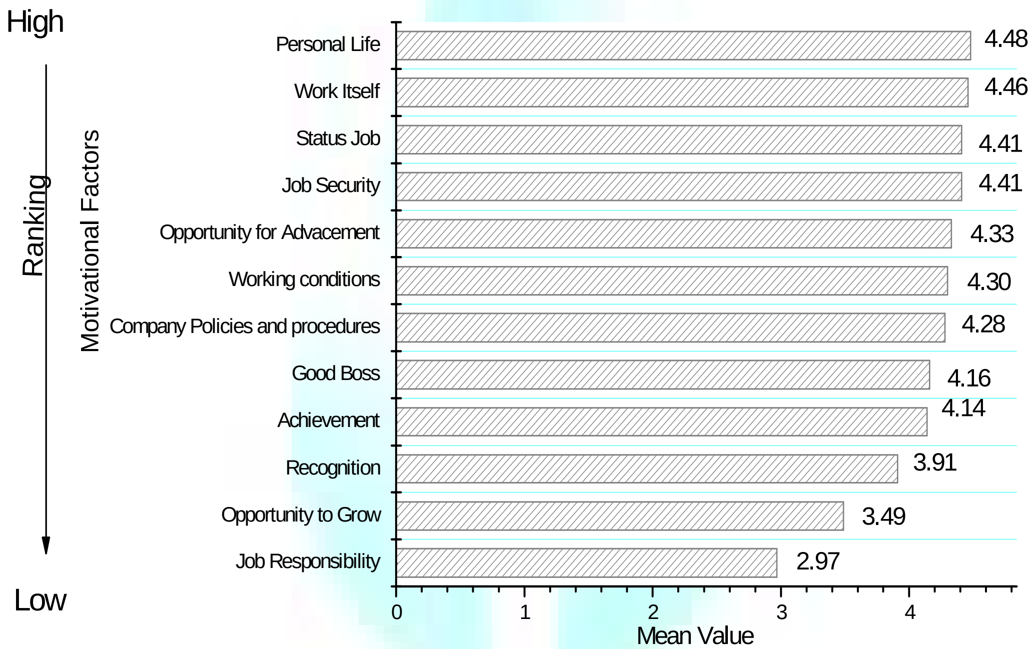
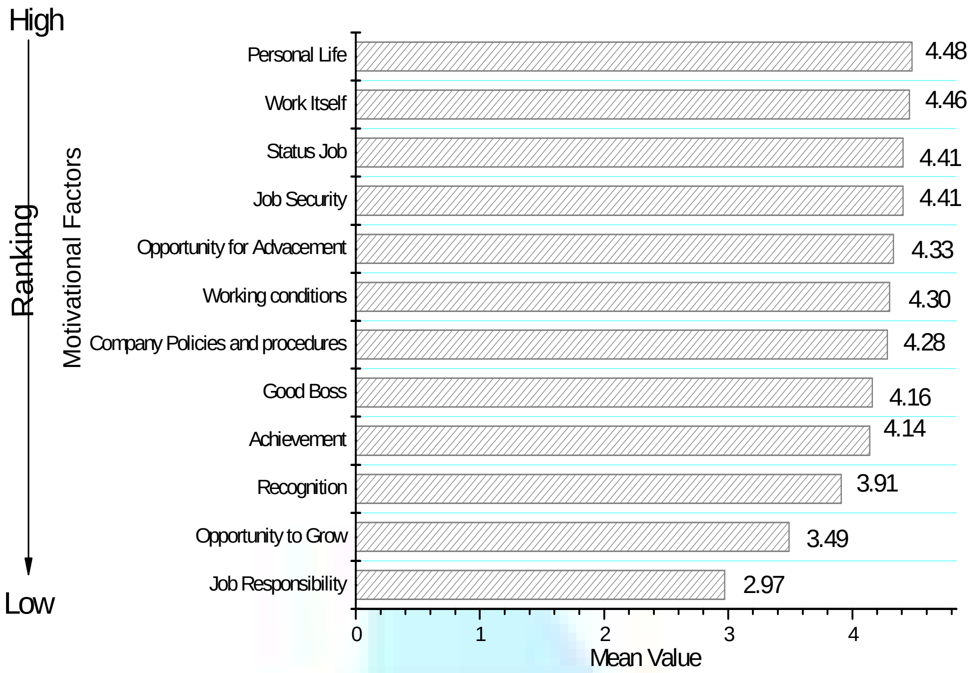
FIGURES



(Fig.1) Factors motivating non-IT sector employees



(Fig.2) Factors motivating non-IT sector employees

TABLE

Table-1: CALCULATION OF RANK CORRELATION COEEFICIENT

Factors	**Rank by IT Sector Employees R_1**	**Rank by Non-IT Sector Employees R_2**	**$(R_1\text{-}R_2)^2$**
Achievement	12	9	9
Recognition	5	10	25
Work itself	2	2	0
Job Responsibility	3	12	81
Advancement	4	5	1
Growth	1	11	100
Company Policies	10	7	9
Working Conditions	9	6	9
Interpersonal Relationship	11	8	9
Status Job	7	3	16
Job Security	8	4	16
Personal Life	6	1	25
N=12		**$\sum D^2$=300**	

The calculated rank correlation coefficient is **- 0.042**

A STUDY ON WCM AND PROFITABILITY AFFILIATION

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ABSTRACT

Working capital management is important part in firm financial management decision. An optimal working capital management is expected to contribute positively to the creation of firm value. To reach optimal working capital management firm manager should control the trade off between profitability and liquidity accurately. The purpose of this study is to investigate the relationship between working capital management based on working capital cycle and firm profitability. This study is used Public Enterprises data of 227 firms for the period of 2000-2008 that consist of six different financial sectors which are listed in India. The coefficient results of Pooled Ordinary Least Squares regression analysis provide a strong negative significant relationship between working capital cycle and firm profitability. This reveals that reducing working capital cycle period results to profitability increase. Thus, in purpose to create shareholder value, firm manager should concern on curtail of working capital cycle till carry out optimal level.

KEYWORDS
Working capital ratios, Indian public sector enterprises, correlation, multiple regression analysis.

INTRODUCTION

Working capital is an important issue during financial decision making since its being a part of investment in asset that requires appropriate financing investment. However, working capital always being ignore in financial decision making since it involve investment and financing in short term period. It also acts as a control in financial performance, since it does not contribute to return on equity. Though, it should be critical for to a firm to sustain their short term investment since it will ensure the ability of firm in longer period.

The crucial part in working capital management is required maintaining its liquidity in day-to-day operation to ensure its smooth running and meets its obligation. However, this is not a simple task since managers must make sure that business operation is running in efficient and profitable manner. There are the possibilities of divergence of current asset and current liability during this process. If this happens and firm's manager cannot manage it properly then it will affect firm's growth and profitability. This will further lead to financial distress and finally firms can go bankrupt.

In traditional view of relationship between working capital cycle and profitability is ceteris paribus. The shorter the working capital cycle, the better the firm's profitability. This shows that less of time a money tied up in current asset and less external financing. At the same time, the longer working capital cycle will hurt firm's probability. The reason is that firm having low liquidity that would affect firm's risk. However, the firm has higher level of account receivable due to the generous trade credit policy it would result to longer working capital cycle. In this case, the longer working capital cycle will increase profitability. Thus, the traditional view cannot be applied to all circumstances.

Dilemma in working capital management is to achieve desired trade off between liquidity and profitability, that is, investment with more risk will result to more return. Thus, firms with high liquidity of working capital may have low risk then low profitability. On the contrary, firm that has low liquidity of working capital, facing high risk results to high profitability. The issue here is in managing working capital, firm must take into consideration all the items in both accounts and try to balance the risk and return.

Working capital management and its outcomes on profitability is focused in this study. Specific objectives are to examine a relationship between working capital management and profitability over a nine years period, to establish a relationship between the two objectives of liquidity and profitability of the firms and to investigate the relationship between debt used by the a firm and its profitability

Additionally, the results of this study would provide firm managers better insights on how to create efficient working capital management that have ability to maximize firm's value. As a result, it will build up confidence in investor to invest in that firm. Further, the confidence of investors to invest in India will influence the growth of economic. The results of this study would also assist policy-makers to implement new sets of policies regarding the working capital market in India to ensure continuous economic growth.

LITERATURE REVIEW

In spite of such a greatcoat of liquidity management, it is strange that so long it could not draw towards as much mindfulness of the researchers in India as it desires. A brief review of the different pains of research in the field is attempted in the following paragraphs.

The National Council of Applied Economic Research (NCAER), New Delhi, was the first to present the volume: Structure of Working Capital in 1966 with special reference to three industries, namely, fertilisers, cement and sugar. This study was mainly devoted to the analysis of composition of the working capital in these industries for the period from 1959 to 1963. However, NCAER appear to have failed to put into sharp focus on various problems involved in the management of different components of working capital.

Dr. Ram Kumar Mishra made another study at the University of Rajasthan under the title "Problems of Working Capital" with special reference to selected public sector undertakings in India, Bombay, Somaiya Publications Pvt. Ltd., 1975. The analysis and findings of this research relate to the functioning of a chosen sample of six large public sector enterprises during the period 1960-61 to 1967-68. No doubt, the basic issues outlined in Dr. Mishra's study and the findings therein have currency and relevance to many of the units in the public sector even today, but due to the functional and structural changes that public sector enterprises have witnessed in the post 1968 era, a repeated effort on a different samples is called for to bring the prescriptions up-to-date.

The study of Grablowsky in 1976; Walker and Petty in 1978 and Deakins in 2001 have showed a significant relationship between various success measures and the employment of formal working capital policies and procedures. Managing cash flow and cash conversion cycle is a critical component of overall financial management for all firms, especially those who are capital constrained and more reliant on short-term sources of finance.

Dr. K. Rajeshwar Rao in his Ph.D. thesis under Kakatiya University, 1980 "Working Capital Problem of Public Enterprises in India (with special reference to selected undertakings)", have enquired and suggested that a well developed working capital management technique which is a sine-qua-non for the liquidity and profitability did not exist in the public enterprises.

The study of (Shin & Soenen, 1998) consistent with later study on the same objective that done by (Deloof, 2003) by using sample of 1000 large non-financial firms for the period of 1992-1996. However, he used trade credit policy and inventory policy are measured by number of days accounts receivable, accounts payable and inventories, and the cash conversion cycle as a comprehensive measure of working capital management. He founds a significant negative relation between gross operating income and the number of days accounts receivable, inventories and accounts payable. Thus, he suggests that managers can create value for their shareholders by reducing the number of days accounts receivable and inventories to a reasonable minimum. He also suggests that less profitable firms wait longer to pay their bills.

In other study, (Lyroudi & Lazaridis, 2000) use food industry Greek to examined the Working Capital cycle (WCC) as a liquidity indicator of the firms and tries to determine its relationship with the current and the quick ratios, with its component variables, and investigates the implications of the working capital cycle in terms of profitability, indebtedness and firm size. The results of their study indicate that there is a significant positive relationship between the working capital cycle and the traditional liquidity measures of current and quick ratios. The working capital cycle also positively related to the return on assets and the net profit margin but had no linear relationship with the leverage ratios. Conversely, the current and quick ratios had negative relationship with the debt to equity ratio, and a positive one with the times interest earned ratio. Finally, there is no difference between the liquidity ratios of large and small firms.

The conclusive sum of this retrospective review of relevant literature produced till date on the offered subject reveals wide room for the validity and originates of this work and reflects some decisive evidences that affirm its viability, as may be marked here it. Nor has any previous research examined the optimal level of working capital key components through working capital cycle and the existence of working capital management and profitability relationship companies. No study has incorporated in this fashion before the present one.

OBJECTIVES OF THE STUDY

The main object of the present study is to examine the importance of the management of working capital in terms of short-term liquidity in selected public sector enterprises. More specifically it seeks to dwells upon mainly the following issues:

To observe the working capital management of the selected enterprises under the study;

To search the working capital management-profitability relationship based on sophisticated statistical techniques.

DATA AND VARIABLES

Data of this study is obtained from Public Enterprises Survey which consists of financial statements public enterprises in India. The sample was constructed as follows. Firms must be available during study period of year 2000 to year 2008. Because of the specific nature of their activities, firms in financial sector are excluded from the sample. Some firms with missing data were also removed. Out of 227 firms, 60 firms were taken for the study for 2000-2008 periods. Table 1 shows the sample distribution by type of financial sector. Numbers of public enterprises for each financial sector are not balance.

TABLE 1: SAMPLE DISTRIBUTION FOR YEAR 2000-2008

Financial Sector	No. of Selected Companies
Steel (S)	7
Petroleum (P)	14
Chemical and Pharmaceuticals (CP)	15
Consumer Goods (CG)	10
Textiles (T)	10
Heavy Engineering (HE)	4
Total	60

In order to analyze the effects of working capital management on the firm's profitability, earning before interest and taxes as measure of profitability was used as the dependent variable. With regards to the independent variables, working capital management was measured by working capital cycle (WCC). WCC focuses on the length of time between when a firm makes payment and when firm receives cash inflow. The lower the value is better due to reveal that firm has high liquidity which easily converts its short term investment in current asset to cash. However, longer value of WCC indicate greater investment in current assets, and hence the greater the need for financing of current assets. WCC is calculated as the age of accounts receivable (AOR) plus the age of inventory (AOI) minus the age of accounts payable (AOP).

In this respect, AOR is calculated as accounts receivable/ [sales/365]. AOR represents the number of days that a firm takes to collect payments from its customer. We calculated the AOI as inventories/ [cost of sales/365]. This variable reflects the average number of days of stock held by a firm. Longer storage times represent a greater investment in inventory for a particular level of operations. AOP is calculated by accounts payable/ [cost of sales/365]. This measure indicates the average time firm takes to pay their suppliers. The higher the value, the longer firms take to settle their payment commitments to their suppliers.

Control variables are introduced as the growth in firm sales and its leverage. Sales growth (SG) is calculated by (Sales at the end – Sales at the opening)/Sales at the opening. The leverage (DR) measures by debt ratio as calculated by total debt over total asset. In addition current ratio (CR) which calculated by current asset over current liability, was included as one of independent variable. The reason is current ratio always been used as measure of corporate liquidity conventionally.

TABLE 2: MEANS AND STANDARD DEVIATION FOR THE SELECTED VARIABLES

VARIABLES		FINANCIAL SECTORS						
		Total	S	P	CP	CG	T	HE
EBIT	Mean	0.06	0.03	0.07	0.05	0.06	0.03	0.08
	Std Dev.	0.09	0.07	0.10	0.11	0.0	0.07	0.08
WCC	Mean	1.51	3.17	1.08	1.40	0.67	4.55	1.21
	Std Dev.	3.26	4.06	1.86	2.49	3.44	6.91	2.63
CR	Mean	2.14	1.69	2.10	1.10	3.53	2.55	1.72
	Std Dev.	2.83	1.17	3.60	2.22	4.52	2.51	1.79
DR	Mean	0.30	0.39	0.27	0.35	0.17	0.18	0.35
	Std Dev.	0.36	0.19	0.24	0.54	0.22	0.17	0.25
SG	Mean	0.16	0.17	0.10	0.15	0.21	0.14	0.18
	Std Dev.	1.19	0.67	0.54	1.32	0.94	0.54	1.62

Table 2 gives the descriptive statistics for variables that used in this study. The average profitability (EBIT) for the whole sample is 6 per cent with Heavy Engineering (HE) sector having the highest profit of 8 per cent and the lowest is Textiles (T) sector with 3 per cent. WCC is working capital cycle divide by 100. Sector Consumer Goods (CG) is the lowest WCC with 67 days and 344 days standard deviation. The average of current ratio is 2.1 and the lowest is sector of

Steel (S) with 1.7. Due to the nature of business, Steel sector and Chemical and Pharmaceuticals (CP) have more than 35 per cent debt compare to total asset which 38.6 per cent and 35 per cent respectively. On average firms sales growth is 15 per cent and the least sale growth by firm in sector of Petroleum (P) with only 10 per cent.

RESULTS AND ANALYSIS

First, the relationship is examined between working capital cycle period and firm profitability. Next, a regression analysis is applied to a pooled sample and six financial sectors.

Correlation Analysis

Spearman's Correlation analysis is used to see the relationship between working capital management and profitability. If efficient working capital management increases profitability, one should expect a negative relationship between the measures of working capital management and profitability variable. Table 3 exhibit result of correlation coefficients and p-values are listed in parenthesis. The result shows a negative relationship between WCC and EBIT. This means that result is support the expectation that a working capital cycle (WCC) is associated with higher profitability. However, the current ratio is, positively related to profitability. This reveals that WCC is measuring liquidity differently from the conventional current ratio. Generally, traditional liquidity ratios such as current ratio have been understood that have lack in measuring the efficiency of the firm's working capital management.

TABLE 3: SPEARMAN CORRELATION COEFFICIENTS AND PROBABILITIES

Variables	EBIT	WCC	CR	DR	SG
EBIT	1.00 -----				
WCC	-0.27 (0.00)	1.00 -----			
CR	0.30 (0.00)	0.06 (0.02)	1.00 -----		
DR	-0.29 (0.00)	0.13 (0.00)	-0.65 (0.00)	1.00 -----	
SG	0.24 (0.00)	-0.19 (0.00)	0.07 (0.01)	-0.08 (0.001)	1.00 -----

Note: The *p*-value is given in parentheses

Regression Analysis

To further investigate the impact of working capital management on profitability, the model used for the regressions analysis is expressed in the general form as given in equation below:

$EBIT = b_0 + b_1 WCC_t + b_2\, \text{Current Ratio}_t + b_3\, \text{Debt Ratio}_t + b_4\, \text{Sales Growth}_t$

The equation above is estimated using the regression-based framework Pooled Ordinary Least Squares (OLS) as employed by Shin & Soenon (1998). Model of this study differs by using WCC as a comprehensive measure of working capital management. The data set used for this part is pooled across firms and years, given a balanced panel data set of 1628 firm-year observations. This study is also estimated by fixed effect model. Where the fixed effects estimation assumes firm specific intercepts, which capture the effects of those variables that are particular to each firm and that are constant over time. In all regressions, standard errors are calculated using White's correction for heteroscedasticity.

TABLE 4: REGRESSION FOR PROFITABILITY ON WORKING CAPITAL CYCLE

Dependent		Panel A						
EBIT		Intercept	WCC	CR	DR	SG	R^2	Adj. R^2
All Sectors	Pooled OLS	0.08 (0.00)	-0.005 (0.00)	0.00 (0.56)	-0.05 (0.00)	0.002 (0.39)	0.07	0.07
	Fixed Effect	0.07 (0.00)	-0.003 (0.003)	0.00 (0.12)	-0.03 (0.00)	0.00 (0.91)	0.50	0.44

Note: The *p*-value is given in parentheses

The regression results are present in Table 4. The results offer strong evidence of a negative relationship between the working capital cycle and firm profitability. The negative regression coefficient for WCC is highly significant (p-value = 0.000 & 0.0046) for both regression implies that a firm with a relatively shorter period of cash conversion cycle is more profitable. Therefore, reducing the firm's WCC is potential way for the firm to create additional shareholder value.

For conventional measure of liquidity that current ratio, it positively related to profitability. This relationship that is not consistent to study Shin & Soenon (1998). However the positive relationship is not significant. Furthermore, current year profitability is negatively associated with current year's leverage which is measure by debt ratio. Both of debt ratio coefficients are also exhibit the highly significant with p-value= 0.0001 and 0.0012 respectively. For the sales growth, evidence is positively related to profitability. This is consistent with often argument that growth a part of feature for firm profitability and the creation of shareholder value. But, this argument inappropriate to this study since the positive relationship is not significant at all.

Analysis for Financial Sector

A significant industry effect subsists on a firm's investment in working capital is well recognized. One of the reason is due to no single policy is necessary optimal to all firm. To further investigate the impact of working capital management on firm profitability whether different in particular industry, the regression analyses are applied to each financial sector in the sample.

Table 5: Regression for Profitability on Financial Sectors

Dependent		Panel B						
EBIT		Intercept	WCC	CR	DR	SG	R^2	Adj. R^2
Steel (S)	Pooled OLS	0.084 (0.00)	-0.01 (0.00)	0.01 (0.07)	-0.15 (0.001)	0.02 (0.11)	0.41	0.38
	Fixed Effect	0.079 (0.003)	-0.01 (0.04)	0.004 (0.41)	-0.10 (0.09)	0.01 (0.24)	0.51	0.44
Petroleum (P)	Pooled OLS	0.14 (0.00)	-0.01 (0.00)	-0.001 (0.02)	-0.22 (0.00)	0.02 (0.03)	0.38	0.37
	Fixed Effect	0.12 (0.00)	-0.01 (0.23)	0.001 (0.42)	-0.16 (0.001)	0.01 (0.14)	0.70	0.66
Chemical and Pharmaceuticals (CP)	Pooled OLS	0.06 (0.00)	0.001 (0.32)	-0.002 (0.68)	-0.01 (0.07)	-0.002 (0.41)	0.01	0.003
	Fixed Effect	0.04 (0.001)	0.00 (0.90)	0.01 (0.14)	-0.01 (0.25)	-0.002 (0.37)	0.38	0.32
Consumer Goods (CG)	Pooled OLS	0.10 (0.00)	-0.003 (0.001)	-0.003 (0.00)	-0.14 (0.00)	0.01 (0.01)	0.21	0.20
	Fixed Effect	0.07 (0.00)	-0.00 (0.79)	-0.001 (0.01)	-0.04 (0.12)	0.01 (0.00)	0.61	0.56
Textiles (T)	Pooled OLS	0.03 (0.04)	-0.001 (0.00)	0.01 (0.00)	-0.04 (0.35)	0.01 (0.29)	0.15	0.11
	Fixed Effect	0.004 (0.79)	-0.003 (0.09)	0.01 (0.04)	0.10 (0.12)	0.01 (0.26)	0.40	0.32
Heavy Engineering (HE)	Pooled OLS	0.11 (0.00)	-0.01 (0.00)	0.01 (0.00)	-0.11 (0.00)	0.002 (0.28)	0.24	0.23
	Fixed Effect	0.11 (0.00)	-0.01 (0.00)	0.00 (0.07)	-0.07 (0.002)	-0.00 (0.70)	0.55	0.50

Note: The *p*-value is given in parentheses

Table 5 summarizes regression result between working capital management and profitability for each economic sector. It reveals that all economic sector relationship between WCC and EBIT is significantly negative except for Chemical & Pharmaceuticals for both regressions, while Petroleum and Consumer Goods for fixed effect regression. No significant between WCC and EBIT for both regression analysis for Chemical & Pharmaceuticals may cause by nature of business that depend more on long term assets compare to short term assets that have higher liquidity.

Consumer Goods are the only financial sector that has significantly negative relationship between profitability and current ratio for both regressions. As well, Petroleum also significantly negative evident by OLS. Besides, Textiles sector has highly positive significant between current ratio and profitability with p-value = 0.00. This is may cause by the having the lowest profitability, 3.1% compare to other sectors.

Furthermore, no significant relationship between debt ratio and profitability is found for Textiles. However, highly negative significant between debt ratio and profitability is found in sector Petroleum and Heavy Engineering. These shows the both sector have fully utilize the firm leverage to generate firm profit. The evident shows in Table 3 that the profit of Petroleum and Heavy Engineering are higher than average.

It is probably of all sectors that not provide any significant relationship between sales growth and profitability thus results to insignificant relationship result for across industries. However, Consumer Goods provide strong evident of a positive association between sales growth and profitability (p-value = 0.01 & 0.00 respectively for both regression). This may results of the lowest WCC of this sector which is 67 days.

CONCLUSION

Working capital management is important part in firm financial management decision. The ability of the firm to continuously operate in longer period is depends on how they deal with investment in working capital management. The optimal of working capital management is could be achieve by firm that manage the trade off between profitability and liquidity. The purpose of this study is to investigate the relationship between working capital management and firm profitability. Working capital cycle is used as measure of working capital management. Results of this study found that working capital cycle are significantly negative associated to the firm profitability. Thus, firm manger should concern on reduction of working capital cycle period in purpose of creation shareholder wealth.

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DO GENDER DIFFERENCES IMPACT PROFESSIONAL DEVELOPMENT?

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ABSTRACT

The Main aim of this study is to find out the influence of Gender on Professional career planning in students at PG level study. This study reveals the facts that gender influence the career planning of students for professional study. This research shows how family background and educational background of students influence the professional career planning. This research explores that how female students are more aware & sincere about their professional career planning than male students? How the Institution influences to students for professional career planning and choosing the career path by guidance of teachers/seniors?

KEYWORDS

Career, Gender, Professional, Students, Planning.

INTRODUCTION

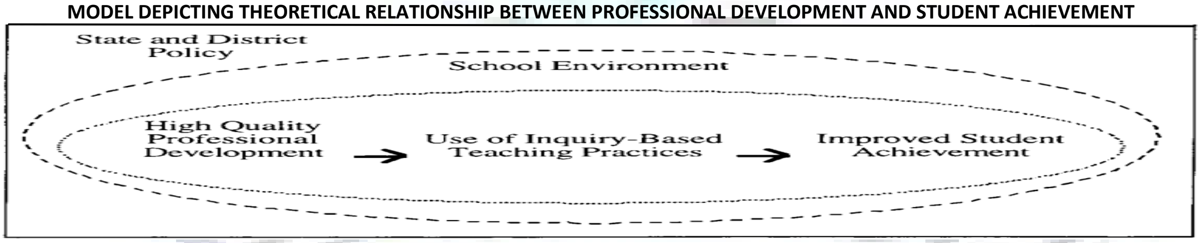
Careers are complex and women's careers are additionally complex owing to the traditional economic roles ascribed to men and women. Career theory and notions of career success were built around the notion of white men following a particular career path and so rooted in male values. It has therefore been difficult to understand the careers of women in these contexts. Historically, men and women have not been on a level playing field when it comes to career choice and career development, as the game being played has followed men's rules. However, the notion of careers has changed over time and recognition is now given to the role of gender in careers, as well as career systems being realigned to fit the changing economic climate. The traditional linear career, while not dead, has become just one of the different ways that people might think about their careers.

Men dominate all levels of the management hierarchy, and the majority of branch level managers are men. Some organizations (Charity retailing) offer a slightly different scenario. While a male management hierarchy exists beyond branch level, the majority of charity shop managers have traditionally been, and still are women. While it is no surprise that women occupied traditional unpaid managerial posts, it appears that the feminisation of the position remains despite the changing nature and concomitant professionalization of the sector. Possible reasons for this are the perceived status of the job and the poor salary that accompanies it. Much of the product sold in charity shops is donated second hand goods (although many of the larger charities now also sell new goods). The sector relies on a voluntary workforce, many of whom have special needs while the customer base may also have special needs. There are misguided external perceptions of the role of charity shop management, and as such the sector has been accredited as having a poor image, and little status is accorded to the role of charity shop manager.

THE LOGIC OF PROFESSIONAL DEVELOPMENT

The implicit logic of focusing on professional development as a means of improving student achievement is that high quality professional development will produce superior teaching in classrooms, which will, in turn, translate into higher level of student achievement

MODEL DEPICTING THEORETICAL RELATIONSHIP BETWEEN PROFESSIONAL DEVELOPMENT AND STUDENT ACHIEVEMENT



APPROACHES TO PROFESSIONAL DEVELOPMENT

In a broad sense, professional development may include *formal* types of vocational education, typically post-secondary or poly-technical training leading to qualification or credential required to obtain or retain employment. Professional development may also come in the form of pre-service or in-service professional development programs. These programs may be formal, or informal, group or individualized. Individuals may pursue professional development independently, or programs may be offered by human resource departments. Professional development on the job may develop or enhance process skills, sometimes referred to as leadership skills, as well as task skills. Some examples for process skills are 'effectiveness skills', 'team functioning skills', and 'systems thinking skills'.

Professional development opportunities can range from a single workshop to a semester-long academic course, to services offered by a medley of different professional development providers and varying widely with respect to the philosophy, content, and format of the learning experiences. Some examples of approaches to professional development include:

- **Case Study Method** - The case method is a teaching approach that consists in presenting the students with a case, putting them in the role of a decision maker facing a problem (Hammond 1976)
- **Consultation** - to assist an individual or group of individuals to clarify and address immediate concerns by following a systematic problem-solving process.
- **Coaching** - to enhance a person's competencies in a specific skill area by providing a process of observation, reflection, and action.

- **Communities of Practice** - to improve professional practice by engaging in shared inquiry and learning with people who have a common goal
- **Lesson Study** - to solve practical dilemmas related to intervention or instruction through participation with other professionals in systematically examining practice
- **Mentoring** - to promote an individual's awareness and refinement of his or her own professional development by providing and recommending structured opportunities for reflection and observation
- **Reflective Supervision** - to support, develop, and ultimately evaluate the performance of employees through a process of inquiry that encourages their understanding and articulation of the rationale for their own practices
- **Technical Assistance** - to assist individuals and their organization to improve by offering resources and information, supporting networking and change efforts

Professional development is a broad term, encompassing a range of people, interests and approaches. Those who engage in professional development share a common purpose of enhancing their ability to do their work. At the heart of professional development is the individual's interest in lifelong learning and increasing their own skills and knowledge. The 21st century has seen a significant growth in online professional development. Content providers incorporate collaborative platforms such as discussion boards and wikis, thereby encouraging and facilitating interaction, and optimizing training effectiveness.

At the beginning of the twenty-first century, gender-related differences in occupational aspirations and career attainment are still an important social issue. Most Western countries, including Israel, are still witnessing systematic differences between men and women in the workplace. There is evidence that many occupations and jobs are still segmented by gender Women tend to enter jobs that are labeled as"female-type" and perceived as best suited for women. Their status in the labor force is inferior to that of men, and they tend to receive lower salaries and enjoy fewer career opportunities. It is argued that women's disadvantage in important career-related factors, mainly their type of education, lower occupational aspirations or lower commitment to investing in their careers, accounts for occupational inequality between the sexes and women's lower career attainment (Nira, and Yoram, 2007).

LITERATURE REVIEW

Empirical literature indicates that female leaders are judged more negatively than male leaders under certain circumstances: drawing from their meta-analytic findings, Eagly *et al.* (1992) report that female autocratic leaders are evaluated more negatively than male autocratic leaders. According to this study, autocratic female leaders are perceived less favourably, particularly when the judges are men.

Women's career paths have always been more complex and ambiguous than men's (Stroth and Reilly, 1999), and so gender is critical in the understanding of careers (Still and Timms, 1998; Mavin, 2001) Women construct their conceptions of themselves, their lives and the world around them differently from men (Gilligan, 1982; Gallos, 1989) but this does not mean they have less career motivation as much as a different perspective towards what a career means to them (Gallos, 1989). Hirsh and Jackson (1989) argued that careers needed to accommodate the reality of women's lives, so that they could make a meaningful investment in both occupational and family roles. In the dual career household, women still undertake the bulk of the homemaker's role (Hochschild, 1989; Burke, 2002). The value placed on continuity of employment and commitment and inflexible working hours may exclude some women from some managerial jobs. Using male-based standards of career and career success, it is easy to assess women who choose to forge a career that combines achievement and nurturance as failing professionally (Gallos, 1989). Although the neoclassic approach made some attempts at recognising that men and women's lives are different, they too offer inadequate explanation as they either uphold women's family life above their work life (e.g. Psanthas, 1968; Zytowski, 1969), or else relegate family life to a subordinate position (e.g. Astin, 1984).Organisational structures are not gender neutral (Acker, 1990) and thus it can be more difficult for women to construct their careers on an equal basis. Male models of work are deeply embedded in most organisational cultures (Lewis, 2001) and work is often constructed to suit men's life patterns in a society of divided stereotyped roles (Marshall, 1989).

These follow classic career theories and as such men are more likely to ascribe success in these terms than women (Vinnicombe and Harris 2000). Women have been found to associate success with more subjective measures such as feelings of achievement and satisfaction with various aspects of their work and non work lives (which may include opportunities for advancement), personal recognition and influence, and the "challenges" of their jobs (Powell and Mainiero, 1992; Sturges, 1999; Stroth and Reilly, 1999; Vinnicombe and Harris, 2000). Baruch (2004b) argues that the two major career issues for the individual are career choice and career development.

Managerial competence for example has traditionally been regarded as a male domain (Schein, 1994). Callanan (2003) claims that career success has objective and subjective components, and much research uses objective rather than subjective measures.

While women have achieved significant progress towards parity in business careers, this progress appears to have stalled in the upper levels of management. In 2002, women held just slightly less than eight percent of the highest-ranking corporate leadership positions (Census of Women Corporate Officers and Top Earners 2002). The pattern is similar when it comes to professional education.

Moreover, despite trends indicating a rise in entrepreneurial activity by women, their participation in MBA programs, often viewed as a gateway to business and entrepreneurial leadership, has stalled in the last decade at around 30%. In sharp contrast to their enrolment in graduate programs (Houenshead & Wilt. 2000).

OBJECTIVES OF THE STUDY

To identify, describe and produce an analysis of gender differences in professional development. The research seeks to determine:

1. The nature, extent and effect of psychological influences on choices, including a desire to choose professional course
2. The nature, extent and effect of sociological influences on choices, including background, personal and social expectations, previous educational experience and social role.
3. The nature and influence of individual perceptions of courses, institutions.
4. The role and possible influence of significant others on choice, such as advice and guidance , family, peers, relatives and employers.

HYPOTHESIS

H1:- Female students are more sincere for professional career than male students.

H2:-Female students are more sincere about professional career planning in early age than male students.

H3:- Female students are more influenced by their teacher/senior for professional career planning than male students.

H4:-Family background of female students less affect the professional career than the male students of the similar background.

H5:-Heterogeneous (Both male & female) Institute play better role in career planning than Homogeneous Institute (Only male/female).

HYPOTHETICAL THEORETICAL MODEL

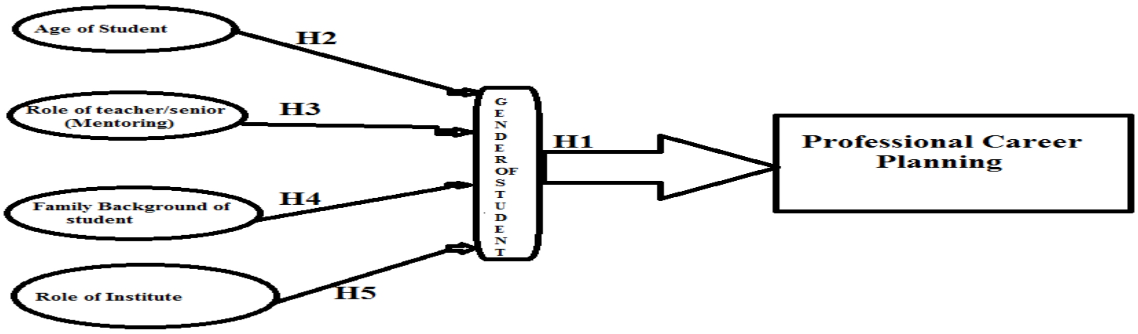


Fig.-Hypothesis Model

RESEARCH METHODOLOGY

This research is basically a Qualitative research. The research tool is a self design Questionnaire. The sample size is of 100 students consisting of 50 male and 50 female. The questionnaire was distributed among the respond they responded without any influence of any other extrinsic factors.
Sampling: Simple Random Sampling
Sample Size: 100 (PG Students of Management and Engineering from NCR-Delhi)
Research Type: Primary Research
Question Type: Closed Ended Questions
Research Method: Exploratory Research

RESULTS

Sr. No.	Statement	Male (50)	Female (50)
1	Interest in professional studies	42 (Professional) 08 (Educational)	45(Professional) 05 (Educational)
2	Role of gender in professional development	29 (Yes) 21 (No)	40 (Yes) 10 (No)
3	Age when they start career planning	30 (in age of 16-20) 20(in age of 21-25)	38 (in age of 16-20) 12(in age of 21-25)
4	When they start thinking about professional studies	10 (higher secondary) 15 (senior secondary) 21 (Graduation) 04 (Post Graduation)	12 (higher secondary) 23 (senior secondary) 10 (Graduation) 05 (Post Graduation)
5	Female students are more aware about professional career than male students	32 (Agree) 18 (Disagree)	50 (Agree) 00 (Disagree)
6	Female students are more influenced by their teacher/seniors for Professional Career Planning	38 (Agree) 12 (Disagree)	50 (Agree) 00 (Disagree)
7	Heterogeneous institutes play better role in Professional Career Planning	42 (Agree) 08 (Disagree)	50 (Agree) 00 (Disagree)
8	Family background affect professional career planning	47 (Yes) 03 (No)	45 (Yes) 05 (No)
9	Family background of female student affect professional career planning more as compare to male	34 (Yes) 16 (No)	36 (Yes) 14 (No)
10	Most influential person in your life who affect your PCP	20 (Parents) 18 (Teachers) 12 (others)	30 (Parents) 16 (Teachers) 04 (others)
11	Men gets more options than women to choose from different career streams	24 (Yes) 26 (No)	38 (Yes) 12 (No)
12	Financial status of family affect career planning more for female student as compare to male	30 (Yes) 20 (No)	33 (Yes) 17 (No)
13	Women are more restricted in their choice of career	33 (Yes) 17 (No)	39 (Yes) 11 (No)
14	Government institutes are preferred over private institutes by students in their Professional Career Planning	41 (Agree) 09 (Disagree)	39 (Agree) 11 (Disagree)
15	Women are more likely to opt for sponsored professional course while men do not mind spending out - of – pocket	40 (Agree) 10 (Disagree)	22 (Agree) 28 (Disagree)
16	Doing a Professional course would bring job from a recognized organization	35 (Agree) 15 (Disagree)	32 (Agree) 18 (Disagree)

FINDINGS AND CONCLUSION

This Exploratory research explores that gender is the intervening variable which influence the professional career planning of the PG students. As all the hypothesis are verified successfully which again intensify the affect of gender in professional career planning by the students. As the sample is consists of youth between the age group of 20 to 29. The findings indicate that female students are more aware, sincere and start career planning in earlier age than the male counterpart students. Hence after analysing data and its interpretation we can draw the following theoretical pattern of study.

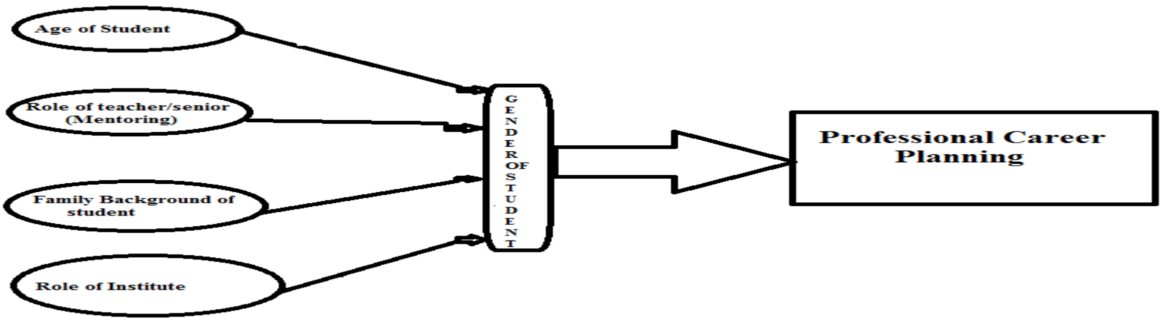


Fig.- New Study Model

- Female students are more sincere for professional career than male students
- Female students are more aware about professional career than male students
- Female students are more sincere about professional career planning in early age than male students
- Female students are more influenced by their teacher/seniors for professional career planning than male students
- Heterogeneous (Both male & female) Institute play better role in career planning than Homogeneous Institute (Only male/female)
- Family background of females affect their professional career more than a male

LIMITATIONS AND SUGGESTIONS

The present study has certain limitations that need to be taken into account when considering the study and its contributions. However some of these limitations can be seen as fruitful avenues for future research under the same theme. Time limitation was one of the major constraints while doing this research. As per the requirement of quantitative data the sample taken was only 100 students (50 male and 50 female) that is another limitation of this study. Our sample size includes only 100 students hence sample size is small as well as less diverse which restricts the real finding somehow. As the study shows that gender influence the professional career planning of students so the further study can be continued on the intensity of influence and it can involve the students of rural and urban area separately to know that is the intensity of gender effect is deferent in rural and urban students. Further research can be done on more diverse sample and the geographical size as well.

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EMPLOYEES' PERCEPTION TOWARDS HUMAN RESOURCE PRACTICES IN AIRPORTS AUTHORITY OF INDIA AT CHENNAI

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ABSTRACT
Human Resources constitute the most important and indispensable factor in any economy. In public sector, HR practices have a long way to go in order to achieve a professional and competitive HR standard.HR practices in Airports Authority of India as an area of research have not received proper attention in Chennai. Therefore the author took interest to cover the research gap. This paper is based on an empirical study of Airports Authority of India, Chennai rated as one of the best and safest airport in the country. The purpose of the study is to assess the AAI employees' level of awareness, to know the perceived opinion and to measure the level of satisfaction towards Human Resource practices. The sample of the study is 380 where Executives are 82 and Non-Executives are 298. The 16 dimensions of HRM practices has been categorized in to four functions of HRM like Acquisition of Human Resources (Recruitment and Selection), Development of Human Resources (Training, Career Development, Performance Appraisal, Promotion and Transfer), Managing Human Resources (Communication, Leadership, Motivation, Discipline, Job Involvement, Human Relations) and Maintenance of Human Resources (Employees Welfare Measures, Retirement, Total Quality management, Trade Union, Employee Grievances and Workers Participation in Management). The research is focused on survey method and hypotheses are tested empirically and concluded with suggestions.

