AMITY UNIVERSITY PRESS

AMITY BUSINESS REVIEW

Volume 18, No. 1, January - June 2017

Amity
BUSINESS REVIEW

Volume 18, No. 1, January - June 2017
ISSN: 0972-2343
ASI-SCORE : 1.3
UGC approved: Journal No. : 46876
Indian Citation Index

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Bi-annual Double-blind Refereed Journal of
Amity Business School
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Vol. 18, No. 1

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From the Desk of the Editor-in-Chief

"In the interest of the prosperityof the country, a King shall be diligent in foreseeing the possibility of calamities, try to avert them before they arise, overcome those which happen, remove all obstructions to economic activity and prevent loss of revenue to the state."

Kautilya

Taxation in India dates from the ancient period of Manu Smriti and Arthshastra. After years of wait finally now India is a nation with single taxation GST (Good and Services tax).The present Indian Taxation system is based on the ancient tax system which was based on the theory of maximum social welfare. It is one of the biggest fiscal reforms in India since Independence. It is a system that will allow states and the center to work together towards a new India.

GST is a management case study. The historic GST or goods and services tax has become a reality. The new tax system was launched by Hon'ble President and Prime Minister of India at a function in Central Hall of Parliament on the midnight of June 30th, 2017 which embodies the principle of "one nation, one tax and one market". Hon'ble Prime Minister says, 'GST is Good and simple Tax, it is transparent and will end corruption and black money. Sardar Vallabhbhai Patel unified the country and GST will bring economic unity to India.'

The concept of GST is aimed at unifying the country's $2 trillion economy and 1.3 billion people into a common market. For corporates, the elimination of multiple taxes will improve the ease of doing business. And for consumers, the biggest advantage would be in terms of a reduction in the overall tax burden on goods. "Inflation will come down, tax avoidance will be difficult, India's GDP will be benefitted and extra resources will be used for the welfare of the poor and the weaker section," Finance Minister Arun Jaitley said at GST launch event in the Parliament.

All businesses, whether small or large, will be impacted by this new indirect tax regime. Indirect taxes in India have driven businesses to restructure and model their supply chain and systems owing to multiplicity of taxes and costs involved. Total tax collection in India (direct & indirect), currently stands at Rs.14.6 lakh crore, of which almost 34 per cent comprises indirect taxes, with Rs 2.8 lakh crore coming from excise and Rs. 2.1 lakh crore from service tax. With the implementation of GST, the entire indirect tax system in India (excise, state-level VAT, service tax) is expected to evolve. The tax revenue mix can change as per the economic condition of the country. In developing countries, indirect taxes comprise a higher share of total taxes, whereas in developed countries, their contribution is significantly lower. For example in Australia, indirect tax contributes just 13 per cent of total tax collection. After GST, the percentage of indirect tax is expected to increase in India.

Most economists forecast inflation to come down as GST rates for most goods have been fixed at a lower rate. "It's not optimal, but let the best not be the enemy of the good. Even with its imperfections, it could usher in significant benefits, especially through a quantum leap in transaction trails and logistical efficiencies," Mr. D. K. Joshi, chief economist of Crisil, wrote in a report. With the seamless flow of tax credits and stabilization of GST compliances, good growth is expected in the medium- to long-term. The unorganized players, in the pre GST period had the advantage of operating beyond the existing tax structure which is going to change now.

I have an ardent hope that you all will enjoy reading the articles in the current issue and will revert with your valuable contents.

Enjoy Reading!

Sanjeev Bansal

Crime Rate and Firm Entry in Nigeria

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One of the important areas that have not received much attention is the influence of crime rate on new firm entry. Therefore, this paper examined the effect of crime rate on firm entry using Nigeria as a case study. We used ARDL methodology to analysis data covering the period of 1986 to 2013 which were sourced from Central Bank of Nigeria (CBN) statistical bulletin, National Bureau of Statistics, World Bank Development Indicator and Nigerian Police Force. After controlling for economic condition, human capital development and financial development, our results showed that in the short run, lagged two of crime rate significantly influenced the firm entry negatively while current and one-lagged crime rate significantly and positively influenced firm entry. In the long run, crime rate had positive effect on firm entry. This implies that as crime rate increases; the level of entrepreneurial activities would reduce which would eventually has negative effect on economic activities because the presence of criminal activities has raised the cost of doing business and business uncertainty level has become unbearable to entrepreneurs. However, in the long run as crime rate increases, firm entry also increases because the entrepreneur has realized that the cost of crime can be overcome in the long run through tax evasion and poor institutional quality in the system.

Keywords: *Crime rate, firm entry, bound test, Nigeria*

JEL Classification: *L11, L26, O55*

INTRODUCTION

Nowadays, crime and its detrimental effects have received wide attention in research. In the field of economics, many researchers have related crime rate to macroeconomic variables such as economic growth, unemployment, poverty, institutions, regulations while little attention is given to the effect of crime on microeconomic variables. For instance, Detotto and Otranto(2010) note that the detrimental effect of crime to the legal economic activity such as business activities is still neglected. Crime can act like a tax on the entire economy. It may discourage investments, reduces the competitiveness of firms(by reducing firm entry), and reallocates resources, creating uncertainty and inefficiency in an industry. This is possible in a country where the rule of law is weak, and high level of corruption also creates uncertainty and non-consistency, which can deter the firms' prosperity in that country.

Consequently, there would be absence of confidence in investment environment which may deter foreign and domestic investment with several impacts on development and growth. High crime rate leads to higher cost of doing business, because of the need to employ different forms of security by incumbent firms, and diverts investment away from business expansion and productivity improvement, and may lead to a less than optimal operating strategy. Crime rate increases business uncertainty due to business losses, arising from looting, arson, theft, extortion and fraud. It leads to loss of output because of reduced hours of operation. It can also cause a permanent shut-down of firms or relocation to less

crime-prone countries. This eventually leads to reduction in firms' entry.
as a result, firms' entry decreases.

The above description can be attributed to Nigerian business environment where the main problem faced by businessmen is illegal practices such as bribery and corruption. The fatality of being involved in corruption activities constitutes the main pervasive and self-reinforcing entry barrier(Iwasaki, Maurel & Meunier, 2016).The current trend shows that investment opportunities and the level of firm entry in Nigeria have stifled by the increasing levels of uncertainties in the macroeconomic environment coupled with high level of corruption. Nigerian business environment has moved backwards in terms of investor protection and the ease of starting a business (Nigeria was rated 133rd out of 183 countries in doing business). The country exhibits various level of criminal activities; which include armed robbery, murder, rape, car theft, burglary, fraud, bribery and corruption, food and drug adulteration, gambling, smuggling, human trafficking, kidnapping, drug trafficking, money laundering, internet scam, advanced fee fraud (419) and other illegal activities (Adebayo, 2013).

In Nigeria, the youth are the major teaming population that engages in criminal activities due to high rate of unemployment among others. As of 2009, the youth population is about 46.4 million especially between the age group of 15-39 years (National Population Commission, 2009). It was declared by the National Bureau of Statistics (2009) that the national unemployment rates for Nigeria between 2000 and 2011 showed that the number of unemployed persons constituted 31.1% in 2000. Meanwhile, some youths practice self-employment, but find it difficult to survive in their business operation due to; political instability in the country, high level of corruption, poverty, poor governance, increasing population without adequate policy initiatives among others. These phenomena contributed enormously towards high crime rate in the country which includes kidnapping, armed robbery, formulation of militant group among others which has negative effect on birth of new firms. By implication, foreign and even domestic investors will be discouraged to make investment because of uncertainties in the country surrounded by high crime rate.

The main objective of this study is to investigate the effect of crime rate on firm entry in Nigeria for the period 1986 - 2013. The study on the effect of crime rate on firm entry in African continent is relatively scarce with exception to the work of Mahofa, Sundaram and Edwards (2016) who examine the relationship between crime and the entry of firms across local municipalities in South Africa. Our paper complements their findings by empirically examining the effect of crime rate on firms' birth in Nigeria. We deviate from the previous work in a number of ways. Firstly, we study the crime-firm entry nexus using time series data spanning from year, 1986 to 2013,by adopting the recently developed autoregressive distributed lag (ARDL) approach to co-integration test by Pesaran, Shin and Smith, (2001), Pesaran and Shin (1995, 1999).The time series approach seems to have several advantages in terms of the interpretation of results and its application because it allows the identification of dynamic processes and the forecasting analysis. In addition, this methodology allows firm entry variations to be explained by its past history and the crime rate. It also allows us to examine both short and long run effects of crime rate on firm entry in Nigeria. Our study uses crime data which is rarely available in the country. The study is country specific because what is defined as a crime in country is not a crime in another due to underreporting of certain offences which they believe are social stigma to the victims. The rest of this paper is organized as follows: section 2 review literature, section 3 entails the methodology, section 4 discusses the results and findings of the paper while section 5, concludes the study.

LITERATURE REVIEW

The entry and exit process of firms can be coined from the creative destruction of Schumpeterian preposition. In his view, a firm enters a market with new technology, and competes with an incumbent firm that uses conventional technology. Sönmez (2013) noted that if the new innovating firms cope with the competition, it would be able to replace the incumbent firms. If not, they will fail to survive and exit from the market. In this process, only successful firms can survive in the market, and resources are transferred from inefficient firms toefficient firms. The entry and exit of firm based on innovation and new technology can be further classified into passive and active learning models. When we assume that firms do not know their productivity when they enter the market, and they learn it over time we are referring to passive learning system. However, if firms' productivity is too low compared to its competitors, it would decide to exit the market. If firms enter the market, and invest in order to increase their productivity, cope with the competition, and survive in the market. It is called active learning system. If not, they decide to exit the market (Cincera&Galgau, 2005).Melitz (2003) proposed a dynamic model with heterogeneous firms to analyze the intra-industry effects of international trade. He proposed that firm entry increases in as much as the expected discounted value of profits equals the cost of entry. It is believed that higher productivity leads to higher profitability and consequently increases the entry of firms in an industry.

Analyzing the process of new firm entry and its determining factor can be considered as an important element in an economic setting. This is because it helps to transfer resources from inefficient activities to more productive activities and helps to reduce monopoly rents(Caves, 1998; Iwasakiet al et, 2016). In investigating the ways by which crime rate affect business activities, Bates and Robb (2008) concluded that the effect of crime on firm performance might be indeterminate. Low crime areas offer higher returns than high crime areas. If high-crime locations are riskier than low-crime areas, investments flows should be driven towards the high-crime area, only if firms operating in that area earn above-average profits that exceed the cost of crime because of the disutility or decreased production up to a point where expected returns to capital are equalizedacross the two areas.

Garrett and Ott (2009) examined the influence of city-level business cycle fluctuations on crime in 20 large cities in the United States. Their monthly time-series analysis considers seven crimes over an approximately 20-year period: murder, rape, assault, robbery, burglary, larceny, and motor vehicle theft. Short-run changes in economic conditions, as measured by changes in unemployment and wages, are found to have little effect on city crime across many cities, but property crimes are more likely to be influenced by changes in economic conditions than are more violent crimes.

Bruno, Bytchkova and Estrin(2008) examined a three-year panel data set of Russian firms spanning from 2000 to 2002. They investigated the effect of regional institutional and economic factors on entry rates across time, industries and regions. The study was builton a novel database and exploited inter-regionalvariation in a large number of institutional variables. The authors found that entry rates in Russia are not especially low by international standards and are correlated with natural entry rates, institutions and firm size.

Rosenthal and Ross (2010) analyzed the effects of crime on business location in five US cities. Combining crime data and business survey and assuming that land bids differ monotonically with violent crime, they found that while firms tend to disproportionately locate in high-crime areas, anincrease in 100 violent crimes would reduce the retail share of employment by 22% and reduce thehigh-end share of local restaurants by 4.4 percentage points.

Kerr and Nanda (2010) examined the effect of U.S. branch banking deregulations on the entry size of new firms, using micro-data from the U.S. Census Bureau. They found that the average entry size for startups did not change following the deregulations. However, among firms that survived at least four years, a greater proportion of firms entered either at their maximum size or closer to the maximum size in the first year. Their results highlight that this large-scaleentry at the extensive margin can obscure the more subtle intensive margin effects of changes in financing constraints.

By referring to a model on the relationship between, production function, level of crime and self-protection, Kimou and Gyimah-Brempong (2012) tested empirically the impact of crime on business activity in Cote d'Ivoire. Using a recent World Bank enterprise survey data set and a quasi-experimental methodology, they controlled for the direction of effects of crime on profitability and investment. As predicted by their theoretical framework, they found a mixed effects of crime through the channel of private provision of security: self-protection increases the profitability of contracted firms while hampering their level of investment.

Dougherty(2014) used the variation in legal system quality across states in Mexico to examine the relationship between judicial quality and firm size over the course of the 2000s, when systemic changes were taking place. Using economic census microdata and survey-basedmeasures of legal institutions, a robust effect of judicial quality is observed on the firm size distribution and efficiency, instrumenting for underlying historical determinants of institutions. Indicative evidence is found that the effect is strongest in more capital intensive industries. Market size and distance-to-market are also found to matter for firm size outcomes.

Iwasaki, Maurel and Meunier (2016)empirically analyzed the determinants of firm entry and exit in Russia using a regional-level panel data for the years of 2008–2014, with special emphasis on institutional failures and the politico-economic impact of external crises. They found that these two elements exhibit statistically significant and economically meaningful effects both on the creation and destruction of Russian firms, controlling for potentially explanatory factors. Their empirical results also suggest that the process of firm entry and exit is manifold across Russian regions due to their heterogeneity. Nevertheless, a surprisingly robust estimate of the world oil price (irrespective of the difference in target regions) suggests a possible high exposure of each Russian region to a global crisis. This comes from the importance of oil trade with the world and, accordingly, the ongoing crisis may bring a harmful influence to regeneration of Russian businesses.

Mahofa, Sundaram and Edwards(2016) analysed the relationship between crime and the entry of firms across local municipalities in South Africa. They used data on the incidence of crime, sourced from the South African Police Service, and a unique database of business registrations over the period 2003 to 2011, to show that crime reduces business entry. Their results were robust as they used rainfall shocks as an instrumental variable for crime, in order to control for potential bias arising from the fact that crime might be a consequence, rather than a cause of the entry of firms. Their paper highlighted the importance of strong local institutions that can lower the costs of doing business for business dynamism.

DATA AND METHODOLOGY

Data

Starting from year 1985, the crime rate in Nigeria and other illegal practices continue to be at higher level. Corruption was perceived to be a legalized deal along with other business activities. Since then, the

business climate in Nigeria continues to experience uncertainties which might have drastically affected new firm entry. In order to effectively capture this phenomenon, this study uses time series data covering the period of 1986 -2013. Our study is based on secondary data which were sourced from Central Bank of Nigeria (CBN) statistical bulletin; National Bureau of Statistics, World Bank Development indicator and Nigerian Police Force.

Based line specification

We situate our study on the theoretical preposition of Melitz (2003) who developed a framework that firm entry(FM) increases in as much as the expected discounted value of profits equals the cost of entry. It is believed that higher productivity leads to higher profitability, consequently, the higher the entry of firms in an industry. However, we can take higher crime rate(CR) as a shock to the system. This is because, higher crime rate would increase the cost of doing business, hence higher crime will lead to low firm entry in an industry. Therefore, it is only the highly productive firms that will have expected profits high enough to justify paying the entry costs(Mahofa et al, 2016).

We further include a set of control variables, thus: economic condition (EC), human capital development(HD) and financial development(FD). This is because general economic condition is also a factor that affects the decisions of firms in terms of entry and exit the market. A favorable economic condition negatively affects exit decisions of firms from a market.

Human capital development also has relationship with firm entry. A country with skilled labour has the tendency to attract high level of firm entrance. A good human development system can produce higher level of entrepreneurial activities.

Ghosal (2003) noted that initial capital and the financial structure of the firm serve as one of the main determinants of firm entry into an industry. He proposes that the firms that encounter financial constraints have lower survival probability, and higher exits. Generally, smaller and younger firms face financial difficulties, and they borrow more and have higher probability offailing to pay back. Also, it has been documented that a significant effect of the interest burden from debt-servicing costs on firm survival. Therefore, we include in our model; the financial development variable to capture the effect of financial development on firm entry. Following our discussion, we specify that:

$$FM = f(CR, EC, FD, HD) \qquad (1)$$

In specific form, we transform equation (1) and adopt autoregressive distributed lag (ARDL) framework by Pesaran and Shin (1995, 1999), Pesaran et al. (1996) and Pesaran (1997). This approach does not involve pre-testing variables, which means that the test on the existence relationship between variables in levels is applicable irrespective of whether the underlying regressors are purely I(0), purely I(1) or mixture of both. Fundamentally, the ARDL approach to cointegration (Pesaran, Shin & Smith, 2001) involves estimating the conditional error correction version of the ARDL model for firm entry and its relative determinants:

$$\Delta FM_t = \propto_0 + \sum_{i=1}^{k} \prod_i \Delta FM_{t-i} + \sum_{i=0}^{k} \gamma_i \Delta \mathrm{CR}_{t-i} + \sum_{i=0}^{k} \theta_i \,\Delta EC_{t-i} + \sum_{i=0}^{k} \psi_i \,\Delta FD_{t-i}$$
$$+ \sum_{i=0}^{k} \delta_i \,\Delta HD_{t-i} + \alpha_1 FM_{t-1} + \alpha_2 CR_{t-1} + \alpha_3 EC_{t-1}$$
$$+ \alpha_4 FD_{t-1} + \alpha_5 HD_{t-1} + \epsilon_t \qquad (2)$$

Where Δ is first-difference operator and kis the optimal lag length, Firm entry(FM), Crime (CR),economic condition (EC), human capital development (HD) and financial development (FD)while ε_t is the white noise. It is used to capture other factors that can affect poverty reduction which are not accounted for in the study.The F test is used for testing the existence of long-run relationship. The null hypothesis for no cointegration among variables in equation (2) is H_0: $\alpha1= \alpha2= \alpha3= \alpha4=\alpha5= 0$ against the alternative hypothesis H_1: $\alpha1 \neq \alpha2 \neq \alpha3 \neq \alpha4 \neq \alpha5 \neq 0$. Given a relatively small sample size in this study of 28 observations, the critical values used are as reported by Narayan(2004). The test involves asymptotic critical value bounds, depending whether the variables are I(0) or I(1) or a mixture of both. Two sets of critical values are generated which one set refers to the I(1) series and the other for the I(0) series. Critical values for the I(1) series are referred to as upper bound critical values, while the critical values for I(0) series are referred to as the lower bound critical values. If the F test statistic exceeds their respective upper critical values, we can conclude that there is evidence of a long-run relationship between the variables regardless of the order of integration of the variables. If the test statistic is below the upper critical value, we cannot reject the null hypothesis of no cointegration and if it lies between the bounds, a conclusive inference cannot be made without knowing the order of integration of the underlying regressors. Therefore, if the results show the existence of co- integration, we can then proceed to estimate the Error correction model (Pesaran et al,2001). The essence of error correction model is to show the speed of adjustment back to long run equilibrium after shock.