KEYWORDS
Human Resources in public sector, Acquisition of human resources, Development of human resources, Managing human resources and Maintenance of human resources.

INTRODUCTION
In the earth, man is the supreme gift of god. It is man, the individual, who is the centre, the finest and the best in the creations. In the present humanized era, Human Resource is concerned with the 'People' dimension in the organization. The basic difference between a winning company and a losing company is the difference among their employees. Managing God is probably an easier task but managing human beings is relatively a tougher task. Larger part of our industrial growth is not from more capital investments but from investment in men and improvements brought about by improved men. HRM as a concept emerged in the mid-1980s with the efforts of the writers of management of that decade including Pascale and Athos and Peters and Waterman. A number of researchers' abroad (Ichniowski, Delaney and Lewin, 1989; Ichniowski, 1990; Huselid, 1993) and in India related a comprehensive measure of HR practices to the firms' performance (Rao, 1982; Rao and Pereira, 1987; *Business Today*, 1996; Singh, 2000).

HUMAN RESOURCES IN PUBLIC SECTOR

Menon and Jha brought out a conceptual framework for the management of public enterprises in developing countries. Powell, Viswanadham, Ramanadham, Sengupta, dealt with problems and performance of public enterprises in India. Amiya Bagchi has appreciated the performance of the public enterprises in respect of their efficiency, generation of employment and their contribution to the net domestic savings in India. K.R.Singh has made a study on the performance of public enterprises and identified a number of reasons for the poor performance of public enterprises. Ravi Shankar and Mishra have studied the need of management training and organizational development in public enterprises. In public sector, HR practices have a long way to go in order to achieve a professional and competitive HR standard.

AIRPORTS AUTHORITY OF INDIA

India is the fast becoming an aviation hub. Every airport was built as a symbol of socialists' self-reliance. The country has 125 airports. Of these 11 are designed as international airports, 81 domestic airports and 8 customs airports and 25 civil enclaves at Defence airfields. Airports Authority of India (AAI) was constituted by an Act of Parliament and came into being on 1st April, 1995 by merging erstwhile National Airports Authority and International Airports Authority of India. The merger brought into existence a single Organization entrusted with the responsibility of creating, upgrading, maintaining and managing Civil Aviation infrastructure both on the ground and air space in the country. In the year 2008- 09, AAI handled aircraft movement of 13,06,532 (International 2,70,345 and Domestic 10,36,187), Passengers handled 442,62,137 (International 57,61,880 and Domestic385,00,257) and the Cargo handled 4,99,418 tonnes (International 3,18,242 & Domestic 1,81,176). AAI foreign assignments include airport feasibility studies, airport design, project implementation and project supervision, manpower training, airport management and operation on turnkey basics , providing manpower for airport operation including air traffic services, ground navigation and surveillance facilities

SWOT ANALYSIS OF AAI

Strengths	Weaknesses
❖ Government fund ❖ Skilled employees ❖ Monopoly	❖ Expansion ❖ Red tape ❖ Rules and regulation
Opportunities	**Threats**
❖ Modernization ❖ World class standard	❖ Legal issues ❖ Security issues

AIRPORTS AUTHORITY OF INDIA, CHENNAI AIRPORT

Chennai International Airport is the third most important international gateway into the country after Mumbai and Delhi, and the main air hub for South India. Chennai International Airport is rated as one of the best and safest of all in the country. The first passenger terminal was built at the northeast side of the air field, which lies in the suburb of Meenambakkam due to which it was referred to as Meenambakkam airport. A new terminal complex was subsequently built further south near Pallavaram to which passenger operations were shifted. The old terminal building is now used as a cargo terminal and is the base for the Indian courier company Blue Dart.

Chennai airport consists of three terminals. Meenambakkam is used for cargo while the new passenger terminal complex consists of the domestic and international terminals are interconnected by a link building, which houses administrative offices. The complex is one continuous structure it was built at different periods. The airport has the honour of being the first ISO 9001-2000 certificates airport in the country which was received in 2001. Chennai airport handles about 30 aircraft movements every hour. A nation-wide survey to assess the facilities at airports has ranked the Chennai airport the best airport managed by the Airports Authority of India.

REVIEW OF LITERATUTE

Robert Luna-Arocas, Joaquin Camps examines to clarify the relationship between human resource practices and staff retention by selecting three high performance work practices (precursors) and one outcome variable (turnover intentions), and trying to demonstrate the mediator role of employee commitment and job satisfaction in this relationship. The proposed model has been analyzed with a sample of 198 employees and a structural equation modeling methodology. Salary strategies and job enrichment strategies and job stability strategies were positively related to job satisfaction. Job enrichment strategies and job stability strategies were positively related to employee commitments. Employee commitment was negatively related to turnover intentions. The relationship between job satisfaction and turnover intentions was mediated by employee commitment. One limitation of these findings is the use of self-report questionnaires to collect data on all measures. Another potential limitation concerns the measurement of some latent factors with only two observable variables. Turnover continues to be a serious problem for businesses. The proposed model suggests the use of specific practices that develop satisfaction and commitment as an intermediate step to low turnover intentions.

Research suggests that a number of factors influence human resource management (HRM), policies and practices. This article reports the empirical results of a study designed to examine and highlight the main contingent variables and national factors influencing Indian HRM. The investigation is based on a questionnaire survey carried out in 137 Indian firms in the manufacturing sector. The results suggest a number of significant correlations between a set of contingent variables (i.e., age, size, ownership, life cycle stage and HRM strategies of an organization, type of industry and union membership) and four HRM functions of recruitment and selection, training and development, compensation and employee communication. Similarly, four national factors (namely national culture, institutions, dynamic business environment and business sector) are suggested, which influence Indian HRM policies and practices. The study has a number of implications both for academics and practitioners. It has also opened avenues for future research.

HRD in Public Enterprises by M.P.Bansal was a pioneering study in the area of HRM taking SAIL for study. It clearly explained the concepts, processes and scope of HRD in general and in the public sector undertakings in India in particular. It also portrayed on the components of HRD like organizational development, training and development, performance appraisal, career advancement as they are practiced in SAIL. It also suggested a manpower forecasting model apart from offering some significant suggestions.

OBJECTIVES OF THE STUDY

1. To study the effectiveness of Training and Development programmes practiced in AAI
2. To understand the factors influencing motivation, leadership, and the employees interpersonal relationship in AAI
3. To study how employees performance are appraised and their promotional policies.
4. To know the employees participation in management, the system of grievance and discipline, TQM and its application, and the various welfare measures provided by AAI.
5. To study the overall satisfaction of HR practices in AAI and to suggest measures for improving the quality of HR in present and future

HYPOTHESIS

1. The perception of employees is same as far as the acquisition and development of human resources (Recruitment and Selection, Training and Development, Career Development, Performance Appraisal, Promotion and Transfer) are concerned in relation to department, designation, age, job category, gender, educational qualification, group, monthly salary and years of experience.
2. The perception of employees is same as far as managing the (Motivation, Leadership, Communication, Employees' Job Involvement, Human Relations and Discipline) human resources are concerned in relation to department, designation, age, job category, gender, educational qualification, group, monthly salary and years of experience.
3. The perception of employees is same as far as the maintenance (Employees Welfare, Total Quality Management, Trade union, Workers Participation in Management and Grievance Redressal and Retirement) of human resources are concerned in relation to department, designation, age, job category, gender, educational qualification, group, monthly salary and years of experience.
4. There is no correlation between the various dimensions of HRM with regard to the satisfaction of employees.
5. Factors attributing to join AAI are the same among employees working as Executives and Non-Executives in AAI.

LIMITATION OF THE STUDY

1. Due to the time constraint and reluctance on the part of the respondents to put effort and time, the study is based on 380 employees only.
2. The study is confined to AAI Chennai; this study does not cover any other regional/metropolitan airport.
3. The study provides an overview of HRM practices of AAI, with special reference to the employee perception on HR systems and does not reflect any general scenario of airport or aviation sector.
4. The perception on HR practices varies to employees. Each has viewed the questionnaire from his/her perspective.
5. The study does not cover few 'Group A' officials (top level executives are omitted) and 'Group D' employees (low level executives, not forming part of the study).

RESEARCH METHODOLOGY

To attain these objectives with assurance, a descriptive and analytical study was conducted. The stratified random sampling technique was used to gather information. The area of study that was covered was specific to Airports Authority of India, Chennai. This study has been made during the period 2007-2009. The purpose of the study is to assess the AAI employees' level of awareness, to know the perceived opinion and to measure the level of satisfaction towards Human Resource practices. The total manpower in Chennai AAI is 1224 consists of Group A, B, C and D. The researcher has excluded top level management (Executive Director, General Manager, Additional General Manager, Deputy Manager and Asst. General Manager) and Group D employees (Cleaners, Sweepers, Safaiwala, Khalsi, Beldar, Chowkidars and Attendants at low-level workers) not forming part of the study. By excluding the employees not forming part of the study the total employees is 810 where executive is 169 and non-executive is 641. Totally, 500 employees are selected on stratified random sampling method. Out of the sampling, 406 employees only returned the filled in questionnaires and of them 380 only are usable. Hence, the exact sample of the study is 380 where Executives are 82 and Non-Executives are 298. The 16 dimensions of HRM practices has been categorized in to four functions of HRM like Acquisition of Human Resources (Recruitment and Selection), Development of Human Resources (Training, Career Development, Performance Appraisal, Promotion and Transfer), Managing Human Resources (Communication, Leadership, Motivation, Discipline, Job Involvement, Human Relations) and Maintenance of Human Resources (Employees Welfare Measures, Retirement, Employee Grievances and Workers Participation in Management, Trade Union, and Total Quality management).

RESULTS AND ANALYSIS

TABLE 1: DISTRIBUTION OF SAMPLES ON THE BASIS OF DESIGNATION

Designation	N	%
Executives		
Senior Manager	14	3.7
Manager	30	7.9
Assistant Manager	35	9.2
Junior Executive	3	.8
Non-Executives		
Senior Superintendent (Senior Grade)	36	9.5
Senior Superintendent	37	9.7
Superintendent	24	6.3
Senior Assistant	112	29.5
Assistant	71	18.7
Junior Assistant	18	4.7
Total	380	100.0

From the table 1 it is observed under the category of non-executive 30% of the respondents are Senior Assistants, 19% are Assistants, 10% are Senior Superintendents, 9.5% are Senior Superintendents (SG), 6% are Superintendents, and 5% are Junior Assistants. Under executive category 9% are Assistant Managers, 8% are Managers and 4% are Senior Managers.

TABLE 2: DISTRIBUTION OF SAMPLES ON THE BASIS OF JOB CATEGORY

Job Category	N	%
Executive	82	21.6
Non-Executive	298	78.4
Total	380	100.0

It is very clear from the table 2 that nearly 4/5th of the respondents are non-executives and 1/5th of the respondents are executives

TABLE 3: DISTRIBUTION OF SAMPLES ON THE BASIS OF DEMOGRAPHIC FACTORS

		Executives		Non-Executives		Total	
		N	%	N	%	N	%
Gender	Male	69	84.1	230	77.2	299	78.7
	Female	13	15.9	68	22.8	81	21.3
Department	Fire	3	3.7	68	22.8	71	18.7
	Project	32	39.0	16	5.4	48	12.6
	Electrical	5	6.1	41	13.8	46	12.1
	Cargo	8	9.8	33	11.1	41	10.8
	Ground Flight Service (GFS) and Motor Transport	4	4.9	33	11.1	37	9.7
	Housekeeping, Electronics, Materials Management	3	3.7	31	10.4	34	8.9
	Operations	7	8.5	18	6.0	25	6.6
	Accounts	6	7.3	17	5.7	23	6.1
	Civil	7	8.5	16	5.4	23	6.1
	Commercial, Planning and others (Land Management, Law & Medical)	5	6.1	12	4.0	17	4.5
	Personnel	2	2.4	13	4.4	15	3.9
Age	30 & Below	2	2.4	7	2.3	9	2.4
	31-40	13	15.9	74	24.8	87	22.9
	41-50	39	47.6	147	49.3	186	48.9
	51 & above	28	34.1	70	23.5	98	25.8
Experience	Up to 10 Years	4	4.9	37	12.4	41	10.8
	11-20 Years	25	30.5	134	45.0	159	41.8
	21-30 Years	42	51.2	108	36.2	150	39.5
	31 & Above	11	13.4	19	6.4	30	7.9
Educational Qualification	Diploma	22	26.8	30	10.1	52	13.7
	UG	38	46.3	111	37.2	149	39.2
	PG	18	22.0	44	14.8	62	16.3
	Others (SS, HSS,ITI)	4	4.9	113	37.9	117	30.8
Monthly salary	Below 25000	0	.0	99	33.2	99	26.1
	25001-35000	3	3.7	161	54.0	164	43.2
	35001-45000	35	42.7	38	12.8	73	19.2
	Above 45000	44	53.7	0	.0	44	11.6

The table 3 describes that 19% of the respondents from the total sample are from Fire department. Category-wise analysis depicts that 39% of the executives are from Project department and 23% of the non-executives are from fire department. Gender-wise analysis shows that 79% of the respondents are Male whereas 21% are Female. Category-wise analysis reveals that among 82 executives 69 (84%) are male and 13 (16%) are female. The predominant age group (49%) of the employees in the total sample ranges between 41-50 years. The category wise age composition of respondents reveals that majority of the executives (48%) and non-executives (49%) are in the age group ranging between 41-50 years.

It is ascertained from the sample data that 42% of the respondents have 11-20 years of experience, 40% have 21-30 years of experience, 11% have up to 10years of experience and 8% have above 31 years of experience. Category-wise analysis reveals that majority (51%) of the executives has 21-30years of experience and 45% of the non-executives have 11-20 years of experience in AAI. Category-wise analysis reveals 47% of the executives possess under-graduation degree and 22% of executives are post-graduates. Under non-executive category 38% have passed secondary school and 37% possess under graduation qualification. 43% of the respondents of the sample data earn a monthly salary ranges between Rs.25001-35000, 26% are below Rs.25000, 19% are between Rs.35001-45000 and

12% are above Rs.45000. Category-wise analysis reveals that executives who belong to the Grade A fall in the salary slab of above Rs.45000. 54% of the non-executives earn a monthly income ranges between Rs.25001-35000.

TABLE 4: DISTRIBUTION OF SAMPLES ON THE BASIS OF GROUP

Group	N	%
A	44	11.6
B	76	20.0
C	260	68.4
Total	380	100.0

From the table 4 it is clear that 68% of the respondents belong to Group 'C' consists of only non-executives, 20% from Group 'B', comprises of both executives and non-executives (10% from executive and 10% from non-executive) and 12% from Group 'A', consists of only executives.

FACTORS INFLUENCING TO JOIN

TABLE 5: RANKING OF FACTORS

Factors	1		2		3		4		5		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Job Security	224	58.9	45	11.8	49	12.9	31	8.2	31	8.2	380	100.0
Attractive Salary	24	6.3	183	48.2	112	29.5	31	8.2	30	7.9	380	100.0
Better Overall Development	87	22.9	51	13.4	124	32.6	50	13.2	68	17.9	380	100.0
Promotional Avenues	1	.3	62	16.3	89	23.4	158	41.6	70	18.4	380	100.0
Quality Management	44	11.6	39	10.3	6	1.58	110	28.9	181	47.6	380	100.0

Among the various factors Job Security has been ranked in the first place, Attractive Salary in the second place, Better Overall Development in the third place, Promotional Avenues in fourth place and Quality Management in the fifth place.

PERSONAL CHARACTERISITICS OF THE INDIVIDUAL Vs JOB CATEGORY

TABLE 6: NPAR TESTS: MANN-WHITNEY TEST

Test Statistics(a)				
Personal Characteristics of Individual	**Mann-Whitney U**	**Wilcoxon W**	**Z**	**Asymp. Sig. (2-tailed)**
Department	8972.000	53523.000	-3.711	.000
Gender	11367.000	14770.000	-1.362	.173
Group	722.000	4125.000	-15.943	.000
Age	10467.500	55018.500	-2.151	.031
Educational Qualification	7479.000	10882.000	-5.660	.000
Experience	9138.500	53689.500	-3.762	.000
Salary	1020.500	45571.500	-13.450	.000
a Grouping Variable: Job Category				

From the table 6 it is inferred that significant difference exists among the proportion of executives and non-executives of different departments, age, groups, qualification, experience and salary

TABLE 7: RELIABILITY TEST ON VARIOUS DIMENSIONS OF HRM

S. No	Dimensions	No. of Items	Reliability Coefficient Alpha
1	Recruitment	10	0.9073
2	Employee's skill development (Training)	11	0.8889
3	Promotion and Transfer	20	0.8907
4	Performance Appraisal System	10	0.7327
5	Career Development Programme	5	0.8284
6	Job Involvement	6	0.8296
7	Leadership	22	0.9756
8	Motivation	17	0.9654
9	Human Behaviour and Human Relation	16	0.9600
10	Communication System	9	0.8821
11	Discipline	6	0.8943
12	Employee's Welfare Schemes	23	0.9409
13	Employee's Grievance and Workers Participation in Management	9	0.8943
14	Trade Unions	6	0.6685
15	Total Quality Management	5	0.6146
16	Retirement	5	0.6532
	Total	180	0.9853

The reliability of coefficient is high for the dimensions like recruitment, training, promotion and transfer, performance appraisal, career development programmes, job involvement, leadership, motivation, human relations, communication, welfare, discipline, grievances and workers participation. In dimensions like trade union, total quality management and retirement the reliability coefficient is reasonable. The overall reliability coefficient of the all 16 dimensions is 0.9853 which is considered to be highly significant to the total contribution.

TABLE 8: STUDENT'S T-TEST FOR FUNCTIONS OF HRM IN RELATION TO JOB-CATEGORY

Functions of HRM	Job-Category				Independent Sample's Test				
	Executive		Non-Executive		Levene's Test for Equality of Variances		t-test for Equality of Means		
	Mean	SE	Mean	SE	F	Sig.	t	df	Sig. (2-tailed)
Acquiring and Developing HR	3.737	.044	3.384	.025	19.720	.000	6.736	378	.000
Managing HR	3.767	.062	3.529	.026	.912	.340	4.028	378	.000
Maintaining HR	3.758	.041	3.581	.016	.306	.581	4.677	378	.000

From the table 8 it is found that the perception of executives and non-executives differs in relation to acquisition, development, management and maintenance of human resources. The mean values show that executives possess substantial fathom of acquiring, developing, managing and maintaining human resources than non-executives.

TABLE 9: ANOVA FOR FUNCTIONS OF HRM IN RELATION TO DESIGNATION

Designation	Functions of HRM					
	Acquiring and	Developing HR	Managing HR		Maintaining HR	
	Mean	SE	Mean	SE	Mean	SE
Sr. Manager	3.838	.120	3.940	.159	3.899	.120
Manager	3.631	.076	3.678	.103	3.686	.067
Asst. Manager	3.784	.054	3.778	.084	3.762	.052
Jr. Executive	3.785	.383	3.716	.689	3.768	.433
Sr. Supt. (SG)	3.442	.072	3.502	.074	3.613	.045
Sr. Supt.	3.309	.062	3.486	.072	3.554	.045
Supt.	3.443	.085	3.562	.092	3.598	.054
Sr. Asst.	3.404	.041	3.535	.042	3.586	.027
Assistant	3.342	.053	3.510	.055	3.547	.035
Jr. Asst.	3.381	.108	3.669	.100	3.649	.072

TABLE 9 (A): ANOVA FOR DESIGNATION

ANOVA (one way)		
Functions of HRM	F	Sig.
Acquiring and Developing HR	5.736	.000
Managing HR	2.367	.013
Maintaining HR	3.230	.001

The perception of employees differs as far as the acquisition, development, management and maintenance of human resources are concerned in relation to various designations of AAI. The mean values show the executives possess robust understanding and knowledge on HRM functions than non-executives.

TABLE 10: STUDENT'S T-TEST FOR FUNCTIONS OF HRM IN RELATION TO GENDER

Functions of HRM	Gender				Independent Sample's Test				
	Male		Female		Levene's Test for Equality of Variances		t-test for Equality of Means		
	Mean	SE	Mean	SE	F	Sig.	t	df	Sig. (2-tailed)
Acquiring and Developing HR	3.466	.025	3.439	.052	.120	.730	.486	378	.627
Managing HR	3.579	.028	3.587	.055	.003	.958	-.135	378	.893
Maintaining HR	3.613	.018	3.640	.037	.043	.836	-.688	378	.492

The perception of male and female employees is same as far as the acquisition, development, management and maintenance of human resources are concerned.

TABLE 11: ANOVA FOR FUNCTIONS OF HRM IN RELATION TO GROUP

Functions of HRM	Group						ANOVA	
	A		B		C			
	Mean	SE	Mean	SE	Mean	SE	F	Sig.
Acquiring and Developing HR	3.697	.065	3.614	.049	3.375	.026	45.376	.000
Managing HR	3.761	.087	3.642	.059	3.532	.028	16.224	.000
Maintaining HR	3.754	.061	3.690	.036	3.575	.018	21.876	.000

The perception towards various functions of HRM such as acquisition, development, management and maintenance of human resources significantly differs among the various Groups 'A', 'B' and 'C'. The mean scores reveal the Group 'A' possess affirmative attitude towards HRM function, Group 'B' possess reasonable attitude towards HRM functions than Group 'C' employees.

TABLE 12: ANOVA FOR FUNCTIONS OF HRM IN RELATION TO DEPARTMENT

Department	Functions of HRM					
	Acquiring and	Developing HR	Managing HR		Maintaining HR	
	Mean	SE	Mean	SE	Mean	SE
Accounts	3.449	.090	3.587	.114	3.679	.078
Cargo	3.499	.064	3.612	.079	3.633	.051
Civil	3.498	.090	3.628	.100	3.633	.067
Ground Flight Service and Motor Transport	3.389	.070	3.445	.079	3.542	.046
Electrical	3.415	.063	3.539	.067	3.577	.039
Fire	3.417	.049	3.576	.054	3.610	.034
Electronics, House Keeping and Materials Management,	3.432	.080	3.571	.079	3.609	.052
Operations	3.568	.095	3.698	.086	3.651	.062
Personnel	3.275	.144	3.447	.096	3.580	.063
Project	3.582	.065	3.637	.079	3.642	.046
Commercial, Planning and Others	3.501	.132	3.661	.134	3.743	.115

TABLE 12(A): ANOVA FOR DEPARTMENT

ANOVA (one way)		
Functions of HRM	**F**	**Sig.**
Acquiring and Developing HR	1.054	.398
Managing HR	.741	.686
Maintaining HR	.760	.668

It is inferred that the employees of different departments possess identical opinion towards the functions of HRM.

TABLE 13: ANOVA FOR FUNCTIONS OF HRM IN RELATION TO AGE

Functions of HRM	Age								ANOVA	
	30 & Below		31-40		41-50		51 & above		F	Sig.
	Mean	SE	Mean	SE	Mean	SE	Mean	SE		
Acquiring and Developing HR	3.559	.177	3.424	.049	3.444	.033	3.514	.042	3.514	.042
Managing HR	3.641	.234	3.610	.050	3.571	.036	3.566	.047	3.566	.047
Maintaining HR	3.588	.180	3.634	.032	3.620	.023	3.607	.029	3.607	.029

Employees in the age group between 30 and below has affirmative attitude towards acquiring, developing and managing human resources whereas the other age groups are also have close association to the mean scores of 30 and below. Employees in the age group amongst 31 to 40 have favourable opinion towards maintaining human resources than other age groups.

TABLE 14: ANOVA FOR FUNCTIONS OF HRM IN RELATION TO EDUCATIONAL QUALIFICATION

Functions of HRM	Educational Qualification								ANOVA	
	Diploma		UG		PG		Others		F	Sig.
	Mean	SE	Mean	SE	Mean	SE	Mean	SE		
Acquiring and Developing HR	3.431	.064	3.464	.036	3.507	.063	3.444	.039	.354	.786
Managing HR	3.539	.061	3.572	.040	3.663	.070	3.565	.042	.781	.505
Maintaining HR	3.593	.043	3.609	.025	3.682	.050	3.610	.026	1.033	.378

The perception of employees of different educational qualification background is same among the acquisition, development, management and maintenance of human resources.

TABLE 15: ANOVA FOR FUNCTIONS OF HRM IN RELATION TO EXPERIENCE

Functions of HRM	Experience								ANOVA	
	up to 10 Years		11-20 Years		21-30 Years		31 & Above		F	Sig.
	Mean	SE	Mean	SE	Mean	SE	Mean	SE		
Acquiring and Developing HR	3.397	.071	3.462	.035	3.441	.037	3.631	.071	1.869	.134
Managing HR	3.591	.079	3.612	.037	3.524	.040	3.676	.082	1.303	.273
Maintaining HR	3.641	.056	3.630	.023	3.588	.026	3.684	.051	1.042	.374

The table 15 revealed that the respondents possess different length of service have the same perception towards the various HRM functions such as acquisition, development, management and maintenance of human resources.

TABLE 16: ANOVA FOR FUNCTIONS OF HRM IN RELATION TO MONTHLY SALARY

Functions of HRM	Monthly Salary								ANOVA	
	below 25000		25001-35000		35001-45000		Above 45000		F	Sig.
	Mean	SE	Mean	SE	Mean	SE	Mean	SE		
Acquiring and Developing HR	3.344	.044	3.401	.033	3.607	.049	3.697	.065	10.783	.000
Managing HR	3.545	.045	3.527	.036	3.639	.056	3.761	.087	3.326	.020
Maintaining HR	3.574	.029	3.580	.023	3.687	.034	3.754	.061	5.663	.001

From the table 16 it is inferred that the perception of the respondents towards various functions of HRM such as acquisition, development, management and maintenance of human resources significantly differs among the various pay-scales. The mean values show employees with high pay scales have enduring and affirmative perception than other pay scales in relation to HRM functions. Gradual increase in pay scale results in better understanding of HRM functions.

CORRELATION ANALYSIS

TABLE 17: CORRELATIONS FOR FUNCTIONS OF HRM

Functions of HRM	Acquisition & Development of Human Resources	Management of Human Resources	Maintenance of Human Resources
Acquisition & Development of Human Resources	1	.723**	.702**
Management of Human Resources	.723**	1	.878**
Maintenance of Human Resources	.702**	.878**	1

** Correlation is significant at the 0.01 level (2-tailed).

The relationships of sixteen independent variables (grouped in to three functions) as with the dependent variable Human Resource Management, are identified with the help of correlation analysis. From the above table it is inferred that significant correlation exists between acquisition and development of human resources with management and maintenance of human resources and management of human resources with maintenance of human resources. The magnitude of association is strong in management of human resources with maintenance of human resources and equally high in acquisition and development of human resources with management and maintenance of human resources. Therefore each function is interrelated and interdependent on each other and the correlation among various functions of HRM is significant

CLUSTER AND DISCRIMINANT ANALYSIS

The researcher aims to classify the AAI employees based on their perception and approach towards various dimensions of HR practices. The agglomeration schedule and the emergence of the co-efficient foretell the existence of heterogeneous groups of employees based on the perception level of HR practices in AAI. The frequency of each cluster is presented in the table.

TABLE 18: NUMBER OF RESPONDENTS IN EACH CLUSTER

Cluster 1	124
Cluster 2	10
Cluster 3	246
Valid	380

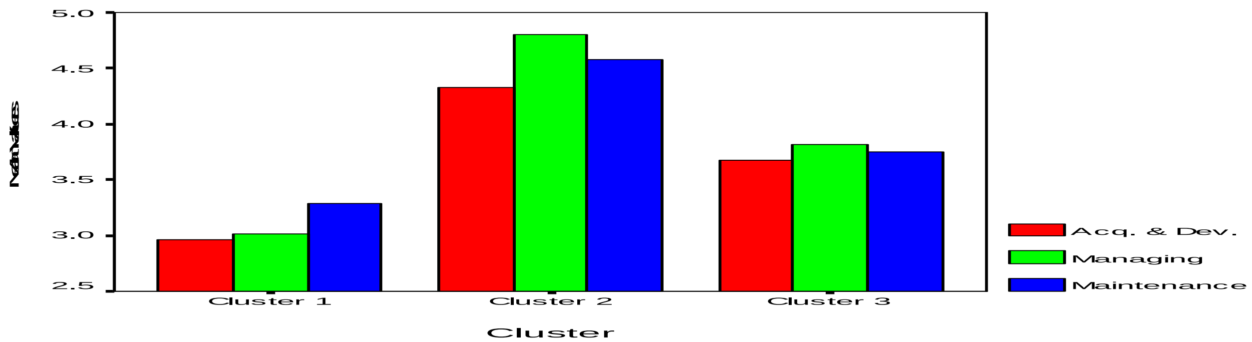
From the table it is found that three different heterogeneous clusters towards various dimensions of HR practices exist among the employees of AAI. It is inferred that 33 percent of the employees are found in cluster 1, 3 percent in cluster 2 and 64 percent of the employees are found in cluster 3.

TABLE 19: FINAL CLUSTER CENTERS

Dimensions	Cluster			ANOVA	
	1	2	3	F	Sig.
Recruitment	79.02	94.00	58.06	417.749	.000
Employee skill development	75.54	73.40	58.63	123.453	.000
Promotional Policy	81.59	79.33	67.77	98.635	.000
Promotion/Transfer/Demotion	74.26	80.00	55.89	333.592	.000
Job involvement	77.47	99.67	74.52	68.794	.000
Leadership	77.41	98.86	53.35	622.913	.000
Developmental Motivation	76.54	99.29	54.92	448.356	.000
Human Behaviour	76.19	90.38	57.85	138.197	.000
Performance Appraisal System	75.19	99.00	66.61	72.909	.000
Training Program	61.43	86.40	53.32	105.529	.000
Communication System	76.16	91.78	60.91	191.132	.000
Employee Welfare Schemes	80.50	98.87	75.35	130.691	.000
Employees Grievance, Discipline	73.80	97.86	61.22	130.568	.000
Trade Unions	71.42	74.33	57.39	104.075	.000
Total Quality Management	73.48	99.60	64.77	103.635	.000
Retirement	72.16	80.00	65.81	94.419	.000

It is further concluded that the cluster2 employees possess a clear wisdom about the HR practices. However the cluster1 possesses a balanced knowledge of HR practices than cluster 3.

GRAPH 1: CLASSIFICATION OF EMPLOYEES BASED ON SIMILAR PERCEPTION TOWARDS HRM FUNCTIONS



JUSTIFICATION OF CLUSTERS FOR VARIOUS DIMENSIONS OF HR PRACTICES

The multivariate discriminant analysis is brought to bear the on the problem of justifying the number of clusters. In this analysis the cluster classification is considered as grouping variable and the dimensions of HR practices is considered as independent variables. The following results have explained the profound justification for heterogeneous clusters. The canonical correlation and their values are presented in the table 20.

TABLE 20: EIGEN VALUES

Eigen values				
Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	18.817(a)	88.9	88.9	.974
2	2.346(a)	11.1	100.0	.837
a First 2 canonical discriminant functions were used in the analysis.				

From the table 20 the canonical correlation co-efficient proves that the two discriminant functions formed for the heterogeneous groups are highly significant. The significance is explained with the help of the Chi-square values presented in the table 21.

TABLE 21: WILKS' LAMBDA

Wilks' Lambda				
Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.015	1549.826	32	.000
2	.299	446.295	15	.000

From the Eigen values table it is inferred that two different discriminant functions have been formed with canonical correlation co-efficient 0.974 and 0.837. The significance of dicriminant functions is established in the Wilks Lambda table. The significance of three different heterogeneous clusters emerged in the cluster analysis is perfectly justified.

The discriminant functions are formed as follows to obtain the perception level of employees about various HR dimensions.

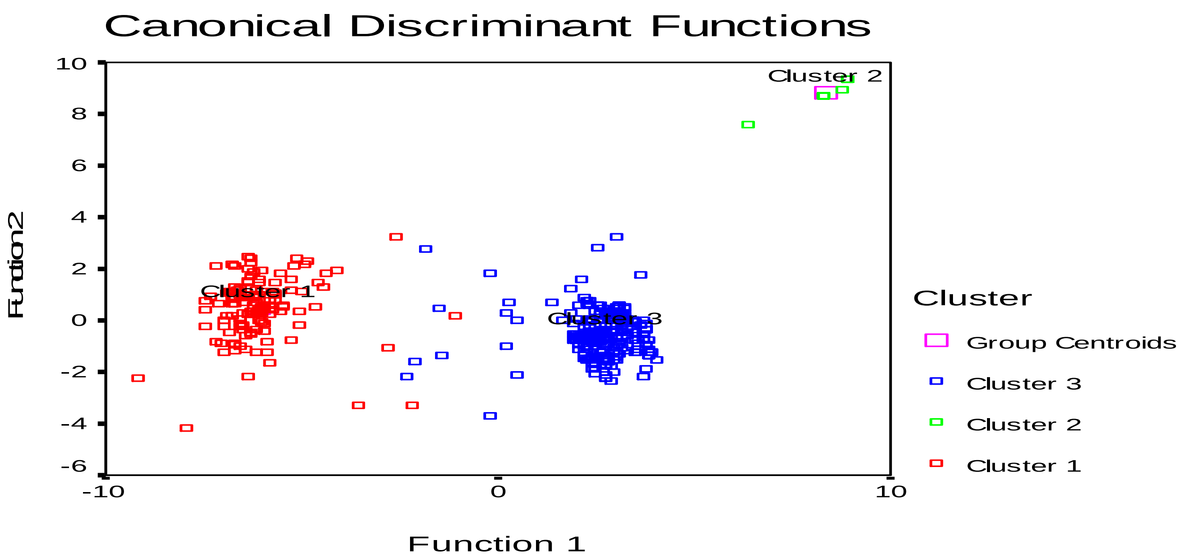
TABLE 22: STANDARDIZED CANONICAL DISCRIMINANT FUNCTION COEFFICIENTS

Factors	Function	
	1	2
X1 - Recruitment	.246	.557
X2 - Employee's skill development (training)	.382	-1.370
X3 - Promotion and transfer	.021	-.662
X4 - Performance appraisal system	.138	.452
X5 - Job involvement	-.793	.459
X6 - Leadership	.721	-.493
X7 - Motivation	1.086	-.338
X8 - Human behaviour and human relation	-.454	1.444
X9 - Communication system	.448	.103
X10 - Discipline	.957	.282
X11 - Employee's welfare schemes	.140	.406
X12 - Employee's grievance and workers participation	-.269	-.248
X13 - Trade unions	.218	-1.159
X14 - Total quality management	-.252	.760
X15 - Retirement	.366	.404

Z1 = 0.246 x X1 + 0.382 x X2 + 0.021 x X3 +0.138 x X4 - 0.793 x X5 + 0.721 x X6 + 1.086 x X7 - 0.454 x X8 + 0.448 x X9 + 0.957 x X10 + 0.140 x X11 - 0.269 x X12 + 0.218 x X13 -0.252 x X14 + 0.366 x X15

Z2 = 0.557 x X1 - 1.370 x X2 - 0.662 x X3 + 0.452 x X4 + 0.459 x X5 - 0.493 x X6 - .338 x X7 + 1.444 x X8 + 0.103 x X9 + 0.282 x X10 + 0.406 x X11 - 0.248 x X12 - 1.159 x X13 + 0.760 x X14 + 0.404 x X15

GRAPH 2: CANONICAL DISCRIMINANT FUNCTIONS



The structure matrix is presented in the in the table 23 to explain the significant factors present in the two functions.

TABLE 23: STRUCTURE MATRIX

Factors	Function	
	1	2
Leadership	.400(*)	.092
Motivation	.365(*)	.123
Recruitment	.347(*)	.022
Promotion and transfer	.314(*)	-.126
Communication system	.233(*)	.075
Human behaviour and human relation	.195(*)	.024
Employee's skill development (training)	.182(*)	-.133
Trade unions	.173(*)	-.069
Discipline	.165(*)	.118
Retirement	.162(*)	.078
Job involvement	.082	.311(*)
Employee's welfare schemes	.162	.310(*)
Total quality management	.152	.244(*)
Career development programme(a)	.176	.206(*)
Employee's grievance and workers participation	.165	.202(*)
Performance appraisal system	.122	.195(*)
* Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions * Variables ordered by absolute size of correlation within function.		
* Largest absolute correlation between each variable and any discriminant function		
a This variable not used in the analysis.		

From the structure matrix it is clear that the clusters exhibit their heterogeneousness between the two domains. Hence restructuring of HR practices should concentrate equally on both domains.

TABLE 24: CLASSIFICATION RESULTS

			Predicted Group Membership			
		Cluster	Cluster 1	Cluster 2	Cluster 3	Total
Original	Count	Cluster 1	123	0	1	124
		Cluster 2	0	10	0	10
		Cluster 3	3	0	243	246
	%	Cluster 1	99.2	.0	.8	100.0
		Cluster 2	.0	100.0	.0	100.0
		Cluster 3	1.2	.0	98.8	100.0
a. 98.9% of original grouped cases correctly classified.						

The accuracy level of the discriminant functions is tested by substituting the score of the respondents in the two equations and assigned to the group for which the score is closer. The results of the original classification of sample respondents (based on cluster analysis) and group after assignment using Discriminant analysis are given in Table 24. It is evident that the accuracy level of the discriminant is very high since the correct classification rate level is nearly 99 per cent.

RANKING OF FACTORS Vs JOB CATEGORY

TABLE 25: RANKING OF FACTORS INFLUENCED TO JOIN AAI

CADRE	FACTORS	1		2		3		4		5		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Executives	Attractive Salary	6	7.3	58	70.7	12	14.6	3	3.7	3	3.7	82	100.0
	Job Security	72	87.8	6	7.3	0	.0	1	1.2	3	3.7	82	100.0
	Quality Management	4	4.9	0	.0	16	19.5	27	32.9	35	42.7	82	100.0
	Promotional Avenues	0	.0	4	4.9	21	25.6	33	40.2	24	29.3	82	100.0
	Overall Development	0	.0	14	17.1	33	40.2	18	30	17	30.8	82	100.0
Non-Executives	Attractive Salary	24	8.1	145	48.7	62	20.81	28	9.4	39	13.1	298	100.0
	Job Security	152	51.0	39	13.1	39	13.1	30	10.1	38	12.8	298	100.0
	Quality Management	30	10.1	16	5.4	48	16.1	84	28.2	120	40.3	298	100.0
	Promotional Avenues	10	3.4	58	19.5	58	19.5	126	42.3	46	15.4	298	100.0
	Overall Development	82	27.5	40	13.4	91	30.5	30	10.1	55	18.5	298	100.0

It is ascertained from the table 25 that executives and non-executives have identical opinion about the factors influencing to join AAI. Job Security has been placed in the first rank, Attractive salary in the second place, Better Overall Development in the third place, Promotional Avenues in fourth place and Quality Management in the fifth place. Therefore the perception of executives and non-executives are same among the factors influencing to join AAI. The table given below shows the differences of opinion on the basis of percentage method for each factor.

MANN-WHITNEY TEST

TABLE 26: NPAR TESTS: MANN-WHITNEY TEST

Test Statistics (a)				
Factors	**Mann-Whitney U**	**Wilcoxon W**	**Z**	**Asymp. Sig. (2-tailed)**
Attractive salary	9934.500	13337.500	-2.793	.005
Job security	7608.000	11011.000	-5.887	.000
Quality management	11932.000	15335.000	-.339	.735
Promotional Avenues	9509.500	54060.500	-3.233	.001
Better Overall Development	7933.500	52484.500	-5.010	.000
a. Grouping Variable: Job Category				

Though the ranking order is the same between executives and non-executives, differences in perception in terms of percentages exist in attractive salary, job security, promotional avenues and overall development between the two categories of employees working in AAI.

FACTOR ANALYSIS OF HRM DIMENSIONS

FACTOR ANALYSIS OF TRAINING IN AAI

TABLE 27: KMO AND BARTLETT'S TEST FOR TRAINING

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.832
Bartlett's Test of Sphericity	Approx. Chi-Square	2852.383
	df	45
	Sig.	.000

The test of significance indicates that there exists a significant relationship among the variables of training. The KMO test value is 0.832 which is > 0.5 indicating that factor analysis may be useful with the data. Hence it may be concluded that the variables are significantly related. The two tests justify carrying out factor analysis.

TABLE 28: NUMBER OF FACTORS FOR TRAINING

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Compo-nent	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.758	57.578	57.578	5.758	57.578	57.578	3.697	36.969	36.969
2	1.045	10.454	68.031	1.045	10.454	68.031	3.106	31.063	68.031
3	0.842	8.417	76.449						
4	0.684	6.845	83.293						
5	0.504	5.039	88.332						
6	0.483	4.834	93.167						
7	0.274	2.743	95.910						
8	0.201	2.006	97.916						
9	0.118	1.182	99.098						
10	.0902	0.902	100.000						
Extraction Method: Principal Component Analysis.									

From the table 28 it is ascertained that all ten variables of training are classified into two factors. All ten variables account for cumulative total variance of 68.031 percent. The table 29 shows the variable and variable loadings on each factor.

TABLE 29: VARIABLES AND VARIABLE LOADING FOR THE FACTORS OF TRAINING

Rotated Component Matrix(a)			
Variables		Component Loading	
		1	2
1	When employees are sponsored for training they take it seriously	.849	
2	Training enables an employee to handles stress, tension, frustration and conflict	.838	
3	Employees try to learn as much as possible from training programme they attend	.726	
4	Training helps in organizational development	.720	
5	Feedback and suggestion collected are looked upon by the company for the betterment of the workers		.821
6	Employees are given opportunities to try out what they have learnt from training		.703
7	Juniors are given opportunities by their seniors to develop their skill in handling higher responsibilities		.642
8	Training helps to shoulder bigger responsibilities		.611
9	System of employees' feedback is followed in AAI		.596
10	Employees who need genuine training are sponsored		.580
	Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		
	a. Rotation converged in 3 iterations.		

It is found from the table 29 that Factor I consists of four variables and Factor II consists of six variables. Factor I named as "Development of Organization" and Factor II named as "Development of Individuals".

FACTOR ANALYSIS OF PERFORMANCE APPRAISAL IN AAI

TABLE 30: KMO AND BARTLETT'S TEST FOR PERFORMANCE APPRAISAL

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.602
Bartlett's Test of Sphericity	Approx. Chi-Square	3086.527
	df	28
	Sig.	.000

The significance test indicates that there exists a significant relationship among the variables of performance appraisal system. From the given data, KMO test value is 0.602 which is > 0.5 indicating that factor analysis may be useful with the data. Bartlett's test indicates significance and hence it may be concluded that the variables are significantly related. The two tests justify carrying out factor analysis.

TABLE 31: NUMBER OF FACTORS FOR PERFORMANCE APPRAISAL

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Compo-nent	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.715	58.937	58.937	4.715	58.937	58.937	3.840	48.002	48.002
2	1.159	14.489	73.426	1.159	14.489	73.426	2.034	25.424	73.426
3	.767	9.588	83.013						
4	.468	5.844	88.857						
5	.403	5.035	93.892						
6	.355	4.438	98.330						
7	.126	1.575	99.905						
8	.0076	.0953	100.000						
Extraction Method: Principal Component Analysis.									

From the table 31 it is inferred that all eight variables of performance appraisal system are grouped into two factors. All eight variables account for cumulative total variance of 73.426 percent. The table 32 shows the variable and variable loadings on each factor.

TABLE 32: VARIABLES AND VARIABLE LOADING FOR THE FACTORS OF PERFORMANCE APPRAISAL

	Rotated Component Matrix(a)		
	Variables	**Component Loading**	
		1	**2**
1	The system in this organization assess employees performance with aim to make them development oriented	.918	
2	Goals are set at the beginning of the year for every employee based on which performance is assessed	.861	
3	The system in this organization encourages employees to set achievable goal	.853	
4	The system is used to decide about the training programmes to the employees	.852	
5	The system is continuous one and at each stage employees are known about their status for improvement	.816	
6	Appraisal system provides scope for discovering the hidden potentials and talents of employees		.831
7	Has the appraisal system helped in knowing yourself		.787
8	Performance counseling is practiced to improve performance		.638
	Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		
	a. Rotation converged in 3 iterations.		

It is found from the table 32 that Factor I consists of five variables and Factor II consists of three variables named as "Requisite for Effective Performance Appraisal" and "Performance Feedback".

FACTOR ANALYSIS OF MOTIVATION IN AAI

TABLE 33: KMO AND BARTLETT'S TEST FOR MOTIVATION

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.852
Bartlett's Test of Sphericity	**Approx. Chi-Square**	9511.254
	df	136
	Sig.	.000

The test of significance indicates that there exists a significant relationship among the variables of motivation. The KMO test value is 0.852 which is > 0.5 indicating that factor analysis may be useful with the data. Hence it may be concluded that the variables are significantly related. The two tests justify carrying out factor analysis.

TABLE 34: NUMBER OF FACTORS FOR MOTIVATION

Total Variance Explained									
	Initial Eigenvalues			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
Compo-nent	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	11.448	67.340	67.340	11.448	67.340	67.340	9.990	58.762	58.762
2	1.231	7.239	74.580	1.231	7.239	74.580	2.689	15.817	74.580
3	.960	5.647	80.227						
4	.660	3.885	84.112						
5	.551	3.241	87.353						
6	.517	3.041	90.394						
7	.392	2.304	92.697						
8	.351	2.063	94.761						
9	.272	1.602	96.363						
10	.169	.992	97.354						
11	.140	.823	98.178						
12	.0980	.576	98.754						
13	.0831	.489	99.242						
14	.0576	.339	99.581						
15	.0437	.257	99.838						
16	.0173	.102	99.940						
17	.0103	.0603	100.000						
Extraction Method: Principal Component Analysis.									

From the table 34 it is found that all seventeen variables of motivation are sorted out in two factors. All seventeen variables account for cumulative total variance of 74.580 percent. The table 35 shows the variable and variable loadings on each factor

TABLE 35: VARIABLES AND VARIABLE LOADING FOR THE FACTORS OF MOTIVATION

Rotated Component Matrix(a)			
	Variables	Component Loading	
		1	2
1	No victimisation of employee exists	.911	
2	Promotion and transfer used as positive motivating factors rather than punishment strategy	.899	
3	AAI gets the work done by consultation, suggestions and participation rather than resorting to authoritarian, dictatorship, autocracy and coercion	.895	
4	Enough autonomy and independence given to employees for completing task.	.887	
5	Promotions and Transfer increases versatility	.884	
6	Job of the employee matches with his skills and experience	.867	
7	Positive motivation prevails in AAI than negative motivation	.860	
8	Career development helps to improve organizational development	.852	
9	Needs such as power, affiliation and achievement, status are well recognised	.816	
10	The psychological climate for acquiring new knowledge and skills is very conducive	.799	
11	Employees are helped by their superiors to learn from mistakes they make rather than punishing them	.778	
12	Promotions are purely based on performance	.752	
13	Wage revision is done at regular intervals	.748	
14	Job rotation facilitates the employees career development	.682	
15	Extraordinary work/contribution by the employees are rewarded /recongnized		.805
16	In house journal is used for motivating employees		.706
17	Employees are encouraged to experiment with methods and try out creative ideas		.595
	Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		
	a. Rotation converged in 3 iterations.		

It is found from the table 35 that Factor I consists of 14 variables named as "Need and Maintenance Factor". Factor II consists of 3 variables named as "Motivational Factor".

FACTOR ANALYSIS OF EMPLOYEES' GRIEVANCES AND WORKER'S PARTICIPATION IN MANAGEMENT IN AAI

TABLE 36: KMO AND BARTLETT'S TEST FOR EMPLOYEES' GRIEVANCES AND WORKER'S PARTICIPATION IN MANAGEMENT

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.715
Bartlett's Test of Sphericity	Approx. Chi-Square	1708.027
	df	36
	Sig.	.000

The test of significance indicates that there exists a significant relationship among the variables of employee grievances and workers participation in management. The KMO test value is 0.715 which is > 0.5 indicating that factor analysis may be useful with the data. Hence it may be concluded that the variables are significantly related. The two tests justify carrying out factor analysis.

TABLE 37: NUMBER OF FACTORS FOR EMPLOYEES' GRIEVANCES AND WORKER'S PARTICIPATION IN MANAGEMENT

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.805	42.279	42.279	3.805	42.279	42.279	2.833	31.480	31.480
2	1.556	17.291	59.571	2.576	28.621	70.900	3.548	39.420	70.900
3	1.020	11.330	70.900						
4	.895	9.950	80.850						
5	.645	7.171	88.021						
6	.430	4.779	92.801						
7	.362	4.022	96.823						
8	.175	1.949	98.771						
9	.111	1.229	100.000						
Extraction Method: Principal Component Analysis.									

From the table 37 it shows that all nine variables of employees' grievances and workers participation in management are sorted out in two factors. All nine variables account for cumulative total variance of 70.90 percent. The table 38 shows the variable and variable loadings on each factor.

TABLE 38: VARIABLES AND VARIABLE LOADINGS FOR THE FACTORS OF EMPLOYEES' GRIEVANCES AND WORKER'S PARTICIPATION IN MANAGEMENT

Rotated Component Matrix(a)			
Variables		Component Loading	
		1	2
1	Grievance redressal procedure is too lengthy and it takes a long time to redress a grievance	.908	
2	Workers participation in management increases employees commitment, loyalty and sincerity	.891	
3	Any form of industrial unrest-grievance, conflict and dissatisfaction are solved then and there	.745	
4	Present grievance machinery is effective		.828
5	Management consults the employees before taking any major decision		.818
6	Management encourages workers participation in management		.729
7	Employees' grievance are handled properly		.488
8	Employees' grievances are settled through trade union/works committee/grievance council		.825
9	The causes of grievances are identified at the earliest and addressed		.537
	Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		
	a. Rotation converged in 3 iterations.		

It is found from the table 38 that Factor I consists of three variables named as "Workers Participation in Decision-Making" and Factor II consists of six variables named as "Grievance Redressal Procedure".

TABLE 39: OVERALL SATISFACTION OF HR PRACTICES IN AAI

Factors	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Total		Mean	SE
	N	%	N	%	N	%	N	%	N	%	N	%		
Operating Conditions	0	.0	0	.0	5	1.3	351	92.4	24	6.3	380	100.0	4.050	.014
Pay Structure	0	.0	1	.3	0	.0	334	87.9	45	11.8	380	100.0	4.113	.018
Fringe Benefits	0	.0	1	.3	17	4.5	334	87.9	28	7.4	380	100.0	4.024	.018
Co-Workers Relationship	0	.0	0	.0	30	7.9	325	85.5	25	6.6	380	100.0	3.987	.020
Relationship With Superiors	0	.0	32	8.4	31	8.2	303	79.7	14	3.7	380	100.0	3.787	.033
Nature of Work	0	.0	1	.3	21	5.5	328	86.3	30	7.9	380	100.0	4.018	.020
Job Security	0	.0	19	5.0	20	5.3	326	85.8	15	3.9	380	100.0	3.887	.027
Performance Appraisal	2	.5	52	13.7	46	12.1	269	70.8	11	2.9	380	100.0	3.618	.040
Training and Development Programmes	1	.3	69	18.2	53	13.9	245	64.5	12	3.2	380	100.0	3.521	.043
Contingent Rewards	1	.3	96	25.3	43	11.3	229	60.3	11	2.9	380	100.0	3.403	.046
Grievance Handling	3	.8	87	22.9	40	10.5	248	65.3	2	.5	380	100.0	3.418	.045
Communication Patterns	0	.0	45	11.8	60	15.8	263	69.2	12	3.2	380	100.0	3.637	.037
Safety and Welfare Measures	0	.0	20	5.3	20	5.3	326	85.8	14	3.7	380	100.0	3.879	.027
Collective Bargaining	0	.0	47	12.4	44	11.6	278	73.2	11	2.9	380	100.0	3.666	.037
Overall Satisfaction With The Organization	0	.0	1	.3	18	4.7	348	91.6	13	3.4	380	100.0	3.982	.016

92% of the respondents agreed that they are overall satisfied with the HR practices practiced in AAI. The mean scores project significantly favourable opinion with respect to overall HR practices in AAI whereas the system of reward, training, grievance redressal and negotiation process are the areas where much focus required.

HYPOTHESIS TESTING

HYPOTHESIS I: The first hypothesis is tested by applying Analysis of Variance test. It is found that the perception of employees differs as far as the acquisition and development of human resources (Recruitment and Selection, Training and Development, Career Development, Performance Appraisal, Promotion and Transfer) are concerned in relation to designation, age, job category, group, and monthly salary

HYPOTHESIS II: The second hypothesis is tested by applying Analysis of Variance test. It is found that the perception of employees differs as far as the managing the human resources (Motivation, Leadership, Communication, Employees' Job Involvement, Human Relations and Discipline) are concerned in relation to designation, age, job category, group, and monthly salary.

HYPOTHESIS III: The third hypothesis is tested by applying Analysis of Variance test. It is found that the perception of employees differs as far as maintaining the human resources (Employees' Welfare, Total Quality Management, Trade union, Worker's Participation in Management and Grievance Redressal and Retirement) are concerned in relation to designation, age, job category, group, and monthly salary.

HYPOTHESIS IV: The fourth hypothesis is tested by applying Correlation Analysis. The relationships of sixteen independent variables as with the dependent variable Human Resource Management – are identified with the help of correlation analysis. Each HRM function is interrelated and interdependent to each other and the correlation among various functions of HRM is significant. The magnitude of association is strong in management of human resources with maintenance of human resources and equally high in acquisition and development of human resources with management and maintenance of human resources. The independent variables are highly correlated with the dependent variables.

HYPOTHESIS V: The last hypothesis is tested by applying Ranking Method and Mann-Whitney test. The perception of executives and non-executives are same among the factors influencing to join AAI. Though the ranking order is the same between executives and non-executives, Mann–Whitney test reports that differences in perception in terms of percentages exist among the factors influencing viz., attractive salary, job security, promotional avenues and overall development.

SUGGESTIONS

Acquisition and Development of Human Resources

- HRD surveys should be carried out in the AAI every three years and findings of these surveys should be interpreted and suitable HRD interventions should be made. The suggestions emerging from these surveys need to be examined and followed up seriously.
- All new recruit should compulsorily undergo intensive training. Training opportunities should be provided to all employees in all cadres atleast once in two years. The training programmes should lay more emphasis on personality development, interpersonal relationship and confidence building. The training system should focus more on need-based services.
- Separate Training and Development wing may be created to discuss the technological developments and innovations in human relations and their career developments. The concept of linking career path and training shall be implemented. AAI should develop appropriate strategy that the career path should indicate the degree of knowledge and skills required at different levels.

- Performance appraisals need to be used as a 'Developmental tool'. The appraisal data should be used not only for promotion decisions but also for identification of staff training needs, job placement, job enrichment and enlargement, talent spotting and career planning. The organization should make a appraisal review, say once every five years, to facilitate further refinements and make modifications/improvement in tune with changes in the organizational structures, systems and procedures, work technology, environment factors, etc.
- Need to adopt a system of numerical evaluation based on performance related factors linked to ensure a scientific system of appraisal and to minimize the ill-effects of subjectivity. AAI need to institutionalize new performance measurement systems like balance score card, activity based costing which could provide real linkage between key performance variable and individual effort so that a realistic, organized and predictable pattern is available for performance analysis and review.

Managing Human Resources

- The system of reward and punishment shall be made more clear and transparent. While there should be an institutionalized system for calling periodical information, good work done by the staff for prompt appreciation of their deeds and punishment to the erring employee should be quick and proper to serve as a deterrent to others.
- Periodical motivational programmes should be conducted by the top management to enable the employees to express their opinion about the present scenario of the organization and developmental activities.
- Employee relations have to develop a two-way relationship that facilitates a supportive and productive environment resulting in dramatic improvements in the organization's performance.

Maintenance of Human Resources

- Welfare measures such as canteen facilities, scholarship for children of staff and library facilities needs reexamination and whenever feasible, these and other such welfare measures may be suitably modified for the benefit of staff.
- Scope of employee suggestion scheme needs to be expanded to make it more participative and effective. Practical and useful suggestions should be encouraged and implemented expeditiously. The grievance procedure should be simple. The success of the procedure depends upon imparting training to the supervisors and union representatives in handling grievances.
- Employees have a sense of fair treatment when the organization gives them the opportunity to ventilate their grievances and represent their cases succinctly rather than settling the problems arbitrarily.
- HR practitioners should act as the pivotal change agent is necessary for the successful implementation of TQM in HRM. The concpets of TQM are very much applicable in HRM and if used in a systematic and well-planned manner can result in good product and service quality and organizational growth. The quality of human specialization influences HR development and influences the overall effectiveness of TQM processes.
- The AAI can introduce Voluntary Retirement Scheme on the grounds of humanitarian basis rather than trimming of manpower.

SCOPE FOR FURTHER RESEARCH

1. Competency mapping of employees at various levels in AAI helps to identify and describe competencies that are the most critical to success in a work situation or work role.
2. A comparative study on implementation of HR practices in other regional Airports like North, East and West. The effectiveness of HR policies in other regional Airports Authority of India with Airports Authority of India, Chennai could be determined.
3. A comparative study of Human Resource Development practices between private and public Airports Authority of India due to the emerging privatization of airports.
4. The performance effect of HRM and TQM: A study in AAI determines whether the HRM practices best fit with TQM philosophy. The purpose of this study is to look at human resource management (HRM) as a key element in the implementation of total quality management (TQM)

CONCLUSION

The AAI is not just passing through a transition, but also undergoing a transformation or even transmutation process. To bring about HR transformation the entire array of HR practices collectively has to be reengineered. Change, which is inevitable, may call for many changes in future HR practices require newer management techniques. Ignoring human resources will certainly question the sustainability of any organization. There is unlimited potential in Human Resources which can be encouraged, developed and nurtured in a proper environment. It is for the authorities of the organization to respond to this challenge and harness the potential enabling utility of the HR in a positive and productive manner.

Bridging the gap where AAI are here today and where they need to be in future is both an exciting and a formidable challenge. The greatest challenges will be on the human resource front. The key role of HR in AAI is to create, sustain and intellectualize a learning of organizational environment that serves as a foundation to any training and learning within an organization. Human Resources are regarded as a key to competitiveness. Changing workforce culture, competing in global economy, eliminating the skills gap, need for lifelong learning are some of the challenges faced in AAI. The success mantra lies in innovation, flexibility and improvisation.

Technology is changing the world at frightening speed. Therefore the ongoing process of training and learning should not only be based on sound and proven theories and concepts but also laced with practical aspects and implementation. Overall HR practices enable an employee to make long term commitment and build a good employee and employer relationship. This is a win –win situation both for the AAI and employees. To become world class airport it is clear that AAI have to embrace and enthusiastically implement world class HR practices. With India emerging as a dominant knowledge power it is only in the fitness of things that Indian airport should accord high values to human capital and take momentum steps forward to reach world class HR capital adequacy. It is becoming increasingly important to inculcate efficient HRM with the emergence of new private Airports.

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TECHNICAL ANALYSIS - A PARANORMAL PHENOMENON

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ABSTRACT

Do not save, but invest is the rational counsel as investments may bring better returns. We all consume less than our income to save and want to be in a position to invest in physical (Land, Gold) and financial (Equity, Debt & Derivatives) assets available for investment. To invest in share market is an exciting roller coaster journey. It involves crucial decisions involving, which shares to be included in portfolio, when to buy and sell. Two most commonly used tools to diagnose and decide are fundamental analysis and technical analysis. Fundamental analysis involves analysing the characteristics of a company in order to estimate its value. Technical analysis takes a completely different approach; it doesn't care about the "value" of a company or a commodity. Technicians/Chartists are only interested in the price movements in the market. Various tools and theories of technical analysis are used to determine the price patterns. Most of them seem illogical but still they work and portfolio managers and professionals of security market use them to make money. This paper is an earnest effort to determine how such a paranormal phenomenon of technical analysis works.

KEYWORDS
Investments, Savings, Technical Analysis.

INTRODUCTION
Investment means to plough back our savings. All of us aim at investing our funds such that they give us better rate of return. Investment needs seeds of free money at disposal. To achieve the first step, one has to save money by consuming less than his/her income. One must save for rainy day but the question is how far to save. Saving may start from first month salary itself. The simple rule of thumb is that one must save at least six months of his salary/income before starting investments. This much of saving should be kept as a buffer for emergency so that in case if one looses his/her job for some days or even months he can live without touching his invested funds. Once a comfortable saving zone is created an individual can *stop saving and start investing* his money in such a way that the rate of return on his investments is more than risk-free savings with bank taking into account the time value of money. This is the stage when we can say, a penny saved is a penny earned. It is quite obvious still; one must take those investment options which ensure higher returns than bank rates, after taking into account the discounting time value of money. One can go for *Real assets* investments like land and gold or invest in *Financial assets*.

PURPOSE STATEMENT
The purpose of this paper is to make an earnest effort in understanding the role of technical analysis in portfolio management. It is believed that share prices follow some price patterns; and to understand that pattern is the game, a mystery. If anyone can understand these patterns he/she can make undue advantage of share market. Technical analysis theories are efforts by various authors for more than hundreds of years in this direction. Some of these theories are as illogical as if one says if we see elephant shape in clouds it will rain. This raises a big question and doubt that how such illogical theories can work with market and be base of very huge investments. This paper aims at finding answer or raising a question for budding researchers whether at all the price patterns work and if yes can those be analysed with the use of technical theories or is it something else which really works.

STYLES OF INVESTMENT STRATEGY
As we all are different beings, we have differences which are reflected in our living styles. Similarly our investment strategy style determines our personality trait whether we are risk averse or risk lovers. Degree of risk we take as an investor determines whether we are good investors, speculators or mere gamblers. First of all, we shall know our self/our risk adaptability and then choose the available investments with matching risks. Depending upon risk we have three types of Financial Assets to invest in. These are; Bonds (least risky), Equities (higher risk), Derivatives (Most risky consisting of options, future and forward deals).

While making investment strategy, one must ensure to have a mix of different types of securities/Financial Assets. '*Don't put all your eggs in one basket*' is an idiomatic phrase used as a tip for making good investment strategy. It simply directs that one should not focus all of his or her resources/savings on one hope, possibility or avenue of success in a particular scrip or security. Thus good portfolio managers believe in diversification of securities for lesser risk and good growth.

The third and most important part of investment strategy is, *to be saved by bell* one must buy and sell shares at the right time. We all know that we shall buy when market is going up (so that we can sell when it is at the top) and sell when it starts falling (so that we make safe exit) but markets keeps on fluctuating like a roller coaster and makes one freeze and thus tensed. To make this decision involves a lot of professionalism and experience earned with many wrong judgments. On professional verge we have Fundamental analysis and Technical Analysis as two tools commonly used by portfolio managers throughout.

INVESTMENT MANAGEMENT DECISION KIT
Throughout the world, portfolio consultants use mainly two categories of tools for decisions related with investments viz, Fundamental Analysis and Technical Analysis. It helps in various ways like whether to invest in shares of a particular company or not; when to buy or sell the shares. These both tools work in totally different way by handling the problem in their own style.

Fundamental analysis focuses on the strengths to judge the competitive advantages available to the company and its future growth prospects. The fundamental analysis is empirical data based. An analyst tries to diagnose the company by microscopic analysis of financial statements of the company. Fundamental Analysis is also known as EIC ANALYSIS (Economy, Industry and Company). The fundamental analysts zoom the focus of analysis from economy to industry to company for a vivid picture. This gives confident decision to the investors whether to buy/sell shares by letting them focus on intrinsic value of shares. Investors compare the market price with its true intrinsic value. If overvalued by market, the obvious tip is not to buy (sell if already bought) and if undervalued one must buy as much.

Technical Analysis on the other hand is altogether a different approach. It has nothing to do with the fundamental history or strategic positioning of the company in the industry. Technical analysis focuses on the movement of the share prices going up or going down. It is based on the strong assumptions that market (share market) price moves in a particular pattern and if we focus on the movement we can predict the future market lines. In this way by focusing on price movements and volumes, technicians try to find price patterns. Technical analysts strongly believe that history repeats itself. Similar is the case with share price movements. If we focus we can find some logic in price movement patterns followed by the market.

PRICE PATTERNS & TECHNICAL ANALYSIS THEORIES

Stock Markets throughout follow some price patterns. If one focuses on the movement of prices the patterns can be determined and thus it may be very easy to make buy and sell strategies for make easy money. Various researchers and authors have contributed many theories from time to time in this arena. These theories are widely accepted now a day as they reflect price patterns. These include-

- Dow Theory
- Elliot Wave Theory
- Fibonacci Numbers
- Kondratev Cycle
- Chaos Theory
- Neural Networks
- Witchcrafts Analysis

Portfolio managers all over the globe follow these theories and make good profits for themselves and clients. Though many of these theories are believed to be illogical, they all work as evident from practitioners. This raises the question on how all these work.

TECHNICAL ANALYSIS- A PARANORMAL PHENOMENON

Technical analysis theories are the most important tools for deciding, when to invest and when to withdraw money from share market, by focusing on the price movements. At the core somewhere it seems it is not the theories which work rather it must be something else. Some of the theories really make sense but most of them really seem illogical making technical analysis paranormal. This section focuses briefly on the theories used by technicians.

Dow Theory: Charles Henry Dow's work for understanding and analyzing market behavior was given the name of Dow Theory after his death in 1902. He had developed world's most popular 'DJIA' (Dow Jones Industrial Index). As per Dow, market has three movements namely Ripples (Daily variations), Waves (Weekly moments) and Tides (Half to four years). Dow's simple tip to investors is just focus on long term tidal movements and not to bother about ripples at all.

Elliot Wave Theory: The Elliot Wave Theory is named after Ralph Nelson Elliot in 1939. Elliot felt that market has rhythmic regularity that can be used to predict the future prices. The fact is that one cannot really recognize an Elliot Wave pattern until it has already passed. So how can we make any forecasts or make trades based on it. The other problem is that the waves are not quantified precisely enough to use in trading decisions. Everyone knows that the stock market goes up and down at various times; however, this information isn't really useful without knowing when it is going to go up or down and how much. Even to say that the waves have a specific form is not really useful without times and price targets. This is probably why Elliot started applying the Fibonacci ratios to his Waves in the 1940's.

Fibonacci Numbers: A 13th Century mathematician, Leonardo of Pisa, nicknamed "Fibonacci", discovered a number pattern that was named after him, called the Fibonacci sequence. The original problem that Fibonacci investigated (in the year 1202) was about how fast rabbits could breed in ideal circumstances. He latter applied that mathematical sequence to Capital market and surprisingly it worked there. Fibonacci numbers are a series where each succeeding number is the sum of the two proceeding numbers. The first two Fibonacci numbers are defined to be one and then the series continues as follows 1, 1, 2, 3, 5, 8, 13, 21... As the number gets larger the ratio of adjacent number approaches the golden mean 1: 1·618034. The ratio is found extensively in nature and has been used in architecture since the ancient Greeks (who believed that a rectangle whose sides had the ratio of 1·6181:1 was the most aesthetically pleasing). Technical analysts use this ratio and its inverse extensively to provide projection of price moves.

Kondratev Cycle/K-waves: Kondratev Cycle is the name given the super-long k waves named after Russian mathematician Kondratev. He was a sensation in his time. He discovered that there are very big business cycles as long as 56-60 years.

Chaos Theory: It focuses in the search for patterns in randomness. Certain changes in the randomness are important. Like fish in the sea moves and changes directions and whole school of fishes follow it. Similarly in the stock market big players make random moves and rest of the market follows the leader. Briefly, market leader is bigger player.

Neural Networks: Neural Networks are based on the notion that computer algorithms can be taught to look for optimum pattern. Computer analyses data and tries to predict the market behaviors based on data input.

Witchcrafts Analysis: This is a part of technical analysis with certain phenomenon of good luck and bad luck. Strange but true that it also works for example witchcraft that all years ending with multiples of'5' will be good for market. Like 1995, 2000, 2005, 2010. It really happened also. Another examples of witchcrafts are Super Bowl Theory, World Cup Theory (years with world cup or super cup fetch more jump to market).

DISCUSSION

The technical analysis uses various theories to determine the price patterns and decide about proper entry and exit timings. Some of these theories make great logic to estimate the market moves while others are illogical, but all of them work. Portfolio managers throughout the world make use of these theories and make money.

It is difficult to digest how a mathematical sequence of Fibonacci numbers which was originally developed to study the reproductive sequence of rabbits when applied to financial markets worked. Similarly, in Elliot wave theory it is very difficult to predict the price wave pattern though we can judge the wave only once it has happened.

Witchcraft Theory is a sophisticated name of Black Magic. A witchcraft notion like year ending with multiples of'5' will be good for share market like 1995, 2000, 2005, 2010.. This is strange that this witchcraft's black magic works not only with a country like India but also believed to work in US markets.

The big question arises how all this works even when it seems totally illogical. The answer to this is 'Herd Behaviour'. Herd mentality describes how people are influenced by their peers to adopt certain behaviors, follow trends, and/or purchase items. As described by Chaos theory, Leaders lead and herd follows. Similarly in share market only a few investors lead the market moves and rest of the investors just convert those moves into trends by following in masses.

CONCLUSION

To conclude, the theories of Technical analysis do wonders in stock market analysis and decision making. There is no doubt that technical analysis works. But, some of the theories seem to have very poor logics. This raises doubt whether it's the theory that works or *something else*. Actually it is nothing but the Herd Behaviour of investors that works. This herd effect can even make a rumor work, what to talk about theories.

The leading portfolio manager's investment decisions are followed by other investors in the share market giving rise to herd effect. All might see and follow the portfolio consultants giving advice on any business channel like CNBC TV18, his words of analysis are blindly followed by most of the viewers. If the message is spread that share price of company 'R' will increase many fold in times to come; they really increase. When everyone listens prices will go up, they all want to invest in it so that they can sell at higher prices. This automatically creates demand and thus the share price increases and the consultant's message automatically becomes valid. It is immaterial whether that was a rumor or based on some theory outcomes. The same is with theories, when technicians predict something about market, market believes it and tries to make their strategies of investment in its light. This way they add weight to the prediction and that starts working. Thus, the core line is 'Herd Behaviour' of investors sets the trends.

The investors should follow, what Dow had said. They should not be worried about ripples i.e. daily movements of stocks rather they should focus on tides and make investment strategies accordingly. They must use a mix of both EIC Analysis and Technical analysis tools for long term investments in market.

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SUPPLY AND UTILISATION PATTERN OF AGRICULTURAL CREDIT: A STUDY OF SELECTED CREDIT INSTITUTIONS OF HARYANA

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ABSTRACT
Productive utilization of borrowed money coupled with timely repayment of installments due largely determines the success of a lending institution. Repayment of loan in time is a primary factor as it helps the business running, benefits the farmers by reducing their debt burden and keeps them eligible for getting a fresh loan in future and further helps in planning the system, successfully. On the contrary unproductive utilization coupled with irregular repayment or non-repayment of loan within its stipulated time has certain depressing efforts on the entire structure and organization of credit institutions as it dilutes the entire loaning structure. Use of credit for productive and unproductive purposes depends upon the nature of utilization of credit. In the present paper, an attempt has been taken to analysis of source wise borrowings of agricultural credit and their utilization pattern by the sample borrowers for different purposes.

KEYWORDS
Agricultural Credit, Repayment of Loans, Regular Borrowers, Defaulter Borrowers, Primary Agricultural Cooperative Societies, Regional Rural Banks, Commercial Banks.

INTRODUCTION
Source of credit is an important factor which influences the propensity to borrow. The availability of credit is major factor which controls the capacity as well as the decision of the farmer to adopt modern techniques. Farmers continue to depend for credit on institutional credit agencies. Credit plays a crucial role in oiling the wheel of agricultural production. Credit supply and its proper use are two main important instruments for agricultural growth. Productive utilization of borrowed money coupled with timely repayment of installments due largely determines the success of a lending institution. Repayment of loan in time is a primary factor as it helps the business running, benefits the farmers by reducing their debt burden and keeps them eligible for getting a fresh loan in future and further helps in planning the system, successfully. On the contrary unproductive utilization coupled with irregular repayment or non-repayment of loan within its stipulated time has certain depressing efforts on the entire structure and organization of credit institutions as it dilutes the entire loaning structure. Use of credit for productive and unproductive purposes depends upon the nature of utilization of credit. The success of financing different activities to the agricultural beneficiaries is determined to a great extent by the effective recovery of loans and effective utilization of loans advanced, so that banks can recycle their funds for further lending. So the repayment of loans in time and effective utilization of loans these are two important indicators for prudent deployment of funds. there is a common feeling that farmers are not using the loan for the purpose for which they apply for it and spend the same for non agricultural purposes such as household expenditure, loan repayment and social customs. If borrowing is utilized for productive purposes it may generate its own means of repayment. But diversion of credit creates some major problems and ultimately restricts the repayment.

IMPORTANCE OF THE STUDY
Productive utilization of borrowed money coupled with timely repayment of installments due largely determines the success of a lending institution. Repayment of loan in time is a primary factor as it helps the business running, benefits the farmers by reducing their debt burden and keeps them eligible for getting a fresh loan in future and further helps in planning the system, successfully. On the contrary unproductive utilization coupled with irregular repayment or non-repayment of loan within its stipulated time has certain depressing efforts on the entire structure and organization of credit institutions as it dilutes the entire loaning structure. Use of credit for productive and unproductive purposes depends upon the nature of utilization of credit. The success of financing different activities to the agricultural beneficiaries is determined to a great extent by the effective recovery of loans and effective utilization of loans advanced, so that banks can recycle their funds for further lending.

REVIEW OF LITERATURE
Many studies have been conducted on the issue of rural and agricultural financing. The studies were based both on primary as well as secondary informations. The role of various institutions has also been studied by various scholars from different angles. In fact, the area of rural credit and agricultural financing offers such a large scope that scholars may attempt to investigate various new issues. Hence, in every study one finds a different approach and different aspects which were not covered by earlier studies. There is still a large scope of research in this area. A review of a few important and relevant studies in this area has been made in the study.

Wangikar S.D., Mohd. Abdul Rub and R.K. Digraskar (1991) – this study made an attempt to know the credit use behaviour of the beneficiaries majority of the respondents (77.22%) had completely utilized the loan for the purpose for which it was sanctioned. About 15.56% had partially utilized the loan and the remaining (7.22%) respondents had completely diverted the loan sanctioned. Out of total amount advanced in the form of kind and cash 88.96%, 1.32% and 9.72% were utilized for stipulated, other productive and unproductive purposes respectively.

In a study of “Credit utilization pattern on different categories of farms in district Kurukshetra, Haryana” by M.K. Modi and K.N. Rai (1993) it was revealed that borrowers are still attracted to the non institutional sources because of simple methods and less formalities adopted by them. The study reported that major share of credit was utilize for the purposes it was taken. However, out of total amount diverted about 50 percent was further used for productive purposes other than specified one in case of crop production credit, whereas in case of term credit, it was even more than need based loans should be given to the farmers keeping in view their credit worthiness. The lending agencies must keep a watch on the utilization pattern of the borrowers from the very beginning to ensure proper utilization of term credit. Efforts need to be made to avoid under and over financing. In a study, “Repayment capacity of defaulter and non-defaulter borrowers of cooperative societies in Haryana”, by S.K. Goyal, R.N. Pandey and M.K. Modi (1993) it was revealed that the non-defaulters were well off and better placed with respect to average yield of major crops, value of farm assets, total cash returns of the household and repayment capacity as compared to defaulter borrowers the defaulter borrowers utilized a relatively larger proportion of their total earnings for consumption purposes and thereby leaving less for investment in production process. This resulted into low repaying capacity of the loan on the part of defaulter borrowers.

From the present study entitled “A study of overdue of loan in agriculture by Balishter, A.K. Singh and Viswajit (1994) the following main conclusions emerge. The large and medium farmers together account for about 37 percent of the total defaulters and for over 57 percent of the total overdue while the marginal and small farmers together account for about 63 percent of the total defaulter and about 42 percent of the total overdue. Out of 175 defaulters 67 or about 38 percent are willful defaulters. It is important here that willful defaulter is mainly confined to medium and large farmers to the extent over 90 percent. Out of 175 defaulters 108 or about 62 percent are those who could not repay their loan due to lack of their repayment capacity. For these defaulters liberal measures such as extending the repayment period over a reasonable time and making adequate loans available in time. Besides, measures for improvement in crop yields, remunerative prices for the crop products crop insurance are also necessary to enhance the repayment capacity of the farmers particularly marginal and small farmers.

Y.C. Sale, V.G. Pokharkar and D.B. Yadav (2005) in their study attempt to estimate the critical requirement of the farmers and the availability of credit on western Maharashtra and examine the utilization and repayment pattern of credit borrows and the major constraints inhibiting the lenders and the borrowers. The data on the list of villages was obtained from the District Central Cooperative Bank and the offices of the cooperative societies. It is observed that the per hectare requirement of loan went on increasing with increase in the size of holding. The average for family borrowings increased with the increase in the size of holdings. Misutilization of crop loan was more i.e. 30 percent especially among the small and medium group of the farmers. Ramakrishna and K.V. Aiyanna (2008) in their study, "Institutional Financing of Agriculture under Service Area Approach" have analyzed the utilization pattern and repayment performance of the borrower under service area approach. It is concluded in the study that in spite of adopting "service area approach" there exists the problem of double finance due to lack of coordination among different institutional agencies operating in-the area. The study reveals that repayment performance of investment loan as well as short term crop loan is not satisfactory in case of all categories of farmers. However, repayment performance is higher in case of investment loan as compared to short term crop loan in all categories of farmers. However, repayment performance is higher in case of investment loan as compared to short term crop loan in all categories of farmers. There is a need to take appropriate measures by the financing institutions to improve the repayment performance.

The review of literature highlights that this particular field need comprehensive study regarding many aspects of utilization pattern of agriculturists financed by the credit institutions. The present study has made an attempt to overcome almost all the problems of the existing studies by focusing on all the three types of credit institutions considering both primary and secondary data and combining the behavioural, technical and managerial aspects of agricultural finance and their utilization pattern on the basis of their status of repayment.

OBJECTIVES AND HYPOTHESES OF THE STUDY

This paper comprises an analysis of source wise borrowings of agricultural credit and their utilization pattern by the sample borrowers for different purposes. It is hypothesized that there is no relationship between the status of repayment and the utilization pattern of the borrowers.

METHODOLOGY OF THE STUDY

The study is based on sample taken from among the institutions and beneficiaries. A multistage sampling has been used for this purpose. Two districts in Haryana state where all the three types of rural based credit institutions exist, viz., Bhiwani and Rohtak have been selected. Rohtak district is comparatively an irrigated area and Bhiwani district a dry district. They represent the two typical agricultural regions: irrigated and dry.

A sample of two branches of each institution from both the districts has been taken as sample for the study. Basically, the branches of each credit institution selected for the study have been taken from the rural areas. From among the cooperative banking we have selected the primary agricultural cooperative societies which have been working in the rural areas. These societies give short term loans to their members for productive purposes. The societies can also provide upto certain limit, medium period loans. From among the commercial banks we have selected the branches of Punjab National Bank, because the maximum number of branches has been established by Punjab National Bank. The problem such as these related to selection does not exist in case of regional rural banks. Except district Gurgaon all the branches of regional rural banks in Haryana are sponsored by the Punjab National Bank (PNB). In district Gurgaon these branches are sponsored by the Syndicate Bank. A sample of 40 farmer beneficiaries in the area of each sample credit institution has been drawn adopting systematic random sampling method. The procedure adopted for selecting the sample farmers have been given as under. From each of the sample credit institution the list of the village wise farmers, it serves have been collected in person. Forty farmer beneficiaries have been taken from each branch in both the districts making the number of respondents to 480 in all. The beneficiaries have been categorized further in marginal small, medium and big farmers. From each category representative beneficiaries have been selected proportionately.

ANALYSIS AND INTERPRETATION OF THE STUDY

TABLE 1 SHOWING INSTITUTION WISE SUPPLY OF CREDIT (Amount ` in lakhs)

Name of Districts	PACs		Commercial Banks		Grameen Banks		Total	
	B	A	B	A	B	A	B	A
Bhiwani	80	71.14 (23.66)	80	117.52 (39.10)	80	111.98 (37.24)	240	300.64 (100)
Rohtak	80	67.15 (24.11)	80	108.22 (38.87)	80	103.04 (37.02)	240	278.41 (100)
Total	160	138.29 (23.88)	160	225.74 (38.98)	160	215.02 (37.14)	480	579.05 (100)

Source: Compiled from the questionnaire.

Figures in brackets under each column indicate percentage to total

Table 1 depicts the institution wise borrowings by the sample loanees of both the districts during the reference period. According to the table, primary agricultural cooperative societies supplied 23.88 percent, commercial banks supplied 38.98 percent and Grameen Banks supplied 37.14 percent of the total institutional credit.

TABLE 2 SHOWING TERM WISE SUPPLY OF AGRICULTURAL CREDIT IN THE SAMPLE DISTRICTS (Amount ` in lakhs)

Name of Districts	Name of the Bank	Short Term		Medium Term		Long Term		Total	
		B	**A**	**B**	**A**	**B**	**A**	**B**	**A**
Bhiwani	PACs	75	67.85	5	3.29	—	—	80	71.14 (23.66)
	Commercial	71	104.46	6	4.91	3	8.15	80	117.52 (39.10)
	RRB	73	99.79	3	2.54	4	9.65	80	111.98 (37.24)
		219	272.10 (90.50)	14	10.74 (3.58)	7	17.80 (5.92)	240	300.64 (100)
Rohtak	PACs	74	63.17	6	3.98	—	—	80	67.15 (24.11)
	Commercial	76	101.32	2	1.65	2	5.25	80	108.22 (38.87)
	RRB	72	92.67	5	4.12	3	6.25	80	103.04 (37.02)
		222	257.16 (92.36)	13	9.75 (3.50)	5	11.50 (4.14)	240	278.41 (100)
Total		411	529.26 (91.40)	27	20.49 (3.54)	12	29.30 (5.06)	480	579.05 (100)

Source: Compiled from the Questionnaire.

B = Borrower

A = Amount

Borrowings according to types of loans: The banks generally provide three types of loans; short term, medium term and long term. The short term loan in usually spent on meeting current agricultural expenditure (like buying of seeds, fertilizers, payment of wages to the workers etc). The medium term loan is used to buy farm animals, purchase of implements and machinery etc. The long term loans are utilized for making capital investments in agriculture like land improvements construction of wells etc.