Variable measurement

Firm entry (FM) is measured as number of new business registration divided by working population (within age of 16-64) in Nigeria for various years. Crime (CR)is proxied as first difference of natural Log of total crime reported, economic condition (EC) is proxied as growth rate of real gross domestic product(GDP), human capital development (HD) is taking as government expenditure on education as a percentage of GDP and financial development (FD) is the credit to private sectors as a percentage of GDP.

EMPIRICAL RESULTS AND DISCUSSION

Descriptive statistics

Table 1 reports the descriptive features of our variables. It shows that the average firm entry rate in Nigeria is about 0.0008 per working population with maximum value of 0.0091 and minimum value of 0.00008 per working population. Crime rate is 12 on average with maximum rate of 13 and minimum rate of 0.2. The growth rate of GDP is 6% on average with minimum value of 0.2%. Also, the human capital development is 4.2 % on average with standard deviation of 5.9%. It shows the level of volatility of the variable. Financial development is 17.9% on average. Its maximum amount is 36.89%.

Table 1: Descriptive statistics

	FM	CR	EC	FD	HD
Mean	0.000783	12.04933	6.133374	17.90060	4.204869
Median	0.000686	12.12149	6.215510	13.76152	4.188113
Maximum	0.009091	12.64857	30.70928	36.89332	8.402582
Minimum	8.20E-05	10.03452	0.200000	8.828019	0.320180
Std. Dev.	0.001667	0.529786	5.933957	8.014265	2.037654
Observations	28	28	28	28	28

It can be confirmed in the Table 1 that financial development records the highest rate of volatility follow by economic condition. The least volatile variable is firm entry rate. The Table 2 reports the correlation between the variables. As can be seen, there is no evidence of multicolinearity among the variables.

Properties of the data

Table 3 shows the unit root results of the variables after conducting Augmented Dicky-Fuller (ADF) test. This pre-test is necessary to know the properties of the variables and to further determine if the methodology adopts is appropriate for the study. As can be seen in the Table 3, we can confirm that crime rate and financial development are stationary at first differencing while firm entry, growth rate of GDP and Human capital development are stationary at level.

Since some variables are stationary at level while others are stationary at first differencing, we proceed to test for the existence of long run relationship among the variables.

Bounds Test

We the results of co-integration using bound test as reported in Table 4. It shows that long run relationship exists among the variables.

Table 2: Correlation Matrix

	FM	CR	EC	FD	HD
FM	1.000000				
CR	0.249107	1.000000			
EC	-0.033315	-0.000412	1.000000		
FD	-0.178199	0.181508	0.038728	1.000000	
HD	0.241536	-0.423142	0.283323	-0.074081	1.000000

Table 3: Unit Root test results

Variables	ADF statistics	Critical value @ 5%	Remarks
CR	-6.545464	-2.981038	I(1)
EC	-4.598774	-2.976263	I(0)
FD	-3.807716	-2.986225	I(1)
FM	-4.494843	-2.976263	I(0)
HD	-3.900223	-2.976263	I(0)

Table 4: Bounds Test (Null Hypothesis: No long-run relationships exist)

F=11.22902	K=4	
	Critical Value Bounds	
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

The F-statistic is greater than both upper and lower bound of the critical value. Hence, we confirm the evidence of long run relationship among the variables.

Interpretation of estimated results

Table 5 report the short run effect of crime rate on firm entry. After controlling for economic condition, human capital development and financial development, we confirm that the lagged two of crime rate negatively and significantly influences firm entry in Nigeria. Also, last year and current year crime rate positively influence firm entrant. It means on average as crime rate increases firm entry decline in the short run.

A two-lag effect of crime rate has negative effect on firm entry. This result is consistent with the result of Mahofa, et al (2016). This means that a one –percent increase in the last two years crime, crime rate would reduce firm entry by 0.43% on average. By implication, if increase in last two years crime rate deters firm entry then business investment would reduce hence, a negative impact on economic growth in Nigeria. Crime, like corruption, should reduce growth by raising the cost of doing business and increasing uncertainty.

Availability of skilled labour seems to increase the level of firm entry in Nigeria as reported in Table 5 in the short run. A bad economic condition especially recession period tends to reduce the level of firm entry. While the level of financial development may not necessary support the firm entrance into the economy in the presence of significant high crime rate. The coefficient of error correction term confirms the validity of short run relationship among the variables. The coefficient is 82.1%, negative and significant. It shows that the adjustment to equilibrium is corrected by 82.1 percent in the following year.

However, in the long run, the crime rate increases the firm entry but not significant as reported in Table 6 after controlling for human capital development, economic condition and financial development. In the long long run a good economic condition increases firm entry in Nigeria. We perform series of diagnostic tests as reported in Table 5. Our results pass serial correlation test and heteroskadescity test. We also perform stability test as reported in the appendix. It is very clear that our estimate is stable when replicate.

DISCUSSION OF FINDINGS

Our long run and partly short run result shows that the current and last year crime rates increase firm entry. This supports the hypothesis of Leff (1964) and Huntington (1968), who state that when there are pervasive regulations that limit potential gains for firm entrance into trading activities, corruption as well as crime commitment (such as certificate forgery) would allow entrepreneurs to bypass official regulations and further capitalize on growth opportunities. Also, the two lagged crime rate significantly reduces firm entry as reported in the Table 5(short run). This implies that if the crime rate continues to discourage firm entry entrepreneurs would find alternatives, in the long run especially in a country like Nigeria where property rights are notwell defined and enforced, people have to resort to violence crime to enforce contracts rather than the court system. So lack of rule of law would tend to increase crime. Therefore, entrepreneurs gain an entrance into an industry by paying bribes in the short run and committing other forms of criminal activities in order to break the bureaucratic bottle neck of the government. The intuition is that with an expanding bureaucratic system of government there will be decreasing opportunity cost of committing crime in order to gain an entrance into an industry. Hence, the higher the crime rate, the high the firm entry in the long run. As opined by Powell, et al (2010) corruption can be legal, such as making campaign contributions to secure a grant of monopoly privilege, or it can be an illegal payment of a bribe. It was stated that not all forms of corruption are crime; some activities are both corrupt and criminal. Crime includes not only some forms of corruption but also a wide range of other activities such as larceny, burglary, theft, murder, rape, 'organized crime', drug possession and distribution and tax evasion. For instance, Nigeria tax collection system is weak. Foreign and domestic firms may operate for years and continue to commit tax evasion which is a form of crime. This type of

Table 5: Short-run results using ARDL[a]
Dependent variable: *Firm Entry(FM)*

Variables	Coefficients	t-statistic	Prob.
ΔFM(-1)	-0.408310	-1.815742	0.1291
ΔFM(-2)	-0.184144	-1.266256	0.2612
ΔCR	0.000180	0.345216	0.7440
ΔCR(-1)	0.002831*	4.874944	0.0046
ΔCR(-2)	-0.004341**	-3.835678	0.0122
ΔEC	0.000351*	4.112538	0.0092
ΔEC(-1)	0.000085***	2.326295	0.0675
ΔEC(-2)	-0.000050	-1.623451	0.1654
ΔFD	-0.000359*	-5.034846	0.0040
ΔFD(-1)	0.000320***	2.388204	0.0625
ΔFD(-2)	-0.000179***	-2.169319	0.0822
ΔHD	0.000152	1.153408	0.3009
ΔHD(-1)	0.000317	1.897194	0.1163
ΔHD(-2)	0.000557**	3.353006	0.0203
ΔCointEq(-1)	-0.821893**	-3.654450	0.0147
Adj. R^2	0.8201		
D.W. Stats	2.527		
F-statistic	6.758268		
Prob(F-statistic)	0.021788		
Breusch-Godfrey Serial Correlation LM Test[F(3,2)= 0.563880, Prob. =0.6898]			
Heteroskedasticity Test: Breusch-Pagan-Godfrey[F-statistic=0.574279, Prob.(19,5)=0.8625]			

[a]*Selected Model: ARDL (3, 3, 3, 3, 3),*significance at 1%,** significance at 5%, ***significance at 10%*

Table 6: Long-run results using ARDL[b]
Dependent variable: *Firm entry(FM)*

Variable	Coefficient	t-Statistic	Prob.
CR	0.001265	1.008635	0.3594
EC	0.000613**	3.195228	0.0241
FD	-0.000077	-1.732917	0.1437
HD	-0.001695***	-2.222528	0.0769
C	-0.009553	-0.550731	0.6055

[b]*Selected Model: ARDL (3, 3, 3, 3, 3),** Significance at 5%,*** significance at 10%*

system encourages firm entry in the long run especially where it is not check. The size of government in Nigeria is large. The country operates the three system of government with high level of bureaucratic problems and regulations. When the size of government is large or when there are many regulations, corruption is a beneficial way to circumvent growth-retarding government presence and regulations that would otherwise hinder productivity as discussed by Heckelman and Powell(2009).

CONCLUSION AND POLICY IMPLICATION

We examine the effect of crime rate on firm entry in Nigeria from 1986 to 2013 using ARDL methodology. Our results show that in the short run, lagged two effect of crime rate significantly influences the firm entry negatively while current and one-lagged effects of crime rates have positive effect on firm entry. Also, in the long run crime effect is positively influenced firm entry. This implies that as crime rate continues to decrease firm entry; private business investment would reduce which has negative effect on economic growth because the presence of criminal activities has raised the cost of doing business and business uncertainty level has become unbearable to entrepreneurs. However, in the long run, crime rate increases the firm entry. This is because firm commit crime in order to break bureaucratic bottleneck of gaining entrance into an industry at the same time since Nigerian tax collection system is weak, the firms realize that the cost of high crime rate can be overcome in the long run by practicing tax evasion and avoidance. Also, the entrepreneurs can also gain an entrance into an industry by paying bribes and committing other forms of criminal activities because of the large size of Nigerian government. According to Goedhuys, Mohnen & Taha(2016), payment in form of bribes may be more efficient in the allocation of business licensing and government contracts as only the more efficient firms are able to pay the highest bribes and gain a new entrance into a new industrial climate. It may as well decrease business uncertainty for firms by given them informational advantages and lobbying power, providing incentives for business investment and firm entry into innovative activity in the economy. The most arguments of Lui (1985) provide that crime and corruption can be taking as a means to overcome bureaucratic obstacles, even where it is morally undesirable. Bureaucracy and red tape are major barriers to firm entry into an industry and innovative activities aspect of an economy (Damanpor 1996). Nigeria serves as a special case with centralized governments as described by Qian and Xu (1998). Innovating firms need to obtain special documents and permits in order to gain entrance into an industry and secure a market advantage in an industry. Hence propel panel of policies need to be channeled to address the crime and corruption practice in the country so as to reduce the cost of doing business which would eventually reduce the level of business uncertainties.

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The Influence of Teaching, Research and Consultancy Services on Efficiency Assessment: Experience from Tanzanian Universities

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This study aimed at examining the influence of teaching, research and consultancy on efficiency assessment of Tanzanian Universities. It involved 263 University faculties for questionnaire responses and 22 heads of department were interviewed as per 2014 survey. In order to accomplish the research objectives a mixed methods research (MMR) approach was employed to have an in-depth understanding of the phenomenon. Findings based on Linear Regression analysis suggest that there is a significant correlation between classroom teaching and examination performance with education level of faculties in influencing Universities' efficiency. However, student rating, number of publications, quality of publications, consultation and community services did not show any significant correlation with education level in determining the Universities' efficiency. It is also affirmed from interviews that teaching is given more precedence than research and consultancy in Universities. Additionally, the lack of funds, skills, and low motivation hampers research and consultancy practices in Universities. And so, Universities need to invest in research and consultancy so as to enhance efficiency and improve quality of teaching. Balancing the three core university functions will bridge the gap between theories and practice; hence foster the quality of university graduates.

Keywords: *Higher education, mixed methods research, University efficiency, University-industry collaboration.*

INTRODUCTION

As the importance of higher education takes pace Worldwide the evaluation of efficiency and performance has become more important than ever before. This is one of the necessities for the Universities to prevail and remain competitive. In this regard, the Universities are struggling to maintain their efficiency through various ways (Mason et al, 2006). There are different parameters used to gauge the Universities' efficiency which may vary from place to place depending on a specific objective to be measured. Some of these parameters include graduates' efficiency, graduate employability, research and consultancy, teaching hours, teachers student ratio and examination performance to name some (Smith et al, 2000). Predominantly, all these parameters are within the three core Universities' objectives namely; teaching, research and consultancy. However, teaching is given precedence with the aim of producing skilled man power (Flegg et al, 2003). On the other hand, research and consultancy in higher education are essential in understanding social, political and economic implications. Some of the Universities use research productivity as criteria for budget allocation to various departments. The department or school with higher research output can receive more budgets and research grants. Importantly, research output has also been considered as a yard

stick in promotion of faculties. Thus, it is emphasized that these three objectives are interwoven. The link between teaching, research and consultancy is significant in improving quality of teaching. Faculties who engage in research and consultancy, they are well informed about the subject matter than those who do not. They are able to link between teaching and the real life situation on the ground. Despite the essence of this link, still there is a gap between what Universities teach and the job market demand. This is evidenced by employers' complaints about graduates' incompetence (Makulilo, 2012). To redress this situation therefore, engaging faculties in research and consultancy can bring attention to curriculum changes in line with the job requirements. It has been learned from this study that the Universities do not engage fully in research and consultancy. As result, teaching is given primacy without producing work-readiness graduates.

The current study therefore, attempted to examine the influence of teaching, research and consultancy in measuring Universities' efficiency in Tanzania. Specifically, the study intended to ascertain the faculties' perceptions on how the three objectives contribute to the efficiency of Universities. Moreover, the reasons for the existing imbalance are also identified.

LITERATURE REVIEW

Efficiency evaluation in higher education is not given a required attention despite its essence in revealing setbacks and maintaining quality (Alam, 2009). To address this challenge, many studies have focuses on external criteria for improvement of teaching and research in Universities (Silva, 2000). It is learned that the government support in research and consultancy is important for a better result. In Brazil public Universities, these two objectives seem to be more valued and useful in measuring efficiency. Thus, the government is argued to support the Universities to full fill their obligations and sustain production of quality knowledge through teaching and research. Molefe (2010) suggest some internationally adopted approaches to faculties' efficiency assessment. Some of these include interpersonal skills, communication, research, leadership, subject masterly, assessment skills, listening skills, commitment to quality and decision making to name a few. However, the Universities may include more or less of the identified dimensions. Additionally, in the attempt of explaining efficiency of Universities, Molefe (2012) identified other seven dimensions, namely; knowledge, student-teacher relations, organization skills, communication skills, subject relevance, assessment procedure and utility of assignment were used. All these dimensions focus on individual lecturers' efficiency that eventually is used to evaluate the University efficiency.

According to Commonwealth (2013) the three University objectives are over emphasized. It is argued that the Universities contribution to economic development is not limited to teaching and research, but also through engagement and collaboration with the industry and other external entities. Reviewing research efficiency reports and other official documents is a suggested way of understanding the impact of Universities. The experience shows that there has been a narrow linkage between the Universities and industries. So, the University research outputs remain in libraries without being exposed and used in solving various socio-economic problems. Despite this ignorance of patents, efficiency measurements based on University's core objectives remain imperative for economic growth.

Based on various identified efficiency dimensions, it is observed that the focus is on the internal criteria and the external are ignored. Thus, it is vital to assess faculties, students and management systems in the Universities to ensure quality and sustainability. It is affirmed that the process is incomplete without including external environment where the Universities output go (Darling-Hammond, 2010). Therefore, the Universities need to measure their efficiency in terms of services or impact they cause to the society. This can be done in terms of research, consultancy and community services. Consequently, the Universities can easily get feedback on their efficiency and performance. It is the intent of this study therefore, to assess efficiency perceptions based on the three University objectives that focus on both the internal and the external dimensions.

METHODOLOGY AND DATA

The study employs a Mixed Method Research (MMR) paradigm, guided by pragmatism philosophy. This approach combines both quantitative and qualitative paradigms. Though each of the paradigm claims to be superior to the other, none of them is error free (Cameron, 2011; Lund, 2012; Johnson, 2013). Therefore, in this study, the proposed MMR research design is a dominant concurrent method (QUANT +qual) similar to mixed approach by Johnson and Onwuegbuzie (2004). The main purpose of MMR in this study is convergence where concurrent design fit to this purpose as again suggested by Onwuegbuzie and Collins (2007). Questionnaire technique is used for quantitative method while interviews represent qualitative approach. Data of these two approaches were concurrently collected and analysed. Finally the results compared and convergence or divergence is ascertained prior to conclusion.

DATA SOURCES AND ANALYSIS

Data were obtained from faculties and heads of departments, who were purposeful selected from 32 Universities both public and private. A total of 263 faculties selected from different departments filled the questionnaire and returned them, whereas 22 heads of department were interviewed. The solicited questionnaire responses were exposed to factor analysis (FA) processes for validation purposes and hypothesis testing. On the other hand, a thematic analysis (TA) was used to analyse the information obtained from interview sessions.

ANALYSIS OF QUESTIONNAIRE

An adapted standardized rickets scaled questionnaire was used, and all necessary procedures for questionnaire analysis were done through SPSS. The factor analysis (FA) was followed by a simple linear regression (LR) analysis to determine the significant correlation between independent and dependant variables in evaluating the University efficiency. The FA was also preceded by T-Test used to test for the difference of mean among respondents. One sample T-Test was used to determine if the mean of a sample is different from a particular value at $\alpha = .05$. To justify the following Ho tested:

H_o There is no significant difference between respondents who wish to agree and those who wish to disagree.