Borrowings on the basis of types of loan are presented in the Table 2. Of the total borrowings, short term loan accounts for 91.40 percent of the total borrowings of the sample borrowers of two districts during the reference period. Medium term loans accounts 3.54 percent and long term loan accounts 5.06 percent of the total borrowings of the sample borrowers of two districts. The supply of short term loan is more in case of district Rohtak. In case of medium term, the percentage of finance is more or less equal in both districts. In long term, the percentage of finance is slightly more in district Bhiwani.

TABLE 3 SHOWING TERM WISE SUPPLY OF CREDIT BY DIFFERENT INSTITUTIONS (Amount ` in lakhs)

Name of the Bank	Short Term		Medium Term		Long Term		Total	
	B	A	B	A	B	A	B	A
PACs	149 (93.12)	13.02 (94.74)	11 (6.88)	7.27 (5.26)	—	–	160 (100)	138.29 (120)
Commercial	147 (91.88)	205.78 (91.15)	8 (5)	6.56 (2.90)	5 (3.12)	13.4 (5.95)	160 (100)	225.74 (100)
RRB	145 (90.60)	192.46 (89.50)	8 (5)	6.66 (3.00)	7 (4.40)	15.9 (7.40)	160 (100)	215.02 (100)
Total	441 (91.88)	529.26 (91.40)	27 (5.62)	20.49 (3.53)	12 (2.5)	29.30 (5.07)	480 (100)	579.05 (100)

Source: Compiled from the Questionnaire.

The table explains the supply of credit in all types of credit institutions. Of the total borrowings short term loan accounts 94.74 percent and medium term loan accounts 5.26 percent in case of primary agricultural cooperative societies. Primary agricultural cooperative societies do not provide long term loan. The supply of short term finance is 91.15 percent, medium term 2.90 percent and long term is 5.95 percent in case of commercial banking. In case of regional rural banks, the supply of short term finance is 89.50 percent, medium term finances 3.10 percent and long term finance is 7.40 percent of the total finance. The supply of short term and medium term is more in case of primary agricultural cooperative societies. The supply of long term finance is more in case of Haryana Grammen Banks.

TABLE 4 SHOWING MODE OF BORROWINGS BY THE SAMPLE BORROWERS (Amount ` in lakhs)

Name of Districts	Name of the Bank	In Cash		In Kind		Cash & Kind		Total	
		B	A	B	A	B	A	B	A
Bhiwani	PACs	5	3.29	–	—	75	67.85 (95.38)	80	71.14 (100)
	Commercial	78	112.37	2	5.15 (4.39)	—	—	80	117.52 (100)
	RRB	79	109.58	1	2.40 (2.15)	—	—	80	111.98 (100)
	Total	162 (68.75)	225.29	3	7.55 (2.51)	75	67.85 (22.57)	240 (100)	300.64 (100)
Rohtak	PACs	6	3.98 (6)	–	—	63.17 (74)	63.17 (94)	80	67.15
	Commercial	79	105.62	1	2.60 (2.40)	—	—	80	108.22 (100)
	RRB	79	100.29	1	2.75 (2.67)	—	—	80	103.04 (100)
	Total	164 (69.16)	209.89	2	5.35 (1.92)	74 (30.84)	63.17 (22.70)	240 (100)	278.41 (100)
	G. Total	326 (68.95)	435.13 (75.14)	5	12.90 (2.22)	149 (31.05)	131.02 (22.64)	480 (100)	579.05 (100)

Source: Compiled from the Questionnaire.

B = Borrower, A = Amount

MODE OF BORROWINGS

The credit agencies provide funds to sample borrowers either in cash or in kind or both in cash and kind. Generally cash credit is provided to the lonees to meet the direct expenses relating to agricultural activities like, payment of wages to the agricultural labourers, purchase of fertilizer, seeds, pesticides etc. In case of PACs, loans both in cash and kind are provided to the beneficiaries. In certain cases only loans in kind are provided to the loanees in the form of machinery like tractor etc. The mode of borrowings by the sample beneficiaries of the two districts during the reference period is given in the Table 4.

Table reveals that the loans provided in terms of cash are the maximum. It is 75.14 percent of the total borrowing of the sample borrowers. The loan supplied in cash and kind accounts for 22.64 percent of the total borrowings. The loans advanced only in kind make the lowest percentage of the total borrowings. The table clearly shows that the PACs do not provide the finance in 'kind' form. Similarly commercial banks and Grameen Banks do not provide the finance in 'Cash and Kind' form.

TABLE 5 SHOWING DISTRIBUTION OF CREDIT ACCORDING TO FARM SIZE (Amount ` in lakhs)

Land holding pattern	Bhiwani		Rohtak		Total		Average Amount per borrower
	B	A	B	A	B	A	
Marginal farmers	80	57.02	85	47.64	165	104.66	0.63
Small farmers	99	128.83	104	137.77	203	266.6	1.31
Medium large	61	114.79	51	93.00	112	207.79	1.85
Total	240	300.64	240	278.41	480	579.05	1.2

Source: Compiled from the Questionnaire.

LOANS ADVANCED ACCORDING TO THE LAND HOLDING

The entire land holdings of sample borrowers of both the sample districts have been divided into three categories. The distribution of the credit according to the size of the farm is explained in the table 5. As per the table marginal farmers (having 0 to 2.5 acres of land) constitutes 165 or 35 percent of the total borrowers, and these borrowers have availed loans of ` 104.66 lacks. On an average marginal farmers have availed ` 62000 per head.

But when the size of land holdings increases the average amount per borrower also increases. The small farmers (having 2.5 to 5 acres of land) constitutes 203 or 42 percent of the total borrowers. These borrowers have availed loans of ` 266.60 lacks or 46 percent of the total amount supplied. On an average small farmers have availed loans of ` 1.32 lack per head. When the size of land holding increases the average amount per borrower also increases, but the number of loanees decreases when size of land holding increases. The medium and large farmers (having above 5 acres of land) constitutes 112 or 22.90 percent of the total borrowers. These borrowers have availed loans of ` 207.79 lacks or 36 percent of the total amount supplied.

In an average medium and large farmers have availed loans of ` 1.85 lack per head. The borrowers whose land holding is above 5 acres, the average amount supplied to them is the highest i.e., ` 185000 per borrower

TABLE 6 SHOWING SUPPLY OF CREDIT ACCORDING TO IRRIGATED/NON IRRIGATED LAND HOLDING (Amount ` in lakhs)

Name of District	Irrigated regions		Non irrigated regions		Total	
	B	A	B	A	B	A
Bhiwani	196 (81.66)	262.07 (87.17)	44 (18.34)	38.57 (12.83)	240 (100)	300.64 (100)
Rohtak	240 (100)	278.41 (100)	—	—	240 (100)	278.41 (100)
Total	436 (90.83)	540.48 (93.33)	44 (9.17)	38.57 (6.67)	480 (100)	579.05 (100)

Source: Compiled from the Questionnaire.

Supply of credit on the basis of availability of irrigation facilities: The classification of borrowing according to irrigated and been irrigated regions is illustrated in Table 6.

According to the table out of total borrowing 93.33 percent is borrowed by the loanees of irrigated regions and 6.67 percent is borrowed by the loanees of non irrigated regions. In the district Bhiwani 81.66 percent borrowers have irrigated regions and 18.34 percent barrowers have non irrigated regions. In the district Rohtak 100 percent borrowers have irrigated land. The table clearly indicates that in the district Bhiwani 87.17 percent credit has been supplied to the irrigated regions and 12.83 has been supplied to the non irrigated regions. In the district Rohtak 100 percent credit has been supplied to the irrigated regions.

It is revealed from the survey that non irrigated land does not exist in the district Rohtak.

UTILIZATION PATTERN OF THE INSTITUTIONAL CREDIT

Borrowing must be used in a productive way. Productive borrowing creates its own means of repayment. Diversion of credit or misuse of credit in other than selective purposes creates undesirable problems. Such credit being unproductive does not help the borrower in repayment and ultimately the debt accumulates. Therefore, proper utilization of credit is as important as the supply.

TABLE 7 SHOWING INSTITUTIONAL CREDIT LEFT FOR ULTIMATE USE (Amount ` in lakhs)

Name of District	No. of Borrower	Supply of Credit	Pre Borrowing exp.	Balance with the borrower for use
Bhiwani	240	300.64 (100)	1.51 (.50)	299.13 (99.49)
Rohtak	240	278.41 (100)	1.66 (.60)	276.75 (99.40)
Total	480	579.05 (100)	3.17 (.55)	575.88 (99.45)

Source: Compiled from the Questionnaire.

DISTRICT WISE USE OF CREDIT

For the supply of institutional credit, middlemen village touts and others help the loanees to obtain loans. These people charge commission for their services and borrowers helplessly pay it under the bureaucracy of lending institutions. The details are furnished in the Table 7.

Table reveals that out of the total supply of institutional credit only .55 percent or ` 3.17 lacks have been spent for pre borrowing expenditure. There is no significant difference in the style of pre borrowing expenses by the sample loanes of the districts under study. It clearly seems that a very little amount has been spent on the pre borrowing expenses. So the middlemen are not influencing the borrowers in taking loans.

TABLE 8 SHOWING INSTITUTE WISE CREDIT AVAILABLE FOR END USE Amount ` in lakhs)

Name of District	No. of Borrower	Supply of Credit	Pre Borrowing exp.	Balance with the borrower for use
PACs	160	138.31 (100)	1.76 (1.28)	136.55 (98.72)
Commercial Banks	160	225.7 (100)	.64 (.30)	225.06 (99.70)
RRBs	160	215.04 (100)	.77 (.36)	214.27 (99.64)
Total	480	579.05 (100)	3.17 (.55)	575.88 (99.45)

Source: Compiled from the Questionnaire.

BANK WISE CREDIT UTILIZATION

Cooperatives, commercial banks and Grameen banks are the institutional agencies for providing credit to the agriculturists of the districts under study during the period under reference. The use of institutional credit supplied by these banks is illustrated in Table 7. According to the table cited above, there is no significant difference in the style of pre-borrowing expenses of three institutions. But the pre-borrowing charges paid by the beneficiaries to secure cooperative loan is slightly higher. It is 1.28 percent.

TABLE 9 SHOWING UTILIZATION OF AGRICULTURAL CREDIT TOWARDS AGRICULTURAL ACTIVITIES (Amount ` in lakhs)

Name of District	No. of Borrower	Supply of Credit	Pre Borrowing exp.	Loan use for agriculture activities	Loan diversified
Bhiwani	240	300.64	1.51 (.50)	251.47 (83.64)	47.66 (15.86)
Rohtak	240	278.41	1.66 (.60)	223.50 (80.27)	53.25 (19.13)
Total	480	579.05	3.17 (.55)	474.97 (82.02)	100.91 (17.43)

Source: Compiled from the Questionnaire.

USE OF CREDIT IN AGRICULTURAL ACTIVITIES

The irony of agricultural lending is that it is mostly being used exclusively for the purpose for which it is borrowed. Thus to assess the extent of credit use in agricultural activities and non-agricultural activities are well explained in the Table 8.

Deducting the pre borrowing expenditure from the total institutional supply, at last the balance left is expected to be used on farm activities. But some part of this credit has been diversified. Out of total 82.02 percent of the institutional credit have been utilized for agricultural activities. In case of district Bhiwani, 83.64 percent credit has been used for agricultural activities and 15.86 percent credit has been used for diversified purposes. In district Rohtak, 80.27 percent credit has been used for agricultural activities and 19.13 percent credit has been used for diversified purposes. Table clearly shows that the percentage of diversification is more in the district Rohtak in comparison to district Bhiwani.

TABLE 10 SHOWING BANK WISE USE OF AGRICULTURAL CREDIT TOWARDS AGRICULTURAL ACTIVITIES (Amount ` in lacks)

Name of District	No. of Borrower	Supply of Credit	Pre Borrowing exp.	Loan use for agricultural activities	Loan used for diversified purpose	Total loan misused
PACs	160	138.29 (100)	1.76 (1.27)	116.18 (84.01)	20.35 (14.72)	22.12 (15.99)
Commercial	160	225.75 (100)	.64 (.28)	182.79 (80.97)	43.32 (18.75)	42.95 (19.03)
RRB	160	215.01 (100)	.77 (.35)	176 (81.85)	38.24 (17.80)	39.01 (18.75)
Total	480	579.05 (100)	3.17 (.55)	474.97 (82.02)	100.91 (17.43)	104.08 (17.98)

Source: Compiled from the Questionnaire.

Of the total 84.01 percent credit has been used for agricultural activities and 14.72 percent credit has bee used for diversified activities in case of primary agricultural cooperative societies. But of the total 80.97 percent credit has been used for agricultural activity 18.75 percent credit has been used for diversified activities in case of commercial banks. In case of Grameen Banks, 81.85 percent of the total credit has been used for agricultural activities and 17.80 percent credit has been used for diversified purposes. The percentage of diversification is lowest in case of PACs and it is highest in case of commercial banks.

But the behaviour of attitude of the sample borrowers of both the agencies (commercial banks and Grameen Banks) is more or less same with regard to the utilization of the institutional credit and also about the diversification of credit.

TABLE 11 SHOWING ADEQUACY OF INSTITUTIONAL CREDIT TO MEET THE PURPOSE OF SAMPLE BORROWERS (Amount ` in lakhs)

Name of District	No. of Borrower	Adequate to meet the purpose	Not adequate to meet the purpose
Bhiwani	240	221 (92.08)	19 (7.92)
Rohtak	240	216 (90)	24 (10)
Total	480	437 (91.04)	43 (8.96)

Source: Compiled from the Questionnaire.

According to the Table 11, 8.96 percent borrowers are not satisfied due to insufficient of loan amount. Out of 480 borrowers 437 or 91.04 percent borrowers are satisfied with the adequacy of loans because the loans are sufficient to meet their purposes. The gap between supply of credit and use ultimately leads the borrowers not to repay the institutional loans.

TABLE 12 SHOWING TERM WISE GAP BETWEEN SUPPLY AND USE OF INSTITUTIONAL CREDIT (Amount ` in lakhs)

Name of district	Bank	No. of borrowers	Short Term			Medium Term			Long Term			Total		
			S	PU	NPU	S	PU	NPU	S	PU	NPU	S	PU	NPU
Bhiwani	PACS	80	67.85	57.7	10.16	3.28	2.78	0.5	—	—	—	71.14	60.48	10.66
	Comm.	80	104.46	90	14.46	4.91	4.91	—	8.15	5.95	2.2	117.52	100.86	16.66
	RRB	80	99.79	83.94	15.84	2.54	2.54	—	9.65	3.65	6.01	111.98	90.13	21.85
	Total	240	272.1	231.64	40.46	10.73	10.23	0.5	17.8	9.6	8.21	300.64	251.47	49.17
Rohtak	PACS	80	63.17	53.97	10.47	3.98	3.48	0.5	—	—	—	67.15	57.45	10.97
	Comm.	80	101.32	83.67	19.4	1.65	1.65	—	5.25	2.55	2.7	108.22	87.87	22.1
	RRB	80	92.67	71.64	18.31	4.16	3.64	0.52	6.25	2.9	3.01	103.04	78.18	21.84
	Total	240	257.16	209.28	48.18	9.79	8.77	1.02	11.5	5.45	5.71	278.41	223.5	54.91
G. Total		480	529.26	440.92	88.64	20.52	19	1.52	29.3	15.05	13.92	579.05	474.97	104.08

Source: Compiled from the Questionnaire.

S = Supply of Credit
PU = Productive Use
NPU = Non productive use

Term wise gap between use of institutional credit out of the total supply of ` 579.05 lacks, ` 474.97 lacks or 82.02 percent has been utilized for productive purposes. The remaining 104.08 lacks or 17.58 percent has been diversified by the sample borrowers during the reference period. Out of the total non productive loan ` 88.64 lacks or 85.16 percent has been diversified out of short term loans.

Out of the total non productive loans ` 13.92 lacks or 13.38 percent has been diversified from long term loans. However diversion of loan from medium term category is the least that is 1.46 percent only. The percentage of diversification from short term loans is 82.28 percent in district Bhiwani, it is 87.74 percent in district Rohtak. The percentage of diversification from long term loans is 16.72 percent in the district Bhiwani, it is 10.41 percent in case of district Rohtak.

TABLE 13 SHOWING DIVERSION OF INSTITUTIONAL CREDIT BY THE SAMPLE BORROWERS OF DIFFERENT NON PRODUCTIVE PURPOSE (Amount ` in lakhs)

Name of District	Pre borrowing exp.	Repayment of old dues	Marriage	Health	Education	Litigation	Liquor	Construction of Houses	Total
Bhiwani	1.51 (3.07)	2.68 (5.45)	12.45 (25.32)	5.04 (10.25)	16.91 (34.40)	0.65 (1.32)	2.24 (4.55)	4.69 (15.64)	49.17 (100)
Rohtak	1.66 (3.02)	3.12 (5.68)	11.73 (21.36)	4.12 (7.50)	20.89 (38.04)	1.12 (2.03)	2.29 (4.17)	9.98 (18.2)	54.91 (100)
Total	3.17 (3.04)	5.80 (5.57)	24.18 (23.23)	9.16 (8.80)	37.80 (36.31)	1.77 (1.70)	4.53 (4.35)	17.67 (17)	104.08 (100)

Source: Compiled from the Questionnaire.

Diversion of credit towards different activities: This table reveals that the total credit of Rs.104.08 lacks have been diverted in different directions by the sample beneficiaries. It constitutes 17.97 percent of the total supply of the institutional loan. Out of this lion's share has been diverted towards education expenditure. It constitutes 36.31 percent.

Out of total 23.23 percent share has been diverted towards marriages expenditure and 17 percent of total diverted funds 8.80 percent, 5.57 percent, 4.35 percent and 3.04 percent has been diverted towards the expenditure in health, repayment of old dues, liquor, and pre borrowing expenditure respectively. Total amount of non productive funds is Rs. 49.17 lacks in district Bhiwani.

Table 14 Showing institute wise distribution of beneficiaries according to their status of repayment and their utilization pattern

Nature of borrower	Bhiwani									Rohtak								
	PACS			Comm.			RRB			PACS			Comm.			RRB		
	R	D	T	R	D	T	R	D	T	R	D	T	R	D	T	R	D	T
Utilized	33	32	65	59	9	68	62	2	64	25	42	67	58	10	68	69	4	73
Misutilised	5	10	15	4	8	12	8	8	16	2	11	13	7	5	12	5	2	7
Total	38	42	80	63	17	80	70	10	80	27	53	80	65	15	80	74	6	80

Source: Field Survey.

Note: R = Regular
D = Defaulter
T = Total

TABLE 15 SHOWING UTILIZATION OF CREDIT AND THEIR STATUS OF REPAYMENT

	Utilized	**Misutilised**	**Total**
Regular	306 (90.80)	31 (9.20)	337 (100)
Defaulter	99 (69.23)	44 (30.77)	143 (100)
Total	405 (84.38)	75 (15.62)	480 (100)

Source: Field Survey.

Out of total 23.23 percent, 17 percent, 8.80 percent, 5.57 percent, 4.35 percent and 3.04 percent has been diverted towards the expenditure in marriages, construction of houses, health repayment of old dues, liquor and pre-borrowing expenditure respectively.

TESTING OF HYPOTHESIS

H_0: It is hypothesized that there is no relationship between the status of repayment and the utilization pattern of the borrowers.
The chi-square test was conducted to test the hypothesis.
Calculated value of chi-square (χ^2) : 36
Table value : 3.84 / 6.63
Degree of freedom (df) : 1
Level of significance : 5 percent / 1 percent

FINDINGS

The institutions supplying agricultural credit are primary agricultural cooperative societies, commercial banks and Haryana Grameen Banks. Out of the total institutional supply, PACS have supplied 23.88 percent, commercial banks have supplied 38.98 percent and HGBs have supplied 37.14 percent. The banks generally provide three types of loans; short term, medium term and long term. Out of the total borrowings, short term loan accounts for 91.40 percent, medium term loans accounts 5.06 percent of the sample borrowers of two districts. All types of loans have been supplied by all the credit institutions except PACs, because PACs do not provide long term loans. The credit agencies provide funds to sample borrowers either in cash or in kind. The loans provided in terms of cash are maximum it is 75.14 percent of the total borrowings of the sample borrowers. The loan supplied in cash and kind accounts for 22.64 percent of the total borrowings. The loans advanced only in kind make the lowest percentage of the total borrowings. The study reveals that PACs do not provide the finance in 'kind' form. Similarly commercial banks and Grameen Banks do not provide the finance in 'cash and kind' form.

LOANS ADVANCED ACCORDING TO THE LAND HOLDINGS

The entire land holdings have been divided into three categories. Marginal farmers (having upto 2.5 acres of land) constitute 35 percent of the total borrowers and these borrowers have availed loans of Rs. 104.66 lacks. Small farmers constitute 42 percent of the total borrowers, these borrowers have availed loans of Rs. 266.60 lacks or 46 percent of the total amount supplied. The medium and large farmers (having above 5 acres of land) constitute 22.90 of the total borrowers, these borrowers have availed loans of Rs. 207.79 lacks or 36 percent of the total amount supplied. On an average marginal farmers have availed loans of Rs. 63000 per borrowers, small farmers have availed Rs. 1,32000, medium and large farmers have availed Rs. 1,88000 per borrower.

SUPPLY OF CREDIT ACCORDING TO IRRIGATED AND NON IRRIGATED LAND HOLDINGS

The study reveals that out of total borrowings 93.33 percent is borrowed by the loanees of irrigated region and 6.67 percent is borrowed by the loanees of non-irrigated regions. In the district Bhiwani 81.66 percent borrowers have irrigated regions and 18.34 percent borrowers were related to non-irrigated regions. In district Rohtak 100 percent credit has been supplied to farmers of the irrigated regions. It has been revealed from the survey that non irrigated land was not found in the district Rohtak.

UTILISATION PATTERN OF INSTITUTIONAL CREDIT

Borrowing must be used in a productive way. Productive borrowing creates its own means of repayment. Diversion of credit or misuse of credit for other than selective purposes creates undesirable problems. Out of total 82.02 percent of the institutional credit have been utilized for agricultural activities and 17.43 percent have been used for diversified purposes. In case of district Bhiwani, 83.64 percent credit has been used for agricultural activities and 15.86 percent credit has been used for diversified purposes the percentage of diversification was found more in district Rohtak in comparison to district Bhiwani.

In case of PACs 84.01 percent credit has been used for agricultural activities and 14.72 percent credit has been used for diversified purposes. In commercial banks 80.97 percent credit has been used for agricultural activities 18.75 percent credit has been used for diversified purposes. In case of Grameen Banks 81.85 percent and 17.80 percent credit has been used for agricultural activities and diversified activities respectively. Out of total non-productive loans Rs. 88.64 lacks or 85.16 percent has been diversified from short term loans, Rs. 13.92 lacks or 13.38 percent has been diversified from long term loans. Diversion of loan from medium term category is the least that is 1.46 percent only. Diversion of credit towards different activities out of total credit supply of Rs. 579.05 lacks, Rs. 104.08 lacks or 17.58 percent supply has been diversified by the sample borrowers in different activities. Out of this major share has been diverted for meeting education expenditure, it constitutes 36.31 percent. Out of total diverted amount 23.23 percent, 17 percent, 8.80 percent, 5.57 percent, 4.35 percent and 3.04 percent has been spent for meeting expenditure in marriages, construction of houses, health, repayment of old dues, liquor and pre-borrowing expenditure respectively.

SUGGESTIONS

A few humble suggestions are putforth hereunder to contain the situation.

- Pre-lending appraisal like evaluation of agricultural product, assessment of external forces, local market structure etc. should be taken into consideration. Credit may not be sanctioned according to the approved schemes of the lending institutions alone. Repaying capacity of the borrowers should be judged carefully before such a decision. Similarly, post lending supervision and approaching the borrower in right time for repayment may prove effective in early recovery of overdues.

- The employees of lending institutions should develop a positive attitude in creating friendly relation with borrowers. They have to create a good climate of personal touch with the borrowers by meeting their express demand instantly. They should gain fairly adequate knowledge about the behaviour, credit worthiness, personal need and character of the borrower. Such an attitudinal change amongst bank officials may bring both borrowers and lenders close and this relationship ultimately motivate the borrowers to repay the dues in time.
- There must be a vigorous attempt for educating the farmers that institutional loan is not a help and it is required to be repaid. It may be suggested that non-repayment of loan ultimately would turn bank into red affecting farmers interests. Such a mental shake-up is essential, so that farmers make productive use of the loan and get enough return to repay the loan.

CONCLUDING REMARKS

To study the behavioural attitude of sample beneficiaries about the utilizration pattern of institutional credit according to their status of repayment the chi-square test has been used both at 5 percent and 1 percent level of significance. Since the calculated value is greater than the table value the hypothesis is rejected it means the borrowers do not show any similar tendency regarding the utilization pattern and their status of repayment. Since the sample borrowers are different in their repayment status and their utilization patterns also differ.

The beneficiaries of the sample districts have been divided into two categories on the basis of their status of repayment. The pattern of utilization of both the categories of loanees have been shown in the Table 4.15. Among the regulars the percentage of utilization arise 90.80 which is higher than the defaulters. In the category of defaulters 69.23 percent borrowers have utilized the credit for the stipulated purpose. Among the regulars only 9.20 percent borrowers have misutilized the credit, while in case of defaulters 30.77 percent borrowers have misutilized the credit. Out of the total 84.38 percent borrowers have utilized the credit while 15.62 percent borrowers have misutilized the credit. Out of the total 480 borrowers have 405 utilized the credit.

Out of which 306 or 75 percent are regulars and 25 percent are defaulters. Out of total 480 borrowers 75 borrowers have misutilized the credit out 59 percent of which borrowers are defaulter and 41 percent are regular. Of the total 75 borrowers have misutilized the credit out of which 59 percent borrowers are defaulter and 41 percent are regular.

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ADVERTISING THROUGH SOCIAL MEDIA NETWORKS: LET'S CATCH UP WITH THE INTERNET AUDIENCE

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ABSTRACT

Advertisers are always looking out for new ways of advertising to push their products and services in the markets. Advertising is one such activity that thrives on newness of presentation techniques and uniqueness of saleable ideas. Advertising industry, in general, claims to be ever changing, innovative, creative and technology driven in its approach. The Internet has added a new dimension to the existing media of advertising by opening up the world of social media networks and its millions of users. There is so much buzz about social media in today's world. From Facebook to MySpace to Orkut, and our very own desi versions such as Ibibo, Yaari and Minglebox, suddenly all Internet users seem like one big family. The Internet world is vibrant and the ultimate transformation that is taking place is within business landscape, worldwide where companies are beginning to leverage informal social networks to engage people, mollify customers, strengthen their brands and even hire people. The paper manly talks about the social media as strong advertising component, how does it work, what are the genres it offers, the marketing potential of social media, and some of the success stories from Indian markets. It further explores that the large number base of users would make social media an easy, favourable and cost-efficient choice of advertisers in the days to come. Although many companies are experimenting with the medium through Facebook, Orkut, You Tube and other applications, a lot needs to be done to achieve significant results.

KEYWORDS

Advertising, Indian Market, New Media, Social Media Networks.

INTRODUCTION

The impact of Internet is profound for a massive and knowledge-hungry nation like India. It is a media of young people. Today's consumer is young and he feels more comfortable with social media networks. To tap this young generation, many Indian companies are planning to use Internet, specially the social media networks as their part of integrated communication strategy. This form of marketing allows companies to target the most consumers with ease and great management. It has emerged as the most cost-effective advertising media over the years in the hands of internet advertisers. It has become a Hobson's choice for a successful business enterprise. Whether a start-up or an established multinational brand, it is mandatory to have online presence in today's economic climate. Social network marketing is a wonderful form of word-of-mouse marketing which is just catchy and contagious for businesses to target their audiences in the online world. Internet offers enormous reach and scope to Social Media networks enabling the better prospects over the traditional marketing. It is a vibrant media that promises to market everything online and provides attractive marketing options.

REVIEW OF LITERATURE

Today, Social Media Marketing may sound familiar but in the early seventies even the marketing concepts and techniques had been applied to the promotion of social objective, safe driving, and family planning (Kotler and Zaltman 1971). The authors illustrated how social causes could be advanced more successfully through applying principles of marketing analysis, planning, and control to problems of social change. In the early part of 21st century, the marketing scenario has completely reversed with the introduction of digital media. This increase in the number of media has been driven largely by improvements in technology and how customers interact with the technology and each other. Companies are dipping their toes into the bustling Internet, trying to gain a foothold in the rapidly expanding online social media. Drug companies see big profits in online social media advertising (Jun Yan 2009).This new media is challenging and posing new threats for the marketing managers (Russell S. Winer 2009) who are using this to engage customers. In the US presidential election; Social Media has changed the face of politics in America. And the way Barack Obama exercised social media (Vijay Sankaran 2008; Suzana P. Sousa 2009), it has given a new power to the political leaders and clear voice to the people. Beyond drugs and politics, Social media is also playing an increasingly important role as information sources for travelers (Xiang and Gretzel 2009). The goal of this study is to investigate the extent to which social media appear in search engine results in the context of travel-related searches. It also provides evidence for challenges faced by traditional providers of travel-related information. Even Social media is being integrated with traditional PR/marketing, especially in non-profit public relations in order to influence the governments, policy makers, and business houses (Watson, T., 2009). Web 2.0 can also enhance the power of viral marketing (Lemi Baruh 2009) by increasing the speed at which consumers share experiences and opinions with progressively larger audiences. Web 2.0 applications can directly engage consumers in the creative process by both producing and distributing information through collaborative writing, content sharing, social networking, social book marking, and syndication. Web 2.0 will expand to allow health promotion practitioners more direct access to consumers with less dependency on traditional communication channels (Rosemary Thackeray etal 2008). The above perspectives indicate that the Social Media is gaining momentum in all walks of life worldwide. The developed economies with strong 'information superhighway' infrastructure are greatly capitalizing on this media, however, it is yet to be developed into a popular and feasible advertising media in India.

WHAT IS WEB2.0

Web2.0 is a collection of tools and technologies that allows users to interact with online content, engage users by letting them participate in, control and guide their online visit. It's with surprising ease that people have adopted Web 2.0 into their daily lives. From "podcast" to "poke", "wiki" to "weblog", the internet generation has a language all of its own. The surprising part is not all Web 2.0 junkies are internet savvy people or tech-savvy people. In fact, for some of the people this has become the centre-piece of their lives. Facebook, the social networking phenomenon, dominates water cooler conversations everywhere, having gained a staggering 42 million users since its worldwide launch in 2006. YouTube, which was founded as recently as 2005, attracts some 100 million page views a day (Budhiraja 2009) [1] Social media marketing also known as social influence marketing is the act of using social influencers, social media platforms, and online communities for marketing, publication relations and customer service.

NEW CONSUMER, NEW MEDIA

Presently the market witnesses two things: the new consumer and the new media. Now, there is a lot more on the menu to choose from. The staple fare of movies and top 10 countdowns from 10 years ago is now changed to be in line with one's gender, age and other persuasions. There's something for everyone, but still not enough for all. The youth would like to see more content made for them than just cricket and comedy. Reality shows have made a dent at least for now. Though there are so many radio stations, they all sound the same, that's pretty tragic. The web of course, particularly the social networking sites are growing so fast that it's unbelievable and advertisers have yet to catch on. It is the time when the marketers should look at online media that attracts more consumers and builds better image of brands. Today, people are spending more than 20 percent of their time online, so obviously, it becomes a prudent choice for the marketers to bank on social media. According to ViziSense, an online audience measurement and analytics platform, social networking and photo-video sharing sites draw over 50 per cent of the Indian Internet audience in an Internet subscriber base of 50 million. And the advertisers know that the digital medium is growing at a much rapid pace than the rest (Sharma, 2009).

WHY SOCIAL MEDIA FOR ADVERTISING

Social media optimization and marketing is usually community-specific. It doesn't interfere with any other methods of getting traffic to your website. It can and will fit perfectly with an advertising campaign targeting other websites or search engines. Talking about some of the opportunities first – this new world order is bringing consumers closer, and they are forming communities around their common interest and preferences. These are all consumer-driven communities where they are flocking by choice and not by chance. This has given marketers an opportunity to narrow-cast their communication and reach to their target audience in the right context with minimal wastage. These connected consumers are also sharing and forming opinions through blogs and message forums. The word of mouth is traveling faster today through the word of mouse. These being digital conversations, give marketers an opportunity to monitor consumer preferences and opinions leading to better product development or service delivery (Motwani, 2009).

There is so much buzz about social media in today's world. From Facebook to MySpace to Orkut, and our very own desi versions such as Ibibo, Yaari and Minglebox, suddenly all Internet users seem like one big family. As per recent survey of comScore, a leader in measuring the digital world, Orkut reigned as the most visited social networking site in India in 2008 with more than 12.8 million visitors, an increase of 81 percent from the previous year (comscore, 2009).

Another reason that goes in favour of Social Media Marketing is the large number base of users. While Indian PC and Internet penetration rates are relatively lower than the West. India has one of the largest Internet population in the world-some 60 million regular users. Moreover these users are the most sought after customers with high disposable incomes, and companies with clear online media plan are waking up to the fact they can reap the benefits of engaging with this audience (Mitra, 2009).

Moreover, India enjoys the global reputation of being the expert in technology, there's no reason why Indian brands can not join the bandwagon of social media and make more refreshing appeal to the online audiences. Success on the Social Web is all about genuine participation. Brands like US-based Comcast and India's Kingfisher are using channels like Twitter to reach and engage customers by using the language and speaking style that these customers are themselves using. One more reason that makes it more favourable is that it is more important during recession. As it is cost-effective, measurable, interactive and resonates better with the audience. It is the new old medium, really – it's the new direct, the new TV, the new radio, the new ambient, the new heart of integrated communication (Chandra, 2009).

THREE TYPES OF SOCIAL MEDIA

Social media demands that you make a difference right from the business model itself. A web presence has to be crafted for success from the outset. The net also mandates that technology work hand in hand with the big idea to make the whole experience more forceful. Within SMM there are three broad activities which you should be involved with. There is quite a bit of overlap between them (Miles, 2009):

Publishing – you publish information for others to read, watch or listen to. You can publish on sites or using tools you control such as a blog, or you can publish on third party sites such as Wikipedia or YouTube.

Sharing – you share with your friends and followers third-party sites and content that you find interesting and valuable. Sharing is done via bookmarking sites such as Digg, Stumbleupon and Del.icio.us or through the likes of Twitter.

Networking – networking is about joining and interacting with groups of people who have common interests. Some network sites cover all interests such as FaceBook and MySpace. Others are built around niche interests such as Ecademy, a network for entrepreneurs.

Social Media Genres

On the marketing front, today's networked market offers a wonderful opportunity to build communities around your brand. The online world of social networking is a wonderful place to create your brand and communicate about it. A few examples of the different Social Media genres include:

News - These sites allow users to submit news articles. Once an article is published, users can submit their comments and vote to promote the story and/or author.

Examples: Digg, Propeller, Mix, Reddit, Newsvine

Media - These sites allow users to upload and share a variety of different media files including music, video, photos, live casting etc. The overwhelming majority of these sites are dedicated mainly to photo and video files.

Examples: YouTube, Flickr, Ustream

Networking/Communication -These sites allow users to create profiles and network with others according to similar traits, tastes, and interests.

Examples: Blogs, Blogger, Live Journal, Open Diary, Type Pad, WordPress, Vox

Social Networks: Bebo, Facebook, LinkedIn, MySpace, Orkut, Skyrock, Hi5, Ning

Micro-blogging- It is slowly moving into the mainstream. It is a web service that allows the subscriber to broadcast short messages to other subscribers of the service. Microposts can be made public on a Web site and/or distributed to a private group of subscribers

Examples: Twitter, Plurk, Pownce, Jaiku

Wiki - These sites allow users to add and edit informational articles as determined by the individual users.

Examples: Wikipedia, WikiHow, Million Dollar Wiki

Bookmarking - These sites allow users to compile public bookmark collections of sites they find interesting, informative, or helpful. The more a site is bookmarked, the higher the ranking.

Examples: Stumble Upon, Technorat, Del.icio.us

There are some Social Media sites that serve the specific social or professional objectives:

Reviews and Opinions

Product Reviews: epinoins, MouthShut.com

Q&A: Yahoo! Answers, WikiAnswers

Entertainment

Media & Entertainment Platforms: Cisco Eos

Virtual worlds: Second Life, The Sims Online, Forterra

Game sharing: Miniclip, Kongregate

SOCIAL MEDIA & INDIAN MARKETS

Social networking and blogging are latest attractions of youths in India. All social networking websites in India offer a social media platform; free of charge for users to connect and interact with the coterie of people to create their own world of expression and creativity. These sites are the accepted medium for advertising because of their huge base of users. Bigada, yaari and Bharatstudent are the top Indian social networks gaining rapid popularity among the youngsters. Social Media sites have lot of information such as user profile data which can be effectively used to rank users, or target a specific set of users for advertising. They enjoy great traffic as these sites are updated with fresh content regularly.

EARLY STARTERS

Brands that have a definitive web strategy are showing others what they stand to lose by vacating the space. Sectors that took to the medium early – automotive, banking, travel are now reaping the benefits of a head start. Late bloomers are discovering how costly hesitancy has been. (Chandra, 2009). Social media is still a new realm for Indian advertisers, though many companies are experimenting with the medium through Facebook, Orkut, You Tube and other applications. Maruti Suzuki India is truly a pioneering automobile company in online Social Marketing. Realising that there are several online communities for the highly popular Swift, it has created an online platform to bring together the 2,500 disparate online Swift users clubs in India. Recently, the company actively seeded forums, and social networking sites with news about the launch of Ritz. The Team Tata Nano has been even more social media savvy-interacting with large member groups-both official and non-official-on both Orkut and Facebook. This Nano site had games built into it, where people could customize colours and pick their favourites ones-thereby sneakily helping the company figure out which one to use on the Nano. Another enterprising social media drive is initiated by Apollo Hospitals. It employs the Social Media in an engaging and innovative manner. The company has caught up the eye of medical "tourists" worldwide by uploading videos about its procedures, in video sharing site YouTube-the company posted its first clip in October, 2008 where a foreign patient spoke about his experiences at the hospital. This brilliant move of Apollo has brought several advantages: it is completely free, with a mass reach; it is devoid of company-controlled jargon, presenting a far effective, "honest" and "true" account of a patient's experience, it is also far more targeted than an advertisement on TV (Mitra, 2009). The above promotional concepts underline the power and reach of Social Media marketing. One can imagine the enormity of this media when a Nike commercial uploaded by some user gets more than 16 million views on YouTube. We all know how much media money one would have spent to reach an audience of 16 million!

VIRTUALLY ANYTHING WITH SOCIAL MEDIA MARKETING

Well-known author Shobhaa De has logged on to the Internet to promote her new book, *Superstar India*, published by Penguin Books India. Hanmer MS&L (a unit of Publicis Group) has been commissioned to promote the book online. Social media and networking sites like Facebook are being used to get the message across. De's profile page on Facebook has her book cover as the main picture. The profile has more than 500 friends of the author. There is also a group with over 200 members, and a specially created page for the book, which is a part of Facebook's branded pages for marketers. In fact, De's website, www.shobhaade.in, automatically takes visitors to the Facebook profile. The author is also writing a blog (superstarindia.blogspot.com) featuring excerpts from the book. A video has been uploaded on YouTube as well, where De talks about the book. The agency is also using the medium of blogs for the campaign, and has contacted prominent bloggers to promote the book (Khan, 2010).

BARACK OBAMA'S ELECTION CAMPAIGN: A TRIBUTE TO SOCIAL MEDIA

Perhaps the single most important ingredient to Obama's online success was his campaign's thorough understanding of social networks. First and foremost, Obama's team understood how people use social networking sites and, as a result, how communication works within them. The battle for the American Presidency has been a fascinating and historic one. Obama has been in the news for his extraordinary online fundraising and $188 million TV ad blitz. But what won him acclaim from American chief marketing officers and chief executive officers was his path breaking digital strategy and campaign. The results have been a game changer: $640 million in funds, 3.1 million contributors, more than a 100 million page views of official and unofficial YouTube videos, five million volunteers, 2.2 million "fans" on his main Facebook page, 800,000 on his MySpace page, and more than a million more names on the official campaign website. (Sankaran, 2008).

FMCG BANDS & SMM

The entire promotional campaigns of *Superstar India* and *US Presidential Election* show how diverse concepts are promoted through Social Media Networking to influence more readers and voters, and achieve bigger objectives while collaborating with them. Recently many FMCG bands are planning to have their online avatars. There are first few big marketing players like HUL, PepsiCo, Coca-Cola, ITC Godrej, Marico, CavinKare, Procter & Gamble and Colgate-Palmolive, who have already joined the digital bandwagon for their brands. These FMCG companies are increasingly looking at online as an effective marketing tool, and it makes sense as their target audience is all here, especially the youth. Hindustan Unilever Ltd (HUL) is reportedly one of the biggest FMCG companies to spend on Internet marketing. It has a website for most of its popular brands and some of these sites are quite engaging. The best known example, of course, is Sunsilk's *Gang of Girls*, which has become a case study for Indian marketers on how to use the online medium. Pepsi seems to be the most smart Indian brand in terms of using internet Marketing. The latest campaign by the beverage brand is about a non-existent place called Youngistaan. It has taken the whole concept to the dizzy heights by building a whole virtual world of Youngistaan. The Internet is the only medium which could give real shape to the concept. For the Youngistaan Campaign they have created a whole micro site depicting Youngistaan with the presence of Pizza Hut, PVR and MTV, all are actually youth brands and that might be the reason for this co-branding exercise. The virtual Youngistaan offers mobile theme downloads, personalized Youngistaan Pizza Hut cards offering discounts, Youngistaan tips for school and a gallery of Pepsi ads.

CONCLUSION

Social Media comes with a word of caution. People, who want to use it, must have clear objectives and realistic expectations of what can be achieved. It is very creative space that requires that marketers identify the space, the nature of stakeholders involved, what makes people tick within that space and, importantly, to listen to people and not try and sell things to them. Even some big companies don't have their significant online presence. These companies don't spend much on an online campaign and they are comfortable with 10 times more promotional budget on traditional media. Experts feel that these companies don't have serious online marketing strategy as they don't have faith in online media due to the lack of authenticated data. Traditional media has enough third party authenticated data and hence, the belief is obviously higher. Moreover, many regional FMCG players do well in their respective regions with television media. The Internet is a vibrant media, they feel, when you are targeting the entire country while at regional level it is not that much effective and precise. Some critics wary of Internet reach amongst the masses and the second being the quality of internet service that people enjoy, which is not apt for viewing live online videos. Yet, considering the cost that it involves, it is worth a try for the marketers.

To put a final word, it is difficult to ignore this media as people are living off the virtual space for almost all their needs – information, directions, bookings, music, movies, research, dating, jobs, and connections. If this is the case, then clearly the eyeballs are on the computer and mobile screen for the better part of their 24 x 7.

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A LITERATURE SURVEY ON EMOTIONAL INTELLIGENCE SHOULD MATTER TO MANAGEMENT

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ABSTRACT
Other things being equal, most organizations would like to hire people with above-average IQ because it seems logical to think such people would be above-average employees in terms of performance and leadership. But such is not the case according to this broad literature survey. In fact, assuming that IQ is adequate, an individual's level of emotional intelligence (EI) has more predictive integrity. E1 involves knowing when and how to express emotions as well as the ability to control emotions. It involves self-awareness, self-management, social awareness, and the ability to manage relationships (Daniel Goleman, 1998). Evidence also suggests that it can be learned, and once learned, will be retained for considerable time. This paper on emotional intelligence will address some important questions including: What is emotional intelligence (EI)? How is it different from other established constructs in psychology? Is it possible to develop EI? Is EI a better predictor of work performance than traditional measures of intelligence?

KEYWORDS
Emotional, Management, Intelligence, Performance.

INTRODUCTION
Research on emotional intelligence began as early as the 1930s with researchers Robert Thomdike and Stein (1937) and Wechsler (1940). David Wechsler defined intelligence as "the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment" (Wechsler, 1958). He also wrote, "It follows that we cannot expect to measure total intelligence until our tests also include some measures of the non-intellective factors" (Wechsler, 1943).

The work of these early pioneers was largely overlooked until 1983 when Howard Gardner began writing about "multiple intelligence." He proposed that intrapersonal and interpersonal intelligence are as important as the type of intelligence typically measured by IQ and related tests. Conducted in the 1940s, the Ohio State Studies were some of the earliest research studies on leadership. J. K. Hemphill (1959) suggested that "consideration" is an important aspect of effective leadership. This research study suggested that leaders who are able to establish "mutual trust, respect, and a certain warmth and rapport" with members of their group will be more effective (Fleishman and Harris, 1962).Around the same time period, the Office of Strategic Services (1948) created a process of assessment based on the work of Murray (1938) that included the appraisal of non cognitive and cognitive abilities. This became known as the "assessment center" and was first used in the private sector by AT&T in 1956 (Bray, 1976).

Many of the factors evaluated in the assessment centers past and present include social and emotional competencies including communication, sensitivity, initiative, and interpersonal skills (Thornton and Byham, 1982). By the 1990s, a long tradition of research on the role of non cognitive factors had been established to help people succeed in both life and the workplace. The current research has been built on this tradition.

CURRENT RESEARCH, THEORY, AND PRACTICE
Salovey and Mayer coined the term "emotional intelligence" in 1990 (Salovey and Mayer, 1990). They were well aware of the previous work on non-cognitive aspects of intelligence and they described emotional intelligence as "a form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action" (Salovey and Mayer, 1990). These partners launched a research program with the intent to develop valid measures of emotional intelligence and to explore its significance. In one study they found that when people saw an upsetting film, those who scored high on emotional clarity (the ability to identify and name to a mood being experienced) recovered more quickly (Salovey, Mayer, Goldman, Turvey, and Palfai, 1995). In another study, individuals who scored higher in the ability to perceive accurately, understand and appraise others' emotions were better able to respond flexibly to changes in their social environments and build supportive social networks (Salovey, Bedell, Detweiler, and Mayer, 1999). In the early 1990s, Daniel Goleman became aware of the work of Salovey and Mayer. He was a science writer for the New York Times and later became a professor at Harvard University. He published, Emotional Intelligence: Why It Matters More Than IQ, in 1995, and has since published such works as Working with Emotional Intelligence (1998), Emotionally Intelligent Parenting (2000), Primal Leadership: Leading with Emotional Intelligence (2002), and Social Intelligence: Beyond IQ to Emotional Intelligence (2006).

Practitioners who must make decisions on hiring and promotion are far more interested in assessing capabilities related to outstanding performance and leadership. Qualitative research suggests that IQ measures fail to account for large portions of the variance related to performance and career success, especially among top managers and senior leaders. A large body of research indicates that IQ does not predict success for top performers as well as competencies that integrate cognitive, emotional, and social abilities--all of which may be represented as emotional intelligence

HOW EI DIFFERS FROM OTHER ESTABLISHED CONSTRUCTS IN PSYCHOLOGY
There is a growing awareness that the abilities, traits, and competencies related to emotional intelligence are woven together with cognitive intelligence .A good example of this research is the Somerville study, a 40-year investigation of 450 boys. Two-thirds of the boys were from welfare families and one-third had IQs below 90. However, IQ had little relation to how well they did at work or in the rest of their lives. What made the biggest difference was the development of abilities such as being able to handle frustration, control emotions, and learning to get along with other people.

Another good example is a study of 80 PhDs in science who underwent a battery of personality tests, IQ tests, and interviews in the 1950s while they were graduate students. Forty years later, when they were in their early 70s, they were tracked down and their careers were evaluated based on their resumes, feedback from experts in their fields, It turned out that social and emotional abilities were four times more important than IQ in determining professional success and prestige .It would be inaccurate to suppose that cognitive ability is irrelevant for success in science. For starters, a relatively high IQ is needed to be admitted to a graduate school like Berkeley. Once past this threshold, however, IQ has little to do with a person's ability to surpass his or her peers. It is more important to be able to persist in the face of difficulty and to get along well with colleagues and subordinates than it is to have an extra 10 or 15 points of IQ. The same is likely true of other occupations. Given levels of IQ create a "threshold competence," a minimal capability that everyone in a given pool must have to get and keep their job. However, IQ does seem to account for a substantial amount of variance in performance for entry-level positions. In middle- and upper-level jobs, the distinguishing factors seem to be related to emotional intelligence and competencies that distinguish the superb performers from the run-of-the-mill performers. While IQ should remain an important predictor of the types of vocations a given individual can pursue, once within that vocation the predictive validity of IQ seems to diminish significantly .The excitement generated in some media contexts supports the impression that high emotional intelligence might compensate for a low IQ and allow those with below-average IQ, but high emotional intelligence, to thrive. This is a false impression due to the concept that a "threshold competence" exists for any given position in which a minimal IQ is required to get and keep a job.

VALUE OF EMOTIONAL INTELLIGENCE AT WORK

In our research it was found that new salesmen who were optimists sold 37% more insurance in their first two years than did pessimists. When the company hired a special group of salesmen who failed the normal screening but scored high on optimism, they outsold the pessimists by 21% in the first year and 57% in the second year. The optimistic salesmen outsold the average agent by 27%. A study of store managers in a retail chain found that the ability to handle stress predicted net profits, sales per square foot, sales per employee, and per rupees inventory investment. The ability to manage feelings and handle stress is a key aspect of emotional intelligence. Emotional intelligence involves knowing when and how to express emotions, as much as controlling emotions. Simply controlling emotions is not adequate for sustained success

IS IT POSSIBLE TO DEVELOP EI?

Bar-On has found that successively older cohorts tend to score higher on his scale of EI, suggesting that EI can be learned through life experience. A wide range of findings from psychotherapy training programs and executive education all provide evidence for peoples' ability to improve their emotional and social competence with sustained effort and a systematic program. New findings in the emerging field of affective neuroscience have begun to demonstrate that the brain circuitry of emotion exhibits a fair degree of plasticity, even in adulthood For example, college of Management at Jalandhar conducted longitudinal studies in which students participated in a required course on competence building that allowed students to assess their emotional intelligence competencies as well as cognitive ones. The students then selected specific competencies to target and designed and implemented an individualized learning plan to strengthen them. Assessment of the students at the beginning of the program, upon graduation, and again years later on-the-job has shown that emotional intelligence competencies can be significantly improved and that these improvements are sustainable.

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IDENTIFICATION OF POTENTIAL COMMERCIAL LOCATIONS IN PATNA URBAN AREA

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ABSTRACT
With the liberalization of Indian economic policies and the increase in expendable income of the urban population of India, there is tremendous growth in the organized retail sector since the turn of the century. The change in consumer buying behaviour, increase in purchasing power and exposure to organized retail formats has redefined the consumption pattern. As a result, retail projects have been mushrooming across even tier-II cities like Ahmedabad, Lucknow, Ludhiana, Nashik, Jaipur, Patna etc. Patna has been a wholesale trading centre long before independence. A large portion of wholesale trading activity is located in the old eastern part of Patna city. Like all Indian cites, retail trading is the means of livelihood to a large section of inhabitants of Patna Urban Area. In the recent years there has been a spurt in retail activities which is evident from mushrooming of large branded showrooms, large departmental store, hyper marts and shopping malls. The present research will determine the future commercial potential of locations in Patna Urban Area (PUA), based on the "Level of Urbanization" & "Image Perception of the citizens. It will benefit prospective retailers, business managers and market analysts, as well as urban planners who try to identify the potential commercial nodes within the Patna urban area.

KEYWORDS
Attractiveness Measures, Image Perception, Level of Urbanization, Spatial Interaction.

INTRODUCTION
Commercial activities form the backbone of a city's growth and development. In the urban scenario commercial activity occupies the prime locations where land values are very high. The recent emergence of the Corporate, Banking & Insurance, Retail & Wholesale sector, Hotels & Restaurants as the new growth segment in the B & C class cities has resulted in increased GDP and higher employment opportunities.

The real estate sector in India is growing bigger by the day. Industry experts believe that Indian real estate has huge demand potential in almost every concerned sector -- especially Retail. It is recognized that commercial development is necessary to provide for the needs of the city's growing residential population and to generate additional revenue to extend and maintain public facilities and services. The purpose of planning for commercial growth is to ensure well designed attractive development in appropriate locations of the city. The idea to demarcate commercial space within urban centres stems from the recent demand for real estate space generated by the retail sector. The urban development ministry has proposed that all states should notify at least 10-12% of the land fit for urbanization for commercial use.

The importance of retail in any city cannot be underestimated. It is one of the primary threads in the fabric of many outstanding cities throughout the world. The retail boom being witnessed in the past few years is bound have a significant impact in the commercial real estate sector. A large young working population (median age of 24 years), larger disposable income of the middle class, more nuclear families in urban areas, increased working-women population and emerging opportunities in the services sector are the key factors in the growth of the organized Retail sector in India. According to the latest AT Kearney study (2007), for the third year in a row, India leads the annual list of most attractive '**emerging markets**' for retail investment followed by Russia and China.

The change in consumer buying behaviour, increase in purchasing power and exposure to organized retail formats has redefined the consumption pattern. As a result, retail projects have been mushrooming across even tier-II cities like Ahmedabad, Lucknow, Ludhiana, Nashik, Jaipur, Patna etc. Industry observers feel that this growth is facilitated by favorable demographics, existence of customer-friendly banks and finance companies, professionalism in real estate and reforms initiated by the Government to attract global investors. These factors have irrevocably changed commercial development patterns in the country. In the present context of market globalization and competition the importance of commercial planning is very significant. Moreover since most Indian cities are historic & organic in growth, with little planned area for expansion, careful retail & commercial planning become imperative.

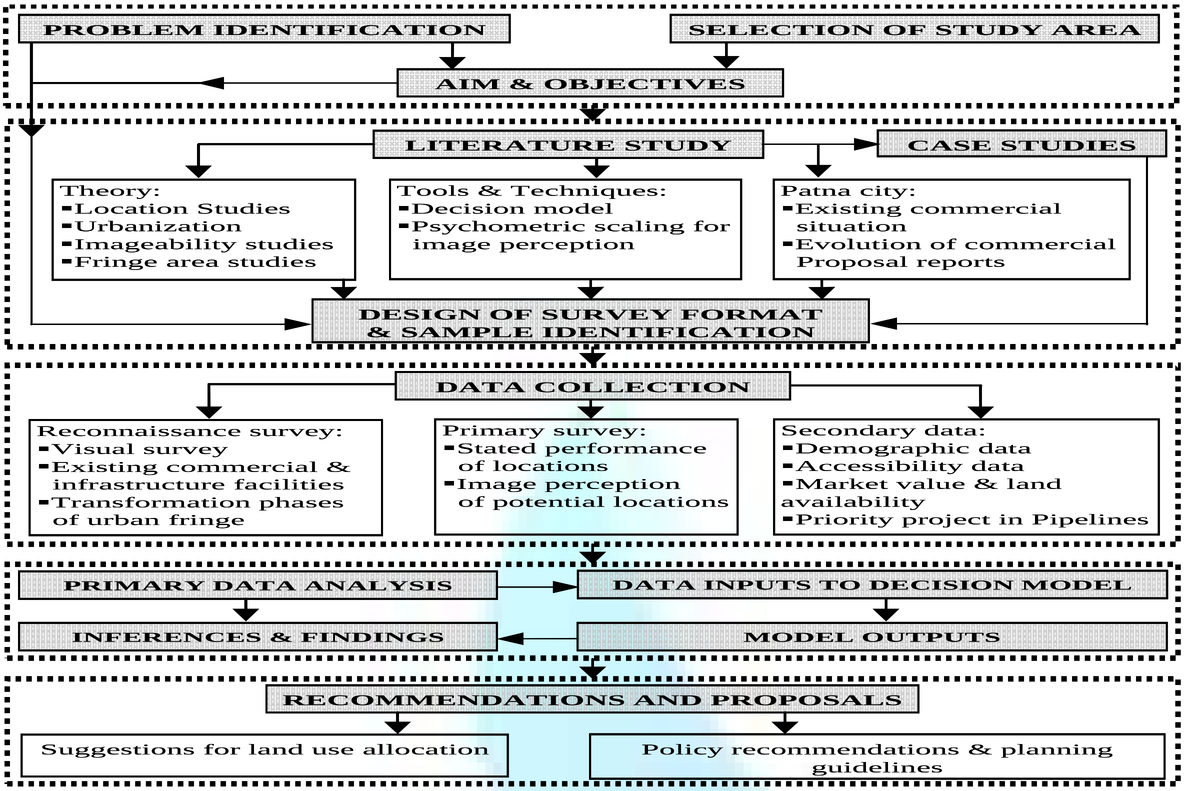
NEED FOR THE STUDY
Patna Urban area (PUA) has emerged as a regional primate city of Bihar, with municipal area of 108.94 sq. km and population of 13.7 lakhs as per 2001 census with average population density of 125.43 pph. It is an important commercial centre due to its central position at the junction of the three rivers. It is well connected to NH2 and Delhi-Howrah rail line to its south and the East West expressway to its north, by appropriately bridging the Ganges.

Patna has been a wholesale trading centre long before independence. A large portion of wholesale trading activity is located in the old eastern part of Patna city. Like all Indian cites, retail trading is the means of livelihood to a large section of inhabitants of PUA. In the recent years there has been a spurt in retail activities which is evident from mushrooming of large branded showrooms, large departmental store, hyper marts and shopping malls.

Due to lack of planning and development guidelines and rapid urbanization the city has been found various problems in the in recent years. The old city, presently engaged in wholesale commercial activities, is congested with narrow lanes has crucial traffic congestion problems. Commercial land use is predominant ribbon development along the major road -- a typical organic growth in unplanned India cities. The anticipated growth of Patna needs more area under commercial land use. A recent initiative of preparing Master Plan 2021 and City Development Plan (CDP) has given new direction for growth of the city. Trade and commerce are identified as "strengths" in CDP of Patna.

This study is aimed to address how and where new commercial developments will come up in PUA and how it will change the image of the city. It attempts to determine the future commercial potential of various locations and predict new commercial locations; as well provide different sets of guidelines for sensitive, planned and regulated development.

METHODOLOGY



LITERATURE REVIEW

Literature study is essential for any study to know the theories, principles, practices, and background of the subject and it helps to formulate the methodology. The study of literature related to field of this project enables to gain capacity of thinking to provide better direction towards eminent result. Some of these are highlighted:

GEOGRAPHY OF LOCATION & LOCATION THEORIES

Principles of retail location, retail organization & retail techniques are important for any commercial planning exercise. Location theory rests on various classical & neo-classical theories. Clarkson et al. (1996) categorizes location theories as:

- Economic Theories
- Central Place Theories
- Land value Theories
- Spatial interaction Theories
- The principle of minimum differentiation

URBANIZATION STUDIES

The levels of urbanization of region are estimated from Census data, in a number of ways:-

- Urban population ratio
- Rural population served by urban centres
- Distance to the nearest town

IMAGEABILITY STUDIES

One of Kevin Lynch's innovations (1960) was the concept of place legibility, which is essentially the ease with which people understand the layout of a place. By introducing this idea, he was able to isolate distinct features of a city, and see what specifically is making it so vibrant, and attractive to people. To understand the layout of a city, people first and foremost create a mental map. Mental maps of a city are mental representations of what the city contains, and its layout according to the individual. These mental representations, along with the actual city, contain many unique elements, which are defined by Lynch as a network of paths, edges, districts, nodes, and landmarks.

RURAL-URBAN FRINGE STUDIES

The term "rural-urban fringe" is used to designate area where we have a mixture of rural and urban land use. Fringe area used as a new residential colonies, a considerable amount of vacant land, partially developed residential plots, few factories, commercial squatters on either side of the road, and further away from the city, warehouse, cold storage plants, timber yards, brick kiln, etc.

PREDICTION TECHNIQUES AND LOCATION MODELS

Some of the locations planning models used for location assessment are: Check list, Analogue, Financial analysis, Regression model & Gravity (Spatial interaction) model.

A) REILLY'S LAW OF RETAIL GRAVITATION (1931)

It states that the force of retail attraction between two cities is directly proportional to their respective populations inversely proportional to the square of the distances between them. The concept of determining the equilibrium point on a line between the two forces (competing markets) is then employed to establish the catchment area, from which point a consumer will be equally attracted to either of the market centers (breaking point). Mathematically expressed it as:

$$\frac{T_A}{T_B} = \frac{P_A}{P_B}\left[\frac{D_B}{D_A}\right]^2$$

Where,
TA= Trade drawn to city "A" from an intermediate place
TB= Trade drawn to city "B" from an intermediate place
PA = Population of city "A"
PB = Population of city "B"
DA = Distance from city "A" to intermediate place
DB = Distance from city "B" to intermediate place

B) HUFF'S MODEL (1962)

D. L. Huff (1962), first attempted to bridge the gravity formulation and consumer behaviour, by suggesting an advanced model for expressing the probability of a consumer to travel to a particular store (trade zones), using two variables-store sizes (floor space and travel time). Huff suggested that, Probability (Pij) of a given centre j being chosen from a set of centres by consumer at i is given by:

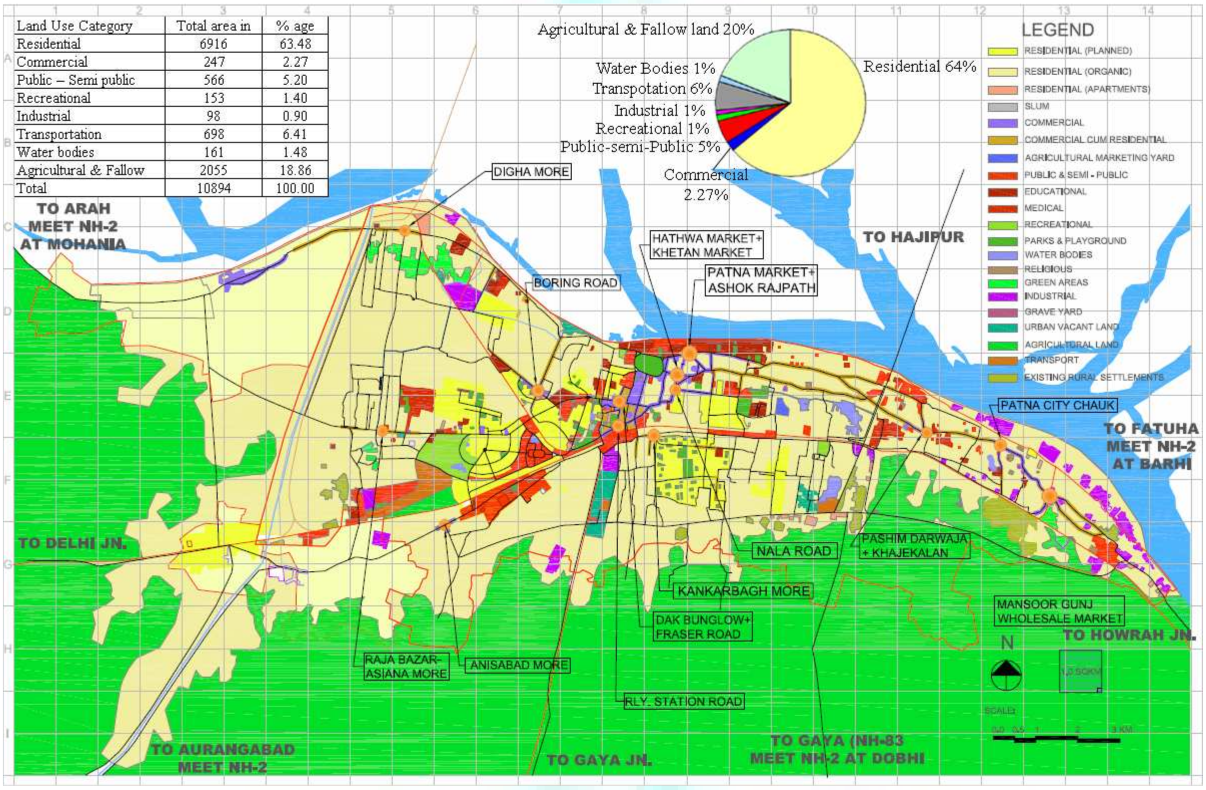
$P_{ij} = U_j / \sum U_j$ Where, U_j is the utility associated with centre j
i = residential zone (demand),
j = shopping centres (supply)
This can be expanded as:
$P_{ij} = (A_j/d_{ij}^2) / \sum (A_j/d_{ij}^2)$ Where, A_j = the attractive power of the centre and
d_{ij} = distance from zone i to centre j

OVERVIEW OF THE STUDY AREA - PATNA

INTRODUCTION & HISTORIC PERSPECTIVE OF PATNA

Patna is the capital of Bihar, with municipal area of 108.94 sq. km and population of 13.7 lakhs as per 2001 census with average population density of 125.43 pph. Patna is situated on the southern bank of river Ganges. Patna is one of the most ancient cities of India. It is a sacred spot visited by many and blessed by the Great Buddha as the capital of the first all-India Empire under the great ruler Ashoka.

FIGURE 1: EXISTING LAND USE MAP & LAND USE BREAK-UP WITH EXISTING COMMERCIAL SETUP



TOWN GROWTH AND IMAGE OF THE CITY PATNA

Patna is a linear city which has grown on either sides of a main road (Ashok Rajpath) running east to west on a ridge, almost parallel to the bank of the river Ganga. The eastern most zones, which is the old city and the ancient capital is full of rampant derelict buildings beaded along narrow lanes with obsolescence and unsanitary conditions. This zone contains one of the biggest centres of wholesale trade at Marufgunj and Mansurganj. The middle zone (central zone) which covers the area roughly between the Pashim Darwaza in the east and the Patna-Gaya road (now the Buddha Marg) in the west is the business and the commercial core of the city, also having bulk of the institutional, cultural and the district administration buildings. It is one of the most overcrowded zones of the city. The western zone, the new capital area, differs significantly from the other two zones. It comprises of monumental buildings and a well laid out ring and radial road pattern, with 200 feet Wide Avenue with the Secretariat and the Raj Bhawan forming its terminal features. However this zone is deficient in certain basic community facilities such as schools, shopping centres etc.

Patna has always been a great centre of trade and commerce. Patna today has a regional impact and draws a large number of people from throughout the state who come to the city for vocational requirements and for availing other services that the city offers. The general hospital, the many institutions of higher education and the offices of the state government, divisional and the district administration, all attract a large number of people to the city.

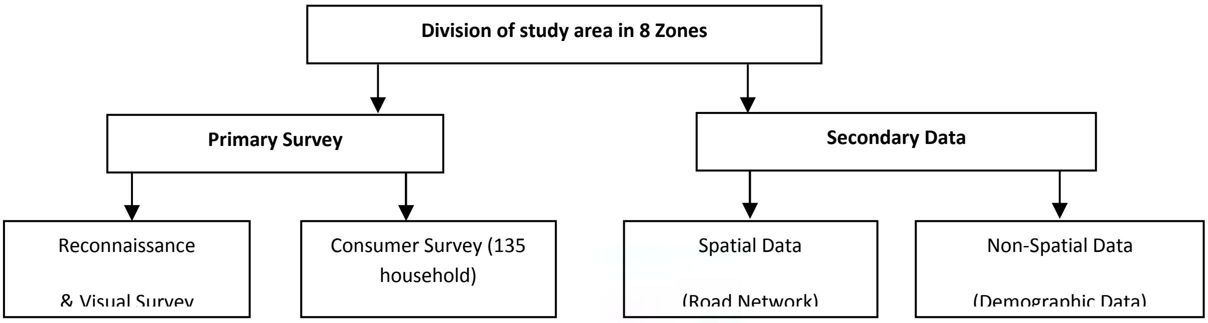
COMMERCIAL SETUP OF CITY PATNA

The spatial distribution of commercial activities in Patna is typical of old Indian cities. More than anything else it is the long shopping streets that dominate the city's urban scene. Almost all existing important roads in the central and the eastern zones of the city have commercial establishment on either side with intermittent breaks. One of the most important and busiest retail shopping areas of the city is spread over the southern flange of the Ashok Rajpath, right from Gandhi Maidan to NIT More. From NIT More, this road has retail shopping (ground floor) on both sides up to its junction with Sher shah road. The commercial activity on this road in the central zone is mostly retail trade, whereas in the eastern zone it is both retail and whole sale. Other important roads in the central zone, (such as Rajendra path, Bari Path, Daryapur, Sabjibagh road, Station Road, Nala Road etc), all have retail commercial activities on both sides. There are some planned shopping centres in the city namely Patna market, Hathwa Market + Khetan market, Dak-Buglow Chauraha (Maurya lok + N P Centre + Abul Hai Commercial complex + Jai Praksh Bhawan +Maharaja Complex +Heera place etc).

In western zone Boring Road and Boring Canal Road are fully developed as commercial or mixed land use. Both sides of Bailey Road from Shekhpura More to Jagdeo Path are developed as shopping area. Maroofgunj and Mansoorgunj in the Eastern zone are the wholesale trade centres in grain, pulses, spices and other 'kirana' materials, the largest of its kind in Bihar. Wholesale trade in hosiery, cosmetics, general merchandise, utensils etc. are carried out in the Chowk Mohalla of Old city.

SURVEY PROCEDURE AND DATA COLLECTION

A Schematic overview of the survey design & data collection is provided here:



RECONNAISSANCE SURVEY

Primary reconnaissance survey was initially conducted at the city level to identify existing commercial nodes and candidate nodes for future commercial development. The major road intersections were identified along with the existing commercial locations, infrastructure facilities like road width and condition, pedestrian, parking provisions in shopping areas and recent retail developments, distribution of markets in the city (both traditional and new organized formats).

PRIMARY HOUSEHOLD SURVEY

Survey format were designed to know the shopping behaviour of customer and functional urban image suitability of zones & urban image of city. Primary consumer survey were conducted in the 135 households, identified by stratified random sampling in the 8 zones (self divided for convenience) and 57 wards of Patna Municipal area.

Primary data analysis is conducted to address five research questions:

How far is a customer willing to travel for shopping?

Where do consumers prefer to shop (location / format)?

What are the store and location attributes while deciding where to shop in?

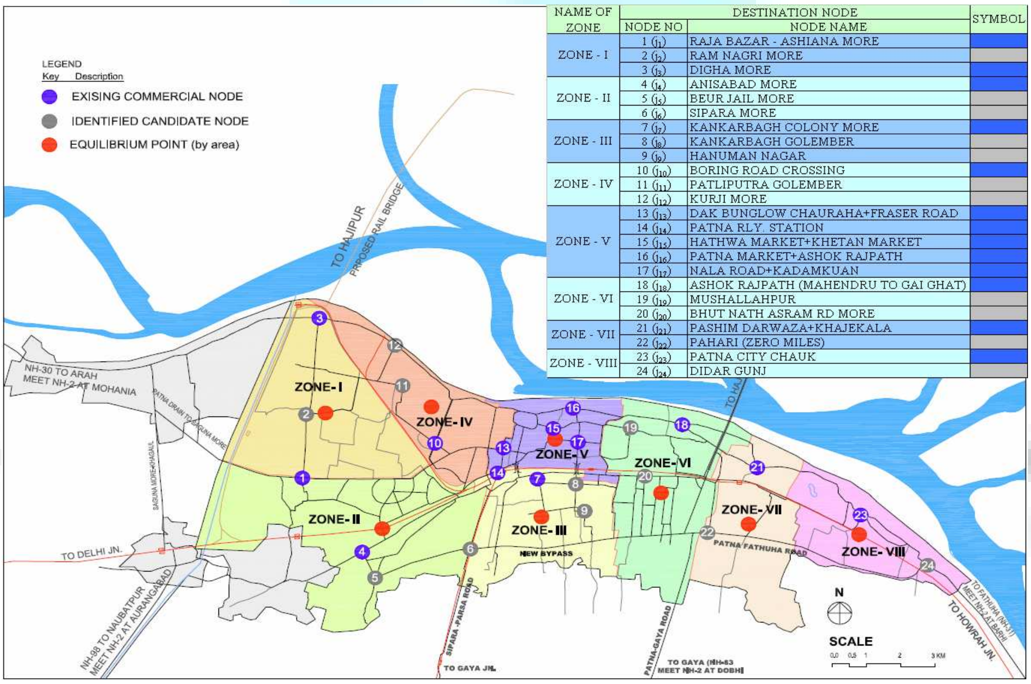
What perception does the citizen have regarding the image of the city and various zones of Patna?

Which zones are perceived to be "best suited" for various commercial functions?

SECONDARY DATA COLLECTION

The spatial data includes: (1) Census administrative & ward boundary map, (2) Road network map, (3) Existing land use map. The non-spatial data includes: (1) Ward wise population of 1991 and 2001, (2) Projected population for 2011 and 2021, (3) Socio-economic characteristic. Secondary data were collected from various documents (such as CDP & Master Plan) and organizations such as PMC, PRDA, BIRSAC, state statistical department, census office, various district office and town planning departments. Some of the data inputs are represented in figure 2.

Figure 2: Map Showing origin zones (i) & destination nodes (j) and equilibrium point of zone



NAME OF ZONE	DESTINATION NODE		SYMBOL
	NODE NO	NODE NAME	
ZONE - I	1 (j_1)	RAJA BAZAR - ASHIANA MORE	
	2 (j_2)	RAM NAGRI MORE	
	3 (j_3)	DIGHA MORE	
ZONE - II	4 (j_4)	ANISABAD MORE	
	5 (j_5)	BEUR JAIL MORE	
	6 (j_6)	SIPARA MORE	
ZONE - III	7 (j_7)	KANKARBAGH COLONY MORE	
	8 (j_8)	KANKARBAGH GOLEMBER	
	9 (j_9)	HANUMAN NAGAR	
ZONE - IV	10 (j_{10})	BORING ROAD CROSSING	
	11 (j_{11})	PATLIPUTRA GOLEMBER	
	12 (j_{12})	KURJI MORE	
ZONE - V	13 (j_{13})	DAK BUNGLOW CHAURAHA+FRASER ROAD	
	14 (j_{14})	PATNA RLY. STATION	
	15 (j_{15})	HATHWA MARKET+KHETAN MARKET	
	16 (j_{16})	PATNA MARKET+ASHOK RAJPATH	
	17 (j_{17})	NALA ROAD+KADAMKUAN	
ZONE - VI	18 (j_{18})	ASHOK RAJPATH (MAHENDRU TO GAI GHAT)	
	19 (j_{19})	MUSHALLAHPUR	
	20 (j_{20})	BHUT NATH ASRAM RD MORE	
ZONE - VII	21 (j_{21})	PASHIM DARWAZA+KHAJEKALA	
	22 (j_{22})	PAHARI (ZERO MILES)	
ZONE - VIII	23 (j_{23})	PATNA CITY CHAUK	
	24 (j_{24})	DIDAR GUNJ	

DATA ANALYSIS

ANALYSIS & DESCRIPTIVE STATISTICS OF SHOPPING BEHAVIOUR

The analysis & descriptive statistics of consumer shopping behaviour is presented here under the six headings:

1. Demographic statistics of sample:
   - Male-female composition (Male-55% & Female-45%) of total respondents is close to real aggregate situation of city (Male-54% & Female-46%).
   - Majority of the respondents were aged between 20-50 years (72% of sample). This compares favourably as real age distribution of Patna urban area.
   - The revealed monthly household income (MHI) of the sample fitted the basic standard distribution curve, with about 27% in the middle category of INR 15,000-20,000.
2. Willingness to travel (distance & time) and preference of mode of travel:

- The majority of people (53%) are willing to travel less than 2 kms for general shopping trips and another 28% are willing to travel between 2-5 kms. About 19% people willing to travel between 5-10 kms.
- About 62% of people are willing to sped 10-30 minutes of time for one-way shopping trip.
- About 53% of people use private vehicle (car & 2-wheeler) for shopping trips.

3. Preference of shop format and Shopping Zones:

- The majority of people (64%) prefer organized format (branded showroom & departmental store/Mall) for general shopping.
- The most preferred shopping zones are Patna Market, Hathwa Market, Dak Bunglow & Boring Road in PUA. The first two are traditionally & high-status market with high commercial image.
- The relatively new locations showing high store attraction are Dak Bunglow Chauraha & Boring road Chauraha.

RELATIVE IMPORTANCE OF STORE ATTRIBUTES AND LOCATION ATTRIBUTES

The relative importance of 10 store attributes (Pricing strategy, Scope of bargaining, Quality of product, Image of Store, Customer Service, AC/Infrastructure, Interiors/shop ambience, Range of products mix, Advertisement, Location) to determine store attractiveness was rated by consumers.

The relative importance of 10 location attributes (Traveling distance / Time, Accessibility by public transport, Overall convenience in reaching store, Visibility of store frontage, No traffic Congestion/Pedestrian safety, Ease of parking in the area/store, Comparison options (similar shops), Complementary activities (eating/movie), Overall image of the shopping area, Utilities and infrastructure)

The four attributes with maximum importance are: (1) Quality of product, (2) Range of product, (3) Customer service, (4) Location of store

The four attributes with maximum importance are: (1) Overall image of shopping area, (2) Travel distance/time, (3) No traffic congestion/pedestrian, (4) Ease of Parking in shopping area

PREFERENCE FOR DIFFERENT TYPE OF COMMERCIAL ACTIVITIES IN UPCOMING ZONES

It is found that Bailey Road is most preferred upcoming zone for organized retail and corporate offices. Whereas for wholesale and unorganized retail South of new bypass is most preferred upcoming zone.

PERCEPTION OF THE IMAGE OF THE AREA

- Most respondents feel that new commercial developments are changing the commercial image and it is for better. Thus people are accepting and liking this image change over towards high-status organized retail
- Majority 92% of the respondents think Patna need more shopping malls since organized format shopping is presently not adequate and needs to be augmented.
- While trying to assess the overall pervading image of the city, respondents asked to rate the following urban function: Administrative, College/Hospital, Commercial, Residential, Industrial, Heritage/Religious, Recreation, Tourism, Agriculture. It is found that social infrastructure is 1st & commercial is the 2nd image of city Patna

CALCULATING THE COMMERCIAL POTENTIAL OF DIFFERENT NODES

Step-1: Computing the distance between all origin zones (i) & destination nodes (j)

Step-2: Calculating utility associated with destination node (j) for all origin zones (i)

Step-3: Finding the probability of a consumer to travel from origin zones (i) to the destination nodes (j)

Step-4: Comparison of "Actual" and "Potential" market shares of destination nodes

We formulate a simple step by step linear logic to arrive at the attractiveness of a store in a particular location. This is shown below:

Huff's states the probability (Pij) of a customer originating from zone i to visit a shop at j is the ratio of the utility of shop j to the sum of utilities of all shops taken together.

$P_{ij} = U_j / \sum U_j$ Where, Uj is the utility associated with centre j

He uses store area & distance from store as the two attractive variables to calculate utility. However in the present study, we use two more sophisticated attractiveness variables namely, Level of Urbanization of the nodes & Commercial image of the nodes/zones.

$A_j = LI_j * UI_i$, Where, LIj = level of urbanization of the nodes, UIj = commercial image of the nodes

$P_{ij} = (LI_j * UI_j / d_{ij}^2) / \Sigma (LI_j * UI_j / d_{ij}^2)$, where dij = Distance from zone i to node

Step 1: Computing the distances between all origin zones (i) & destination nodes (D-nodes) (j)

Origin zones: The eight survey zones of delineated study area taken as origin zones (i)

Destination nodes: Based on the reconnaissance survey, 13 existing commercial nodes & 11 identified candidate nodes are taken as D-nodes (j).

The distance between all the 24 destination nodes and 8 origin zones has been calculated. For this, equilibrium points of all 8 zones are determined geometrically, as will be discussed in detail in the report.

Step 2: Calculating Utility associated with each destination node (j) for all origin zones

As mentioned earlier, we use two compound attractiveness variables namely, Level of Urbanization of the nodes & Commercial image of the nodes/zones for calculating utility.

The utility of commercial area (Uj) is defined as ratio of attractiveness power (level of urbanization of the nodes (LIj) multiplied by commercial image (UIj) of the nodes) to the square of distance from the origin zone to the commercial node (dij) in km.

Thus, Utility of commercial node (j) is:

$U_j = LI_j * UI_i / d_{ij}^2$ Where, LIj = level of urbanization of the nodes
UIi = commercial image of the nodes
dij = Distance from zone i to node

(a) Calculating Level of Urbanization of destination nodes (j)

Ramachandran (1989) calculates level of urbanization by three measures: % of Urban population, Rural population served by urban centres, Maximum distance to the nearest urban centre.

In this present study, the "Level of Urbanization" of different nodes has been calculated by five modified measures:

Land Value (X1)	(Actual Value)
Accessibility (X2)	(Psychometric scale value by expert opinion)
Urban infrastructure (X3)	(Psychometric scale value by expert opinion)
Population Growth (X4)	(Actual Value converted in to scale)
Land availability (X5)	(Psychometric scale value by expert opinion)

All measures have been taken as equally important. The unit of all the measures is different, so standardized values (Z) for all measures is calculated. Only, the criterion land availability is inversely related to the level of urbanization. To overcome this problem the sign of the standard scores are corrected so that positive value indicates a high level of urbanization, while negative value indicated a low value. The standard score on all the criteria are the added together to give a composite index of level of urbanization.

$LU = X1+X2+X3+X4-X5$ (where, LU=level of urbanization)

This composite index of level of urbanization has been interpolated for model application by the formula:

$LU_i = (LU-LU_{min}) / (LU_{max}-LU_{min})$

b) Calculating Commercial Image of destination nodes (j)

Respondents from each zone were asked to rate the urban image suitability of that zone, in light of the urban functions: (Commercial (Retail), Public/Semi-public, Residential, College/Hospital, Recreational, Heritage/Religious, and Industrial). From the findings, the retail commercial image is used for the calculating the commercial image perception. This disaggregated data (on scale 1-5) is interpolated by following formula:

UIj= (UIj - UImin)/ (UImax - UImin)

The 1 (one) interpolated value of urban image for retail signifies fully conducive to retail commercial activity and 0 (zero) signifies not at all commercial.