H_1 There is a significant difference between respondents who wish to agree and those who wish to disagree.

The output of T-test from SPSS analysis (see Figure 1.2) indicates p-values of 0.000 in all 7 variables. Since the p-value is < 0.05 level of significance we have enough evidence to reject the null hypothesis and retain the alternative hypothesis. The implication we get is that all variables are significantly different from each other hence; they qualify to be retained until further test proves otherwise.

RELIABILITY AND VARIDITY TESTS

The computed Cronbach's alpha for the seven items is .78 which indicates that the items form a scale that has practical internal consistency reliability as indicated in Figure 1.1.

KMO AND BARTELETT'S SPHERICITY

The recommended KMO obtained is .74 which is > .50 which lies within the acceptable range (Reech et

al, 2005). On the other hand, the Bartlett's Test of Sphericity is also significant (< .05), implying that the correlation matrix is significant different from identity matrix indicated by 0.000 correlation between variables at 5% level. Consequently, the null hypothesis H0 that "None of the variables are correlated in the population" is rejected while the alternative hypothesis H1 is accepted that "At least some of the variables are correlated in the population".

There are only 3 factors retained out of seven. Only factors with total Eigenvalues > 1.0 are extracted. The results show that more than half of the variance is accounted by three extracted factors. The Varimax rotation extracted only three factors. From the rotation, the first, second and third factor accounted for 26.4%, 20.7% and 15.0% of the variance respectively. This made a cumulative percentage of 62% (Figure 1.4). Based on rotated matrix, all the seven items have loaded in three factors and they are uncorrelated with each other. The first three variables are highly loaded in the first factor, followed by another group of two variables being loaded in factor number two and finally two variables are moderately loaded in the third factor. The teaching factor is highly explained, followed by research and consultancy. Also, it is learned that the classroom teaching (85.4%), examination performance (84.3%) and student rating (83.5%) are explained by teaching factor. Similarly, factor 2 of research, predicts 76.4% number of publications and 67.7% quality of publications. Finally, the third factor explains two variable of consultation (64.2%) and public services which is explained by 76.5%.

ORDINARY LEAST SQUIRE (OLS) ESTIMATE OF LINEAR REGRESSION

The objective of Simple Ordinary Least Squire (OLS) Linear Regression (LR) analysis is to establish if there is any significant correlation between items forming each of the three extracted factors with the University efficiency. The relationship is built based on the education level (Biodata) of faculties and the seven items that eventually determines the University efficiency. Thus, each item is used as a dependent variable, whereas education level of faculties is taken as a factor variable. It was hypothesized that there is no significance correlation between the education level of faculties and the items that explain the Universities efficiency. Thus, for each item statement there is a constructed hypothesis to be tasted. The regression analyses

APPENDICES

Figure 1.1 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.781	.780	7

Source: Own Calculation

Figure 1.2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.736
Bartlett's Test of Sphericity	Approx. Chi-Square	31.408
	Df	21
	Sig.	.000

Source: Own Calculation

outputs are shown in Table 3 indicating if the correlation is significant or not significant. The decision criteria for regression analysis is P-values ($p < 0.05$) which allows to accept Ho and reject the alternative hypothesis H1, and the vice versa.

THE GENERAL LINEAR REGRESSION EQUATION

$y_i = \alpha_0 + \alpha_1 x_i + \xi$

i=1, 2,…………n

y_i = regressed or dependent variable;

x_i = regressant/repressors, explanatory / independent variable;

ξ = Error Term

Outcome < – y < - x cause

Ordinary Least squares, or Least Squares is the most commonly used method.

α_0, α_1 are the parameters. Parameters are specialized constants, these have the constant value for a given data set, but the values generally differ between different data sets.

Model 1: Regression of Classroom Teaching and Education Level

H_o: There is no correlation between classroom teaching and education level.

H_1: There is a correlation between classroom teaching and education level.

Table 3 above shows that the p-value (.011) of model 1 is significant since it is less than .05 and the slope of the regression equation is a not zero ($\beta \neq 0$); hence the null hypothesis (H_o) is rejected whereas; the alternative hypothesis (H_1) is accepted. Therefore, there is a correlation between classroom teaching and education level.

The actual regression equation is given by;

Classroom Teaching $(Y_i) = 4.830 + 0.156\ (Edu) + \xi$

The implication is that for any change of education level will increase the level of classroom teaching. This suggests that there might be other factors not included in this study that contribute largely to classroom teaching apart from education level of faculties.

Table 1.1: Combined Results for Regression Analysis

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	4.830 (0.000)	3.384 (0.000)	3.256 (0.000)	3.712 (0.000)	3.392 (0.000)	3.442 (0.000)	2.912 (0.000)
Education level	-.121** (0.011)	.035*** (0.005)	.060 (0.499)	.070 (0.325)	.049 (0.594)	-.005 (0.958)	.104 (0.287)
Beta	-.156	.022	.042	.061	.033	-.003	.066
N	263	263	263	263	263	263	263
The values attached to the coefficient ***, ** and * represent levels of significance at 1%, 5%, and 10% constructed from two tailed hypotheses							

Source: Researcher's Calculations

Model 2: Regression of Examination Efficiency and Education Level

H_o: There is no correlation between examination efficiency and education level.

H_1: There is a correlation between examination efficiency and education level.

From the same Table 3 above it is indicated that the p-value (.005) of Model 2 is significant. In this case the null hypothesis is also rejected whereas; the alternative hypothesis is accepted. Therefore, it is confidently confirmed that there is a correlation between examination efficiency and education level. This entails that classroom teaching is determined by education level. Theoretically, classroom teaching and examination efficiency are assumed to have linear relationship with education level. However, there is no theory which explains either positive or negative relationship between the two. Therefore, the results are likely to take either of the two shapes. Literatures support that there is a positive correlation between classroom teaching and education level, as well as examination efficiency and education level of faculties (Northcote, 2009; Hénard and Roseveare, 2012; Koedel & Betts, 2007; Hoffmann & Oreopoulos (2006); Paola, 2009; Harris & Sass, 2011). Thus, the increased essence of HE in socio-economic development call for quality teaching. Training of faculties is one of the suggested strategies to improve teaching and learning. Additionally, in Tanzanian Universities and other HEIs offering degrees, the level of education is an important criterion for recruitment and selection of faculties. For example, a Tutorial Assistant (TAS) needs to have a bachelor degree with a Grade Point Average (GPA) of 3.8 and above.

Furthermore, several studies support that student achievement is the result of teacher' education level and experiences. Some of them include Clotfelter et al (2006); Clotfelter et al (2007); Aaronson et al (2007); Goel (2007); Harris & Sass (2007); Kukla-Acevedo (2009); Ladd & Sorensen (2014); Rockstroh (2013); and Zhang (2008). They generally accept that there is a significant relationship between education level of teachers and student achievements.

Model 3: Regression of Student Rating and Education Level

H_o: There is no correlation between student rating and education level.

H_1: There is a correlation between student rating and education level.

Model 3 of the student rating and education level, also indicates that it is not significant. The p-value (.499) in Table 1.1 is greater than the decision p-value (.05). This provides sufficient evidence to accept the null hypothesis and reject the alternative hypothesis. Thus, it is true that there is no correlation between student rating and education level. Student rating as one of efficiency indicators is still subjective. In this case, teachers play a very important role since they actively participate in the teaching and learning. There are variations in the rating process among them despite the given rating standards (Angelo & Cross, 1993). This depends on the type and nature of rating. If the rating is objective, then variation is minimized since every faculty uses the same rating scale and the vice versa is also correct.

Despite the process of student rating being illusive, researchers conclusions are almost universal. Like in the previous models, it is again affirmed that student rating needs to be done by using multiple sources of data. Therefore, data based on faculties' education alone are insufficient to guarantee the quality rating. This system is suggested to be very comprehensive to capture a variety of data sources (Alemon, 1999).

Model 4 :Regression of number of publications and education level

H_o : There is no correlation between number of publications and education level .

H_1 : There is a correlation between number of publications and education level .

Model 4 in Table 1 4 indicates that the obtained p - value (325) is statistically insignificant , hence suggesting that the Ho is to be accepted and reject H1 . Therefore , it evident to say that there is no correlation between the number of publications and education level .

Model 5 :Regression of quality of publications and education level

H_o : There is no correlation between quality of publication and education level .

H_1 : There is a correlation between quality of publication and education level .

In model 5 in the same Table 1 4 ,it is also noted that the calculated p value (594) is not significant to reject the null hypothesis . Similarly , its corresponding R2 is almost zero indicating no contribution of this factor to quality of publications . So , it is again evident to say that there is no correlation between quality of publications and education level .

Basing on model 4 and model 5 ,it can be argued that there are numerous factors that influence the number of publications and quality of publications in the Tanzanian Universities . As it has been discussed earlier in other models ,there is no straight forward theory to rule out the quantity and quality of publications .Depending on the type and source of data a researcher employs there can be some contributions of education level to these factors .This might be contradicting to the general expectations . Highly educated faculties are expected to engage more in research activities than junior ones . As result , their contribution in terms of number and quality of publications could also be high .Empirical studies however , disclose mixed results on these correlations . A strong relationship between education level and number of publication is strongly supported by Zainab (1999) and Aksnes (2015) .It is avowed that as the University academicians climb the academic ladder their research productivity increases due to their experiences .Professors are said to be more prolific than Associate Professors ,Senior Lecturer ,Lecturer , Assistant Lecturers and Tutorial Assistants in that order .

Therefore , the current findings supports that faculties do not largely engage in research , hence they failed to relate its essence in measuring the University 's efficiency .Research publication is one of the major causes of the Universities' inefficiency if it is not done effectively (Kipesha and Msigwa ,2013 ; Bangi and Sahay ,2014) .

The argument to whether research support teaching is still debatable . Studies indicate unconsensus between the two contenting sides . Those who support the assertion they strongly accept that research findings are brought into classroom teaching .The practical knowledge is disseminated to learners who link between theory and practice (Prince et al , 2007) .It is also emphasized that research is used for hiring ,tenure and promotion in Universities . Moreover , through research the course content and thinking curiosity have been kept up to date .In contrast ,some scholars argue that the correlation between research and teaching is negligible .They have pin pointed some empirical studies such as Rugarcia (1991) and Felder (1994) that research and teaching have different goals and require different skills and knowledge .While the

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primary goal of research is to advance knowledge ; the goal of teaching is to develop and enhance abilities . Therefore , the link between the two is reported to be very small (Feldman ,1987) In the same line the number and quality of publications does not always depend on ones education level alone .In this case therefore ,other factors such as commitment ,time ,interest and skills to name some , contribute to research publications . In the Tanzanian Universities for example , doctors and professors are appointed to hold various leadership positions in their institutions or government . Eventually , they do not have sufficient time to concentrate on research activities .

Model 6 : Regression of consultation and education level

H_o :There is no correlation between consultation and education level .

H_1 :There is a correlation between consultation and education level .

Model 6 is identified statistically insignificant due to its p value being greater than 05 . Thus , the null hypothesis is accepted whereas ; the alternative hypothesis is rejected connoting that there is no correlation between consultation and education level .

Model 7 :Regression of community service and education level

H_o : There is no correlation between community service and education level .

H_1 : There is a correlation between community service and education level .

Likewise ,Model 7 is statistically insignificant due to its p value which is greater than 05 .Thus ,the null hypothesis is accepted and the alternative hypothesis is rejected .It is confirmed therefore ,that there is no correlation between community service and education level .

Model 6 and model 7 are related themes under the same construct which is also the third objective of the Universities .It is also a measure of their outputs to the community ,and a means of getting feedback from them .In this context consultancy refers to a provision of any advice ,information , "in company " training acting as a subject matter to external organization for fee .Similarly ,community services refers to those activities the University engage to the community for the purpose of educating ,providing services based on their knowledge in various fields . It is a community University partnership which translates theory into practice (Holland ,2003) Thus , there is a strong relationship between the Universities and other HEIs with the community services .

Despite the importance of community services provided by the Universities ,still there is no clear evidence if the level of education of faculties has significance correlation . The findings from empirical studies are still mixed .This depends on the type of service provided ,which will also dictate the education level required for a particular service .

Therefore ,findings from linear regression analysis suggest that classroom teaching and examination efficiency are statistical significant to Universities ' efficiency determined by the education level of faculties . However , the literature reveals contradictory results on the correlation between classroom teaching and examination efficiency with education level .Thus ,the type of data and scope might have caused such variation .On the contrary , student rating ,number of publications ,quality of publications ,consultation and community services did not show any significant correlation with education level of faculties in an endeavourer to assess the Universities' efficiency .

INTERVIEWS ANALYSIS

According to Miles and Huberman (1994) there are three important steps in thematic analysis which include data display, data reduction and data drawing and conclusions. In the first stage of data reduction orally and recorded data was organized, compressed and assembled to permit drawing conclusions. To allow easily interpretations, figures, quotations and tabulations were used to present different ideas as suggested by Gibbs (2002) and Yin (2010). The data from interview sessions were preliminary coded in relation to the study requirements. These preliminary codes were then reduced into final coding in the second stage by merging some of the related codes in one theme for easily descriptions.

All the interview responses from 22 Universities' heads of departments were first presented in a raw data together with preliminary codes for each as shown in Table 1.2.

The second stage of data reduction involves sharpening, sorting, discarding and organization of data in such a way that final conclusion is drawn and verified. This is a continuation of the preceding stage of data displaying. The data given in Table 1.3 was sorted and organized into specific themes and defined before interpretation and conclusion.

Three input and three output themes were identified from the interviews data that focused on the three University objectives. The condensed themes indicated in table 1.3 were further summarized into 6 major themes for easily interpretations and conclusion as shown in Figure 1.4.

Table 1.2: Input

1. Enrolment	
High enrolment	Enrolment increases without corresponding increase of resources.
Qualification	Most students in private Universities have low qualifications.
Allocation	Unfair allocation done by TCU.
Learning facilities	Shortage of learning facilities as result of increased enrolment.
Resource	Low enrolment reduces University resources.
2. Faculties	
Teacher student ratio (TSR)	There is low teacher student ratio.
Training	In public Universities, faculty training is mandatory while in private Universities is not given priority.
Motivation	Faculties are not motivated to engage in research and consultancy services.
Qualifications	Most of the faculties have low qualifications.
Reputation	Faculties in public Universities are more reputable than that of private Universities.
Employment terms	Most faculties in private Universities are temporary employed than in public Universities.
3. Non-academic Staff	
Management	Management is not fulfilling its obligations leading to misuse of resources.
Others	Interviews did not reveal any other information related to non-academic staff.

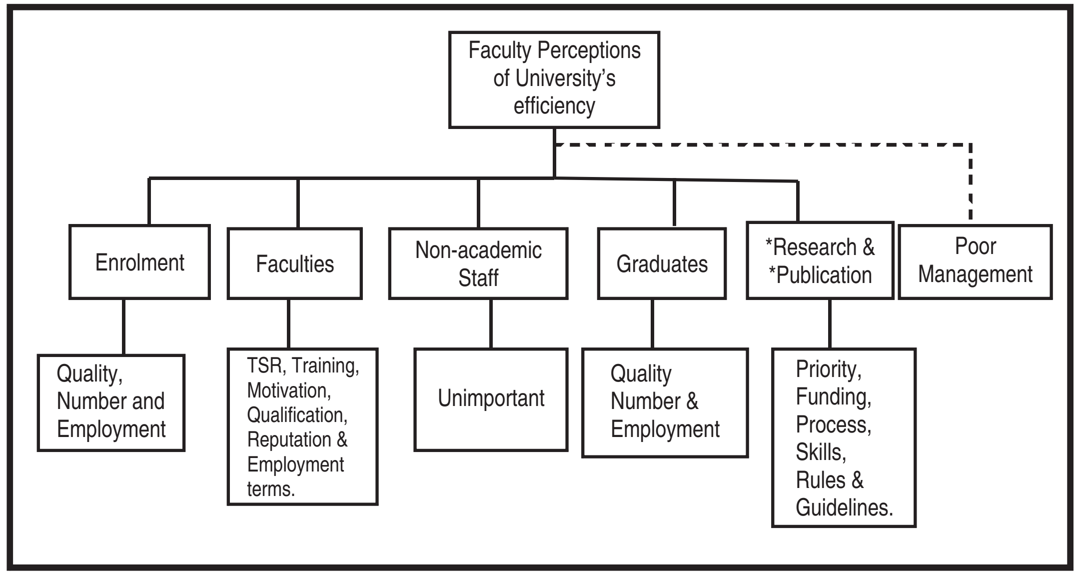
Source: Researcher's Compilations

Table 1.3: Output

1. Graduates	**Definitions**
Quality	Most graduates have low qualifications.
Number	The number of graduates has increased.
Employment	Those from reputable Universities are easy employed.
2. Research publications	
Priority	Teaching is prioritized than research.
Funding	There is shortage of research funds.
Process	It is not effectively done.
Research skills	Faculties lack research skills.
Rules and Regulations	Many faculties conduct research individually.
3. Consultancy services	
Process	It is not effectively done.
Funding	There is shortage of consultancy funds.
Consultancy skills	Faculties lack consultancy skills.
Rules and Regulations	Many faculties conduct consultancies individually.
Workshops and seminars.	Only experienced faculties are involved.

Source: Researcher's Compilations

Figure 1.4: Developed Thematic Map Showing Five Themes



Source: Researcher's Compilations

Table 1.4: Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.648	26.406	26.406	1.648	26.406	26.406	1.600	25.721	25.721
2	1.448	20.681	47.087	1.448	20.681	47.087	1.472	21.029	46.750
3	1.125	14.921	62.008	1.125	14.921	62.008	1.132	15.258	62.008
4	.927	13.237	75.245						
5	.714	10.203	85.448						
6	.666	9.516	94.964						
7	.352	5.036	100.000						
Extraction Method: Principal Component Analysis.									

Source: Researcher's Calculations

Figure 1.5: Rotated Component Matrix$_a$			
	Component		
	1	2	3
Q6 Classroom teaching	.854		
Q4 Exam. Performance	.843		
Q7 Student Rating	.835		
Q2 Number of publications		.764	
Q3 Quality of Publications		.765	
Q1 Consultation			.677
Q5 Community Services			.642
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 4 iterations.			