Step 3: Finding the probability of a consumer to travel from origin zones (i) to the destination nodes (D-nodes) (j)

The probability of a customer patronizing a selected shopping destination is positively related (directly proportional) to the attractiveness (product of level of urbanization and commercial image of the node/zone) of the shopping area and negatively related (inversely proportional) to the square of the distance between the D-nodes (j) and origin zones (i)

Table 1 provides a sample data entry for all destination nodes from origin zone-I, with the respective distances, level of urbanization parameters, commercial image & calculated utility (attractiveness). Similar data is computed for all origin zones.

Table 1: Calculation of Utilities (Attractiveness of shopping nodes (j) (for zone – I only)

			dij	LEVEL OF URBANIZATION					Urban commercial image (on scale 1-5)	UTILITIES
NAME OF ZONE	NODE NO. (j)	DESTINATION NODE NAME	ZONE-I	Land Value (X1)	Accessibility (X2)	Urban Infrastructure (X3)	Population Growth (X4)	Land Availability X5)		ZONE-I
		MAXIMA		500000	4	4	4	1	5.00	
ZONE - I	1 (j_1)	RAJA BAZAR - ASHIANA MORE	2.00	211000	4	3	4	2	3.75	0.1269
	2 (j_2)	RAM NAGRI MORE	0.45	171925	3	3	4	3	3.75	2.1025
	3 (j_3)	DIGHA MORE	2.75	158700	2	2	2	4	3.75	0.0322
ZONE - II	4 (j_4)	ANISABAD MORE	4.33	145475	3	3	4	2	2.67	0.0144
	5 (j_5)	BEUR JAIL MORE	5.16	132250	2	2	2	4	2.67	0.0053
	6 (j_6)	SIPARA MORE	5.70	119025	2	2	2	4	2.67	0.0043
ZONE - III	7 (j_7)	KANKARBAGH MORE	6.37	264500	4	3	3	1	3.79	0.0131
	8 (j_8)	KANKARBAGH GOLEMBER	7.60	238050	3	3	3	2	3.79	0.0078
	9 (j_9)	HANUMAN NAGAR	7.83	224825	3	3	4	4	3.79	0.0069
ZONE - IV	10 (j_{10})	BORING ROAD CROSSING	3.37	300000	4	4	2	1	3.74	0.0472
	11 (j_{11})	PATLIPUTRA GOLEMBER	2.47	264500	4	3	4	3	3.74	0.0811
	12 (j_{12})	KURJI MORE	2.90	200000	3	2	3	4	3.74	0.0392
ZONE - V	13 (j_{13})	DAK BUNGLOW CHAURAHA+FRASER ROAD	5.30	415000	4	4	2	1	4.87	0.0292
	14 (j_{14})	PATNA RLY. STATION	5.45	405000	4	4	2	1	4.87	0.0274
	15 (j_{15})	HATHWA MARKET+KHETAN MARKET	6.56	343850	4	4	2	1	4.87	0.0182
	16 (j_{16})	PATNA MARKET+ASHOK RAJPATH	7.06	356500	4	4	2	1	4.87	0.0158
	17 (j_{17})	NALA ROAD+KADAMKUAN	7.00	304175	3	3	2	2	4.87	0.0125
ZONE - VI	18 (j_{18})	ASHOK RAJPATH (MAHENDRU TO GAI GHAT)	9.89	225000	3	3	2	2	2.41	0.0021
	19 (j_{19})	MUSHALLAHPUR	10.11	200000	2	2	2	2	2.41	0.0016
	20 (j_{20})	BHUT NATH ASRAM RD MORE	10.36	264500	2	2	4	4	2.41	0.0017
ZONE - VII	21 (j_{21})	PASHIM DARWAZA+KHAJEKALA	12.61	227700	2	2	2	2	2.67	0.0013
	22 (j_{22})	PAHARI (ZERO MILES)	11.27	150000	2	2	1	4	2.67	0.0010
ZONE - VIII	23 (j_{23})	PATNA CITY CHAUK	15.05	230000	3	3	2	1	4.00	0.0021
	24 (j_{24})	DIDAR GUNJ	17.85	115000	1	1	2	3	4.00	0.0006
MINIMA				100000	0	0	0	4	1.00	
MEAN (X)				241037.50	2.88	2.73	2.54	2.42		2.5943279
STANDARD DEVIATION (S)				100756.84	1.07	1.00	1.07	1.24		

Step 4: Comparison of "Actual" and "Potential" market shares of D-nodes (j)

A theoretical understanding of "Actual Market Shares (AMS)" & "Potential Market Shares (PMS)" needs to be highlighted here. In the first case, we consider the actual size of existing market & their real geographical locations, but the population of wards is not considered. So, we assume that the urban area has a uniformly distributed population, i.e. identical sizes of origin zones, but differing size of D-zones. When the Huff's model is applied to this dataset we get the AMS.

In the second case, we consider the actual population living in different ward, but do not consider the actual size of existing market. So here, we assume that the existing market provision is done uniformly for all nodes, i.e. identical size of D-nodes (similar attractiveness), but differing size of origin nodes. When the Huff's model is applied to this dataset, we get the PMS.

For this, consumer probability (Pij) in eight origin zones (i) with respect to 13 existing shopping nodes (j) was multiplied with the actual population (PAj) going to that shopping node and to the potential population (PPj) around each existing shopping and identified candidate nodes (j) to get the actual and potential market shares respectively.

The actual number of people going to each commercial node was identified based on the primary survey results. First the % of people going from each origin zone (i) to all the D-nodes (j) was identified and total population from each origin zone (i) to one particular D-nodes (j1) was calculated and added up to find the actual population going to that particular D-nodes (j1). Similar calculation for all other D-nodes (j) has done for finding actual population around each node. It is obvious that Identified candidate nodes (j) do not have actual population around.

The potential population is assumed to be located around every D-node (j). The potential population around the node (PPj) is taken as the sum of population living in the wards around that node in approx 2 km radius based on the primary survey results of willingness to travel for shopping.

Actual Market Share (No. of actual trip from zone i to node j) = Pij * PAj

Potential Market Share (No. of expected trip from zone i to node j) = Pij * PPj

Where, Pij = Probability that a consumer in zone i will visit node j.

PAj = Actual population going to t each destination nodes (j).

PPj = Potential population around each destination nodes (j).

Table 2: Calculation of Actual Market Share & Potential Market Share (zone –I only)

			(Pij)	ACTUAL POPULATION GOING TO NODE (P_A)	ORIGIN ZONE (i)	POTENTIAL POPULATION AROUND THE NODE (P_P)	NO. OF EXPECTED SHOPPING TRIPS FROM (i) TO (j)	$\Sigma P_{ij1}.P_{A1}$	ORIGIN ZONE (i)	$\Sigma P_{ij1}.P_{A1}$	NORMALISED POTENTIAL MARKET SHARE (%)
NAME OF ZONE	NODE NO. (j)	DESTINATION NODE NAME	ZONE-I		ZONE-I				ZONE-I		
ZONE - I	1 (j_1)	RAJA BAZAR - ASHIANA MORE	0.0489	25103	1228.1120	3996.8011	0.8776	165634.0000	8103.2359	26371.3927	3.8406
	2 (j_2)	RAM NAGRI MORE	0.8104	0	0.0000	0.0000	0.0000	63000.0000	51056.5924	54889.4392	7.9939
	3 (j_3)	DIGHA MORE	0.0124	10925	135.4201	368.5175	0.0809	36654.0000	454.3374	1236.3847	0.1801
ZONE - II	4 (j_4)	ANISABAD MORE	0.0056	21789	121.2795	11172.5863	2.4532	110796.0000	616.7054	56812.5353	8.2739
	5 (j_5)	BEUR JAIL MORE	0.0020	0	0.0000	0.0000	0.0000	15327.0000	31.3454	1237.3421	0.1802
	6 (j_6)	SIPARA MORE	0.0016	0	0.0000	0.0000	0.0000	80558.0000	132.0875	3446.8119	0.5020
ZONE - III	7 (j_7)	KANKARBAGH MORE	0.0050	38493	193.7669	9375.8439	2.0587	197259.0000	992.9770	48047.4062	6.9974
	8 (j_8)	KANKARBAGH GOLEMBER	0.0030	0	0.0000	0.0000	0.0000	106981.0000	322.5575	27898.7790	4.0631
	9 (j_9)	HANUMAN NAGAR	0.0026	0	0.0000	0.0000	0.0000	40951.0000	108.2065	20922.3222	3.0470
ZONE - IV	10 (j_{10})	BORING ROAD CROSSING	0.0182	134952	2456.9932	33531.1559	7.3624	105051.0000	1912.6041	26101.7512	3.8013
	11 (j_{11})	PATLIPUTRA GOLEMBER	0.0313	0	0.0000	0.0000	0.0000	39561.0000	1236.4125	26873.4829	3.9137
	12 (j_{12})	KURJI MORE	0.0151	0	0.0000	0.0000	0.0000	38561.0000	582.1337	3444.1313	0.5016
ZONE - V	13 (j_{13})	DAK BUNGLOW CHAURAHA+FRASER ROAD	0.0113	200993	2262.2602	48224.9858	10.5888	69948.0000	787.2941	16782.8825	2.4442
	14 (j_{14})	PATNA RLY. STATION	0.0106	78615	831.3275	20822.9729	4.5721	40531.0000	428.6011	10735.5402	1.5635
	15 (j_{15})	HATHWA MARKET+KHETAN MARKET	0.0070	293922	2058.7698	88903.9110	19.5206	39180.0000	274.4357	11850.9637	1.7259
	16 (j_{16})	PATNA MARKET+ASHOK RAJPATH	0.0061	323902	1975.8145	75900.2896	16.6654	50497.0000	308.0340	11833.0292	1.7233
	17 (j_{17})	NALA ROAD+KADAMKUAN	0.0048	35645	171.7141	33733.7784	7.4069	68348.0000	329.2517	64682.5489	9.4201
ZONE - VI	18 (j_{18})	ASHOK RAJPATH (MAHENDRU TO GAI GHAT)	0.0008	15586	12.7449	10135.1740	2.2254	92183.0000	75.3812	59945.4428	8.7302
	19 (j_{19})	MUSHALLAHPUR	0.0006	0	0.0000	0.0000	0.0000	84586.0000	52.4823	12309.6677	1.7927
	20 (j_{20})	BHUT NATH ASRAM RD MORE	0.0007	0	0.0000	0.0000	0.0000	45327.0000	29.6702	3644.3681	0.5308
ZONE - VII	21 (j_{21})	PASHIM DARWAZA+KHAJEKALA	0.0005	54880	26.7417	12620.0001	2.7710	90317.0000	44.0091	20768.8430	3.0247
	22 (j_{22})	PAHARI (ZERO MILES)	0.0004	0	0.0000	0.0000	0.0000	41978.0000	15.7357	9895.8158	1.4412
ZONE - VIII	23 (j_{23})	PATNA CITY CHAUK	0.0008	131640	107.0282	106649.9370	23.4171	196440.0000	159.7136	159149.0479	23.1778
	24 (j_{24})	DIDAR GUNJ	0.0002	0	0.0000	0.0000	0.0000	61086.0000	14.7726	7764.3226	1.1308
TOTAL			1.0000	1366444			100.0000			686644.2513	100.0000

By comparing the actual market share and potential market share we will infer about the future growth possibilities of all the existing commercial nodes. We calculate the difference between the potential market share and actual market share of all the existing shopping nodes.

If PMS – AMS = +ve, it means there is untapped market potential in a destination node.

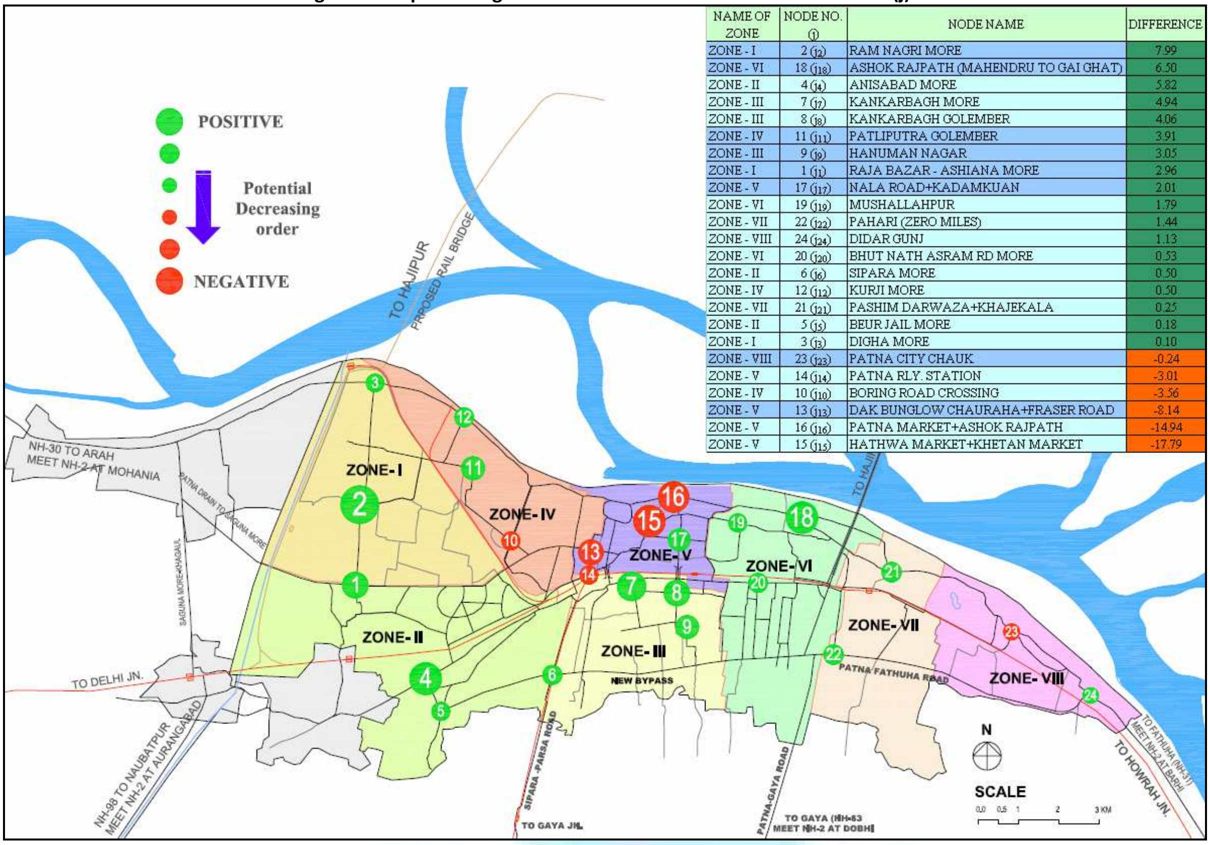
If PMS –AMS = -ve, it means area is oversaturated and not likely to grow.

Table 3 provides a summary of this (PMS –AMS) value, and is represented in a map in figure 3. This leads us to further recommendation and proposals, to be discussed in the next section.

Table 3: Comparison of "Actual Market Share & Potential Market Share" of all D-nodes

NAME OF ZONE	DESTINATION NODES		POTENTIAL MARKET SHARE (%)	ACTUAL MARKET SHARE (%)	DIFFERENCE
	NODE NO. (j)	NODE NAME			
ZONE - I	1 (j_1)	RAJA BAZAR - ASHIANA MORE	3.84	0.88	2.96
	2 (j_2)	RAM NAGRI MORE	7.99	0.00	7.99
	3 (j_3)	DIGHA MORE	0.18	0.08	0.10
ZONE - II	4 (j_4)	ANISABAD MORE	8.27	2.45	5.82
	5 (j_5)	BEUR JAIL MORE	0.18	0.00	0.18
	6 (j_6)	SIPARA MORE	0.50	0.00	0.50
ZONE - III	7 (j_7)	KANKARBAGH MORE	7.00	2.06	4.94
	8 (j_8)	KANKARBAGH GOLEMBER	4.06	0.00	4.06
	9 (j_9)	HANUMAN NAGAR	3.05	0.00	3.05
ZONE - IV	10 (j_{10})	BORING ROAD CROSSING	3.80	7.36	-3.56
	11 (j_{11})	PATLIPUTRA GOLEMBER	3.91	0.00	3.91
	12 (j_{12})	KURJI MORE	0.50	0.00	0.50
ZONE - V	13 (j_{13})	DAK BUNGLOW CHAURAHA+FRASER ROAD	2.44	10.59	-8.14
	14 (j_{14})	PATNA RLY. STATION	1.56	4.57	-3.01
	15 (j_{15})	HATHWA MARKET+KHETAN MARKET	1.73	19.52	-17.79
	16 (j_{16})	PATNA MARKET+ASHOK RAJPATH	1.72	16.67	-14.94
	17 (j_{17})	NALA ROAD+KADAMKUAN	9.42	7.41	2.01
ZONE - VI	18 (j_{18})	ASHOK RAJPATH (MAHENDRU TO GAI GHAT)	8.73	2.23	6.50
	19 (j_{19})	MUSHALLAHPUR	1.79	0.00	1.79
	20 (j_{20})	BHUT NATH ASRAM RD MORE	0.53	0.00	0.53
ZONE - VII	21 (j_{21})	PASHIM DARWAZA+KHAJEKALA	3.02	2.77	0.25
	22 (j_{22})	PAHARI (ZERO MILES)	1.44	0.00	1.44
ZONE - VIII	23 (j_{23})	PATNA CITY CHAUK	23.18	23.42	-0.24
	24 (j_{24})	DIDAR GUNJ	1.13	0.00	1.13
Σ			100.00	100.00	

Figure 3: Map Showing Potential and Saturated Destination Nodes (j)



NAME OF ZONE	NODE NO. (j)	NODE NAME	DIFFERENCE
ZONE - I	2 (j_2)	RAM NAGRI MORE	7.99
ZONE - VI	18 (j_{18})	ASHOK RAJPATH (MAHENDRU TO GAI GHAT)	6.50
ZONE - II	4 (j_4)	ANISABAD MORE	5.82
ZONE - III	7 (j_7)	KANKARBAGH MORE	4.94
ZONE - III	8 (j_8)	KANKARBAGH GOLEMBER	4.06
ZONE - IV	11 (j_{11})	PATLIPUTRA GOLEMBER	3.91
ZONE - III	9 (j_9)	HANUMAN NAGAR	3.05
ZONE - I	1 (j_1)	RAJA BAZAR - ASHIANA MORE	2.96
ZONE - V	17 (j_{17})	NALA ROAD+KADAMKUAN	2.01
ZONE - VI	19 (j_{19})	MUSHALLAHPUR	1.79
ZONE - VII	22 (j_{22})	PAHARI (ZERO MILES)	1.44
ZONE - VIII	24 (j_{24})	DIDAR GUNJ	1.13
ZONE - VI	20 (j_{20})	BHUT NATH ASRAM RD MORE	0.53
ZONE - II	6 (j_6)	SIPARA MORE	0.50
ZONE - IV	12 (j_{12})	KURJI MORE	0.50
ZONE - VII	21 (j_{21})	PASHIM DARWAZA+KHAJEKALA	0.25
ZONE - II	5 (j_5)	BEUR JAIL MORE	0.18
ZONE - I	3 (j_3)	DIGHA MORE	0.10
ZONE - VIII	23 (j_{23})	PATNA CITY CHAUK	-0.24
ZONE - V	14 (j_{14})	PATNA RLY. STATION	-3.01
ZONE - IV	10 (j_{10})	BORING ROAD CROSSING	-3.56
ZONE - V	13 (j_{13})	DAK BUNGLOW CHAURAHA+FRASER ROAD	-8.14
ZONE - V	16 (j_{16})	PATNA MARKET+ASHOK RAJPATH	-14.94
ZONE - V	15 (j_{15})	HATHWA MARKET+KHETAN MARKET	-17.79

CONCLUSION

Based on this analysis, the oversaturated and the potentially growing commercial nodes are identified for Patna urban area. It is clear that the core area (Patna market + Ashok Rajpath, Hathwa market + Khatan market, Patna Railway Junction, Dak Bunglow Chauraha, Boring Road Chauraha and Patna city Chauk etc.) is saturated. Newer shopping locations away from the core are likely to grow in the near future are (Kankarbagh colony, Raja Bazar + Ashiana more etc).

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FOREIGN DIRECT INVESTMENT AND ITS IMPACT ON TECHNOLOGY DIFFUSION: SOME ISSUES AND CHALLENGES AHEAD

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ABSTRACT
This study aspires to understand the impact of Foreign Direct Investment (FDI) in general and it's associated diffusion of technology in developing countries in particular. General findings during the literature review indicate that impact of FDI on technology diffusion is either positive or negative. So this study attempts to analyze the causes of negative and positive impacts of FDI on technology diffusion. As seen, the effects of FDI vary depending on the host country's characteristics and policies, and there is a role of government for economic policy in maximizing the potential benefits of FDI and minimizing negative impacts of FDI. It also deals with some related issues and challenges such as mechanisms of technology diffusion, measurement of technology diffusion and role of the State. It also tries to suggest some policy measures to improve the negative impacts of FDI. Finally the question of how to maximize potential benefit of FDI and minimize negative impact could also be dealt with.

KEYWORDS
Foreign Direct Investment, Negative and Positive Impacts, Technology Diffusion.

INTRODUCTION
The issue of technology transfer should be at the core of the development debate in the context of Foreign Direct Investment (FDI)[1] inflows. Transformation of developing countries from a stage of low technological development to high technological development would be possible through transfer of technology. In recent years India has been actively encouraging the inflows of foreign direct investment (FDI) because during the financial year 2009-10 FDI equity inflows have been US $ 27,149 million. If reinvested earning and other capital flows are also included, the total inflows in 2009-10 add up to US $ 37,182 million. In the year 2010-11 from April to August the country received FDI inflow of $ 11,390 million (DIPP[2]).

During the financial year 2009-2010 FDI inflows were more in Service, Telecom, Electrical Equipments, Real Estate and Transportation sectors. Top foreign investments received during the financial year 2009-2010 were M/s. Vodafone (Mauritius) (US$ 801 million) (telecom), M/s. Matsushita Electric Works, Japan, (US $ 342 million) (electrical products), M/s. GA Global Investments Ltd., (US$ 258 million) (National Stock Exchange), M/s. EMAAR Holdings, Mauritius (US$ 204 million) (Real estate construction), M/s. L B India Holdings Mauritius Ltd. (US$ 118 million) (Real Estate) (Ministry of Commerce and Industry, Government of India) .

Endogenous and classical growth theories have a role for technology in promoting economic growth. It then becomes necessary for economies to have policies that promote technology transfer. Technology is a key to economic development (United Nations Conference on Trade and Development (UNCTAD)[3] 1992, pp.53). Innovation and Technology diffusion is important for growth (Organisation for Economic Co-operation and Development (OECD) 1991). The growing attraction of India as an investment destination and identified the following as the nine sectors with potential – automobiles and auto ancillaries; information technology (IT) and IT – enabled services; pharmaceuticals; housing and real estate; construction activities; banking sector; biotechnology; food processing; and telecommunications. FDI is a vehicle for effective technology transfer. But it need not be shy of imposing essential conditions on FDI. The experience of China in handling FDI is an eye-opener is this regard. Over the last decade India has clearly demonstrated that FDI is an instrument for economic growth through technology transfers, employment generation, improved access to managerial expertise, global capital and product markets, marketing and distribution networks. A striking feature in this context is how MNCs are increasingly shifting their portfolios of mobile assets across the globe to find the best match with the immobile assets of different locations which means when MNCs are transferring technologies through various channels it requires good infrastructure facilities. They are also shifting some functions that create their ownership assets like R&D , training and strategic management ('the process of deep integration') within an internationally integrated production and marketing system.

The growth of international production is driven by economic and technological forces. It is also driven by the ongoing liberalization of Foreign Direct Investment (FDI) and trade policies. In this context, globalization offers an unprecedented opportunity for developing countries to achieve faster economic growth through trade and investment. In the 1970s, international trade grew more rapidly than FDI making it the most important international economic activity. This situation changed dramatically in the middle of 1980s, when the world FDI started to increase sharply. In this period, the world FDI increased its importance by transferring technologies and establishing marketing and procuring networks for efficient production and sales internationally (Shujiro Urata, 1998). Through FDI, foreign investors gained by utilizing their assets and resources efficiently, while FDI recipients acquired technologies and got involved in international production and trade networks.

FDI is an important channel for accessing resources for economic development for the developing nations as it represents transfer of a bundle of assets like capital, technology, and access to export markets, skills and management techniques and modern environment management systems. Increasingly, foreign direct investment is assuming a prominent role in the development and growth strategies of developing and emerging countries more so because of inadequate resources to finance development projects. Proponents of foreign direct investment such as development institutions, economists, academics and policy makers argue that foreign direct investment ensures efficient allocation of resources as compared to other forms of capital inflows. In addition, it is argued that foreign direct investment enhances economic growth through technology spillover, creates employment, reduces dependence on accumulation of debt as a source of

[1] FDI includes the three following components: equity capital reinvested earning and intra company loan.
[2] For detail see DIPP fact sheet on Foreign Direct Investment.
[3] For details see UNCTAD, 1992, World Investment Report, pp.12-18.

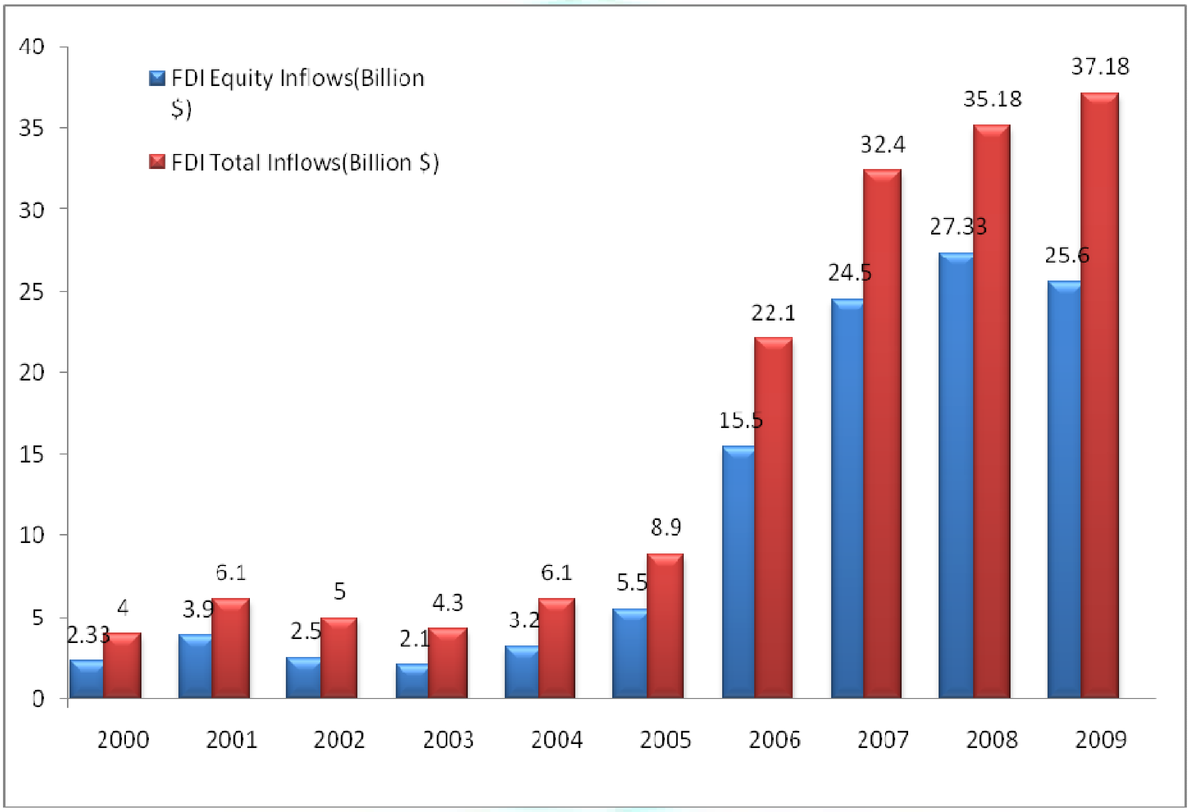
development financing and enhances human capital and entrepreneur skills. Increasing the level of literacy of work force is one of the imperative aspects that countries seeking to attract foreign direct investment should aspire to achieve. This is because literacy is a key business consideration by multinational enterprises looking to invest in foreign countries. In addition, not only does a literate work force attract foreign direct investment but it also ensures maximisation of human capital spillovers that could arise from the presence of foreign enterprises. The obvious benefit from foreign direct investment in relation to human capital formation and enhancement is that multinational firms tend to offer more training to their employees compared to domestic firms. Empirical studies in developing countries have found spillovers of both management and technical skills.

DIMENSIONS OF FDI INFLOWS IN INDIA

The dimensions of FDI flows in India can be explained in terms of their growth and size, sources and sectoral compositions. The growth of FDI inflows in India was not significant until 1991, due to its regulatory policy framework. However, under the new policy regime, it is expected to assume a much larger role in India's economic development. It can be observed that there has been a steady build up in the actual FDI inflows in the post-liberalization period. After the post liberalization and particularly at the beginning of twenty-first century and beyond that the FDI inflows have undergone a drastic change. During the financial year 2009-10 FDI inflows

have been US $ 37.18 billion as compared to US $ 35.18, 32.4, 22.1,8.9,6.1, 4.3, 5, 6.1, & 4 billion in the year 2008-09, 2007-08, 2006-07, 2005-06,2004-05, 2003-04, 2002-2003, 2001-2002 & 2000-2001 respectively (DIPP). It can be easily seen from the figures given as below.

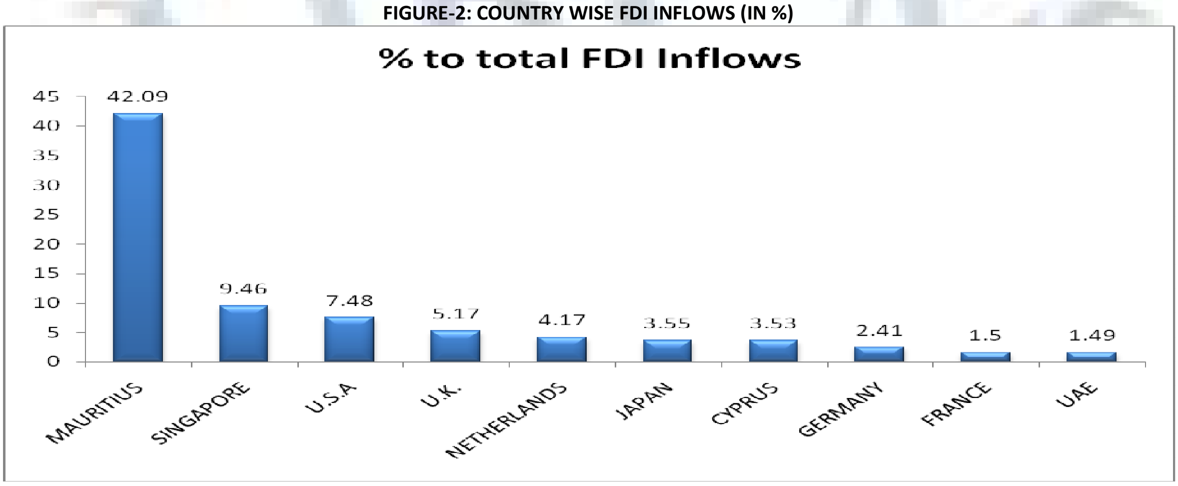
FIGURE-1: YEAR WISE FDI INFLOWS (IN US $ BILLIONS)



Source: Fact sheets on FDI, DIPP.

Top Foreign Investing countries during 2000-2009 were Mauritius (42.09%), Singapore (9.46) U.S.A (7.48%), U.K. (5.17%), Netherlands (4.17%), Japan (3.55), Cyprus (3.53), Germany (2.41), France (1.50) and U.A.E. (1.49).This shows the growing confidence of foreign investors in the Indian economy. It can be easily perceived from the figures given as below:

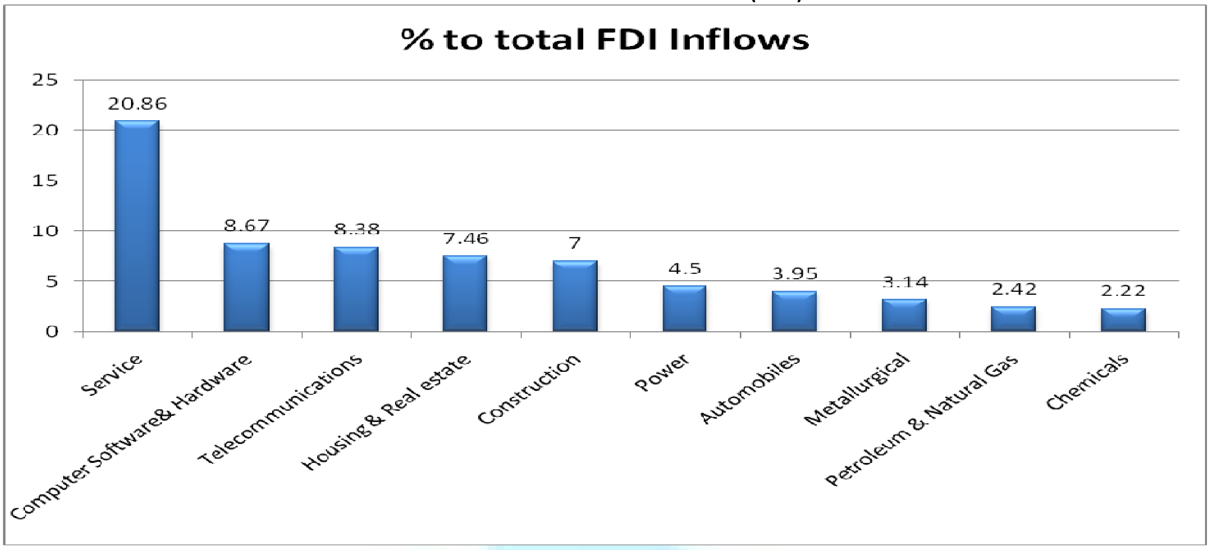
FIGURE-2: COUNTRY WISE FDI INFLOWS (IN %)



Source: Fact sheets on FDI, DIPP.

If we will consider sector wise FDI inflows, then services sector attract more than one-fifth share out of total. Other sectors like computer Software & Hardware, Telecom industries, Housing & Real estate, Construction, Power, Automobile, Metallurgical, Petroleum & Natural Gas and Chemical sector also capture a significant percent of total FDI inflows. It can be easily seen from the figures given as below.

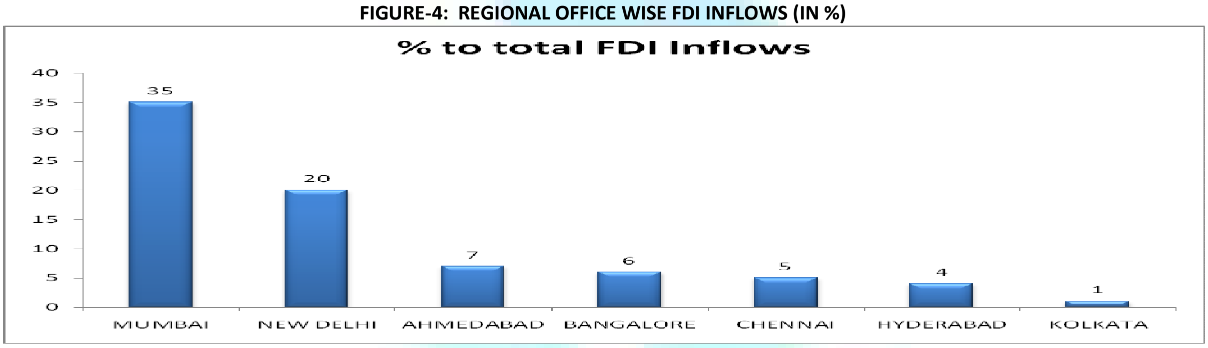
FIGURE-3: SECTOR WISE FDI INFLOWS (IN %)



Source: Fact sheets on FDI, DIPP.

If we will consider from view point of regional office of RBI then, Mumbai regional office of RBI received around 35% of the total inflows during 2000-2009. Delhi, Ahmedabad, Bangalore, Chennai and Hyderabad are the other major regions which have received FDI inflows. The six regions mentioned above constitute two-thirds of the total inflows received (Ministry of Commerce and Industry, Government of India).

FIGURE-4: REGIONAL OFFICE WISE FDI INFLOWS (IN %)



Source: Fact sheets on FDI, DIPP.

REVIEW OF LITERATURE

The role of foreign direct investment on technology diffusion of host country has received considerable attention in recent years, especially in the context of liberalization and globalization through MNCs. Recently, a number of empirical studies have been done to understand the role of FDI in technology diffusion. Many studies have discussed FDI and its impact on technology diffusion, a few are discussed below:

A study by **Holger and Nunnenkamp (2009)** showed that FDI inflows have positive impact on technology diffusion through productivity, wage, R & D intensity and level of human capital. Authors used cross sectional data for 294 manufacturing firm of German FDI from 2001 to 2005. A similar study by **Asiedu (2008)** reported that FDI inflows have positive impact on technology diffusion through GDP per capita, infrastructure quality, and openness of the economy. Author had used cross sectional data from period 1980 to 1994 for 71 developing countries (32 SSA countries and 39 non-SSA countries). On the, contrary a study by **Gachino (2007)** on Kenya shows that impact of foreign direct investment on technology diffusion is negative in case of manufacturing sector. This paper examined the effect of foreign presence on firm level productivity in the Kenyan manufacturing industry employing "traditional" and "recent" methodologies both based on production function framework. Author used panel data from unpublished plant level collected in an annual survey by the Ministry of Trade and Industry, Kenya. In another study by **Johnson (2006)** employed a panel of 90 countries and hypothesized that FDI should have a positive effect on economic growth as a result of technology spillovers and physical capital inflows. Performing both panel and cross-section analysis, he found that FDI inflows enhance economic growth in developing economies, but not in developed economies. In addition, Johnson (2006) also provides an excellent review of the existing empirical literature on FDI and technology diffusion that invokes macroeconomic data. Against this a study by **Blyde et al.(2005)** reported that impact of FDI on technology diffusion is negative rather than positive. Authors used panel data for the period 1995 to 2000 and conducted a study for Venezuela. A similar type of study by **Javorick and Spatareanu(2004) shown** that FDI has negative impact on technology diffusion. Authors used panel data for the period 1998 to 2000 and done a study for Romania. The study by **Siddharthan and Lal (2004)** used panel data for the period 1993 to 2000 and examined the impact of FDI on technology spill-over. The author said that FDI has positive impact on Technology diffusion. In a different type of study by **Bengoa and Sanchez-Robles (2003)** showed that FDI inflows have positive impact on technology diffusion. Authors used panel data for 18 Latin American countries applying random and fixed-effects techniques for its estimation. They established a positive effect on economic growth and the magnitude seemed to depend on host country conditions. An interesting study by **Carkovic and Levine (2002)** found that FDI has insignificant effect on technology diffusion**.** Authors employed both panel and cross-section data for 72 developing and developed countries over the time period 1960-1995 period to investigate the issue, using both OLS and Generalized Method of Moments (GMM) methods of estimation. They established that FDI inflows do not exert a robust influence on economic growth. Another study by **Zhang (2001)** found that FDI has positive impact on technology diffusion. Author had used time-series data for 11 developing countries**.** However, the magnitude again appeared to depend on host country conditions. A different type of study by **Pradeep Agrawal (2000)** on impact of foreign direct investment on technology diffusion in south Asia by using panel data from five South Asian countries; India, Pakistan, Bangladesh, Sri Lanka and Nepal. Author had found that, the impact of FDI inflows on technology is negative prior to 1980, mildly positive for early eighties and strongly positive over the late eighties and early nineties. A path breaking[4] study by **Aitken and Harrison (1999**) showed that FDI has negative impact on technology diffusion. Here authors used panel data for the period 1976 to 1989 and carried out a study for Venezuela. The study by Borenztein et al. (1998) reported that FDI has positive impact on technology diffusion. For this study authors used cross-section data for 69 developing countries during the period 1970 to 1989 and employed seemingly unrelated regression methods for their estimations. Their main finding was that FDI has a positive effect on technology diffusion, but the magnitude of the relationship depends on the quality of the human capital of the host country. In a similar vein, a study conducted by **Aitken *et al.* (1997)** reported that FDI has positive impact on technology diffusion. Authors had used for Mexican manufacturing firms for the period 1986 to 1990. Authors also founded that export decision of Mexican firms is positively related to foreign firms' presence that is measured using two separate variables - MNCs' output (production) and their exports. In an earlier study by **Balasubramanyam et al. (1996)** shown that FDI has positive impact on technology spillover. For this study author used cross-section data for 46 developing countries over the period 1980 to 1995 and employed the OLS method to estimate the relationship between FDI and technology diffusion. They found that FDI has positive spillover effects on economic growth, but that its effects are limited to host countries that adopt export-promoting policies.