Source: Researcher's Compilation

Among the identified major themes, five of the themes were included in questionnaire. The sixth theme emerged during interview and was found to be interesting and important in explaining Universities efficiency. This is poor management which have great impact on Universities' efficiency. While the interview result indicated the importance of all the five themes in determining efficiency, non-academic staff showed no importance.

DATA DRAWING AND CONCLUSION

Data drawing in Thematic Analysis (TA) is based on the six identified themes. These themes are student

enrolment, teaching, research and consultancy, quality of graduates and poor management.

STUDENT ENROLMENT: this theme was valued by all Universities respondents regardless of their categories. In contrast however, while respondents from public Universities complain of high enrolment, those in private complain of enrolments decrease. It was added that enrolment increase in public Universities supersede available resources. As such, teaching and learning deteriorates. At the same time in private Universities facilities are misused due to low enrolment. These causes a big loss since student fees is the main source of income. To emphasize this, the Registrar in one of the private University stressed:

> ….as we are getting few students our income decreases from tuition fees and other imposed fees. We have decided to postpone some activities because of that. However, we are aware that the centralised admission system is not on our favour. …we know that some Universities do not use this system and they enrol students on their own. Anyway, even some politics behind this system are involved. If you collude with the Tanzania Council of Universities (TCU) you are likely to receive more students. (J. Gangilonga, March 24, 2014).

This respondent lamented due to unfair procedures of the centralised admission system by TCU. It is alleged that the system give priority to public Universities at the expense of private ones in enrolling students. However, there is no concrete evidence to these accusations. However, data from TCU indicates a big difference of enrolment between public and private Universities. Contrary to that the preference of applicants is observed to be in public Universities than private. Reasons for such situation are based on brand, experience and marketability of public Universities as they have been in the market for decades. Therefore, enrolment is noted to be a big challenge to both public and private Universities in a reciprocal way. Nevertheless, it learned from the interviews that enrolment influences Universities' efficiency.

TEACHING: Teaching has been identified as the most important activity in Universities compared to research and consultancy. For the teaching and learning to be successful, among other things, qualified faculties play an important role. During interviews it was acknowledged that most of faculties in public Universities have better qualities than those working in private Universities. Faculties in public Universities have long experiences and even produce human capital for private Universities. While public Universities have a training schedule to its faculties, private Universities do not have any support to faculties career development. They prefer hiring retirees from public Universities plus part timers who do not require any further training. In public Universities the challenge emanate from mismatch between high enrolment and teaching learning facilities, plus shortage of faculties. Contrary to that private Universities have low enrolment, somehow sufficient resources but low qualified staff. Thus, their low enrolment does not guarantee quality of outputs due to unqualified staff and low quality facilities.

RESEARCH AND CONSULTANCY: As it has been stated earlier in this paper that research and consultancy services are part and parcel of Universities' core objectives. Surprisingly, evidence from interview indicates that this is not justly done. Lack of funds, experience and motivation are reported to be the main hurdles to these crucial activities. The Universities' management does not consider research and consultancy as important as teaching. Hence, either meagre or no funds are set aside for it. Few available experienced researchers do not gloom the novice staff. Consequently, disparities exist between skilled and unskilled researchers. Skilled researchers greedily use their skills in research and consultancies without acknowledging the management. The reason for that is said to be low motivation provided by Universities. Thus, beside reduction of research publications, Universities also lose incomes, secretly generated by faculties. Justifying this scenario the one Head of Research and Consultancy had the following to say:

> ...it does not mean that research and consultancies are not done by teachers, but they work outside the University. The 30 percent imposed by the University is too high. Instead, people work silently without formalizing to the University, except for the big projects which may require more time and University confirmation. ....it is unfortunately that publications and consultancies are not considered in ones promotion. (Professor Kati, January 30, 2014).

This quote imply how Universities are not full engaging in research and consultancy forcing faculties to take their own way of doing it. In this regard, we strongly recommend the Universities management to review their research and consultancy policies to motivate faculties. Conclusively, research and consultancy are not considered as main University activities creating a gap between theory and practice. Without research and consultancy it is difficult to bridge the existing gap between Universities and industry. Significantly, the complaint of stakeholders about graduates' failure to meet their expectations will prevail unless this gap is bridged.

QUALITY OF GRADUATES: The quality of graduates is the main yard stick of University efficiency. Most of the interviewees were sceptical about the quality of their graduates. But, few of them recommended on the high credibility of their graduates. Nevertheless, evidence from literatures suggests that University graduates are not of the expected quality. Universities are not meeting employers' expectations Panagiotakopoulos (2012). Further, they face high enrolment, low quality faculties, deficiency of quality faculties, poor research and consultancies, which impedes quality graduates production.

Poor Management: Though, the issue of management was not directly mentioned by interviewees, still it plays a pivotal role in Universities' success or failure. It is reported that Universities' management do not motivate faculties in research activities, do not provide incentives and misuse of resources. One respondent explained the incidence of computer disappearance from the University premises when the Head of Law department said this:

> …it does not make sense, how computers and digital projectors can be stolen while the guards are always on. Yet the management has not taken an initiative to reveal the truth. We are blaming the management for not doing their job. ….even the remaining computers and other facilities are lapidated. (Dr Iringa, Personal communication, January 13, 2014)

On the other hand, the existence of research and consultancy policies does not guarantee practical implementations without involvement. Some interviewees were not even aware of the policy existence. Moreover, respondents from public Universities blame the government for untimely fund disbursement. To justify this one of planning Director said:

> "…..it is sad to say, the requested fund reaches us by the time closer to the next fiscal budget. This situation has made our plans to remain in papers without implementation. ….last year we were forced to reimburse the injected funds since it was too late to start any implementation. …..similarly, whenever we get funds on time it is less than half of the proposed budget. At all times, the ministry has not been helpful to us." (Dr Njombe, Personal communication, February 27, 2014)

In this case, government Universities are not only encountered by University management challenges alone, but also the government challenges via the responsible ministries. We are in the argument that until and unless, the government and Universities managements co-operate, public Universities will continue suffering the same way, towards objectives achievement.

The Influence of Teaching, Research and Consultancy Services on Efficiency Assessment: Experience from Tanzanian Universities.

CONCLUSION AND RECOMMENDATIONS

The employed Mixed Methods Research findings suggest that there is convergence of results from questionnaire and interviews. First, results suggest that teaching is significant to the Universities' efficiency and is given precedence than the other two objectives. Implicitly, the Universities direct more resource in the production of graduates than in research and consultancy services. However, high enrolment, shortage of faculties, low quality of faculties and poor facilities affects teaching. Consequently, poor quality of graduates has been the case. To add more, shortage of funds, lack of skills, lack of training to junior staff and poor management are some of Universities' efficiency bottlenecks. Conclusively, it is affirmed that there is a high convergence of results obtained through questionnaire and interviews. Nevertheless, these results are limited to variables involved and scope. Other studies employing more sample, different variables and scope might reveal dissimilar findings. It is recommended that Universities need to engage in all three core objectives namely teaching research and consultancy. The identified gap of University-Industry collaboration need to be bridged hence, increase their efficiencies. These can only be successful through sustainable use of available resources.

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A Fundamental Analysis of Selected Steel Companies in India

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In this paper an attempt has been made to do fundamental analysis of selected steel companies in India. The data collected from the annual reports from 2010-11 to 2014-15 from the selected five steel companies in India. The study concentrates on the various accounting ratios to analyze the financial performance in terms of solvency of the selected companies. The statistical tools like Average, Standard Deviation and Co-efficient of variation have been applied.

Keywords: *Fundamental analysis, Financial Performance, Efficiency.*

INTRODUCTION

India is the world's third-largest producer of crude steel and is expected to become the second-largest producer by 2016. The growth in the Indian steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labor. Consequently, the steel sector has been a major contributor to India's manufacturing output. The Indian steel industry is very modern with state-of-the-art steel mills. It has always strived for continuous modernization and up-gradation of older plants and higher energy efficiency levels.

Being a core sector, steel industry tracks the overall economic growth in the long term. Also, steel demand, being derived from other sectors like automobiles, consumer durables and infrastructure, its fortune is dependent on the growth of these user industries. The Indian steel sector enjoys advantages of domestic availability of raw materials and cheap labour. Iron ore is also available in abundant quantities. This provides major cost advantage to the domestic steel industry.

Market Size

India's crude steel production grew by 4.9 per cent year-on-year to at 8 Million Tonnes (MT) in May 2016. Total steel production in the country is expected to increase by 7 per cent in 2016. During FY 2015-16, hot metal production increased at a rate of 1.3 per cent year-on-year to 57.13 MT, whereas the production for sale of total finished steel stood at 90.39 MT. India's consumption of total finished steel increased by 4.5 per cent to 80.45 MT during FY 2015-16. Total finished steel exports during FY 2015-16 stood at 4.08 MT, whereas total finished steel imports stood at 11.71 MT for the same period. India's crude steel capacity has increased 7.6 per cent to 118.2 MT. The steel sector in India contributes nearly two per cent of the country's Gross Domestic Product (GDP) and employs over 600,000 people. The per capita consumption of total finished steel in the country has risen from 51 Kg in 2009-10 to about 61.9 Kg in 2015-16.

Investments

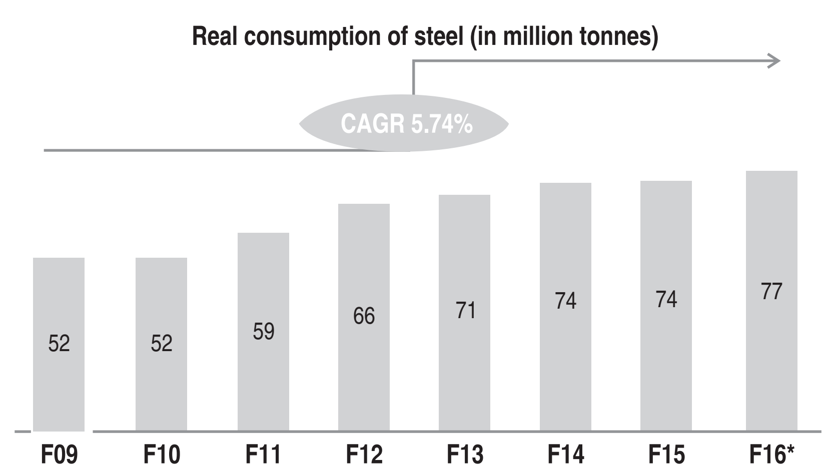
Steel industry and its associated mining and metallurgy sectors have seen a number of major investments and developments in the recent past. According to the data released by Department of Industrial Policy and Promotion (DIPP), the Indian metallurgical industries attracted Foreign Direct Investments (FDI) to the tune of US$ 8.89 billion, respectively, in the period April 2000–March 2016.

Steel demand has outpaced supply over the last five years

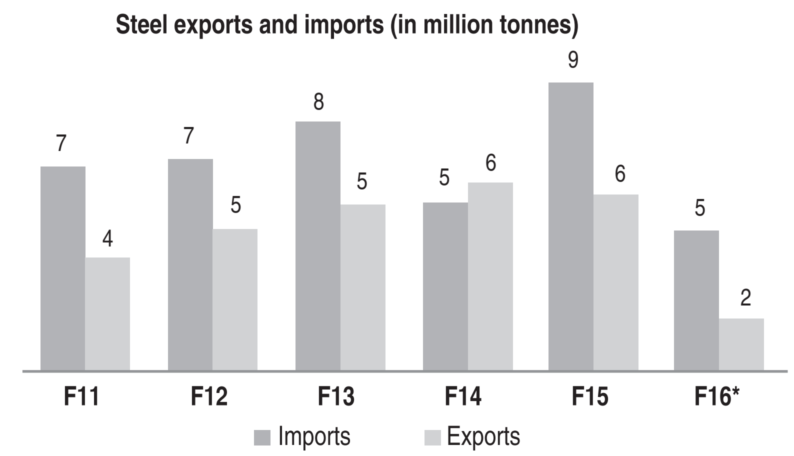
- In FY15, the consumption of finished steel grew to 76.99 MT while the CAGR increased to 5.74 per cent during FY08-15
- Driven by rising infrastructure development and growing demand for automotives, steel consumption is expected to reach 104 MT by 2017
- It is expected that consumption per capita would increase supported by rapid growth in the industrial sector, and rising infra expenditure projects in railways, roads & highways, etc.
- For FY15, per capita consumption of steel in India was 60 kg against the world average of 222 kg

Demand supply gap resulting in increased imports

- With growth in demand for steel outpacing growth in domestic production over the last few years, imports have increased
- India was a net importer of steel till FY13, but turned a net exporter of the same in FY14. In 2015, India imported 9.32 MT of steel while exports declined to 5.59 MT in FY15 from 5.98 MT during 2013-14
- During FY11-15, import of steel grew at a compounded annual rate of 9.01 per cent, whereas, exports increased at a CAGR of 11.32 percent
- Total domestic demand for steel is estimated at 113.3 MTPA by 2016-17



Source: JPC India Steel Ministry of Steel, tech Sci Research
Notes: MT Million Tonnies, CAGR-Compound Annual Growth Rate



Government Initiatives

The Government of India is aiming to scale up steel production in the country to 300 MT by 2025 from about 90 MT in 2015-16.The government has launched the National Mineral Exploration Policy (NMEP), which will help to adopt comprehensive exploration of non-fuel and non-coal mineral resources that would give a major boost to the economy. Metal Scrap Trade Corporation (MSTC) Limited and the Ministry of Steel have jointly launched an e-platform called 'MSTC Metal Mandi' under the 'Digital India' initiative, which will facilitate sale of finished and semi-finished steel products. The Parliament of India has cleared amendments to the Mines and Minerals Development and Regulation (MMDR) Act, which will enable companies to transfer captive mines leases similar to mines won through an auction, and which is expected to lead to increased Mergers and Acquisitions (M&A) of steel and cement companies

Keeping the above background in mind, the main objective of the study is to know the liquidity and financial performance of selected Steel companies in India. For this purpose, the present study has been organized into five sections where section one introduced the problem, section two provides data base and research methodology, section three discusses results and analysis and in section fourth conclusions of the study have been drawn.

DATA BASE AND METHODOLOGY

The study has been undertaken for the period of five years from 2010-11 to 2014-15.Top five companies were calculated on the basis of market capitalization as there are very few companies having significant market capitalization. Selected companies are: TATA steel, Jindal, JSW, SAIL and RINL. In order to analyze the liquidity and solvency, various accounting ratios have been used. Various statistical measures have been used i.e. Average, SD, CV and t-test. In this connection an attempt has been made to analyze the liquidity position of selected steel companies and to understand the company's capacity to repay the short-term debt as well as long-term debt. The trend of these ratios over time is studied to check whether they are improving or deteriorating. Ratios are also compared across different companies in the same sector to see how they stack up, and to get an idea of comparative valuations

EMPIRICAL RESULTS

1. *Analysis of Liquidity*

Current ratio, quick ratio and cash ratio are showing decreasing trend for all the companies. These ratios show the ability to meet their short terms obligations. These ratios measure the ability of a company to pay off its short-term liabilities when they fall due. Generally, the higher the liquidity ratios are, the higher the margin of safety that the company possesses to meet its current liabilities. Liquidity ratios greater than one indicate that the company is in good financial health and it is less likely fall into financial difficulties.

The trend we are seeing all these 5 companies is that, all liquidity ratios are decreasing for last 5 years which is not a good sign considering it is ability of company to meet short term obligations.

Table 1: Liquidity Ratios

SAIL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Current Ratio	1.514	1.507	1.204	0.949	0.827	1.200	1.204
Acid test Ratio	1.043	0.786	0.492	0.412	0.312	0.609	0.492
Cash ratio	0.724	0.345	0.171	0.101	0.067	0.281	0.171

TATA Steel	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Current Ratio	1.383	0.761	0.699	0.612	0.713	0.834	0.713
Acid test Ratio	1.081	0.473	0.380	0.294	0.229	0.492	0.380
Cash ratio	0.316	0.234	0.135	0.051	0.029	0.153	0.135

RINL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Current Ratio	1.446	1.176	0.980	0.823	0.640	1.013	0.980
Acid test Ratio	0.810	0.705	0.604	0.444	0.296	0.572	0.604
Cash ratio	0.391	0.286	0.160	0.017	0.004	0.172	0.160

JINDAL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Current Ratio	0.777	0.701	0.841	0.665	0.877	0.772	0.777
Acid test Ratio	0.540	0.466	0.581	0.403	0.520	0.502	0.520
Cash ratio	0.005	0.002	0.003	0.051	0.022	0.016	0.005

JSW	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Current Ratio	0.705	0.823	0.920	0.726	0.932	0.821	0.823
Acid test Ratio	0.357	0.514	0.603	0.423	0.511	0.482	0.511
Cash ratio	0.149	0.170	0.090	0.023	0.088	0.104	0.090

2. *Analysis of Leverage ratios*

Financial leverage ratios help to determine the overall level of financial risk faced by a company and its shareholders. Generally speaking, the greater the amount of debt of a company the greater the financial risk is. A company with greater amount of debts and financial obligations is more likely to fail to repay its debts. Debt ratio and debt to equity ratios for all the 5 companies are showing increasing trend which is not a good sign. A lower ICR means less earnings are available to meet interest payments and that the business is more vulnerable to increases in interest rates. When a company's interest coverage ratio is only 1.5 or lower, its ability to meet interest expenses may be questionable. Except from Tata steel all other companies ICR is around 1.5.