FOREIGN DIRECT INVESTMENT

There are many definition of Foreign Direct Investment provided by different organizations and authors. It is not easy to define FDI because there is no universal acceptable criterion. Some of famous ones are as follows:

According to Moosa, A.L(1998) “Foreign Direct Investment (FDI) is the process whereby residents of one country (the source country) acquire ownership of assets for the purpose of controlling the production, distribution and other activities of a firm in another country (the host country)”. According to Buckley, P. J (1995), “Foreign Direct Investment (FDI) is an investment made by Multi-National Enterprises (MNEs) or by a non-resident in an enterprise of Host (recipient) countries over which they have a control and earn private return”. The United Nations Conference on Trade and Development (UNCTAD), 1999 World Investment Report defines FDI as ‘an investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise, affiliate enterprise or foreign affiliate). The term ‘long term’ is used in the last definition in order to distinguish FDI from portfolio investment, the latter characterized by being short-term in nature and involving a high turnover of securities. The common feature of these definitions lies in terms like ‘controls’ and ‘controlling interest’ which represent the most important feature that distinguishes FDI from portfolio investment, the latter characterized by being short-term in nature and involving a higher turnover of securities.

The International Monetary Fund’s Balance of Payments Manual (fifth edition, 1993), defines FDI as ‘an investment that is made to acquire a lasting interest in an enterprise operating in an economy other than that of the investor, the investor’s purpose being to have an effective voice in the management of the enterprise.’ The general rule of thumb presented in the *Manual* is that the direct investor owns (or controls) at least 10 per cent of the ordinary shares, voting power or equivalent. FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the host country.

It is important to distinguish between Direct and Indirect Foreign Investment. The indirect investment includes portfolio investment, acquisition of stock of an enterprise, medium-term and long-term loans by financial institutions and intermediaries, and investment in new issues of national loans, bonds and debentures. The direct investment is a long-term equity investment in a foreign company that gives the investor managerial control over the company (De Mello, L. 1999). The definition of FDI and computation of FDI statistics used by RBI does not conform to the guidelines of the IMF. Some of the main discrepancies are - first, India excludes reinvested earnings (which are part of foreign investor profits that are not distributed to shareholders as dividends and are reinvested in the affiliates in the host country) while estimating actual FDI inflows. According to IMF guidelines, these reinvested earnings are a part of FDI inflows, and should be recorded as inflow on the capital account of host country’s balance of payments. Second, India does not include the proceeds of foreign equity listings and foreign subordinated loans to domestic subsidiaries which, according to IMF guidelines, are part of inter-company loans (long- and short-term net loans from the parent to the subsidiary) and should be a part of FDI inflows. Third, India excludes overseas commercial borrowings, whereas according to IMF guidelines financial leasing, trade credits, grants, bonds, etc, should be included in FDI estimates. Fourth, as per IMF standards, if a shareholding of 10 per cent or more is acquired eventually by a non-resident who entered initially through the portfolio route but holds investment aggregating over 10 per cent through the purchase of additional shares in subsequent transactions, those additional shares should be regarded as a part of FDI. However, in India some Foreign Institutional Investors (FIIs) hold well over 20 per cent of the equity in the form of American Depository Receipts (ADRs) and Global Depository Receipts (GDRs) but these are not a part of FDI.

TECHNOLOGY DIFFUSION

In general, technology diffusion is a process by which technology is accepted by firms or individual consumers, either at home or international level. Technology diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social System. In other words, the study of the diffusion of technology is the study of how, why, and at what rate new ideas and technology spread through cultures. It applies, for example, to the acceptance of new technological products like the wristwatch and the personal computer, foods like tomato sauce and sushi, music styles like opera and bossa nova, dressing styles like the top hat and blue jeans, ideals like democracy or feminism, and so on (Rogers, 2003). Technology diffusion addresses the broader scope and approach of facilitating change or implementation of technologies that reduce raw material use and waste at industrial facilities, thus achieving pollution prevention.

Technology diffusion involves the dissemination of technical information and know-how and the subsequent adoption of new technologies and techniques by users. In this context, technology includes "hard" technologies (such as computer-controlled machine tools) and "soft" technologies (for example, improved manufacturing, quality, or training methods) (Kokko,1994). Diffused technologies can be embodied in products and processes. Although classic models of technological development suggest a straightforward linear path from basic research and development to technology commercialization and adoption, in practice technology diffusion is more often a complex and iterative process (de Mello, L, 1999). Technology can diffuse in multiple ways and with significant variations, depending on the particular technology, across time, over space, and between different industries and enterprise types. Moreover, the effective use of diffused technologies by firms frequently require organizational, workforce, and follow-on technical changes.

Technology diffusion can be contrasted with technological innovation, which emphasizes the development of new knowledge, products, or processes, and government-oriented technology transfer, which frequently seeks to shift advanced technology out of laboratories into commercial use. In many cases, diffused technologies are neither new nor necessarily advanced (although they are often new to the user), and they may be acquired from a variety of sources, including private vendors, customers, consultants, and peer firms, as well as public technology centers, government laboratories, and universities. Technology also diffuses through the internal "catch-up" efforts of firms, the transfer and mobility of skilled labor, the activities of professional societies and the trade and scientific press, varied forms of informal knowledge trading, and such practices as reverse engineering.

CHANNELS OF TECHNOLOGY SPILLOVERS

The empirical studies on spillover effects of FDI are based on the notion that MNCs possess superior organisational and production techniques compared to the domestic firms (Hymer 1976). MNCs can transfer technology through various means like licensing, trade, FDI, subcontracting, franchising and strategic alliances. Nevertheless, the preferred mode of technology diffusion is through foreign direct investment since it can internalise the transfer of superior technological assets at little or no extra cost (Caves 1996). In addition, FDI is considered as the best means to keep control over the technological knowledge. The spillovers

[4] In FDI literature this study first reported that FDI has negative impact on technology diffusion

can be in the form of improvement in the productivity of the domestic firms. This is neo-classical view on spillover effects. The commonly identified mechanisms of spillover from MNCs are illustrated in the figure below. Let us discuss briefly one by one

Trading-- It refers to the voluntary exchange of goods and services through money. In financial market its refers to buying and selling financial instruments.

Licensing – To give some countries official permission to invest.

Franchising – To sell a particular product in particular region or in other words it is a formal permission given by a company to somebody who wants to sell its goods and services in a particular area.

Subcontracting – A contract to do part of the work that has been given to another person or company. A subcontractor is hired by a general contractor to perform a specific task as part of the overall project.

Strategic Alliance – It is a formal relationship formed between two or more parties to pursue a set of agreed upon or to meet a critical business need while remaining independent organizations. Alliance is cooperation or collaboration which aims for a synergy where each partner hopes that the benefits from the alliance will be greater than these from individual efforts.

The spillover effects from the FDI can be broadly classified as horizontal (sectoral) and vertical (inter-sectoral) spillover. We examine both horizontal and vertical spillovers in detail below.

HORIZONTAL (INTRA-INDUSTRY) SPILLOVERS

The horizontal spillovers shows the spillovers effects from the multinational in the same industry. For example when FDI is coming to Automobiles sector and if technology will spread to only Automobiles sector then we will call it horizontal spillovers. The entry of foreign firms may lead to an increase in the productivity of the domestic firms in the same industry through various means. First, demonstration effects refer to the copying or the imitation of foreign firms' technology and organisational practices by the domestic firms. Second, labour turnover arises from the mobility of the skilled and trained workers from MNCs to domestic firms. These workers are carriers of MNC's technology. Multinationals can prevent the flow of labour by paying higher wages. On the other hand, there is a possibility of reverse labour turnover. The employees of domestic firms can move to foreign firms. Third, competition effects refers to a situation in which entry of foreign firm forces the domestic firms to increase their efficiency by improving the existing methods of production or adopt new ones.

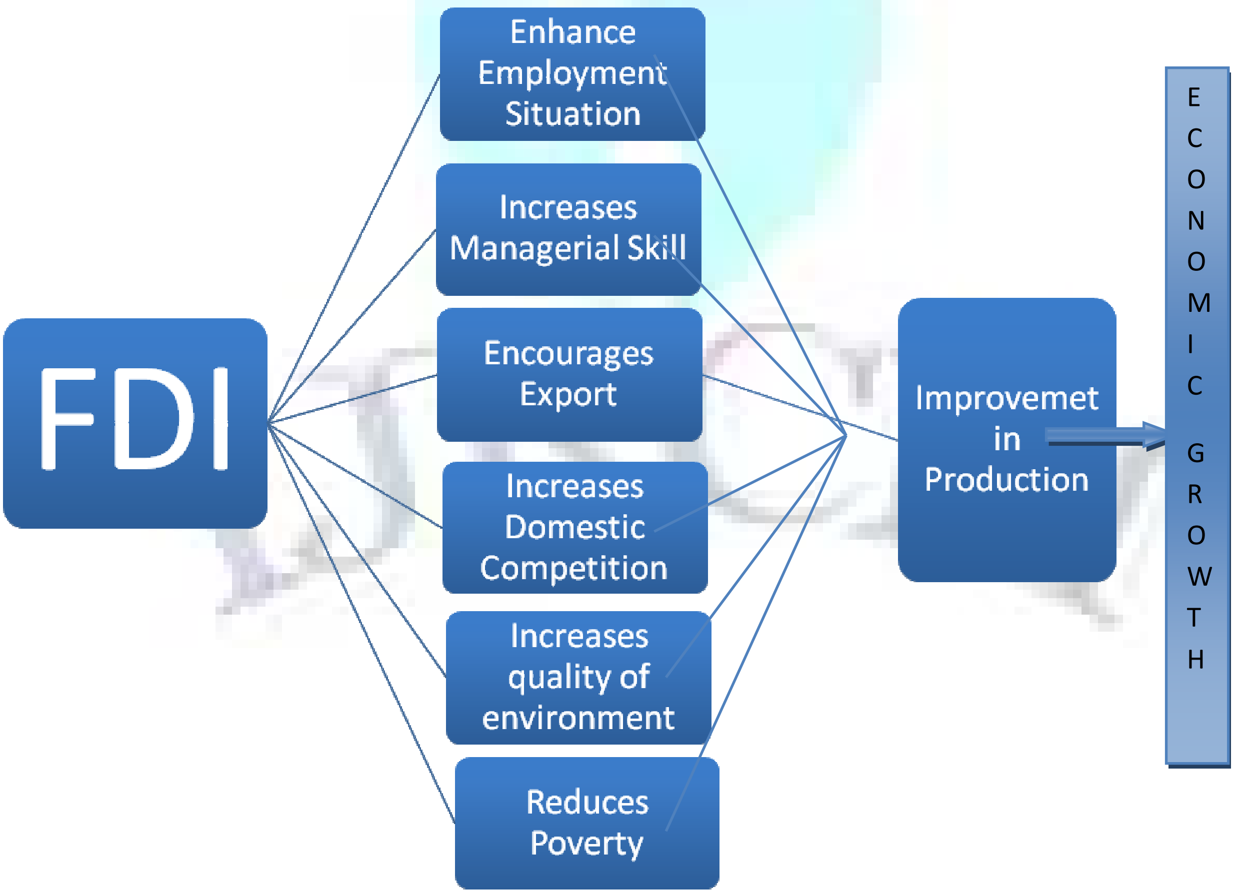
VERTICAL (INTER-INDUSTRY) SPILLOVERS

Vertical spillover shows the spillovers effects from the multinational to different industries in that country. For example when FDI is coming to Telecommunications sector and if it will spread the technology of manufacturing, power, and mining sector then we will call it vertical spillovers. The phenomenon of spillovers is not just confined within industries. It can arise as a result of interaction across industries. The inter industry spillover arises mainly by the customer-supplier relationship between foreign firms and domestic firms. According to Dunning (1993, p.456), "the presence of FDI has helped to raise the productivity of many domestic suppliers, and this has often had beneficial spillover effects on the rest of their operations". It is believed that spillovers are more likely in the case of inter-industry than with in the same industry. The reason behind such a belief is that, MNCs can prevent the leakage of technology to its competitors, while it has no incentive to prevent the technology diffusion to its suppliers and clients (Javorick 2004). Vertical spillover mechanism operates both at the upstream and downstream sector.

FDI AND ITS IMPACT OF TECHNOLOGY DIFFUSION ON THE HOST COUNTRY

When technology diffusion occurs through FDI to any country it improves condition of some major economic activities such as- enhance employment situation, increases managerial skill, encourages export, increases domestic competition, increases quality of environment and reduce poverty. All above activities lead to more production in that country which finally leads to economic growth.

Figure 2-Impact[5] of FDI



[5] Authors own imagination regarding Macro Economic impact of FDI

TWO SPECIFIC QUESTIONS

On the specific question of whether the superior technology involved in the inward foreign investments "spills over" to domestically owned firms rather than being retained entirely by the foreign-owned firms, Teece (1977) argued that since the assets are almost always gained through experience, they cannot be easily licensed to host country firms, but can be transferred at a reasonable cost to subsidiaries who locate in the host country. Against this backdrop, in India, government has an expressed foreign technology agreement in which Reserve Bank of India through automatic route within certain prescribed monetary limits related to Royalty, permits foreign technology agreements in all industries (Ministry of Industry and Commerce, Department of Industrial Policy and Promotion, Govt. of India, 2005).

Another question is related to effects of spillover is linked to wages, i.e., whether the multinational firms pay higher wages for domestic labour, which consequently raise the average wage level in the host country, and particularly whether these higher wages spill over to local firms (Lipsay and Sjoholm, 2005). The answer is positive due to two reasons: first, it is not possible to transfer labour for their country to host country, if possible it is a costly affair so they trained domestic labour and paid high wage. Second, in developed countries labourers are not so cheap like in developing countries and also in some developed countries labourers are not available abundantly.

SOME CRITICAL ISSUES ON FDI AND TECHNOLOGY DIFFUSION

Based on the above discussion, we can conclude that the net effects of horizontal and vertical spillovers can be either positive or negative. Therefore, from the results of the previous studies, we can safely conclude that positive effect is not always the outcome of FDI. We argue that the positive effects of FDI postulated in much of the recent debate are not automatic, that the effects of FDI will vary depending on the host country's characteristics and policies, and that there is a role for economic policy in maximising the potential benefits of FDI. Many developing countries have traditionally relied on a combination of various fiscal incentives and performance and technology transfer requirements to attract foreign multinational firms and to control their operations. However, these measures may not be sufficient to generate significant knowledge spillovers if the majority of local firms employ technologies that are very different from those used by foreigners. Some critical issues related to FDI and its impact on technology diffusion is listed below.

Due to competition effects, foreign firm can lead to crowding out of domestic firms. Those firms which are unable to compete with the foreign firms are forced to make an exit which is known as market stealing effect. Therefore in the short run, the productivity of the domestic firms decline which shows that technology transfer through FDI has negative effect.

The argument about positive competition effect holds only if domestic firms are not far below the technological frontier. On the other hand, in an industry characterised by weak firms, the entry of foreign firms may eventually lead to an exit of the weak domestic firms which is the main cause for negative spillover effect. It is the fact that spillovers are more likely in the case of inter-industry than within the same industry. The reason behind such a belief is that, MNCs can prevent the leakage of technology to its competitors, while it has no incentive to prevent the technology diffusion to its suppliers and clients. So vertical spillovers are negative here. When MNCs prefer to source from their international supplier, the domestic firms have to upgrade their technology in order to meet the global demand. Those supplying firms failing to meet the requirements of the MNCs or unable to meet the import competition will be forced to exit from the market. As a result a negative vertical spillover can arise in such an eventuality. The economic effects of FDI are very difficult to represent a complex package of attributes that vary over time and from one host country to another. They are difficult to separate and quantify. Where their entry has large (non-marginal) effects, measurement is even more difficult. The econometrics analysis of FDI and technology diffusion is of long standing, but its conclusion remains unclear. Some analyses show a positive impact while others remain agnostic. FDI spillovers are not always positive because two factors are themselves highly interdependent. It needs to be acknowledged that the ability of the domestic economy to benefit from MNCs investment crucially depends on the relative technological capabilities of the recipient and the transmitter, and at the same time, those MNCs investments will depend on domestic capabilities.

POLICY ISSUES ON FDI AND TECHNOLOGY DIFFUSION

In order to address above critical issues we should think about some valuable policies for India to make technological diffusion fruitful. We know that positive effects and negative effects are prevailing outcomes from inward FDI through technological diffusion. Being a researcher we should suggest some policies which can minimise negative effects and maximise positive effects. There are policies which can give better direction to FDI flows to India. There should be policies to support local technological capability and labour skills may facilitate spillovers of technology from FDI inflows. The reason is not only that the local industry's ability to absorb foreign technology improves, but also that a more skilled local labour force reduces the cost of intra-firm technology transfer within the MNC, which is likely to encourage affiliates to import ''more'' technology from their parents. Policies are required to give correct information or coordination in the international investment process which can lead a country to attract good quality FDI. There should be policies to keep balance between the private interest of investors and the economic interests of the host country. This can bring positive effect on development. Policies are needed to take care of both employment as well as exchange rate problems. If more than requirement FDI flows will occurs low technology investment by local firms will make an exit. There should be policies to counteract market stealing effect. We should frame policies which will keep proper balance between export-oriented FDI and domestic market oriented FDI according to economic situation of the country. There should be policies to bring in more transparency in the foreign investment policy in order to improve the inflow of FDI. If there is transparency, the foreign investor knows exactly where he stands. Import duties should be reduced to match the world standard import duties on components and raw materials which are not available in India should be declined further so that the cost of production falls and goods can be offered at cheaper rates. FDI should come into infrastructure and area where technological gaps exist. FDI inflows should commensurate with the need of the economy. Tax rate should be brought down to increase the flow of international direct investment in India. There is need for lower interest rates, easy availability of credit from banks and financial institutions. India should enter into more bilateral agreements with different source countries as these agreements increase the confidence of the investors in the host country and they are encouraged to undertake FDI in different areas. There is need for coherence between different policy areas including investment, trade, technology and competition and also between initiatives at the bilateral, regional and multilateral levels, guided by the principle of non-discrimination. FDI polices should be dynamic in character in order to face changing economic scenario at the global level, at the home country as well as at the host country level.

CONCLUSION

FDI is an important mean by which domestic firms can be made more competitive, this should be part of a more holistic development strategy. If above policies can be properly implemented by the government in case of exact time and situation of economy then our policy suggestion can bring some fruitful result in FDI inflows to India and its impact on technology diffusion. If MNCs operated in efficient markets and acted with full information, there would be no need for policy intervention. If markets were not efficient, or MNCs did not have full information on investment opportunities in particular locations, there would be a case for interventions in markets and the investment decisions of MNCs. It is likely that markets information are deficit in developing countries under development is typified by a lack of efficient markets and institutions. The recent policies like SEZ (special Economic Zone) policy, and increased investments in export-related infrastructure, are expected to attract more export-oriented FDI. This would not only help the foreign firms to set their export base in the country, but the domestic firms to reduce their exporting costs and to become more competitive.

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AN EMPIRICAL INVESTIGATION INTO THE DETERMINANTS OF FINANCIAL PERFORMANCE OF INDIAN CORPORATE SECTOR: SIZE, GROWTH, LIQUIDITY, PROFITABILITY, DIVIDEND, LEVERAGE

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ABSTRACT

Analysis of financial performance of any business concern is of utmost important once to every user of the concern. In this respect the user generally consider the factors like size, growth, liquidity, profitability of the companies etc as a determinant of performance measurement. There has been debate going among the social scientist regarding the determinants of financial performance. The present study mainly devoted to examine the determinants of financial performance and also to investigate the existence of any relationship between the determinant factors. Therefore, 151 companies covering 13 industrial groups included in the study sample. With the help of statistical tool of "Correlation Matrix" the relationship between the size and growth; growth and liquidity; growth and profitability etc. are tested by considering each industrial sector. The empirical result found that the financial performance varies from industry to industry and company to company. In some cases size is positively related to growth, profitability etc. where as in other cases it might be reverses. It is argued that performance of industry is dependent on number of factors; both economic and non economic i,e market forces and also its nature of functioning. Moreover, it is not any particular factor which leads to improvements in financial performance of companies but it is the vision, foresightedness and effective utilization of a combination of factors. The dynamic changes take place very quickly and as such the adaptability to the situations and hitting the iron when it is hot is more important than just following a traditional fixed line of action.

KEYWORDS
Financial Performance, Correlation Matrix Analysis, Combination of Factors.

INTRODUCTION

The term performance cannot be put into a tight framework of definition. It is ambiguous and it can be interpreted and measured in different ways. Performance can be accessed from various angles and by different users from their own point of view. A financial analyst will judge the performance from the point of view of growth and profitability. An economic planner will be particular about efficient utilization of resources. A welfare economist will be concerned with the equal distribution of gains and wealth besides efficient utilization of resources. From the national point of view the various indicators of performance can be employment generation, research and development, health, education and economic development etc.

OBJECTIVES OF THE STUDY

This paper is devoted to study the *overall performance* of Indian industry (sample companies) on the basis of *accepted financial tools*. In this respect the study seeks to examine the relationship among the financial parameters representing the financial performance of the firm; *Size, Growth, Liquidity, Dividend, Profitability and Leverage*

HYPOTHESES

Following hypotheses are adopted to attain aforesaid objectives
H_0: There is no relationship among the explanatory variables representing financial performance of the firm (r=0).
H_1: There exists relationship amongst the explanatory variables indicating financial performance ($r \neq 0$).

RESEARCH METHODOLOGY

The study is based on data collected from secondary sources. They are Capital line Database 2007, Bombay Stock Exchange Directory and Financial Statement of Indian Companies. In this treatise, we investigated those companies which are listed in BSE. The study covers a period of five years from 2003 to 2007. To avoid the impact of global financial crisis on companies' performance the periods of 2008 and 2009 have been excluded. The selected sample includes top 500 companies on the basis of market capitalization as on end March 2007. All the companies are classified under different industrial groups. The final sample frame considering availability of data for all years considered for the study constitutes 151 numbers of companies pertaining to 13 industrial groups. The industries are classified on the basis of Capitalline database. The following table delineates the tools of measuring the determinants of financial performance of companies. For the purpose of analysis, financial tools like ratio analysis and statistical tools such as correlation matrix is applied.

NOTATIONS AND MEASURES USED FOR VARIABLES IN THE STUDY

Variable name	Notations	Description
Size	ENT. VALU*	Market capitalization + Debt – Cash & bank balances
	SALES*	Annual Volume of Sales
	CAPITAL*	Equity capital+ Preference capital+ Free Reserve (excluding Revaluation Reserve)
Growth	PAT(*profit after tax)*	Percentage change of PAT over the previous year
	MCAP**	Percentage change of MCAP over the previous year
Liquidity	CR*(*current Ratio)*	Current assets / Current liabilities
	DTR*	Credit Sales/ Average Sundry debtors
	ITR*	Sales / Average Inventory
Profitability	EPS*	Net profit available to equity holders/ Number of ordinary shares outstanding
	BVPS*	Equity capital+ Free reserve, excluding Revaluation Reserve/ Number of equity shares outstanding
	ROC*	{Profit after tax + interest/ Equity capital+ reserve, excluding revaluation reserve+ Preference capital Total debt}100
	RONW*	{ Profit after tax- preference dividend/ equity capital + Free reserve, excluding revaluation reserve}100
Leverage	D/E*	Total Debt/ Equity capital+ preference capital + Free reserve, excluding revaluation reserve
Dividend	DPR*	{ Dividend paid to ordinary shareholders/ Number of ordinary shares outstanding }* 100

* Average values over the five years taken, ** Average growth rate taken,
ENT.VALUE= Enterprises Value, SALES= Sales Value, CAPITAL= Capital employed, PAT= Profit After Taxes, MCAP= Market Capitalization, CR= Current Ratio, DTR= Debtors Turnover Ratio, ITR= Inventory Turnover Ratio, EPS= Earning Per Share, BVPS= Book Value Per Share, ROC= Return on Capital, RONW= Return on Net worth, D/E= Debt Equity Ratio, DPR= Dividend Payout Ratio

FINDINGS AND ANALYSIS

The result of correlation analysis relating to variables measuring financial performance is displayed in the Table of aggregate correlation matrix (annexure at end of this paper). It explains that the leverage is positively and significantly related to liquidity while negatively related with stock yield (DPR and ROC). In other words, the sample industries have used outside fund (Debts- fixed interest bearing securities) in a manner to enhance their liquidity position, while the earning capacity of the firm by using of debt capital has not significantly increased. Further it is observed that the enterprise value, representing the size of the sample industries is positively related with the operational efficiency, volume of sales (sales) and profitability. It is observed that the leverage has insignificant effect on the earning capacity of the firm as well as on the enterprise value although the liquidity position viewed by higher current ratio has significantly increased. Moreover, Current ratio representing liquidity position is negatively related to the sales volume representing the size of companies which is statistically significant. This means, the liquidity is negatively related with the size expressed in sales volume which implies that comparatively larger companies of the sample are keeping low amount of liquid assets in hand and smaller companies are keeping comparatively large amount of funds in hand in the form of liquid assets. ROC is negatively related with the current ratio and the correlated values are statistically significant which signifies that profitability is negatively related with the liquidity. It means that profitable companies maintains low volume of liquid assets implying thereby that, more emphasis has been given on fixed asset to keep the pace of growth of bottom-line of the firm.

According to the aggregate table, correlation between the variables of sales volume and capital employed is 0.785 and also the correlation between sales and enterprise value is 0.619 and the relation between the capital employed and enterprises value is 0.900. All these relationships are found to be statistically significant. Further, the aforesaid relationship suggest that the companies with large amount of capital and having high enterprises value have achieved higher turnover over the years as far sample is concerned. The relationship between sales and growth of market capitalization (-.181) and capital employed and growth of market capitalization (-.163) indicate that small companies in size on the basis of sales and capital employed have high demand in the market. The relationship also expresses that growth and size is negatively and linearly related and rejects the logic behind the fact that small firm cannot grow. The result emerged from the analysis shows that the relationship differs from the results of the study undertaken by Motgomery (1979), Minander (1997). However, they are in the similar line of other studies undertaken by Pant (1991), Kaur (1997). The logic behind positive relationship between the variables- size and growth is that larger companies will grow comparatively fast in the market as automatically larger companies create own identity in the market whereas negative relationship implies that people generally invest money comparatively in small companies with the expectation that it will grow faster in near future. In this respect, pant (1991) argued that a larger firm witnessed slower pace of growth because of their inability to cope with the changes in the market power and its complex organizational structure. Further, the increase in size may also lead to difficulty in respect of co-ordination and control of several of economics and diseconomies of idle capacity (Kaur 1997). The correlation coefficient (r); *sales Vs book value of share (.*207); *capital employed Vs EPS (.198); capital employed Vs book value per share (.248); enterprises value Vs EPS (.215); enterprises value Vs book value per share (.238)* indicates that the profitability is positively and linearly related with the size of companies. This positive relation is matched with the findings of study undertaken by Montgomery (1979), Hamilton and Shergil (1993) and Maninder (1997). This may be because of marketing power, technology and financial factors Kaur (1997). These larger firms further tend to have access to larger market share and the greater profitability.

DPR taken as one of the measurement of dividend decision has been negatively related to *growth of profit (-.203), growth of market capitalization (-.364), leverage (-.170), EPS (-.191), BVPS (-.203) and positively related with ROC (.316) and RONW (.286)* and all are statistically significant. It implies growing companies are giving less amount of dividend to the shareholders as compared to the less growing companies. Moreover, it has been revealed that the companies especially relying on internal source of fund are distributing more amount of dividend. On the other hand, positive relationship between *DPR and ROC and between DPR and RONW* signifies that profitable companies are distributing more dividends rather than keeping in hand. However, to draw specific inferences pertaining to relationship between sizes, growth, liquidity, profitability and dividend, an attempt has been made here-under in respect of sector wise analysis. The accompanying table- discerns correlation-ship between the variables as stated above. From the econometric analysis, the findings are summarized under different heads as stated underneath.

SIZE AND PROFITABILITY

From the available literature, *size* is positively related to the *profitability*, Montgomery (1979), Hamilton and Shergil (1993) and Maninder (1997). However, Bettis and Bothwell et.al. (1984) found negative relationship existing between *size and profitability*. They argued that size not only provides economics and market power but also costs. From the aggregate table it is found that *size and profitability* has no relationship and this logic is supported by the sector like I T, Construction, Cement, Electricity, Engineering, Auto industries, Chemical, Personal care group, and Finance & Investment. But size is positively related in the industries like Energy, Pharmaceutical, Steel and Diversified. These industries support the logic that with the increase of size, the profitability position of the company will automatically improve. But not a single sector supports that there is any negative relationship between *size and profitability*. In the energy sector, the correlation between *capital employed and EPS* is *.702* and in between *Enterprises value and EPS* is *.721*. Further *Book value of share* is positively related with *capital employed* (.616) and with *enterprises value* (.595), all of the relationships are statistically significant at 5% level. This relationship suggests that in that sector with the increase of *capital and enterprises value* the companies *earning per share (EPS)* as well as book value per share increasing. In the pharmaceutical sector, only enterprises value is positively related with the *book value per share* (r= .537) and is statistically significant at 5% level. But other parameters of size as well as profitability are not significantly related between themselves.

In steel sector, it is seen that *enterprises value* is positively related to *EPS* (r=.738) and is statistically significant at 1% level. *Book value per share* is positively related to *enterprises value* (.621). On the other hand, RONW is positively related with *sales* (.598) and *ROC* is positively related with *Sales* (.595) and with *capital employed* (.537); all the relationships are statistically significant at 1% level.

Further, positive relationship has also been found in the group of diversified sector. Sales are positively related with *EPS* (.780) and with *Book value per share* (.897). Again *capital employed* is also positively related with *EPS* (.872) and with *Book value per share* (.950). The relationship is statistically significant at 1% level. So, it suggests that the groups of companies under the diversified sector are able to increase the rate of earning per share as well as *book value per share* by employing more volume of capital and effectively using the same in leveraging the operational activities.

SIZE AND GROWTH

From the literature point of view some of the researchers refer that there is positive relation between *size and growth* (Motgomery ;1979, Minander; 1997) and some are opines that there is a negative relationship in between *size and growth* (Pant; 1991, Kaur; 1997). The logic behind positive relationship is that comparatively large companies grow faster in the market as automatically larger companies create own identity in the market whereas negative relationship implies that people generally invest money comparatively in small companies with the expectation that it will grow faster in near future. In this respect Pant (1991) argued that a larger firm may also achieve slower growth because of its inability to cope with the changes in the market power and its complex organizational structure. Further the increase in size may also lead to difficulty in respect of co-ordination and control of several of economics and diseconomies of idle capacity (Kaur 1997). The present analysis suggests that the sectors like I T, cement, electricity, engineering, steel, auto industries, chemical, personal, finance and diversified, there is no relationship in between *size and growth*. On the other hand negative relationship exists in the sector of energy, construction. In the sector of energy, *growth of Market Capitalisation* (M.Cap) is negatively related with *sales* (-.612) and is statistically significant of 5% level. It means that comparatively small companies in respect of *sales volume* are growing faster whereas a negative relationship has also been seen in between *capital employed* *and growth of M.Cap* (-.581) which is statistically significant at 5% level in the sector of construction. It implies comparatively small companies in respect of *capital employed* are growing faster in the market. The findings are in tune with the (Kaur 1997) and (Pant 1991).

On the other hand, pharmaceutical sector witnessed, a positive relationship in between *Enterprises value and growth of profit after tax* which expresses that more profit, implying faster growth. It could be because of demand of pharmaceutical industries are increasing day by day. So, the present study discloses that *size and growth* of firms has no relationship as per the sample is concerned. This means a growth is independent on *size* of companies. A firm's *growth* is irrespective of *size* of companies and is in tune with the study of Fergusson who did not find any relationship between size and growth. However, study draws conclusion that growth and size relationship is industry specific.

SIZE AND LIQUIDITY

The analysis describes that *size* is not related with the liquidity of the companies in the sector of IT, construction, pharmaceutical, steel, cement, electricity, engineering, auto industries, chemical, personal care and diversified industries. The existence of non relationship suggests that there is no direct relationship between *size* of the companies and *liquidity*. But, in case of energy sector, *current ratio* of the companies is negatively related to the *sales volume* that is -.619 and also statistically significant. It implies that the companies having more *sales volume* are keeping less amount of fund in hand in form of liquid assets. So, it may conclude that it is necessary for the energy sector to think about the proper management of current assets. Further, a positive relationship between the *size and liquidity* has been seen in the sector of Finance group. The correlation between the *sales volume and current ratio* is .727 and correlation between the *capital employed and current ratio* is .639, both the relationships are statistically significant at 5% level, which implies the companies having more sales as well as more capital employed are keeping more amount of fund in form of liquidity. It may be because of the nature of industry. The nature of finance companies is different from that of manufacturing companies.

GROWTH AND LIQUIDITY

The analysis exhibits that the variable of growth and liquidity has no relationship and the fact is supported by the energy, IT, construction, pharmaceutical, cement, electricity, steel, chemical, personal care, finance and diversified sector. So, out of thirteen sectors considered in the study it was revealed that in eleven sectors, no relationships was found in between the *growth and liquidity* as the correlation value is not statistically significant either at 1% or 5% level. But in the engineering sector both *Market Capitalization and profit after tax* is negatively related with *current ratio*. The correlation between *M.Cap and C.R* is (-.750) and between *profit after tax and C.R* is (-.718) and both the relationships are statistically significant at 5% level. But in the Auto group sector it was found that, *growth of PAT* is positively related with the *C.R* (.604). The negative relationship suggests that more growing companies are keeping low amount of fund in form of *liquidity*. On the contrary, the positive relationship implies that more growing companies are keeping more amount of fund in form of *liquidity*. Thus, the companies under the group of Auto sector as the engineering sector may emphasise on its financial structure so as to maintaining appropriate volume of liquidity that would take care of liquidity position.

GROWTH AND PROFITABILITY

It has been observed from the analysis that the industrial sector like Energy, I T, Construction, Electricity, Auto industries, Chemical, Personal sector support the fact that there is no relationship existing in between *growth and profitability* because no correlation value was found as statistically significant. But a positive relationship between *growth and profitability* has been found in the sector of Pharmaceutical, Cement, Finance and Diversified sector. Whereas, a negative relationship seen in the sector of Engineering and Steel industries. A positive relationship implies that fast growing industries are earning more profit as compared to others. This positive relationship is justifiable as growing or profitable companies create own identity in the market from the shareholders point of view. On the other hand negative correlation coefficient between the variables clearly exhibits that the less growing companies are in a better position in generating profit than their counterparts. This is so because comparatively small companies are facing onslaught from the giant companies and has failed to attain higher profitability. The relationship implies under the group of Engineering and Steel, the growing companies are not making profit as like less growing companies. In the steel sector, the correlation between Growths of *PAT and RONW* is -.522, which is statistically significant at 5% level, implying that the companies with less growth of profit are comparatively earning more return on net worth value of the companies. Again in the engineering sector*, growth rate of market capitalization* is negatively related with *RONW* (-.642), suggesting that the companies having less return on net worth is capable of enhancing the *growth rate of market capitalization.*

LIQUIDITY AND PROFITABILITY

From the analysis it has been found liquidity is negatively related in the case of only Electricity industries, as the correlation value between *Return on capital and CR* is (-.637), and is statistically significant at 5% level. This implies that profitable companies are keeping low amount of fund in hand. It delineates that the companies under these sector are utilizing funds as far as possible for generating more profit. But in other cases, both the variables are not interrelated with each other. The existence of non- relationship suggests that *liquidity and profitability* has no relationship. The relationship found does not cope with the findings of Amoto and Wider (1990) who found that risky companies are earning more profit.

LEVERAGE WITH PROFITABILITY AND GROWTH

In our study, *leverage* is positively related with *growth* of the companies and negatively related with the *profitability*. This implies that Indian companies support the logic that leverage is one of the factors for growth but not for profitability of the companies. Grant and Jammine (1988) reported that high *leverage* is associated with low *profitability*. The same relationship has been observed by Chaganti and Damanpur (1991) and Maninder (1997). However Baker (1973) found positive relationship between *leverage and profitability* implying that the high leverage tend to raise profitability. Hamilton and Shergill (1993) revealed that the impact of *leverage* was positive on *ROE, ROA and GIS*. They observed that this relationship might vary over the business cycle. Thus different studies have shown different results regarding relationship between *leverage and profitability*. The findings of positive relationship between *leverage and growth* among our sample companies may be because of larger funds are required and debt is a major source of long term finance.

CONCLUSION

The conclusion is drawn with a few lines as under:

- Leverage (*debt-equity ratio*) is positively and significantly related with liquidity (r=.459). In other words, the sample industries with high credit worthiness are generally using outside fund for the sustainable growth of the business.
- Liquidity is negatively and significantly related with the size expressed in terms of sales volume (r= -.569) which implies comparatively large companies of India are keeping low amount of liquid assets in hand and smaller companies are keeping large amount of funds in hand in the form of liquid assets.
- The companies with small in size on the basis of sales and capital employed are enjoying comparatively high market share. The relationship conveys that growth and size is negatively and linearly related and fails to acknowledge the logic behind the fact that small firm can not grow.
- The profitability is positively and linearly related with the size of companies (r=.248). This is because of marketing power, technology and financial factors. The larger firms tend to have larger market share and the greater profitability.
- Growing companies are distributing less amount of dividend to the shareholders as compared to the less growing companies. The companies relying on internal source of fund are also distributing more amount of dividend.
- Growth of market capitalization of energy sector (r= -.612) and construction companies (-.581) is negatively and significantly related with sales; implying that comparatively large companies like Reliance Industries Ltd, Oil & Natural Gas Corporation Ltd, Indian Oil Corporation Ltd, DLF Ltd, Unitech Ltd, Jaiprokash Associates Ltd, Hindustan Construction Company Ltd, have witnessed slower growth over the years. This may be because of the reasons that larger firms have slower chances of auxiliary growth or inability to cope up with the changes in the market power and its complex organizational structure.
- In the IT Sector, the correlation coefficient between leverage and growth of profit is positive (0.700) which signifies the companies based on external source of funds are comparatively grow faster in respect of profit.

- Pharmaceutical companies are growing with the increase of size. Again size of the companies is positively and significantly related with profitability (r=.537). The relationship strongly suggests that the large pharmaceutical companies such as Sun Pharmaceuticals Industries Ltd, Cipla Ltd, Ranbaxy Laboratories Ltd, Dr Reddy's Laboratories Ltd, Lupin Ltd, and Wockhardt Ltd are growing because of making more profit. On the other hand, a significantly negative relation between leverage and dividend (r= -.559) has been seen; signifying that the companies with internal source of funds are distributing maximum amount of dividend among the shareholders particularly in case of pharmaceutical sector.
- The cement companies' profitability is not significantly related with size as well as growth of the companies implying that no relationship confirms in between growth, profitability and size of the companies.
- In electricity sector the return on capital (ROC) and current ratio is negatively related (r=-.637) which implies liquidity has reverse effect on profitability. On the other hand, the companies such as Voltamp Transformers Ltd, Havells India Ltd, Bharat Bijlee Ltd, Crompton Greves Ltd, Bharat Heavy Electronics Ltd, and Siemnes Ltd have utilized liquid assets efficiently.
- The companies with higher bottom line under engineering sector particularly Alfa-Laval (India) Ltd, Cummins India Ltd, Alstom Projects India Ltd, and Reliance Industrial Infrastructure Ltd are distributing maximum amount of dividend among the shareholders. Growth of profit (-.718) and growth of market capitalization (-.750) is negatively and significantly related with liquidity implying that the companies with lesser degree of profitability are expediting the pace of liquidity and growing faster in the market.
- The companies under steel sector reveal that there is positive relationship between profitability and size of the companies. Companies' profitability is positively and statistically significantly associated with sales volume, capital employed or enterprise value of the respective companies (r= .598; .537; .738). The firms under the iron and steel industry like Steel Authority of India Ltd, Tata Steel Ltd, Jindal Steel & Power Ltd, Maharashtra Seamless Ltd, Monnet Ispat Energy Ltd and Ratnamani Metals & Tube Ltd are generating significant amount of profits due to their operational as well as financial efficiency.
- No significant relationship was found in between the explanatory variables from the sector of the chemical, personal care, and diversified.
- In finance & investment companies, it was observed that, size is linearly and positively related with the liquidity (.639) implying that comparatively large finance companies such as Infrastructure Development Finance Company Ltd, Shriram Transport Finance Company Ltd, and Sundaram Finance Ltd are keeping more amounts of funds in form of liquid assets. Further growth of market capitalization is significantly and positively related with ROC (r=.678), implying that with the increase of profit the growth of market capitalization in the finance companies is enhancing. However, dividend is not significantly associated with liquidity, profitability, size of the companies. This implies that the companies which cater the needs of individual's requirement remain attractive irrespective of their size. Thus the operational efficiency of the company directs the pace of growth of the company.
- Finally, it is seen that the financial performance varies from industry to industry and even company to company belonging to same industrial group. In some cases size is positively related to growth, profitability etc, where as in other cases it might be reverse. The relationship such as *size and growth; growth and profitability; liquidity and profitability* etc, are not fixed as all the determinants of performance have not been influenced by only one factor rather depends on a number of quantifiable as well as non-quantifiable factors. Thus, it is concluded that performance of industry is dependent on *host of factors*; both economic and non economic i.e., market forces and also its nature of function. This suggests that financial managers should consider all those factors ensuring share holders value and finalize the financial strategy accordingly.