Table 2: Leverage ratios

SAIL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Debt ratio	0.518	0.487	0.513	0.536	0.562	0.523	0.518
D/E	0.424	0.469	0.504	0.491	0.491	0.476	0.491
Capitalization ratio	0.204	0.241	0.246	0.228	0.215	0.227	0.228
Interest coverage ratio	1.067	1.125	1.215	1.427	1.616	1.290	1.215
Long term debt to total debt	0.394	0.494	0.479	0.425	0.383	0.435	0.425

TATA Steel	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Debt ratio	0.459	0.431	0.436	0.429	0.404	0.432	0.431
Debt equity	0.876	0.791	0.804	0.779	0.701	0.790	0.791
Capitalization ratio	0.313	0.255	0.274	0.259	0.260	0.272	0.260
Interest coverage ratio	6.259	5.854	5.535	6.413	4.349	5.682	5.854
Long term debt to total debt	0.596	0.517	0.531	0.500	0.511	0.531	0.517

RINL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Debt ratio	0.306	0.365	0.494	0.508	0.584	0.451	0.494
Debt equity	0.440	0.574	0.976	1.032	1.403	0.885	0.976
Capitalization ratio	0.037	0.029	0.081	0.094	0.043	0.057	0.043
Interest coverage ratio	6.968	6.824	2.465	2.624	1.238	4.024	2.624
Long term debt to total debt	0.000	0.000	0.102	0.096	0.004	0.040	0.004

JINDAL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Debt ratio	0.671	0.677	0.690	0.698	0.729	0.693	0.690
D/E	0.965	0.896	1.106	1.160	1.634	1.152	1.106
Capitalization ratio	0.318	0.290	0.343	0.351	0.443	0.349	0.343
Interest coverage ratio	1.104	1.189	1.368	1.677	13.166	3.701	1.368
Long term debt to total debt	0.474	0.428	0.497	0.503	0.607	0.502	0.497

JSW	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Debt ratio	0.866	0.924	0.985	0.988	1.040	0.961	0.985
D/E	0.698	0.792	0.959	0.966	1.118	0.907	0.959
Capitalization ratio	0.280	0.290	0.350	0.343	0.384	0.329	0.343
Interest coverage ratio	1.307	1.407	1.601	1.751	1.798	1.573	1.601
Long term debt to total debt	0.324	0.313	0.355	0.347	0.369	0.342	0.347

3. *Efficiency or Activity Ratios:*

Activity ratios, also known as asset management (turnover) ratios, efficiency, velocity or turnover ratios, measure how effectively the firm is using its assets. Some aspects of activity analysis are closely related to liquidity analysis. Asset management ratios indicate how successfully a company is utilizing its assets to generate revenues. Analysis of asset management ratios tells how efficiently and effectively a company is using its assets in the generation of revenues. They indicate the ability of a company to translate its assets into the sales.

ACP as well as inventory days are the least for Tata steel while for other companies it ranges from 30-40 (for ACP) and for DIO it varies a lot.

Table 3: Efficiency Ratios

SAIL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Receivable turnover ratio	10.979	9.894	10.298	8.679	14.640	10.898	10.298
Receivable days	33.000	37.000	35.000	42.000	25.000	34.400	35.000
Inventory turnover ratio	3.893	3.451	2.846	3.130	2.635	3.191	3.130
Inventory days	94.000	106.000	128.000	117.000	139.000	116.800	117.000
Fixed asset turnover ratio	1.148	1.019	0.865	0.787	0.715	0.907	0.865
Asset turnover ratio	0.574	0.611	0.541	0.517	0.470	0.543	0.541
CA turnover ratio	1.206	1.646	1.682	1.769	1.641	1.589	1.646
Working capital turnover ratio	3.551	4.891	9.946	-32.797	-7.820	-4.446	3.551

TATA Steel	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Receivable turnover ratio	70.574	38.514	49.066	55.135	86.208	59.899	55.135
Receivable days	5.172	9.477	7.439	6.620	4.234	6.588	6.620
Inventory turnover ratio	7.569	7.166	7.437	7.074	5.268	6.903	7.166
Inventory days	48.225	50.934	49.081	51.598	69.282	53.824	50.934
Fixed asset turnover ratio	1.718	1.270	1.164	0.994	0.877	1.205	1.164
Asset turnover ratio	0.334	0.363	0.384	0.383	0.366	0.366	0.366
CA turnover ratio	1.652	2.716	3.391	3.675	3.576	3.002	3.391
Working capital turnover ratio	5.965	-8.664	-7.886	-5.808	-8.874	-5.054	-7.886

RINL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Receivable turnover ratio	33.295	31.791	12.446	15.349	9.243	20.425	15.349
Receivable days	10.963	11.481	29.327	23.780	39.489	23.008	23.780
Inventory turnover ratio	3.379	3.990	3.282	3.193	1.848	3.138	3.282
Inventory days	108.032	91.472	111.207	114.307	197.533	124.510	111.207
Fixed asset turnover ratio	1.001	1.095	0.912	0.810	0.568	0.877	0.912
Asset turnover ratio	0.577	0.631	0.510	0.500	0.344	0.512	0.510
CA turnover ratio	1.486	1.599	1.259	1.468	0.993	1.361	1.468
Working capital turnover ratio	4.815	10.688	-60.729	-6.812	-1.765	-10.761	-1.765

JINDAL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Receivable turnover ratio	13.183	14.937	10.598	10.056	10.359	11.826	10.598
Receivable days	28.000	24.000	34.000	36.000	35.000	31.400	34.000
Inventory turnover ratio	4.409	4.430	4.200	3.732	3.679	4.090	4.200
Inventory days	83.000	82.000	87.000	98.000	99.000	89.800	87.000
Fixed asset turnover ratio	0.569	0.613	0.589	0.491	0.445	0.541	0.569
Asset turnover ratio	0.368	0.403	0.380	0.340	0.296	0.357	0.368
CA turnover ratio	1.343	1.485	1.301	1.473	1.181	1.357	1.343
Working capital turnover ratio	-4.680	-3.475	-6.897	-2.929	-8.404	-5.277	-4.680

JSW	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Receivable turnover ratio	28.142	23.716	19.199	20.565	22.969	22.918	22.969
Receivable days	13.000	15.000	19.000	18.000	16.000	16.200	16.000
Inventory turnover ratio	5.703	6.237	7.450	7.364	5.423	6.435	6.237
Inventory days	64.000	59.000	49.000	50.000	67.000	57.800	59.000
Fixed asset turnover ratio	0.880	1.091	1.093	1.033	1.004	1.020	1.033
Asset turnover ratio	0.568	0.638	0.655	0.667	0.622	0.630	0.638
CA turnover ratio	2.642	2.252	2.496	3.042	2.447	2.576	2.496
Working capital turnover ratio	-6.307	-10.450	-28.889	-8.043	-33.553	-17.448	-10.450

4. *Profitability Ratios*

Profitability ratios measure a company's ability to generate earnings relative to sales, assets and equity. These ratios assess the ability of a company to generate earnings, profits and cash flows relative to relative to some metric, often the amount of money invested. They highlight how effectively the profitability of a company is being managed.

Overall trend for profitability ratios is they are decreasing till 2014 but a bit improvement is shown in the last year 2015, but the profitability of JSW ha got hampered badly. A cheaper import from China has affected this industry from profitability aspect.

Table 4: Profitability Ratios

SAIL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Gross Profit Ratio	16.32%	11.73%	7.81%	4.85%	5.16%	9.17%	7.81%
Net Profit Ratio	11.33%	7.69%	4.88%	5.60%	4.58%	6.82%	5.60%
ROE	13.04%	8.85%	5.29%	6.13%	4.81%	7.63%	6.13%
ROTA	6.28%	4.54%	2.58%	2.85%	2.11%	3.67%	2.85%
return on fixed assets	12.57%	7.57%	4.12%	4.33%	3.20%	6.36%	4.33%

TATA Steel	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Gross Profit Ratio	40.14%	35.68%	30.76%	32.01%	25.00%	32.72%	32.01%
Net Profit Ratio	22.94%	19.23%	12.95%	15.09%	15.20%	17.08%	15.20%
ROE	14.63%	12.82%	9.17%	10.49%	9.66%	11.35%	10.49%
ROTA	7.67%	6.99%	4.97%	5.77%	5.57%	6.19%	5.77%
return on fixed assets	39.42%	24.43%	15.07%	14.99%	13.34%	21.45%	15.07%

RINL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Gross Profit Ratio	12.52%	12.07%	8.42%	9.38%	8.39%	10.16%	9.38%
Net Profit Ratio	5.99%	5.53%	2.81%	2.97%	0.65%	3.59%	2.97%
ROE	4.98%	5.50%	2.83%	3.02%	0.54%	3.37%	3.02%
ROTA	3.46%	3.49%	1.43%	1.49%	0.22%	2.02%	1.49%
return on fixed assets	5.99%	6.06%	2.56%	2.41%	0.37%	3.48%	2.56%

JINDAL	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Gross Profit Ratio	28.75%	21.32%	14.90%	11.01%	1.26%	15.45%	14.90%
Net Profit Ratio	21.56%	15.83%	10.65%	8.88%	-2.32%	10.92%	10.65%
ROE	23.75%	19.46%	12.90%	9.89%	-2.48%	12.70%	12.90%
ROTA	7.82%	6.29%	4.00%	2.99%	-0.67%	4.09%	4.00%
return on fixed assets	12.08%	9.58%	6.21%	4.32%	-1.01%	6.24%	6.21%

JSW	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Median
Gross Profit Ratio	11.89%	9.08%	8.09%	8.05%	7.91%	9.00%	8.09%
Net Profit Ratio	8.60%	5.06%	5.08%	2.95%	4.70%	5.28%	5.06%
ROE	12.04%	8.79%	9.03%	5.50%	8.42%	8.76%	8.79%
ROTA	4.84%	3.21%	3.30%	1.95%	2.89%	3.24%	3.21%
return on fixed assets	7.50%	5.49%	5.51%	3.02%	4.67%	5.24%	5.49%

CONCLUSION

Current ratio, quick ratio and cash ratio are showing decreasing trend for all the companies.

- Also leverage ratios i.e. debt ratio and debt to equity ratios for all the 5 companies are showing increasing trend which is not a good sign. Except from Tata steel all other companies ICR is around 1.5.
- Overall trend for profitability ratios is they are decreasing till 2014 but a bit improvement is shown in the last year 2015, but the profitability of JSW ha got hampered badly. Cheaper imports from China has affected this industry from profitability aspect.

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Transformation of Banking Industry from Need Based Services to Universal Banking Services (An Empirical Study)

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In India, the last fifteen years witnessed growth in financial services unfolded by liberalization and globalization of financial services due to adoption of information technology and unlocking of the regularity framework. But alongside this positive development, there are evidences that formal financial sector still excludes a large section of the population. The intense competitive environment is continuously forcing the banks to become customer centric. Today technology has emerged as a strategic resource for achieving higher efficiency, control of operations, productivity and profitability for Universal Banks . The 'Anywhere, Anytime, Anyway' banking dream for customers has come true. But instead of all these benefits, the awareness and adoption rate of banking services among the customers is still found somewhat low. Hence this paper presents the preliminary findings on investigation of the level of the customer's awareness of, as well as need for banking services by the customers based on demographics, bank type and familiarity with computer/internet. The universal banks are providing a hoard of financial services to its customers .But most of the customers either are not aware of these services or do not need them. Therefore objective of the current paper is to analyse the awareness and need pattern of all the financial services being offered by public and private sector banks.

Keywords : *traditional banking, transformation, universal bank, awareness pattern , need of services.*

INTRODUCTION

Banking is the life blood of the economy whose vitality signifies the health and prosperity of any nation. India had a system of indigenous banking from very early times, though it was not similar to banking in modern times. Since independence commercial banks have a wide network to operate in the country under Reserve Bank of India (RBI). Straight from the nationalisation of banks in 1969 to the recent application of BASEL III, from a small number of PSB to a huge figure of private and foreign banks, from its humdrum and laid back system to the modern hi-tech systems with electronic banking(e-banking) , mobile banking (m-banking) etc. banks have come up to a long way. Banking Industry in India has travelled a protracted path to assume its present status and is continuously undergoing nonstop transformation. Banks are essential part of the economy as they ensure money flows in it constantly. In India, traditional banks usually provided payment services and transfer of funds. They used cheques and drafts to conduct these tasks. The banks also provided miscellaneous services, such as locker system to store valuables.

Modern banks execute multiplicity of function by providing numerous products and services to the customer with the ultimate objective to increase

profits along with customer satisfaction. Innovation is a dynamic phenomenon which involves adoption of new technology. The technological innovation in banking actually began in 1950 well before it began in most of the industries, when the first automated machine was installed at a few US Banks, which then became common in subsequent decades.

In early 90's the financial sector in India was crying out for reforms. Ever since the process of liberalization hit the Indian shores, the banking sector saw the emergence of new-generation private sector banks. Public sector banks which played a useful role earlier on are now facing deterioration in their performance. For very long, the banks in India were not allowed to have access to stock markets. So their dealing in other securities were minimal. But the financial sector reforms changed it all, Indian banks started to deal on the stock market but their bitter experience with scams, they became averse to deal in equities and debentures. Off late, commercial banks in India have been permitted to undertake a range of in-house financial services. Some banks have even setup their own subsidiaries for their investment activities. Subsidiaries include in the area of merchant banking, factoring, credit cards, housing finance etc.

However, the scenario changed with the onset of the Internet. Foreign banks took active interests in other markets, such as stocks & shares trading services, derivatives management, insurance broking services, wealth management, and more. Few more new banks started cash management facility and equipment leasing services. In a nutshell, banking services are not restricted to deposit investment and lending loans. It involves money management in capital market as well.

Traditional Banking Vs Universal Banking Service:

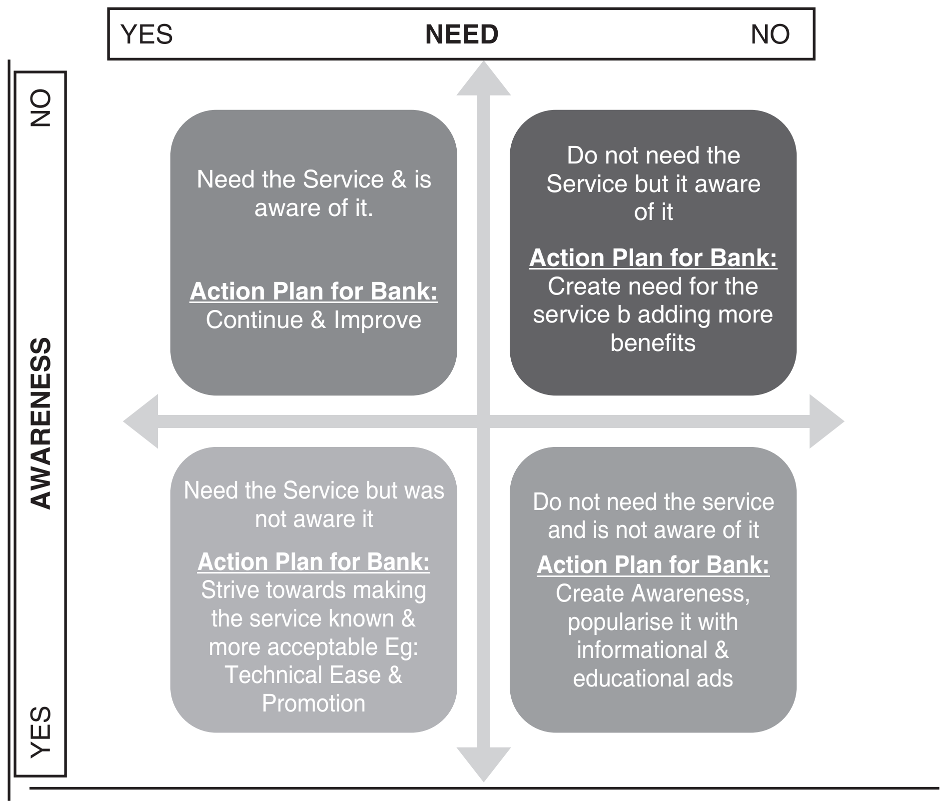
The universal bank is one of the latest functional banks, where its objective is to get maximum profit by way of interest; fees based on income and commission through various diversified activities. The suggestions of Narasimhan Committee and Khan Committee for consolidation of banking through mergers and amalgamations, has brought about a change in commercial banks and has made them march towards universal banking. It is thus, nothing but embracing the completely new objectives through transformation. (Bhole, 2007)

Universal Banking is a superstore for financial products under one roof. Corporates can get loans and avail other innovative handy services while accessing the traditional deposit and borrow services. Banks, especially the financial institutions, are aware of it. Some of the banks like ICICI Bank, HDFC Bank, Bandhan Bank and many others have already achieved the status of Universal Bank. Other players have plans to diversify in a big way, even though there might not be profits forthcoming in the short run due to the switching costs incurred in moving to a new business. (Singhal, 2012). It is one spot ultimate shopping place for a customer who is willing to deal in several financial products. It combines the complexities of investment banking with simpler commercial banking services for individual and companies. In present global scenario universal banking concept is an innovative high breed banking option and its pronounced business largely emphasizes in terms of products, customer groups and regional activities. As per the World Bank, "In Universal Banking, large banks operate extensive network of branches, provide many different services, hold several claims on firms (including equity and debt) and participate directly in the Corporate Governance of firms that rely on the banks for funding or as insurance underwriters". (Zafar,2012). In a nutshell, a Universal Banking is a superstore for financial products under one roof. Corporate can get loans and avail of other handy services, while can deposit and borrow. It includes not only services related to savings and loans but also investments.

Awareness and Need about Universal Banaking services among Customers :

Awareness is that type of social component which increases the collective consciousness among the people and generates confidence to face the problem confidently. The success of the bank depends upon its functioning. The functioning is measured in term of its schemes. The bank should take all effort to make their services reach the customers. The bank must popularize the schemes making the customer aware of the schemes. It must also pay attention to mobilize deposits which is a contribution factors in determining the profitability. The customer awareness about the service depends upon many factors such as return on investment, promptness, care, security, convenience, growth, flexibility, etc.. Another aspect is that whether customers need the financial servies offered by their banks or not. The banks need to understand the need of its customers and simultaneously generate a need among its customers by making them aware of the financial products offered by them. Hence, the bank has to pay special attention to satisfy the needs of the customers. The customer's satisfaction in the action mainly depends upon their service to customer to the fullest extent at the right time. The bank has to continuously assess and reassess its banking services being provided to the customers, and also find out the new and emerging customer expectations from time to time.

Presence of awareness and need for the financial services was checked among the customers. The awareness falls on Y axis, whereas need falls on the x axis of the grid. An action plan to be taken up by the banks was proposed. Thit is depicted below in the diagram.



Proposed Grid : Awareness Need Matrix

The above grid shows the relationship and possibilities between the two variables, i.e. Need and Awareness of financial services. The four possibilities and the result nd action plan by the bank are :

a. Customers are aware and they need the financial service also The bankers' role here is to consider this as an opportunity and enhance their profitability by getting in touch with their customer. This also gives a chance to the banker to continue and improve their products.

b. Customers are not aware about the services offered by their bank but there may be a need for that financial service in future. Therefore, the action plan to be taken up by the banker is to strive toward making the service known and more acceptable to its customers.

c. Customer is aware about the financial product but he does not need financial service. The plan of action for the banker is create a need for the service by adding more benefits.

d. Cutomers are neither aware about the financial service, nor do they need the same service . The banker's role is to create awareness about its financial products and popularize it with informational and educational advertisements.

LITERATURE REVIEW

The banking sector plays a vital role for the development of India and it has been witnessing a major change. This change is the outcome of the changing pattern in the awareness and need of the financial services among customers. The following contribution has been done by the authors in the same field .

George Benston's (1994) research is amongst one of the initial work done in the field of Universal Banking. The author had brought about a comparative analysis of European and United States Scenario. Germany has been mentioned as one of the best examples of Universal Banking in the world. Since there is a permission granted by European economic unification to all banks to operate in all European Community (EC) countries, it is likely that all countries in EC will be served by Universal Banks. Rich & Walter (1993) mentions that the importance of universal banking had grown since the end of World War II. There are three factors suggested by Swiss and German experiences, which will determine the future growth of universal banking. Vij (2003) attempted to present the changing profile of the Indian Banks and also shown how economic functions of the banks are directly related to their inherent vulnerability. ICICI, HDFC and IDBI banks are taken up for the current study and profitability ratios, risk management, asset quality ratios are calculated. After doing a comparative analysis of the three banks, the author concludes saying that HDFC Bank stands out as a clear winner with ICICI Bank on the second position. It was observed that the Electronic Banking is an essential sector of banking industry in a study that focuses on growth and awareness of electronic banking in Pakistan (Dar,2011).Electronic banking is today's need as it provides easy way to monitor an account. Most of the commercial banks in the country switched to the convenience ways in accessing the accounts of the customers and giving them the freedom for the easy access. Parimala & Singu (2014) conducted a survey at Bharti Mahila Bank , Coimbatore city to judge the awareness and customer awareness in the bank which was quite satisfaactory. The new generation bank has focused on empowerment of women and is encouraging the lives of the needy people of the society. But still some people are not aware about the opening of the bank .Bhatnagar (2015)concludes by saying that Indian banking Industry had undergone major changes due to economic liberalization and globalization which led to innovations , information technology revolution, increasing competition , changing customer requirements and financial sector reforms . The current study was relevant and helpful in determining awareness and adoption of technology based banking services . Various public and private sectors banks have been taken into consideration Nirmala &Floence (2014) has concludes that awareness regarding the e-services rendered by the nationalised banks should be made so that they can attract more customers . There should be more emphasis on popularizing internet usage by customers which will result into improvement in customer satisfaction. The customers need to be informed that e-services provide quick transaction and they don't need to stand in lines to make their payments or transactions. Banks are also facing major problems , which is lack of customer education and awareness about the features and benefits of e-payment So therefore there should be arrangement of systemic education campaigns for the clients to educate them. Elavarasi and Surulivel(2014) found out that the younger generation are more more aware and are using electronic banking services more as compared to older generation because of new innovation in information technology and their adoption level is high in e-banking. The older people did not find the transaction to be safe and secure enough to transact .It was also found that private sector banks provide better servies as comared to public sector banks . But when it comes to secured transactions, then public sector banks are preferred . Dash and Bhole, 2007mentioned that universal banking is one of the latest functional banks, its objectives to get maximum profit by way of interest; fees based on income and commission through various the diversified activities. The suggestions of Narasimhan Committee and Khan Committee for consolidation of banking through mergers and amalgamations, has brought about a change in commercial banks and marching them towards universal banking. It is thus, nothing but embracing the completely new objectives through transformation. Chaitanya (2005) focuses on understanding the concept of universal banking in India and attempts to explain the regulatory role, regulatory requirements, key duration and maturity distinction and lastly the optimal transition path.

Yesodha & Sebastina (2011)carried out an empirical research to find out awareness of customers about mobile banking problems faced by them and reason for the adoption of this technology. The author explores the result that majority of the respondents used either their phones or mobile banking to avail banking services. There was a further conclusion drawn by the author that there was not much significant difference in average awareness score of mobile banking with reference to user's monthly income, age group, and education level. Even the score of awareness among public and private sector banks also score fairly equal without any much difference. Sudhagar (2012) analyzed that bank customers' awareness about credit cards that ICICI credit cards were more popular which was followed by SBI Card and HDFC Card. Can Card was found to be less popular among the sampled respondents. The respondents' revealed that the agents of ICICI bank were the source of information about ICICI credit card. In the case for SBI Card, advertisements provided the necessary knowledge and for HDFC cards, the bank was the source of necessary information for the customers. Leela(2013) attempted to understand that businesses and customers are empowered with the information which is required to make better investment decisions through the use of information technology. Simultaneously, the banks are able to provide new and better products, efficiently operate by raising the productivity and geographically expand to compete globally with the help of this technology. The various services offered by the banks can be utilized by the customers only when they are made aware of these services. These calls for the banker and the customer to know each other and also the banker to should understand the customer's needs and simultaneously the customer has to know about the various services offered by the banks. When there is an increased level of awareness among the customers, it will lead to increased preferences(Natarajan and Ali ,2013). Wadhe & Ghodke (2013) attempted to study the consumer awareness on mobile banking and perception of the

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same. Through a survey method in the city of Pune, the author observes that customers are aware of mobile banking and also are familiar with the various banking transactions that can be done with the help pf mobile banking.

This analysis of the above review shows that awareness of the customers is increasing which makes him more demanding with changing needs. The customers wants all the services to be offered by his bank under one roof. Therefore drastic changes can be witnessed in the Indian Banking sector, wherein we can see it moving from need based banking to universal based banking.

OBJECTIVES OF THE STUDY

- To measure the awareness and need levels of the Universal Banking services offered by different types of banks .
- To derive a relationship between awareness and need level of the financial services
- To suggest to the banks, the ways in which they should take corrective measures .

RESEARCH DESIGN

The primary data for the study was collected by administering close ended questionnaires to 700 customers of private, public and foreign sector banks in the city of Bangalore, out of which 445 were complete and used for analysis .

Chi Square analysis was applied to investigate the association between awareness and need pattern of financial services offered by vaious private and public sector banks. This has been done by checking the awareness and need of 45 services offered by banks to its customers.

The following hypothesis were tested :

Hypothesis 1 The awareness of customers about banking services is independent of their Age, Gender, Education, Profession and Income.

Hypothesis 2 The need of customers for banking services is independent of their Age, Gender, Education, Profession and Income .

Hyothesis 3 Awareness and Need of financial services are independent of each other.

LIMITATIONS

1. The responses for the study have been solicited from the customers of various banks of Bangalore city only. The awareness and need of the customers in Bangalore may vary from those of the rest of India.
2. The responses collected have been assumed to be accurate and final.
3. The study suffers from the elements of bias
4. In the pilot study it was found that the customers were hesitant in revealing the number and kind of services they avail and subscribe from the bank. Therefore keeping this fact in mind, the questionnaire was redesigned and general services were included in the questionnaire to check only the need and awareness pattern from the respondents.
5. The secondary data collected is limited to the information available on the website. The time of commencement of various financial services was diffult to trace.

RESULTS AND DISCUSSIONS

- Out of 445 respondents, 59.3 % are males and 40.7% of them are females.
- 58.9 % of the respondents are educated upto post graduate level while 38.4 % of them are graduates, 0.7% of them are below graduate level and rest of the .7% are in other category are others
- 45.6 % of the respondents belong to the 21-30 years of age category, 32.1% or of the respondents belong to the age group of 31-40 yrs., 9.7% belong to 41-50 yrs. category, 7.0 % are above 60 yrs. of age and 3.8% belong to age

group of 51-60 yrs. of age.

- Majority of them, i.e. 41.6 % earn a salary between Rs. 1,00,000 to -Rs. 5,00,000 lakhs per year.
- 51% of the customers had account with public sector banks; 43% with private sector banks and 6% with foreign banks.
- An important factor regarding the use of technology amongst customers was that 52.1 % of the customers were well aware of it .

The result of hypothesis testing are presented under the following heads :

A. Chi-Square Analysis

The hypothesis was :

Hypothesis 1 : The awareness of customers about banking services is independent of their Age, Gender, Education, Profession and Income.

Out of 455 respondents, 264 (59.3%) are males while 181 (40.7%) are females. With x^2 =.218, $p>.05$, there seems to be no association between gender and awareness of financial services being provided by the banks .

As regards the age group of 445 the respondents, with x^2 =.017, $p<.05$, there seems to be an association between age group and awareness of services and both are dependent on each other.

Out of a total of 445 respondents, 315 respondents (70%) are educated employees. With x^2= .969, $p>.05$, there seems to be no association between awareness of services and occupation of the respondents.

185 respondents had income level between Rs. 1,00,000 and Rs. 5,00,000 with x^2=.724, $p>.05$, there seems to be no association between income level of the employees and awareness of the same.

Mentioning about the occupation of the respondents, the x^2 = .006, with $p<.05$. This helps ut to conclude that occupation of the respondents and awareness of financial services are dependent on each other .

Hypothesis 2 : The need of customers for banking services is independent of their Age, Gender, Education, Profession and Income.

Table 1 : CHI SQUARE VALUES FOR AWARENESS LEVEL AND VARIABLES

Demographic Characteristic	Pearson Chi Square	Df	Sig Value	Accept/ Reject Ho
Gender	53.16	46	.218	Accepted
Age Group	277.57	230	.017	Rejected
Education	108.72	138	.969	Accepted
Occupation	235.86	184	.006	Rejected
Income	127.69	138	.724	Accepted

Table 2 : NEED LEVEL OF SERVICES AND DEMOGRAPHIC VARIABLES

Demographic Characteristic	PearsonChi Square	Df.	Sig Value	Accept / Reject H0
Gender	35.04	45	.857	Accepted
Age Group	323.14	225	.000	Reject
Education	145.01	135	.263	Accepted
Occupation	259.33	180	.000	Reject
Income	130.12	135	.603	Accepted

Out of 455 respondents, 264 (59.3%) are males while 181 (40.7%) are females. With x^2 =.857, $p>.05$, there seems to be no association between gender and need of financial services being provided by the banks and they both are independent of each other .

As regards the age group, out of 455 respondents x^2= 000, $p<.05$. This makes us draw the conclusion that age group of respondents and need of financial services are dependent on each other. There sees to be a relationship between both of them and they are dependent on each other .

In the education level of 445respondetns, x^2=.263 with $p>.05$. This helps us come to a conclusion that education level of respondents and need of financial services are independent of each other and there seems to be no relationship between them.

The Occpation of the respondents, x^2 =.000, with $p<.05$. Therefore we can conclude that there is a relation between occupation of the respondents and need of financial servies with both of them being dependent on each other.

Last, mentioning about the Income of the respondents, there is no relation with need of financial services, since x^2=.603 with $p>.05$.

HYPOTHESIS 3: Awareness and Need of financial services are independent of each other

Table 3 : AWARENESS Vs NEED of SERVICES

	Need vs Awareness of Services	Pearson Chi Sq.Value	Sig. Value	AWARENESS		NEED		Reject /Accept Null Hyp.	A<N/ A>N
				Yes	No	Yes	No		
1	Gift Cheque	6.323	.013	205	240	234	211	Accept	A<N
2	Locker Facility	22.96	.000	369	76	298	147	Reject	A>N
3	Retail Loan	11.234	.001	294	151	232	213	Reject	A>N
4	Branch Banking	25.707	.000	394	51	355	90	Reject	A>N
5	Phone Banking	39.181	.000	373	72	334	111	Reject	A>N
6	Internet Banking	96.171	.000	376	69	409	36	Reject	A<N
7	Mobile Banking	36.661	.000	390	55	359	86	Reject	A>N
8	EFT/NEFT	63.950	.000	370	75	384	61	Reject	A<N
9	Loan Against Gold	14.693	.000	331	114	248	197	Reject	A>N
10	Housing Loan	2.336	.132	400	45	302	143	Accept	A>N
11	Loan Against Shares	27.095	.000	214	231	183	262	Reject	A>N
12	Donation for Charity	27.436	.000	174	271	195	250	Reject	A<N
13	Credit Card	31.636	.000	390	55	320	125	Reject	A>N
14	ATM /Debit Card	26.544	.000	428	17	400	45	Reject	A>N
15	Smart Card	19.665	.000	196	249	222	223	Reject	A<N
16	Health Card	32.165	.000	184	261	251	194	Reject	A<N
17	Credit Card Securitisation	46.978	.000	189	256	208	237	Reject	A<N
18	Pension Payment	17.105	.000	248	197	243	202	Reject	A>N
19	Tax Payment	31.624	.000	302	143	285	60	Reject	A>N
20	School rTuitio payment	21.265	.000	148	297	202	243	Reject	A<N
21	Cash MgmtServies	42.237	.000	186	259	168	277	Reject	A>N

	Need vs Awareness of Services	Pearson Chi Sq.Value	Sig. Value	AWARENESS		NEED		Reject /Accept Null Hyp.	A<N/ A>N
				Yes	No	Yes	No		
22	Sale of Entrance Exam forms	33.627	.000	142	303	173	272	Reject	A>N
23	Online Tel. & Electricity	39.278	.000	318	127	307	138	Reject	A>N
24	Recharging prepaid mob	48.856	.000	277	168	289	156	Reject	A<N
25	Online cash remittances	76.591	.000	268	177	285	160	Reject	A<N
26	Online ticket booking	57.217	.000	279	166	296	149	Reject	A<N
27	Home search	33.430	.000	220	225	130	315	Reject	A>N
28	Insurace	34.770	.000	330	115	290	155	Reject	A>N
29	Mutual Funds	35.922	.000	306	139	259	186	Reject	A>N
30	Depository services	57.321	.000	276	169	231	214	Reject	A>N
31	Investment banking	57.282	.000	271	174	230	215	Reject	A>N
32	LOC	31.457	.000	163	282	143	302	Reject	A>N
33	Consultancy Services	45.807	.000	160	285	159	286	Reject	A>N
34	Online stock trading	17.196	.000	213	232	197	248	Reject	A>N
35	Derivative	22.182	.000	140	305	150	295	Reject	A<N
36	RTGS	84.107	.000	297	148	236	209	Reject	A>N
37	Export Finance	30.195	.000	154	291	120	325	Reject	A>N
38	Business overdraft	21.876	.000	229	216	160	285	Reject	A>N
39	NRE NRO	14.210	.000	192	253	130	315	Reject	A>N
40	NRI Investment	20.340	.000	197	248	134	311	Reject	A>N
41	Forex remittances	23.667	.000	189	256	155	290	Reject	A>N
42	TravellersCheque	31.363	.000	225	220	180	265	Reject	A>N
43	Kissan credit card	31.925	.000	166	279	133	312	Reject	A>N
44	Microfinance	30.528	.000	173	272	145	300	Reject	A>N
45	Agricultural & rural credit	19.089	.000	186	259	143	302	Reject	A>N

Table 2.3 has recognized a relationship between awareness and need of financial services offered by banks. Chi-square test showed that the $p < .05$ in case of 43 services out of 45 financial services. This helps us to draw a conclusion that there is a relationship between awareness and need of 43 financial services except in the case of two services i.e. gift cheque and housing loan. This tables tells

Interpretation: Table 2.4 shows the division of all 45 financial services into four combinations of "Awareness and Need Pattern" of bank's financial services. As reported by respondents, out of 45 services , respondents were neither aware of 23 services nor do they need them in future. The respondents were aware of rest of 22 financial services also have either subscribed them already or will be needing them in future. As regards the other two options : " Not aware but need" and " Aware but do not need " there are no financial services that fall under this criteria.

Grid 2 : AWARENESS AND NEED PATTERN" of Financial Services			
NOT AWARE & NOT NEED (1)		NOT AWARE BUT NEED	
-Gift Cheque -Loan against SharesDeben -Facilitates donation for charity -Smart card services -Health Cards -Credit Card securitisation -School Tuition Fee Payment -Cash Management Services -Sale of Entrance Exam Form -Home Search -LOC / Export Bill Services -ConsultancyServices /Trade Services	-Online Stock Trading -Derivatives & Forward contract -Export Finance -Business Overdraft Facilities -NRE & NRO Account facilities -NRI Investment -FOREX Remittances -Traveller'sCheque -Kissan Credit Card -Microfinance Services -Agriculture and Rural Credit	There are no servies selected by respondents under this option.	
AWARE & NOT NEED		AWARE & NEED SERVICES(2)	
There are no servies selected by respondents under this option.	Locker Facility Retail Loan Branch Banking Phone Banking Internet Banking Mobile Banking EFT/NEFT Services Loan Against Gold Serv. Housing Loan Credit Card Services ATM Card/ Debit Card Pension Payments Tax Payment Services Online Telephone & Elec. Bill		Re-charging Pre-paid mobiles Online cash remittances Services Online Ticket Booking Services Insurance :(Life/ General) Service Mutual Fund Services Depository services Investment Banking RTGS

CONCLUSION

After the globalization and liberalization of the Indian Banking Industry since 1991, drastic changes have taken place. The banks have started offering many innovative financial services to its customers. With the change in the banking industry the customer has also become more aware and has started needing innovative financial services like insurance, investments, corporate banking, etc. According to this study it is conclude that demographic variables like age group and occupation of respondents affect the awareness of most of the financial services, whereas awareness of services does not depend on gender, education level and income of the respondents. The same conclusion has been drawn even for the need of financial services wherein gender, education and income of the respondents does not affect the need of financial services.

Out of a total of 45 finanical services almost 23 of them are neither known to the customer nor needed by them. The respondents are aware of rest of the 22 financial services and simultaneously need them currently or will be needing in future. This leaves an implication for the universal banks , that they have to take lot of efforts to generate awareness of these 23 financial services among their present and prospective customers . The banks will have to to for thorough advertising strategy using online as well as offline media track.

FUTURE SCOPE OF STUDY

The Indian banking industry is constantly evolving. The banks have transformed into super markets where they have started offering a hoard of services under a roof. Taking the current research to next step, a study can be conducted where the respondents can be asked whether they have subscribed to the new innovative services being offered by the bank or not. And if they have, the level of usefulness of the same can be measured and analysed. Another study can be carried out where a Universal Banking Score can be calculated for the banks . A study can be conducted focusing on the future requirement of customers.