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TABLES

correlation Matrix (Aggregate)

	ENT.VALU	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVE RAGE	DPR	EPS	BVPS	ROC	RO NW
ENT.VALU	1.000													
	.													
SALES	.619**	1.000												
	.000	.												
CAPITAL	.900**	.785**	1.000											
	.000	.000	.											
CR	-.085	-.169*	-.068	1.000										
	.302	.038	.406	.										
DTR	.003	.052	.037	.048	1.00									
	.972	.524	.656	.557	.									
ITR	.002	-.015	-.015	.026	-.042	1.000								
	.985	.858	.860	.753	.606	.								
PAT	-.109	-.081	-.089	-.080	-.111	-.040	1.00							
	.183	.323	.275	.331	.176	.629	.							
MCAP	-.168*	-.181*	-.163*	-.024	.000	-.110	.396**	1.000						
	.039	.026	.045	.774	.996	.180	.000	.						
LEVERAGE	-.106	-.070	-.012	.259**	.183*	-.063	.197*	.151	1.000					
	.195	.393	.888	.001	.024	.443	.016	.065	.					
DPR	.023	.049	.005	-.094	.059	.083	-.203*	-.364**	-.170*	1.000				
	.782	.550	.956	.250	.470	.311	.013	.000	.037	.				
EPS	.215**	.151	.198*	-.067	-.058	.035	-.090	-.059	-.173*	-.191*	1.00			
	.008	.063	.015	.415	.479	.672	.273	.469	.034	.019	.			
BVPS	.238**	.207*	.248**	-.107	-.025	-.063	-.044	-.032	-.126	-.203*	.805**	1.000		
	.003	.011	.002	.190	.760	.439	.593	.692	.122	.013	.000	.		
ROC	.049	-.006	-.015	-.221**	-.023	-.058	-.157	-.075	-.311**	.316**	.130	-.064	1.000	
	.552	.942	.850	.006	.783	.476	.055	.362	.000	.000	.112	.435	.	
RONW	.049	.019	.015	-.111	-.005	.009	-.281**	-.108	-.142	.286**	.112	-.103	.797**	1.00
	.547	.817	.853	.175	.951	.913	.000	.188	.082	.000	.172	.207	.000	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation Matrix (Construction)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVE RAGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.654*	1.000												
	.021	.												
CAPITAL	.524	.781**	1.000											
	.080	.003	.											
CR	-.208	-.475	-.409	1.00										
	.517	.119	.187	.										
DTR	-.176	.197	.018	-.249	1.000									
	.584	.540	.956	.435	.									
ITR	.652*	.137	-.143	-.074	-.153	1.000								
	.022	.671	.657	.819	.635	.								
PAT	-.265	-.293	-.049	.011	-.317	-.231	1.000							
	.406	.355	.881	.972	.315	.469	.							
MCAP	-.336	-.525	-.581*	.436	-.172	-.082	.685*	1.000						
	.286	.079	.047	.156	.594	.800	.014	.						
LEVERAGE	.156	.467	.408	-.355	.268	-.102	-.080	-.380	1.000					
	.627	.126	.188	.257	.400	.753	.805	.222	.					
DPR	-.175	-.182	-.191	-.157	.088	.064	-.184	-.110	-.193	1.00				
	.586	.571	.552	.627	.786	.844	.566	.735	.548	.				
EPS	-.057	-.052	.302	.062	-.218	-.079	.077	-.364	.202	-.556	1.000			
	.862	.873	.340	.849	.495	.807	.812	.244	.528	.060	.			
BVPS	-.161	-.108	.204	-.131	-.257	-.066	-.078	-.513	.076	-.256	.883**	1.000		
	.617	.739	.525	.685	.420	.840	.810	.088	.814	.421	.000	.		
ROC	.224	.265	.002	-.223	-.101	.204	-.083	-.206	.202	-.359	.142	.191	1.000	
	.483	.406	.996	.486	.756	.526	.798	.521	.530	.251	.661	.553	.	
RONW	.065	.004	.052	-.284	-.165	.336	-.027	-.392	.165	.543	.104	.316	.294	1.000
	.841	.991	.872	.371	.608	.285	.934	.207	.609	.068	.748	.317	.354	.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation Matrix (Pharma)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVE RAGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.627**	1.000												
	.009	.												
CAPITAL	.707**	.659**	1.000											
	.002	.006	.											
CR	.194	.124	.461	1.0										
	.471	.648	.073	.										
DTR	-.332	-.196	-.274	-.13	1.000									
	.209	.466	.304	.637	.									
ITR	-.098	-.133	.181	.346	.258	1.000								
	.717	.624	.502	.189	.334	.								
PAT	.512*	-.113	.250	.221	-.400	-.123	1.000							
	.042	.676	.350	.410	.125	.651	.							
MCAP	-.292	-.349	-.416	-.26	-.268	-.348	.058	1.000						
	.272	.185	.109	.323	.316	.186	.830	.						
LEVERAGE	-.469	-.424	-.392	-.29	-.355	-.348	.135	.427	1.000					
	.067	.101	.133	.270	.177	.186	.617	.099	.					
DPR	.167	.340	.331	-.17	.434	.299	-.420	-.487	-.559*	1.000				
	.535	.198	.211	.535	.093	.261	.106	.056	.024	.				
EPS	.276	-.060	-.041	-.01	-.259	-.065	.137	.284	-.298	-.211	1.000			
	.301	.825	.880	.959	.333	.812	.612	.286	.263	.432	.			
BVPS	.537*	.026	.254	.107	-.316	.092	.572*	.011	-.356	-.198	.778**	1.000		
	.032	.924	.343	.694	.233	.734	.021	.968	.176	.462	.000	.		
ROC	-.099	.110	-.339	-.08	.301	.093	-.485	-.001	-.515*	.329	.429	.057	1.000	
	.716	.685	.199	.782	.257	.731	.057	.997	.041	.214	.097	.834	.	
RONW	-.291	-.091	-.273	.132	.076	-.099	-.472	.161	.182	-.072	-.002	-.535*	.363	1.000
	.275	.737	.307	.626	.780	.715	.065	.551	.501	.792	.995	.033	.167	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation Matrix (Cement)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVER AGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.249	1.000												
	.487	.												
CAPITAL	.260	.697*	1.000											
	.469	.025	.											
CR	-.169	-.069	-.182	1.000										
	.641	.851	.614	.										
DTR	.037	.339	.531	-.192	1.000									
	.919	.338	.114	.596	.									
ITR	.019	.365	-.013	.166	.364	1.000								
	.959	.299	.971	.648	.302	.								
PAT	.227	.068	-.440	.106	.226	.512	1.000							
	.528	.851	.203	.771	.530	.130	.							
MCAP	.008	-.615	-.518	.484	-.030	.054	.337	1.000						
	.981	.059	.125	.156	.935	.883	.341	.						
LEVERAGE	-.181	-.351	-.268	.488	-.190	.457	-.158	.416	1.000					
	.617	.320	.454	.153	.600	.184	.663	.232	.					
DPR	.581	.245	.319	-.336	.403	-.085	.234	-.363	-.459	1.000				
	.078	.496	.368	.343	.248	.814	.515	.303	.182	.				
EPS	-.125	-.234	-.062	-.342	-.411	-.195	-.384	-.326	.030	-.216	1.000			
	.731	.516	.864	.334	.237	.590	.273	.358	.934	.548	.			
BVPS	-.025	-.163	-.090	-.532	-.264	.053	-.190	-.367	.064	-.066	.905**	1.000		
	.945	.653	.806	.113	.461	.884	.598	.296	.860	.857	.000	.		
ROC	.035	.522	.369	-.409	.352	.266	.145	-.145	-.369	-.213	-.007	.129	1.000	
	.923	.121	.293	.240	.319	.458	.690	.690	.294	.555	.984	.723	.	
RONW	-.122	-.018	.343	.058	.105	.159	-.514	.229	.519	-.563	.128	.128	.384	1.000
	.736	.961	.332	.873	.773	.661	.129	.525	.124	.090	.725	.725	.274	.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation Matrix (Auto Industries)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVE RAGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.354	1.000												
	.235		.											
CAPITAL	.512	.911**	1.000											
	.074	.000	.											
CR	.028	-.325	-.188	1.00										
	.928	.278	.539	.										
DTR	.119	.349	.204	-.589*	1.000									
	.698	.243	.504	.034	.									
ITR	.357	.339	.315	-.625*	.687**	1.000								
	.232	.257	.294	.022	.009	.								
PAT	.338	.363	.371	.604*	-.543	-.504	1.000							
	.259	.223	.212	.029	.055	.079	.							
MCAP	-.222	-.215	-.139	.420	-.614*	-.646*	.357	1.000						
	.466	.480	.651	.153	.026	.017	.231	.						
LEVERAGE	-.259	-.358	-.333	.283	-.407	-.623*	.117	.436	1.000					
	.393	.230	.267	.349	.168	.023	.704	.136	.					
DPR	-.147	.214	.091	-.764**	.449	.622*	-.581*	-.187	-.165	1.000				
	.632	.483	.768	.002	.124	.023	.037	.540	.590	.				
EPS	-.131	-.031	.047	.151	-.082	.029	-.019	.260	-.411	-.304	1.00			
	.671	.921	.878	.622	.789	.924	.951	.390	.163	.313	.			
BVPS	-.022	-.003	.148	.201	-.121	.022	.027	.244	-.404	-.374	.979**	1.000		
	.942	.992	.629	.510	.695	.943	.930	.421	.171	.208	.000	.		
ROC	-.081	.165	-.076	-.530	.582*	.711**	-.453	-.281	-.411	.615*	.193	.053	1.000	
	.792	.590	.805	.062	.037	.006	.120	.352	.163	.025	.527	.863	.	
RONW	-.188	.003	-.216	-.466	.412	.586*	-.470	-.080	-.215	.724**	.025	-.118	.926**	1.000
	.539	.993	.479	.108	.162	.035	.105	.796	.480	.005	.935	.702	.000	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation Matrix (Electricity)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVERAGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.031	1.000												
	.923	.												
CAPITAL	-.076	.941**	1.000											
	.814	.000	.											
CR	-.219	-.183	-.027	1.000										
	.494	.570	.933	.										
DTR	-.101	-.233	-.084	-.074	1.000									
	.755	.467	.796	.819	.									
ITR	.380	-.058	.082	-.186	.595*	1.000								
	.223	.858	.800	.563	.041	.								
PAT	-.277	-.373	-.472	-.024	-.406	-.431	1.000							
	.383	.233	.122	.940	.190	.162	.							
MCAP	-.197	-.283	-.093	-.143	.119	.295	.299	1.000						
	.539	.373	.774	.658	.712	.352	.346	.						
LEVERAGE	-.342	-.315	-.066	.089	.667*	.462	-.038	.560	1.000					
	.276	.318	.840	.784	.018	.130	.907	.058	.					
DPR	.111	.249	.122	-.518	-.385	.001	.502	.200	-.307	1.000				
	.732	.434	.705	.085	.216	.999	.096	.533	.333	.				
EPS	-.109	-.122	-.122	.412	.046	-.199	.006	-.434	-.154	-.340	1.000			
	.737	.705	.706	.183	.887	.535	.985	.159	.633	.279	.			
BVPS	.079	.356	.370	-.249	-.249	-.095	-.003	.250	-.129	.185	.300	1.000		
	.806	.257	.236	.435	.435	.770	.993	.433	.690	.564	.344	.		
ROC	.364	.178	-.026	-.637*	-.078	-.112	-.115	-.229	-.559	.289	.091	.473	1.000	
	.245	.579	.937	.026	.810	.730	.721	.475	.059	.362	.779	.121	.	
RONW	.059	-.098	-.098	-.150	.713**	.285	-.356	-.290	.136	-.283	.541	.150	.457	1.000
	.855	.762	.762	.642	.009	.370	.256	.361	.674	.373	.070	.642	.135	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation Matrix (Steel)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVERAGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.197	1.000												
	.481	.												
CAPITAL	.331	.953**	1.000											
	.228	.000	.											
CR	-.272	-.378	-.425	1.000										
	.327	.165	.115	.										
DTR	.459	.654**	.750**	-.251	1.000									
	.085	.008	.001	.366	.									
ITR	.171	-.058	-.065	-.040	-.046	1.000								
	.542	.837	.817	.888	.872	.								
PAT	-.013	-.111	.088	-.120	.119	.064	1.000							
	.964	.695	.756	.671	.674	.820	.							
MCAP	-.244	-.254	-.284	.234	-.223	.506	.189	1.000						
	.381	.361	.305	.402	.423	.054	.500	.						
LEVERAGE	-.207	-.020	.189	-.149	.144	-.302	.722**	-.098	1.000					
	.458	.943	.501	.597	.609	.275	.002	.728	.					
DPR	-.021	.172	.103	-.033	-.063	-.172	-.318	-.359	-.150	1.000				
	.942	.540	.716	.906	.823	.540	.249	.188	.593	.				
EPS	.738**	-.008	.077	-.125	.181	.097	-.279	-.011	-.171	-.202	1.000			
	.002	.977	.786	.658	.518	.730	.315	.968	.542	.470	.			
BVPS	.621*	-.161	-.085	-.102	-.028	.044	-.340	-.005	-.179	-.231	.957**	1.000		
	.013	.567	.764	.718	.922	.877	.215	.986	.524	.407	.000	.		
ROC	.495	.595*	.537*	-.007	.643**	.154	-.336	-.141	-.486	.169	.264	.050	1.000	
	.061	.019	.039	.981	.010	.583	.221	.616	.066	.547	.342	.860	.	
RONW	.448	.598*	.513	-.078	.662**	.082	-.522*	-.099	-.461	.056	.460	.272	.858**	1.000
	.094	.019	.051	.782	.007	.772	.046	.726	.084	.844	.085	.326	.000	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation Matrix (Chemical)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVERAGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.394	1.000												
	.230	.												
CAPITAL	.618*	.703*	1.000											
	.043	.016	.											
CR	.244	-.317	-.016	1.00										
	.469	.342	.962	.										
DTR	-.241	.012	-.421	-.484	1.000									
	.476	.972	.197	.132	.									
ITR	-.225	.349	-.063	-.317	.354	1.00								
	.506	.293	.854	.342	.285	.								
PAT	.008	-.221	.201	.339	-.472	.235	1.000							
	.982		.553	.308	.143	.487	.							
MCAP	-.001	-.490	-.080	.038	-.320	-.006	.710*	1.000						
	.998	.126	.815	.911	.338	.986	.014	.						
LEVERAGE	.229	-.521	.119	.166	-.434	-.524	.545	.765**	1.000					
	.498	.100	.728	.625	.182	.098	.083	.006	.					
DPR	-.298	.372	-.213	-.289	.560	.457	-.447	-.624*	-.774**	1.00				
	.373	.259	.529	.389	.073	.158	.168	.040	.005	.				
EPS	.415	-.034	-.088	-.336	.262	.235	-.153	.188	.097	-.106	1.00			
	.204	.922	.797	.313	.436	.487	.653	.579	.776	.757	.			
BVPS	.339	.007	.131	-.393	.027	-.074	-.184	.077	.188	-.122	.719*	1.000		
	.308	.983	.701	.231	.937	.828	.588	.823	.579	.722	.013	.		
ROC	-.098	.169	-.308	.037	.607*	.533	-.268	-.503	-.636*	.663*	.137	-.349	1.000	
	.774	.620	.357	.914	.048	.091	.426	.114	.036	.026	.688	.292	.	
RONW	.260	.157	-.176	.028	.555	.378	-.239	-.313	-.350	.343	.427	-.181	.878**	1.000
	.440	.644	.605	.935	.076	.252	.478	.349	.292	.301	.190	.594	.000	.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation Matrix (Personal)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVERAGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	-.117	1.000												
	.783	.												
CAPITAL	-.108	.999**	1.000											
	.799	.000	.											
CR	-.236	-.367	-.337	1.000										
	.573	.371	.414	.										
DTR	-.070	-.021	-.065	-.749*	1.000									
	.869	.961	.878	.032	.									
ITR	-.040	-.234	-.244	-.334	.540	1.000								
	.924	.577	.561	.418	.168	.								
PAT	-.130	-.318	-.314	.435	-.456	-.443	1.000							
	.758	.443	.449	.281	.256	.272	.							
MCAP	.193	-.687	-.692	.389	-.010	-.327	.142	1.000						
	.647	.060	.057	.340	.982	.429	.737	.						
LEVERAGE	-.315	-.361	-.345	.784*	-.574	-.522	.644	.429	1.000					
	.447	.380	.402	.021	.137	.184	.085	.289	.					
DPR	-.237	.462	.440	-.663	.556	.536	-.298	-.749*	-.427	1.000				
	.573	.249	.275	.073	.153	.171	.473	.032	.291	.				
EPS	-.392	-.274	-.252	.190	-.144	.457	-.079	-.240	.208	.245	1.000			
	.337	.511	.547	.653	.733	.255	.853	.567	.620	.559	.			
BVPS	-.277	-.268	-.237	.284	-.306	.457	-.065	-.277	.145	.112	.959**	1.000		
	.507	.521	.572	.495	.461	.255	.878	.506	.732	.792	.000	.		
ROC	-.230	-.023	-.062	-.580	.797*	.267	-.208	.025	-.095	.623	.078	-.189	1.000	
	.583	.956	.884	.132	.018	.522	.621	.954	.824	.099	.853	.653	.	
RONW	-.157	.028	-.006	-.426	.693	.034	-.370	.274	-.006	.363	-.085	-.343	.900**	1.000
	.711	.947	.989	.293	.057	.936	.368	.512	.989	.377	.842	.405	.002	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation Matrix (Finance)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVERAGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.555	1.000												
	.096	.												
CAPITAL	.554	.800**	1.000											
	.096	.005	.											
CR	.414	.727*	.639*	1.000										
	.234	.017	.047	.										
DTR	.267	-.023	.178	-.040	1.000									
	.456	.950	.623	.913	.									
ITR	-.182	.245	-.125	-.124	-.276	1.000								
	.614	.494	.732	.733	.440	.								
PAT	-.203	-.111	-.403	-.285	-.506	.672*	1.000							
	.573	.760	.248	.425	.135	.033	.							
MCAP	.416	-.285	-.338	.023	.042	-.480	.097	1.000						
	.231	.424	.339	.949	.908	.161	.789	.						
LEVERAGE	.175	-.144	.030	-.150	-.245	-.105	-.224	-.048	1.000					
	.629	.691	.934	.679	.496	.772	.535	.896	.					
DPR	.193	.225	.346	.000	-.339	.108	-.182	-.360	.412	1.000				
	.593	.531	.328	.999	.338	.767	.614	.306	.236	.				
EPS	-.191	-.063	-.052	-.270	.334	-.287	-.374	-.179	-.044	-.266	1.000			
	.598	.863	.887	.451	.346	.422	.288	.620	.903	.458	.			
BVPS	-.267	.052	-.049	-.231	.326	-.092	-.327	-.332	-.217	-.215	.948**	1.000		
	.456	.887	.893	.521	.357	.801	.356	.348	.547	.550	.000	.		
ROC	.046	-.482	-.391	-.277	-.194	-.185	.551	.678*	-.047	-.345	-.212	-.412	1.000	
	.900	.158	.264	.438	.591	.610	.099	.031	.897	.329	.557	.237	.	
RONW	.422	-.167	-.055	.171	-.051	-.257	.024	.562	.586	-.164	-.274	-.522	.527	1.000
	.224	.645	.879	.637	.890	.474	.948	.091	.075	.650	.444	.121	.118	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations Matrix (Diversified)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVER AGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.356	1.000												
	.313	.												
CAPITAL	.264	.971**	1.000											
	.461	.000	.											
CR	-.279	-.294	-.207	1.000										
	.435	.409	.566	.										
DTR	.486	.552	.604	.245	1.000									
	.154	.098	.065	.494	.									
ITR	-.259	.243	.264	.047	.049	1.000								
	.471	.498	.461	.896	.893	.								
PAT	.124	-.202	-.293	-.188	.040	-.345	1.000							
	.732	.576	.411	.604	.913	.329	.							
MCAP	-.298	-.575	-.453	-.181	-.519	-.337	-.166	1.000						
	.402	.082	.188	.616	.124	.341	.647	.						
LEVERAGE	.114	-.114	-.098	.450	.320	-.042	.201	-.280	1.000					
	.755	.755	.788	.192	.367	.908	.577	.433	.					
DPR	.017	.060	-.040	.547	.140	.380	.006	-.652*	.222	1.000				
	.962	.870	.914	.102	.699	.279	.988	.041	.537	.				
EPS	-.063	.780**	.872**	-.208	.449	.279	-.395	-.114	-.363	-.202	1.000			
	.862	.008	.001	.563	.193	.435	.258	.753	.302	.575	.			
BVPS	.058	.897**	.950**	-.199	.480	.398	-.373	-.377	-.282	-.090	.917**	1.000		
	.875	.000	.000	.582	.160	.254	.289	.283	.431	.805	.000	.		
ROC	-.218	-.290	-.221	-.470	-.357	-.132	-.030	.805**	-.438	-.529	.161	-.174	1.000	
	.545	.417	.539	.171	.311	.716	.935	.005	.206	.116	.658	.631	.	
RONW	-.285	-.339	-.247	-.200	-.252	-.201	-.073	.779**	-.269	-.379	.149	-.238	.943**	1.000
	.426	.338	.491	.580	.482	.577	.841	.008	.452	.281	.681	.507	.000	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation Matrix (Engineering)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVER AGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.461	1.000												
	.180	.												
CAPITAL	.309	.943**	1.000											
	.386	.000	.											
CR	-.317	-.004	.049	1.00										
	.372	.990	.893	.										
DTR	-.426	-.236	.017	.285	1.000									
	.220	.511	.962	.425	.									
ITR	.189	-.114	.029	.349	.626	1.000								
	.601	.755	.937	.323	.053	.								
PAT	-.128	.040	.073	-.718*	-.029	-.472	1.000							
	.725	.913	.842	.019	.937	.169	.							
MCAP	-.033	-.233	-.203	-.750*	.171	-.184	.830**	1.000						
	.928	.517	.575	.012	.637	.610	.003	.						
LEVERAGE	-.400	-.597	-.386	-.132	.539	.362	.393	.510	1.000					
	.252	.069	.271	.717	.108	.304	.261	.132	.					
DPR	.436	.530	.460	.234	-.457	-.148	-.243	-.583	-.444	1.000				
	.208	.115	.181	.515	.185	.684	.498	.077	.198	.				
EPS	.163	.247	.119	-.093	.072	.000	-.038	-.058	-.350	.164	1.000			
	.653	.492	.742	.799	.843	.999	.918	.874	.322	.650	.			
BVPS	-.158	.157	.018	-.358	-.230	-.379	.294	.274	-.148	-.237	.476	1.000		
	.663	.664	.962	.310	.523	.280	.409	.444	.683	.509	.164	.		
ROC	.179	.173	.104	.231	-.147	-.193	-.316	-.489	-.510	.679*	.531	-.232	1.000	
	.621	.633	.775	.520	.686	.593	.374	.152	.132	.031	.114	.519	.	
RONW	.195	.014	.018	.482	.073	.238	-.548	-.642*	-.276	.626	.324	-.573	.862**	1.000
	.588	.970	.961	.158	.840	.508	.101	.045	.440	.053	.361	.084	.001	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation Matrix (Energy)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVE RAGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.509	1.000												
	.091	.												
CAPITAL	.976**	.670*	1.000											
	.000	.017	.											
CR	-.106	-.619*	-.228	1.000										
	.744	.032	.477	.										
DTR	-.100	.491	.015	-.790**	1.000									
	.757	.105	.963	.002	.									
ITR	.544	.121	.447	-.113	.106	1.000								
	.068	.709	.145	.726	.744	.								
PAT	-.409	-.346	-.443	.369	-.112	-.365	1.000							
	.187	.270	.149	.238	.728	.243	.							
MCAP	-.403	-.612*	-.491	.495	-.617*	-.388	.590*	1.000						
	.194	.034	.105	.102	.032	.213	.043	.						
LEVERAGE	-.223	-.042	-.185	-.291	-.030	.041	-.346	.092	1.000					
	.485	.896	.564	.359	.927	.898	.271	.775	.					
DPR	.150	.323	.167	-.346	.404	.577*	-.221	-.541	.033	1.000				
	.642	.305	.603	.270	.192	.049	.490	.069	.918	.				
EPS	.721**	.425	.702*	.179	-.060	.408	.033	-.240	-.638*	.278	1.000			
	.008	.169	.011	.578	.853	.188	.918	.453	.025	.381	.			
BVPS	.595*	.453	.616*	.174	.089	.326	-.023	-.493	-.375	.262	.707*	1.000		
	.041	.139	.033	.588	.782	.301	.944	.103	.230	.410	.010	.		
ROC	-.062	-.332	-.153	.217	-.264	-.077	.326	.445	-.552	-.165	.218	-.452	1.000	
	.848	.292	.635	.498	.407	.813	.301	.147	.063	.608	.496	.140	.	
RONW	.019	-.193	-.035	.102	-.432	-.027	-.057	.211	.362	-.112	-.410	-.116	-.247	1.000
	.954	.547	.914	.752	.161	.933	.862	.511	.247	.728	.185	.719	.439	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

correlation Matrix (IT)

	ENT.VAL	SALES	CAPITAL	CR	DTR	ITR	PAT	MCAP	LEVER AGE	DPR	EPS	BVPS	ROC	RONW
ENT.VAL	1.000													
	.													
SALES	.905**	1.000												
	.000	.												
CAPITAL	.922**	.835**	1.000											
	.000	.001	.											
CR	-.245	-.387	-.158	1.00										
	.442	.213	.624	.										
DTR	.339	.565	.291	-.751**	1.000									
	.281	.056	.359	.005	.									
ITR	-.048	-.110	-.085	-.111	-.106	1.000								
	.882	.733	.794	.732	.743	.								
PAT	-.198	-.091	.023	.015	.138	-.149	1.000							
	.537	.780	.943	.962	.669	.645	.							
MCAP	-.352	-.209	-.335	.432	-.268	-.081	.262	1.000						
	.262	.514	.287	.161	.401	.803	.410	.						
LEVERAGE	-.339	-.232	-.084	.194	-.222	.207	.700*	.430	1.000					
	.281	.467	.795	.545	.488	.518	.011	.163	.					
DPR	.030	.258	.069	-.457	.518	.245	-.285	-.064	-.162	1.000				
	.927	.419	.831	.135	.085	.442	.368	.843	.615	.				
EPS	.231	.178	.099	-.198	-.149	.746**	-.447	-.077	.110	.134	1.000			
	.469	.580	.759	.538	.644	.005	.146	.813	.734	.677	.			
BVPS	.089	.109	.344	-.096	.049	-.414	.536	-.335	.425	-.269	-.338	1.000		
	.783	.736	.274	.767	.881	.181	.073	.287	.168	.397	.283	.		
ROC	.442	.538	.249	-.030	.205	-.354	-.353	.338	-.288	.031	.167	-.330	1.000	
	.150	.071	.435	.926	.522	.259	.261	.282	.363	.924	.604	.294	.	
RONW	.310	.405	.094	-.015	.107	.087	-.402	.507	-.138	.170	.480	-.619*	.872**	1.000
	.327	.191	.771	.963	.740	.789	.195	.093	.669	.598	.114	.032	.000	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

EMPLOYEE LAY OFF IN MERGER AND ACQUISITION-A CASE STUDY OF AVIATION COMPANIES IN INDIA

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ABSTRACT

The paper is about impact of merger and acquisition on employee lay off, a case of aviation industry in India has been taken. Two aviation companies were visited to collect the data in Mumbai. Indepth interview was conducted to get the data along with other sources like newspaper, reports, journals, websites etc have also been used for data collection. It is about how there is cases of lay off in organization as a result of merger and acquisition and how it impacts the HR Integration process. This study gives a conclusion that merger and acquisition brings about duplicity of work and therefore there exists maximum possibility of lay off against those positions in organizations. The ongoing financial crisis during the year 2009 also impacted the lay off in aviation companies. The implication of study is about being careful while handling manpower matter in cases of M&A. The layoff is beset with possibility of fear and insecurity among employees. This may impede the HR Integration process. Psudonyms have been applied in this study and therefore the names of the organizations have not been produced.

KEYWORDS
Layoff, merger, Industry, employee, acquisition

INTRODUCTION
Grant Thorton survey on International Business Owners, through 6900 interviews in 26 countries across Europe, Africa, Asia Pacific and the Americas, concluded that 34 % of business will consider M&A as a method to enhance or balance the profitability.(Harish H.V and Srividya C.G.,2004).According to Hrishikesh Mafatlal, CEO, Mafatlal Industries, "Mergers optimize funds utilization by the companies"(Business Today,Dec.7-21,1995).

Merger and acquisition is like a panacea for a company, which is confronting with the evils of cut throat competition and for those who are willing to expand in short span of time. It has been seen that every economy has a cycle of mergers and acquisition. US have dominant spells of merger and acquisition in recent times. Since the product life cycle shortens and there comes saturation in the period of new product introduction and in that case, companies are compelled to opt for merger and acquisition. However, we cannot brush aside the fact that merger and acquisition is being used as an open option to create conglomerates and to reduce operational cost. There are certain circumstances where mergers and acquisitions have taken place because of administrative reason. However, there may be several factors of merger and acquisition but the objective is to access the market smoothly and substantially. Merger and acquisitions are always a decision taken at the top level; however its impact is being seen at the bottom once it is done. There has been merger and acquisitions in several companies in recent times and the acquisition resulting in lay off of several employees from the company. It was a threat to those who were in the middle of their age and are not technically skilled. The study on merger says that in most of the cases the chances of success of merger is 5o-50. Investopedia.com defined cited in Bajaj (2010) 'Merger' as "A merger involves the mutual decision of two companies to combine and become one entity, it can be seen as a decision made by two 'equals'.

The combined business, through structured and operational advantage secured by the merger, can cut costs and increase profits, boosting shareholders value for both groups of shareholders. A typical merger, in other words involves two relatively equal companies, which combine to become one legal entity with the goal of producing a company that is worth more than the sum of its parts. In a merger of two corporations, the shareholders usually have their shares in the old company exchanged for an equal number of shares in the merged entity"

Answer.com defines cited in Bajaj (2010), Merger as "The statutory combination of two or more corporations in which one of the corporations survives and the other corporations cease to exist"

Investopedia.com defines Acquisition as, "A takeover or acquisition is characterized by the purchase of a smaller company by a much larger one. This is combination of unequal can produce the same benefit as a merger, but it does not necessarily have to be a mutual decision. A larger company can initiate a hostile takeover of a smaller firm, which essentially amounts to buying the company in the face of resistance from smaller company management.

An acquisition paves the way for quick entry and instant access to local resources, but the acquired company may need deep restructuring to bridge the gap between the two organizations (Meyer and Estrin,2001).Acquisition is purchase of stocks in an already existing company in an amount sufficient to confer control(Kogut and Singh,1988,p.412).

Though there is numerous materials available in the market on corporate strategy but there are handful of books which give insights to confront the problems in mergers. .(Heller 2006).

Answer.com defined different types of mergers
1. Horizontal Merger: In this type of merger there is consolidation of firms who are rivals of each other.
2. Vertical Merger: This happens by consolidation of firms that have potential buyer or seller relationship.
3. Conglomerate Merger: In this kind of merger there may be sharing of marketing or production channel and are unrelated in business.

Congeneric Merger: This merger happens between two companies which are in general busines and are not having any buyer or seller relationship.For example: Merger of a leasing company in a bank.

EMPLOYEE LAY OFF

The mergers at large prove to be problematic and painful for the employees of acquired firms; the outcome may range from anger to depression. The usual impact is high turnover, decrease in the morale, motivation, productivity leading to merger failure. The other issues in the M&A activity are the changes in the HR policies, downsizing, layoffs, survivor syndromes, stress on the workers, information system issues etc. The human resource system issues that become important in M&A activity are human resource planning, compensation selection and turnover, performance appraisal system, employee development and employee relations (Pande and Krishnan, 2009).

Answer.com writes on Lay off "when a company eliminates job regardless of how good the employee performance"

Many authors like Allred, Boal and Holstein (2005), Marks and Mirvis (1998), Galosy (1990), Schweiger, Ivancevich and Power (1987), and Jemison and Sitkin (1986) found factors like loss of position, culture clash, arrogant nature of the acquiring firm, obsolescence of knowledge of parent firm, parting with trusted subordinates and colleagues, compensation loss, change in definition of job , career plans and relocation or transfer and job loss for being main causes for employees dissatisfaction after a merger or acquisition.(Bajaj,2010)

As per a study of 25 firms in seven years, the average employment in total was 205000 employees.Around two third of the total employees were in eight inefficient firms studied. The government has been under tremendous pressure for doing and not doing the downsize. (Pande and Krishnan, 2009).

The paramount issue for employees during a merger is their security of jobs. Afterwards they also give value to pay and other benefits, autonomy in work and feedback on their performance. (Schweiger et al.1987). Job insecurity becomes fertile in cases of mergers, injustice in procedure and unfair treatment are seen vagrant in fact. The risk involved in merger may be reduced by decisions of human resource department on stability of the workforce and cutting the employee +strength through attrition not rather than redundancy.

This inculcates security and certainty for staff. Astrachan (1995) described separation anxiety as an anxiety associated with a situation of fear of change in relationship or ending of a relationship drastically. The anxiety created by merger and acquisition may be managed by proper communication about changes taking place in organization and the future course of action regarding jobs of employees.(Garpin & Herndon,2000; Schweiger & Denisi, 1991).

While employees of an acquiring company may feel enthusiastic about the new challenges being brought to them by virtue of integration, employees of an acquired company may confront with different reactions, like, uncertainty, anxiety or fear of major changes (Machiraju, 2003).

Astrachan (1995) described separation anxiety as an anxiety associated with a situation of fear of change in relationship or severing a relationship drastically. The anxiety created by merger and acquisition may be managed by proper communication about changes taking place in organization and the future course of action regarding jobs of employees.

In view of the changes being brought in organization, the main concerns of employees are the job security and their future prospect with the company[6](Daniel & Metcalf, 2001).

Mergers and acquisitions take place for change, and this change in reality inculcates varied emotions among groups of employees (Leedy & Ormrod, 2005).Shinde,(1995) cited in Rao P.Mohan,(2004) "*Winds of liberalisation blowing hard over Indian corporate sector which undergoes a process of restructuring to gain competitive strength.But to achieve this goal,unrestricted mergers and takeovers may prove counter-productive.*"

PROFILE OF CASES

CRAVE AIRLINES AND DULA AIRLINES

Crave Airlines is a public sector aviation company. It was established in year 1946.There has been merger of Crave Airlines and Dula Airlines in recent past. Dula Airlines was also a public sector aviation company and it was established in year 1953. The new name was Crave Airlines. Eealier Crave airlines were operating in foreign whereas the Dula Airlines was operating in domestic market. Both the airlines were making huge loss. The decision on merger of Dula Airlines and Crave Airlines was an outcome of the rising concern for the losses being made by the duo. Though, lay off was not planned as an instant plan to cut the fix cost but several flexible hr policies were brought to cut the burden of salary. The company had also bought a fleet of new aircraft and that was seen as the strength for the company where as it has brought the company at a high expense end. There was effect of financial crisis also as the company had cut the number of flies and also dropped from some routes in domestic and international locations. The merger happened in 2007.

Though, a consultant was assigned to develop a common HR policy for newly formed airlines and there was possibility of introducing voluntary retirement extra for reducing the fixed cost. The company has also introduced leave without pay policy. As per report the newly purchased flight were liked by passengers.

ALDER AIRLINES & TRIZON AIRLINES

Alder Airlines was a low fare airline, and it was not doing well financially since it was in the need of financial support. It came into effect in year 2003.Trizon was looking for strategic acquisitions and acquired Alder and created a new brand in the name of Trizon Low, as a low fare carrier. This had tremendous impact on workforce infect it created duplicity of jobs. The subprime crisis had impacted aviation industry and the impact was writ large as several flights for routes were discontinued. The carrier had no option but to cut its fixed cost through lay off and salary & other such facility cut. As per Business Line,(23rd Sept,2008) , 300 employees were laid off till date.

PERTON AIRLINES AND KRITONA AIRLINES

Perton Airlines was established in India in year 1992 and soon it became market leader. Though airfares were high in India and there was need to capture middle income customer segment. There was trend of merger and alliances and Kritona Airlines was not doing good and it was indeed planning for merger. Thus it merged with Perton in year 2007.A new brand name was introduced as Perton Fly and it was used as low fare carrier in India. There was mutual consent that employees will not be laid off. There was plan to redeploy those who were victim of duplicity of work.

MERGER AND ACQUISITION IN AVIATION COMPANIES IN INDIA

Name of the company	Year of Establishment	Year of M&A
Crave Airlines	1946	2007
Perton Airlines	1992	2007
Kritona Airlines	1993	2007
Alder Airlines	2003	2008
Dula Airlines	1953	2007
Trizon Airlines	2003	2008

METHODOLOGY

Qualitative method was selected for this study. Qualitative approach is helpful in understanding the problem by virtue of feelings, emotions etc. In-depth interview was used as tools for data collection. Apart from in-depth interview different documents like newspaper, journals, reports, websites have also been used for data collection. Three aviation companies, where merger and acquisition took place, were taken for this study. The research setting was in Mumbai since the offices of aviation companies were in Mumbai.

The unit of analysis is the employee lay off due to Merger and acquisition in Crave Airlines & Dula Airlines, Alder Airlines and Trizon Airlines and Parton Airlines and Kritona Airlines in India.

DATA ANALYSIS

For data analysis the responses of interviews were noted and also the data from other sources like newspaper, journals, reports, websites etc were noted. These data were analyzed by finding the lay off and decision to lay off in aviation companies. The impact of lay off and such decision were also analyzed.Since,there was one public sector company where decision to lay off was not taken rather, voluntary retirement, leave without pay etc were planned, these factors have been considered while analyzing the data.

OBJECTIVES

To understand the impact of merger and acquisition on employee lay off.

To identify the outcomes of employee lay off on HR Integration process in Merger and acquisition

FINDINGS

Every merger has its distinct motive behind it (Ansoff et al ,1971,Salter and Weinhold 1981,Walter and Barney,1990) and it is oriented towards getting synergistic benefits from the combination of involved entities in the act of merger. The airlines industry had also been worst impacted by subprime crisis. Crave Airlines introduced voluntary retirement scheme, which was not accepted by employees, employees were even unhappy with any possibility of pay cut or delay in payment of salary. The airlines had problems in lay off being a public sector organization. similarly, Kritona Airlines decided to lay off 1900 employees but there had been industrial action and those employees who were getting affected went to demonstration and dharna. There was news in mass media and the airline had to revert back its decision. Though there was salary cut rather than lay off. Though it was reported that there was lay off in the airline. As per data, In the Trizon Airlines, there was strategic lay off as employees were being laid off in small numbers but that was repeated for several times. Around 300 employees were laid off till 23rd Sept, 2008. Out of them, 200 were security personnel . It was observed at large that an anxiety got developed out of such measures among other employees also. Employees were laid off and they were helped in resettlement through a recruitment consulting. Though this had impact on other employees also. Infact the layoff was not only because of M&A rather the financial crisis had also affected the process. Though M&A brought downsizing in the aviation industry but financial crisis made it more intense and in depth. This had debilitating effect on integration process in organization. There was no data found on using the surplus employees in some other function in the company. The companies were lacking the strategic plan to integrate those employees while diversifying business.

HR managers organized several joint interactions, leadership activities to develop a rapport among employees but the group dynamics was difficult to break initially. The company also provided job search support to employees who were identified to be laid off. They were connected with job consultancy to search suitable job for them. They were also told that there is option to call you back in case there is any opening as per your previous job in the company. It was also reported that the layoff has made the HR Integration more difficult since employees are looking at the situation with a doubt and fear that they may be the victim. There is difficulty in integration initiatives due to such effect. The recent financial crisis has also touched the aviation industry and the organizational performance has gone down. The companies were thus compelled to cut the cost due to market circumstances. Lay off was seen as a result of merger and acquisition, there had been duplicacy of jobs and companies had to cut the cost somehow. The impact of lay off was seen on other employees also as there was fear that there may be information on retrenchment. It had affected the communication process in organization and resulted in creating difficulties in HR Integration process.

HR Managers play significant role in HR integration as employees communication is being done by HR department only in all cases of merger. In case of Kritona Airlines and Perton airlines, both the companies had informal consensus that no employee would be laid off as a part of acquisition process and surplus employees would be absorbed in Perton Airlines. Thus employees were at least convinced with the fact that they will not lose job though there might have some difficulty like transfer and change in department etc, HR department had the key role in persuading the employees to join at new locations with new positions.

CONCLUSION AND IMPLICATIONS

There exists possibility of loosing of efficient manpower. This has negative impact on integration process and thus organizational performance also gets affected as whole. It was seen that the job security was key concern for maximum employees since it has been seen in many cases that restructuring follows the merger and rightsizing is the part and partial of restructuring. Companies introduce measures to cut fixed cost through salary cut, job cut, offering unpaid leave and Voluntary Retirement Scheme etc. This creates a fear among other employees also. They become insecure regarding their future and it influences employee integration, productivity and performance. Employee morale was down due to such initiative. Merger brought immediate lay off at large as happened in some cases here that certain category of employees had to lose their job. This is not conducive to the health of organizational culture, and employee relation. There have been cases of strike, demonstration and protest and government had to interfere with the matter to sort out the issue. M&A is followed by a restructuring since there is task duplicity in several cases. Hence the very organizational structure gets an exposure. The employee lay off disseminates like a fire in the forest and a sense of insecurity develops among employees. Therefore there is need to have more research on measures which may develop alternative model for creating business diversification by the virtue of employees who become surplus.

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