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Changing Scenario of Banking: An Empirical Study on Customers' Perspective on Green Banking

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Indian Government is proposing quiet stringent policies for tackling the climate changes and financial service sector is also covered in the regime. The massive amount of carbon emissions and pollutants are fatal for the human kind and countries are making effort to create a carbon free economy. To foster environmental friendly products and services, one of the buzzword in banking industry is Green Banking. This paper is a niche attempt to unveil the awareness of green banking initiatives, frequency of usage of green services and the perceived benefits of using green banking services among customers of selected public and private sector banks in Punjab. The results revealed a high level of awareness about green banking concept and the most widely used green product found to be plastic money (debit and credit cards). The results highlighted that irrespective of the education level of customer, there is no difference in usage of green banking services. The findings showed three main perceptual benefits of green banking namely online transactions, safe and secure transactions and environmental benefits.

Keywords: Green Banking, Scenario, Customer, Environment Sustainability, Punjab, India

INTRODUCTION

The gigantic environmental changes are impacting the ecosystem a lot. No one is left behind from the vagaries of earthquakes, hurricanes, tsunamis etc. These changes in the environment are an alarming signal for all the stakeholders in the country. The responsibility to protect environment is not only of manufacturing companies alone but equally lies on other organizations including banking corporations. Banks are moving from traditional banking to green banking. The concept of Green bank has varied implications in terms of resource-efficiency, involvement of employees and saving money also. A green bank considers how its business model affects customers, employees and the communities it serves. Greening your bank isn't hard. According to Indian Banks Association (IBA, 2014) "Green Bank is like a normal bank, which considers all the social and environmental / ecological factors with an aim to protect the environment and conserve natural resources". It is also known as ethical bank or sustainable bank. The purpose of green banks is to perform banking activities, while taking care of earth's ecology, environment, and natural resources including biodiversity.

The saving of biodiversity can help world to become a better place to live with certain changes in the mankind's habits, including client habits in the banking sector. Green banking is a concept which aims at promoting environmental friendly practices and to reduce the carbon footprint from banking operations. It is a smart and proactive way of thinking with a vision of future sustainability. The ethical business behavior also demands actions which lead to generating profits but also to sustain them in an eco-friendly manner.

GREEN BANKING PRACTICES

Green Banking is an umbrella term encompassing eco-friendly products, services and processes being adopted by the banks. It may take the form of online banking, online bills, online account opening, Solar Powered ATMs, Energy-efficient branches, etc. The benefits of green banking are numerous like reduction of carbon footprint, efficient utilization of resources and cost cutting etc. Some of the newly invented green banking products, services and processes are explained below:

Green Products

a. Green Deposits: Deposits made through online channel of banking are termed as green deposits. Banks help to provide higher interest rates on commercial deposits, fixed deposits and saving accounts if customers choose to conduct their banking activities through online.

b. Green Mortgages and Loans: Loans and mortgages offered for energy efficient business are popularly known as green loans and mortgages. Some green mortgages allow home buyers to enjoy 15 percent of the price of their house into loans for upgrades including energy-efficient windows, solar panels, geothermal heating or water heaters. The savings in monthly energy bills can also offset the higher monthly mortgage payments and save money in the long run.

c. Green Certificate of Deposits: These are basically short term money market instrument known as green certificate of deposit. These are issued for promoting energy efficient business, business involved in promoting green energy or sustainable environment.

d. Green Credit Cards: A green credit card is just like a normal credit card with the only difference that the rewards or points earned by green cardholders can be redeemed for contributions to eco-friendly charitable organizations. These cards usually offer lucrative incentives for consumers to use their green card for their expensive purchases.

Green Services

a. Mobile Banking: Mobile banking is the most widely used green banking services of the banking industry. This product allows the customers to check balances, transfer funds or pay bills from mobile phone. It also saves time and energy and in reducing massive use of energy and paper of the bank. Most of the banks in India have introduced this paper-less facility.

b. Net Banking: Net Banking is similar to mobile banking. In this service, the customers can assess the various services of banks through internet. The customer needs to have only login account and user password. It helps in saving time and reducing energy and paper work.

c. E-Investment Services: Another step towards green banking is promoting e –investment services. E–investment services are basically concerned with providing online platforms for investors and traders for indulging in investments. This help in saving time, energy and paper. Banks allow their customers to provide all the necessary information for investments online.

d. Online Banking: This banking service helps in additional conservation of energy and natural resources. Online banking facilities include paying bills online, remote deposit, online fund transfers and online e-statements. It allows

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savings in terms of less paper, less energy and less expenditure of natural resources from banking activities. Customers can also save money by avoiding late payments of fees and save time by avoiding standing in queues and paying the bills online from home.

Green Processes

a. Green Reward Checking Accounts: This initiative of banks is to promote paperless society. The banks encourage customers through high bonus rates if they maintain a certain balance with the bank and use more of electronic statements, online bill payments or using a debit or credit card. This banking product combine higher rates along with eco-friendly living.

b. Use of Solar and Wind Energy: Using solar and wind energy is one of the decent way of going green. State Bank of India (SBI) has become the first bank in the country to start generation of green power by installing windmills for captive use. As part of its green banking initiative, SBI has installed 10 windmills with an aggregate capacity of 15 MW in the states of Tamil Nadu, Maharashtra and Gujarat. Using the same concept, other banks are introducing Solar powered ATMs, which can help reduce the electricity and save environment.

c. Energy Consciousness: Developing energy consciousness, adopting effective office time management and automation solutions and using compact fluorescent lighting (CFL) can help banks save energy consumption considerably. Banks should conduct energy audits in all of their offices for effective energy management. They can also switch over to renewable energy (solar, wind etc.) to manage their offices and ATMs.

d. Use of Recycled Paper and Waste: Banks are using recycled paper products for printing monthly statements, brochures, ATM receipts, annual reports, newsletters, copy paper, and envelopes etc. Indian banks are also employing vegetable-based inks instead of less environmentally friendly oil-based inks.

REVIEW OF LITERATURE

Jeucken (2001) focused on preparation of environmental risk and liability guidelines by banks and financial institutions on development of protective policies and reporting for each project they finance or invest. Gupta (2003) focused on the emerging needs of environment sustainable businesses and products and argued that in future, market will reward those industries or the companies, which emerge as the efficient users of the energy and raw materials and will penalize the less efficient one. Guo (2005) explained that commercial banks have to adopt proactive strategies for reducing internal operation risks from environmental issues thereby realizing long-term profitability by external financing of environmentally friendly products and services. Heim (2005) found that environmental sustainable projects are quite difficult to implement as it requires efficient management procedures, yet the benefits of environmental management system can be phenomenal and in cases have proven cost savings, increase in bond value etc. Sudeep (2006) elaborated the increased use of Internet banking as a part of green banking practices and explored that Indian customers' preference for internet banking depends on five variables namely perceived usefulness, perceived ease of use, consumer awareness, quality of facilities and subjective norms. The aspect of sustainable environment needs to be coordinated with all the participants to be in win- win situation. The solution to environmental problems through investment in pollution prevention or cleaner production equipment and machinery that improve industrial efficiency needs to be a triple win for all parties: “win” for the enterprise, “win” for the bank, and certainly “win” for the environment. Further the adoption of greener banking practices will not only be useful for environment, but also benefit in greater operational efficiencies. But there has not been much initiative in this regard by the banks and other financial institutions in India. Indian banks are unable to contribute towards the direction of environment yet they have a big role to play in the economy (Dhewanthi, 2007; Sahoo, 2008).

Global warming issues are alarming all sectors of economies with banks no exception. To cope with the same issue, Sharma (2011) argued that Indian banks are now becoming more conscious on Corporate Social Responsibility (CSR) and one of the main CSR is green banking. Recognizing the warning of global warming the State bank of India has initiated urgent measures to combat the climate change by reducing the bank's own carbon footprint and sensitizing the bank's clients to adopt low carbon emission practices. Joshua and Koshy (2011) explored that banks in India are increasingly providing services through electronic channels such as ATMs, Internet banking, Tele-banking and Mobile banking. ATMs have been widely adopted but the level of adoption of other electronic banking means despite their potential are yet to pick in a big way. Jain (2012) conducted a comparative study of public and private sector banks and concluded that the key areas of strength in case of public sector banks are accessibility, privacy and demo at the counter and the areas of significant improvement are: transfer of funds, convenience, timeliness, cost effective services and network coverage. On the other hand, key areas of strength in private sector banks are: bill payment, customer correspondence, e-shopping and technical efficient services. The areas where improvements are required are: receiving alerts, mobile banking, online trading and advertisement. Kumar and Singh (2013) undertaken a service quality survey of banks using SERQUAL and found that account holders were dissatisfied with the service quality dimension i.e. assurance followed by reliability, responsiveness, empathy and tangibles respectively. Such a study can be helpful in assessing weak areas of bank services, so that immediate steps can be undertaken. Khosla and Munjal (2013) argued that those banks which will be successful in creating customers by offering innovative and advanced services ahead of their competitors will reap more benefits, and recommended that bank should target their promotional activities towards literate, young and resourceful brigade who possess a rich potential to use e – banking services for long as can be generalized from this study. Nath, Nayak and Goel (2014) presented in a very concise and comprehensive way the various measures and initiatives taken by world bank and by central bank of India for combating the effects of environmental disasters and also focused on customer awareness of green banking products about public and private sector banks. Shakil, Azam and Raju (2014) tried to explore the green banking practices in various banks in Bangladesh using secondary data. They concluded that majorly state owned commercial banks, and state development banks are far lacking in implementation of green banking practices like ATMs or online banking. Further they focused the reason for non implementation is cost issue.

NEED AND OBJECTIVES OF THE STUDY

The perusal of literature revealed that green banking is a paradigm shift of banking towards environment sustainability and saving cost. The research papers and articles available in this regard are more conceptual in nature and focusing on benefits of the same. However, there is dearth of empirical research studies on green banking especially in Punjab.

Specific objectives of the study include the following:

- To study awareness regarding Green Banking concept among respondents.
- To examine the usage of various Green Banking

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products/services among respondents.
- To study the perceptual benefits of green banking initiatives to the customers

HYPOTHESES OF THE STUDY

- H_{o1}: Education level of customer does not affect the usage of green baking products.
- H_{o2}: Age of the customer does not affect the usage of green banking products.
- H_{o3}: Income of the customer does not affect usage of green banking products.

METHODLOGY USED IN THE STUDY

Data used

The primary data has been collected using a well structured questionnaire comprising of two sections. Section A consists of Demographic profile of the respondents and covers age, gender, occupation, income level, family members etc. and Section B comprises of nine questions related to various aspects of green banking like awareness of concept, awareness about various green banking products/services and usage of green banking products among customers and one likert scale question on benefits of green banking has been designed.

Locale of the Study

The study has been conducted at Jalandhar, Ludhiana and Amritsar districts of Punjab state during the time period February-March 2015.

Sampling Method and Sample Size

The data has been collected using non probability convenience sampling method. In total 150 respondents were targeted and questionnaire has been sent, out of which 32 questionnaires were not filled at all and 18 were rejected due to incompleteness and inconsistent responses. Finally the data has been analyzed and results have been interpreted based on 100 respondents.

Analytical Tools used

In order to interpret the data well, uni-variate descriptive statistics viz. mean and standard deviation have been used. Further to test hypothesis, bi-variate inferential statistics like chi square and Kruskal Wallis test have been employed. Further multivariate technique, factor analysis, has also used meticulously. For univariate, bivariate as well as multivariate statistics SPSS 20 has been employed.

DATA ANALYSIS AND INTERPRETATION

The data has been processed and analyzed so that findings can be interpreted, communicated and can be easily understood. The findings are presented in the best possible way with the help of tables.

Demographic Profile of Respondents and their Awareness Level about Green Banking

The demographic characteristics of respondents and their awareness level have been measured and the responses are as follows.

The demographic profile of the surveyed respondents revealed that majority of the respondents were male (82%) and belonging to the age category of 20-30 years (38%). The majority of respondent's family size lies between 4 & above (48%) and majority of the respondents were professionals (54%). The Income level of surveyed respondents was lying between 50,001 & above (52%). Majority respondents surveyed were using services of public sector banks like SBI, PNB and BOB (57%), whereas private banks' respondents were (43%). Further to empirically test the hypothesis that demographic profile has no significant relation with awareness level, chi square statistics has been used and the results were not found to be statistically significant.

Table 3: Demographic Profile of Respondents and Awareness Level		
Demographic Factors	**Number of Respondents**	**Percentage of Respondents**
Gender of the Respondent		
Male	68	68
Female	32	32
Total	100	100
Age of the Respondent		
20-30 years	38	38
30-40 years	15	15
40-50 years	20	20
More than 50 years	27	27
Total	100	100
Family Size		
2	3	3
3	18	18
4	31	31
4 & above	48	48
Total	100	100
Education		
Matriculation	6	6
Higher Secondary	13	13
Graduation	44	44
Post Graduation	37	37
Total	100	100
Occupation		
Self Employed	16	16
Business Man	20	20
Service Class	26	26
Professional	38	38
Total	100	100
Income per month		
Below 10,000	-	-
10,001-30,000	23	23
30,001-50,000	25	25
50,001 & Above	52	52
Total	100	100

Respondents' Bank	**No. of Respondents**	**Percentage of Respondents**
Punjab National Bank	24	24
State Bank of India	27	27
Bank of Baroda	6	6
HDFC Bank	14	14
ICICI Bank	20	20
Axis Bank	9	9
Total	100	100
Awareness of Green Banking	No. of Respondents	% of Respondents
Yes	93	93%
No	7	7%

**Chi Square not significant at 5% level*

Awareness about Green Banking Products

The main objective behind this question was to check the awareness level regarding various green banking services available and the responses are as follows:

Table 4: Awareness about Green Banking Products	
Green Banking Products/Initiatives	**Percentage of Respondents**
Green Checking	5%
Green Loans	8%
Green Mortgages	6%
Green CD's	3%
Controlled use of energy	12%
E-Statement	17%
Net Banking	21%
Solar Powered ATMs	11%
Energy-efficient branches and loans	2%
Recyclable Debit and Credit Cards	4%
Using Recycled Paper and Recycled Waste	5%
Conducting Workshops and Seminars	-
Bank Environmental Policy	-
Online Bill Payment	3%
Cash Deposit System	2%
E-Investment Services	1%
Communicate through the Press	-
Total	100

In this digital era, the awareness of Net banking as a green banking service was highest (21%) followed by E-statement (11%) and Solar Power ATM's (11%).

Usage of Various Green Banking Services

The respondents have been asked to mention the Green Banking services they are using and the responses are as follows:

On the basis of descriptive statistics, it is found that the most widely used green banking service among surveyed respondents was Recyclable Debit and credit card (Mean=2.70, S.D=0.58), followed by Mobile Banking (Mean=2.55, S.D=0.74) and Net Banking (Mean=2.25, S.D =0.54). The other used technologies in order were Paperless Statements (Mean= 2.19, S.D= 0.88), Use of Direct Deposits (Mean =2.06, S.D=0.51) and Online Bill Payments (Mean= 1.87, S.D = 0.95) respectively.

Hypothesis Testing

Gender and Usage of Green Banking

In order to test Null hypothesis (Ho2), there is no relation between gender and usage of green banking, chi square statistics have been used and the results are as below:

Table 5: Usage of Various Green Banking Services

Usage of Green Banking Services	N	Minimum	Maximum	Mean	Std. Deviation
Online Saving Account	100	1	3	1.72	.922
Paperless Statements	100	1	3	2.19	.884
Use Direct Deposit	100	1	3	2.06	.509
Online Bill Payments	100	1	3	1.87	.950
Reward Debit and Credit Card	100	1	3	2.70	.577
Net Banking	100	1	3	2.25	.539
Mobile Banking	100	1	3	2.55	.744
Phone Banking	100	1	3	1.56	.701
SMS Banking	100	1	3	1.10	.414
Valid N (listwise)	100				

(Note: The Mean is an average on a scale of 1-3, where, 1= Always, 2=Often and 3= Never)

Table 6: Gender And Usage Of Green Banking

Usage of GB		Gender		Total	Pearson
		Male	Female		Chi Square
Yes	Count	60	27	87	
	% within Usage of GB	69.0%	31.0%	100.0%	0.592*
	% within Gender	88.2%	84.4%	87.0%	
	% of Total	60.0%	27.0%	87.0%	
No	Count	8	5	13	
	% within Usage of GB	61.5%	38.5%	100.0%	
	% within Gender	11.8%	15.6%	13.0%	
	% of Total	8.0%	5.0%	13.0%	
	Count	68	32	100	

**Chi Square not significant at 5% level of significance*

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Perusal of table 6 tells us that there is no statistically significant association between Gender and usage of green banking that is, both Males and Females equally use green banking services.

After determining the association between selected variables gender and usage of green banking, Phi and Cramer's V have also been applied to tests the strength of association. The results of the symmetric measures show that the strength of association between the variables is very weak. On this basis, one can conclude that neither there is any association between gender of respondents and usage of green banking nor the association is strong. Thus we cannot recommend the banking industry to focus more on males or females for persuasion for green banking.

Age and Usage of Green Banking

Green Banking is a novel concept and is assumed to be used more by younger people more as younger generation is more inclined towards new products or innovations. Null hypothesis has been tested using chi square statistics and the results are as follows:

Table 7: Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.054	.592
	Cramer's V	.054	.592
N of Valid Cases		100	
a. Not assuming the null hypothesis.			
b. Using the asymptotic standard error assuming the null hypothesis.			

Table 8: Age and Usage of Green Banking

Age			Usage of GB		Total
			Yes	No	
Age	20-30 years	Count	36	3	39
		% within Age	92.3%	7.7%	100.0%
		% within Usage of GB	41.4%	23.1%	39.0%
		% of Total	36.0%	3.0%	39.0%
	31-40 years	Count	11	4	15
		% within Age	73.3%	26.7%	100.0%
		% within Usage of GB	12.6%	30.8%	15.0%
		% of Total	11.0%	4.0%	15.0%
	41-50 years	Count	19	1	20
		% within Age	95.0%	5.0%	100.0%
		% within Usage of GB	21.8%	7.7%	20.0%
		% of Total	19.0%	1.0%	20.0%
	Above 50 years	Count	21	5	26
		% within Age	80.8%	19.2%	100.0%
		% within Usage of GB	24.1%	38.5%	26.0%
		% of Total	21.0%	5.0%	26.0%
Total		Count	87	13	100
		% within Age	87.0%	13.0%	100.0%
		% within Usage of GB	100.0%	100.0%	100.0%
		% of Total	87.0%	13.0%	100.0%

Note:Pearson Chi Square non significant at 5%level

Table 8 unveils that age has no statistical significant relation with usage of green banking services among the surveyed respondents (p>0.05)

The symmetric measures as shown in table 9 further highlighted the weak association between the variables, hence it can be concluded that usage of green banking services are not related to age of respondent. Further, the relation between demographic feature age and green banking put light on the fact, that the concept of green banking is not yet reached the stage of growth, rather it is on the introductory stage only, so majority of demographic features are not showing any relation with the variable usage of green banking under study.

Education and Usage of Green Banking

Technology has always been used more by the educated people. Green banking is one such step towards technology. So in order to verify whether education has any relation with usage of green banking services, null hypothesis has been framed and tested. At the first outset, normality of data has been checked using K-S test , which showed data deviates from normal distribution (p values<0.05). Hence, the hypothesis has been tested using non parametric H-test and the results are as follows:

Table 9: Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.234	.140
	Cramer's V	.234	.140
N of Valid Cases		100	
a. Not assuming the null hypothesis.			
b. Using the asymptotic standard error assuming the null hypothesis.			

Table 10: Kruskal Wallis-H Test

Green Banking Services	Education	N	Mean Rank	Chi-Square	Asymp. Sig.
Online Saving Account	Matric	6	59.83		
	HS	13	47.12	1.084	0.781*
	Grad	44	50		
	PG	37	50.77		
	Total	100			
Paperless Statements	Matric	6	52.5		
	HS	13	47.31	0.243	0.97*
	Grad	44	51.08		
	PG	37	50.61		
	Total	100			
Use Direct Deposit	Matric	6	55		
	HS	13	51.19	0.535	0.911*
	Grad	44	48.93		
	PG	37	51.39		
	Total	100			

Green Banking Services	Education	N	Mean Rank	Chi-Square	Asymp. Sig.
Online Bill Payments	Matric	6	44.67		
	HS	13	60.54	3.049	0.384*
	Grad	44	51.42		
	PG	37	46.82		
	Total	100			
Reward Debit and Credit Card	Matric	6	35		
	HS	13	54.35	5.038	0.169*
	Grad	44	48.34		
	PG	37	54.23		
	Total	100			
Net Banking	Matric	6	40.08		
	HS	13	46.27	5.485	0.140*
	Grad	44	47.2		
	PG	37	57.59		
	Total	100			
Mobile Banking	Matric	6	48.83		
	HS	13	48.96	0.281	0.964*
	Grad	44	51.86		
	PG	37	49.69		
	Total	100			
Phone banking	Matric	6	61.5		
	HS	13	40.35	3.257	0.354*
	Grad	44	52		
	PG	37	50.5		
	Total	100			
SMS	Matric	6	47.5		
	HS	13	47.5	5.856	0.119*
	Grad	44	48.66		
	PG	37	54.23		
	Total	100			

**Not Significant @5%*

On the basis of Kruskal Wallis H test (refer table 10), it has been found that there is no significant difference between the categories of independent variables and as a result it can be concluded that education of customer and his usage of various green banking services has no significant relation. As a result the null hypothesis cannot be rejected.

Perceptual Benefits of Green Banking: An application of Factor Analysis

In order to gauge the perceptual benefits of green banking among the surveyed respondents they were asked to rate their opinion on various dimensions focusing benefits of green banking and the results are as below after applying the exploratory factor analysis.

Measure of Sampling adequacy (MSA) value (refer table 11) falls in the acceptable range (above .50) with a value of .861 for KMO and .000 for Bartlett's test (less than .5), these measures indicate that the set of variables are fit for factor analysis (Hair, Black, Babin, & Anderson, 2010).

Table 11: KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.581
Bartlett's Test of Sphericity	Approx. Chi-Square	451.948
	Df	136
	Sig.	.000

Table 12: Total Variance Explained

Comp.	Initial Eigenvalues[a]			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.204	16.490	16.490	2.339	12.037	12.037
2	2.939	15.128	31.618	2.464	12.681	24.718
3	2.052	10.560	42.177	2.160	11.116	35.834
4	1.960	10.090	52.267	1.914	9.851	45.685
5	1.739	8.949	61.216	1.805	9.290	54.975
6	1.263	6.502	67.718	1.703	8.763	63.738
7	1.146	5.899	73.616	1.919	9.878	73.616
8	.967	4.978	78.595			
9	.868	4.467	83.062			
10	.755	3.886	86.948			
11	.593	3.052	90.000			
12	.482	2.481	92.481			
13	.400	2.057	94.539			
14	.365	1.881	96.419			
15	.286	1.470	97.889			
16	.214	1.103	98.993			
17	.196	1.007	100.000			

Extraction Method: Principal Component Analysis.

Table 13: Rotated Component Matrix

Problem Variables	1	2	3
Green Banking Promotes investment in bonds & mutual funds meant for environmental investments	.845		
Green Banking supports E-statements	.777		
Green Banking promotes usage of recyclable debit & credit cards	.699		
Green banking involves Self operation		.913	
Green banking is Fully secured		.980	
Green banking provides Easy transfer of funds		.628	
Green Banking is beneficial for banks			.598
Green Banking is paper Savvy			.616

Table 14 : Factors Explaining Perceptual Benefits of Green Banking

Factors	Statements	Loading	Eigen Values	Variance Explained %	Cumulative Variance %
Online Transaction Benefit	Includes usage of recyclable debit & credit cards	.777	2.339	12.037	12.037
	It supports E-statements	.699			
	Includes usage of recyclable debit & credit cards	.845			
Safety and Security Benefits	Green banking provides Easy transfer of funds	0.913	2.464	12.681	24.718
	Green banking is Fully secured	.980			
	Green banking involves Self operation	.628			
Environmental Benefits	Green banking is Beneficial for banks	0.698	2.160	11.116	35.834
	Green banking is all about promoting environmental friendly practices	0.893			
	Green banking is Paper savvy	0.616			

The application of factor analysis revealed three main benefits of green banking termed as online benefits, security benefits and bankers' benefit. This sheds light on the fact that green banking is beneficial both for the customer as well as bank.

CONCLUSION

To conclude with it can be said that awareness regarding Green Banking among investors of Punjab is quite high. More than 80% of total investors surveyed were aware of Green Banking concept. The awareness was quite high among males as compared to females. The majority of the respondents using green banking products feel that green banking practices are environment friendly as well as help in saving their time, cost and efforts etc. Recyclable Debit and Credit Card, Net Banking, Mobile banking, E- statements and ATM's are the most popular products whereas, SMS- banking is the least used banking practice.

Application of factor analysis revealed three main perceptual benefits of green banking namely online benefits, security benefits and bankers' benefits. It can be said that as far as green banking is concerned, Indian banks are far behind their counterparts from developed countries. People in Punjab are yet to come forward for adoption of these practices as they don't have full knowledge and awareness regarding Green Banking. Banks will have to play a vital role to make their customers educated.

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Impact of Intrinsic Motivation on Academic Performance of Teachers: An Empirical Investigation

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The purpose of this study was to test the impact of intrinsic motivation on academic performance (API Score) of management teachers with special reference to Dr. A P.J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow. Respondents were drawn from different management institutions of NCR affiliated to Dr. A P.J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow. A questionnaire was distributed to 300 teachers and data collected for analysis. Total 20 questionnaires were rejected due to incomplete information and analysis was performed on 280 respondents. The findings suggest that the intrinsic motivation factors of management teachers affect their academic performance (API Score) significantly. The two most important limitations, which are discussed in more detail at the end of the paper, are the micro cultural dissimilarities and the reliance on self-reported questionnaire data The results support the view that intrinsic factors of individuals are major indicator of their academic performance. Despite the importance of motivation among teachers, there is little empirical research on intrinsic motivation of teachers.

Keywords: *Academic Performance Indicator (API Score), intrinsic motivation, Academic performance, teachers.*

INTRODUCTION

Intrinsic motivation is the driving force that is fundamental to the active nature of human beings. Intrinsic motivation is the tendency to engage tasks because one finds them interesting, challenging, involving, and satisfying. In order to be intrinsically motivated, a person must experience interest and enjoyment in his/her task, along with feelings of competency and self-determination. Extrinsic motivation is the tendency to engage tasks because of task-unrelated factors such as promise of rewards and punishments, dictates from superiors, surveillance, and competition with peers (Deci & Ryan, 1985). Intrinsic motivation remains an important construct, reflecting the natural human propensity to learn and integrate. Intrinsic motivation of teachers as well as students can create a great difference in the level of education and will provide support in realizing the excellence. In this kind of motivation inner attributes of individuals play very important role in behavior and performance comes out because the person feels enjoyment and satisfaction in doing that particular task. Intrinsic motivation has emerged as an important phenomenon for educators; a natural wellspring of learning and achievement that can be systematically catalyzed or undermined by parent and teacher practices (Ryan & Stiller, 1991). Kuvaas (2006) recently stated a strong relationship between intrinsic motivation and self-reported work performance among typical knowledge-workers. However, such employees may be much more energized by intrinsic motivation and the work itself when compared with more "ordinary" workers (Thomas, 2002). It has been observed that the link between intrinsic motivation and work performance has received very little empirical testing (Piccolo and Colquitt, 2006). Moreover, and despite the importance of intrinsic motivation among teachers in an era of transformation to a more learning-oriented approach, empirical research on motivation of teachers has received relatively little attention. Accordingly, the purpose of this study was to test the relationship between intrinsic motivation and academic performance of teachers from a broad cross-section of management education with the objectives of contributing to the development of quality education.

REVIEW OF LITERATURE

Intrinsic motivation, deriving from within the person or from the activity itself, positively affects behavior, performance, and well-being (Ryan & Deci, 2000). Mary, A. (2010) study revealed the effect of intrinsic motivation on the performance of teachers. A significant positive relationship existed between intrinsic motivation and performance of teachers implying that increase in intrinsic motivation increased the performance of teachers. Motivation can take you far, but it can take you even further if you first find your vision. Your vision will motivate and guide you on your journey to success and personal fulfillment. Trying to succeed at anything without first having a clear vision of what it is you want to accomplish will only lead to you going around in circles and eventually giving up in frustration. Vision comes from within, from the spirit or subconscious of individual. (Harness, 2013). A Personal vision is one of the primary sources of charisma and it inspires and motivates followers to higher levels of commitment and performance (Bryman, 1992). Boyatzis (2006) mentioned that Personal vision is the core mechanism of self-regulation and intrinsic motivation. It is an image of what kind of person one wishes to be, what the person anticipates to accomplish in personal life and work life. In the model of ideal self he mentioned self- efficacy, optimism, values, passion are the key determinants of the ideal self and ideal self leads to personal vision. According to Werkmeister (1967) commitment is a manifestation of the individual's own self, and reflects value standards that are basic to the individual's existence as a person. Commitment has served as a major construct of research for investigating the ties that bind someone to a particular occupation in a particular organization. Although several distinct dimensions of commitment have been found, all of them represent a binding force that inspires individuals to actions that are relevant to both the organization and the individual (Meyer and Herscovitch, 2001). Wool folk Hoy et al. (2008) explored individual teacher sense of academic optimism. They argued that academic optimism is a self-referent, positive belief about the capacity to teach all students, to form trustworthy relationships with parents and students, and to emphasize on academic tasks. In other words, academic optimism of teachers is a single latent construct that is reflective of an individual's psychological state. Luthans (2003) has reported that optimistic individuals are effortlessly motivated to work harder, possess high morale, and exhibit more goal-directed behavior. Optimists furthermore have the ability to persist under severe conditions, regard disappointments as temporary and valuable life experiences, and have a general inclination to be cheerful and mentally and physically energized. Bandura (1994) stated about the role of self-efficacy in human behavior. A strong sense of efficacy enhances human accomplishment and personal well-being in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities. It produces personal

accomplishments, reduces stress and lowers vulnerability to depression. Fives (2003) defined self-efficacy of teachers as a motivational construct, that reflects teacher's perception and beliefs regarding teaching specific tasks. He reported that teacher's self-efficacy has been conceptualized in terms of locus of control, which determines an extent to which an individual perceives that the consequences or outcomes in a given situation are within the control of an individual. Hence, with this focus teacher' efficacy was considered an extent to which teachers believed that those factors which are within the control of teachers, have a great impact over teaching outcomes, than believing that the environment held much impact over teaching outcomes. Amabile (1995) stated that, there are abundant evidences that people will be most creative when they are primarily intrinsically motivated, rather than extrinsically motivated by expected evaluation, surveillance, competition with peers, dictates from superiors, or the promise of rewards. Hennessey (2003) stated that Motivation plays a crucial role in the creative process. It is not enough to have unusually high levels of skill or a deep conceptual understanding. In order for individuals to reach their creative potential, they must approach a task with intrinsic motivation; they must engage in that task for the sheer pleasure and enjoyment of the activity itself rather than for some external achievement.

From the literature review it is coming out that the researchers have emphasized on one or two intrinsic variables for performance. For instance Bandura worked on "Self efficacy" or Amabile worked on "Creativity". It is not clear whether there could be more than one inner attributes that are responsible for one's performance. If there are more than one variable, how these variables interact with each other. It appears that the issue of inner drives or inner behavioral attributes has not been examined in comprehensive manner. The proposed research proceeds to investigate this gap.

RESEARCH OBJECTIVES AND HYPOTHESIS

The basic objective of the proposed study is how the performance is generated by the core construct of inner forces of an individual irrespective of the environment in which he/she is working. The proposed research aims at:

1. To identify the inner attributes which enforce intrinsic motivation and their influence on Academic performance (API score) of teachers.
2. To assess the impact of Intrinsic Motivation factors on Academic Performance (API score) of Teachers related to the Management Education.

The proposed study is based on the hypothesis that,

H11. Intrinsic self-motivating factors influence significantly the overall Academic Performance (API score) of the Management Teachers.

METHODOLOGY

This research study is initiated to explore the relative importance of intrinsic factors of motivation in Teacher's Academic performance improvement. The research study is performed within the context of Management education services of various private institutions of National Capital Region affiliated with Dr. A.P.J. Abdul Kalam Technical University, Lucknow. The questionnaire was administered to sample size of 300 faculty members. The method of sampling was multistage cluster sampling followed by stratified simple random sampling. The selection of faculty members from each cluster is based on relevant weightage in total population. Total 20 questionnaires were discarded due to incomplete information and analysis was performed on 280 questionnaires of respondents which were completely filled.

Measures

In the questionnaire, all items related to independent variables were taken on a five-point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree). Dependent variable Academic performance is measured through API score which are proposed for evaluating research and academic contributions of teachers as per UGC guidelines for teacher's assessment.

Independent variables

As per the review of available literature six frequently expressed intrinsic factors of motivation have been selected for study i.e. Personal vision, Personal value (commitment), Optimism, Self-efficacy, Creativity, & Achievement motivation. It is hypothesized that these variables create impact on academic performance of teachers. Personal vision was measured by 6 items and commitment was measured by 5 items in questionnaire. Sample items are "I am aware of my life purpose and it directs me in my decisions" and "I feel a strong sense of responsibility towards the task assigned to me". Optimism and Self-efficacy both were measured by 5 items for each in questionnaire. Sample items are "I rarely count on good things happening to me" and "I can remain calm when facing difficulties because I can rely on my coping abilities". Creativity was measured by 7 items and Achievement motivation was measured by 6 items in questionnaire. Sample items are "I am engaged in creative type work on a regular basis to improve myself" and

"Generally I want to know how well I have been doing, and use the feedback to improve myself".

Dependent variable

Academic performance of teachers was measured by Academic Performance Indicators (API score), points defined by UGC guidelines for calculating scores regarding academic contribution of teachers.

Analysis

Cronbach's alpha was calculated to measure the internal consistency reliability of the instrument Alpha coefficient ranges in value from 0 to 1. If the value of cronbach's alpha is greater than 0.7 then the instrument is considered reliable. The value of cronbach's alpha calculated came more than 0.7 and thus the instrument was considered reliable for the study. Linear Regression analysis was used to test the hypothesis.

RESULTS

To find out effect of various independent factors on research activities (academic performance indicator-API Score), regression analysis is being performed. We obtain value of R^2 =.308 (Table 1), and adjusted R square value = .293; which means 29.3% variation in research activity (API) depends on variation in various independent factors.

Model Summary (Table 1)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.555[a]	.308	.293	2.74001

To further test that the regression model will be good fit on this data or not, f-value is being calculated with the help of ANOVA. The calculated f-value is 20.25 (Table 2) and corresponding p value is 0.000, which means regression model will be a good fit for this data. The obtained regression model is shown in (Table 2) & (Table 3).

Performance = 14.97 + .21 Self-efficacy + .06 Achievement + .05 Personal values (commitment) + .28 Personal vision + .45 Creativity + .071 Optimism

The calculated t-value (Table 3) corresponding to regression coefficient of self-efficacy is 2.86 and corresponding p value is .005, which means that self-efficacy is significantly and positively affecting the academic performance of management faculty; while calculated t-value corresponding to regression coefficient of Achievement is 1.08 and corresponding p value is .279, which means that Achievement is not an effective predicator of academic performance of management faculty. Personal value (commitment) is having t-value .729 and related p value is .467, which means Personal

ANOVA (Table 2)

Model		Sum of Squares	Mean Df	Square	F	Sig.
1	Regression	912.350	6	152.058	20.254	.000a
	Residual	2049.593	273	7.508		
	Total	2961.943	279			

a. Predictors: (Constant), sum_optimism, sum_Pvision, sum_selfefficacy, sum_Achievement, sum_PvalueCommitment, sum_creativity

b. Dependent Variable: API_Score

Coefficients (Table 3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.977	1.934		7.745	.000
	sum_selfefficacy	.214	.075	.184	2.861	.005
	sum_Achievement	.062	.058	.068	1.084	.279
	sum_PvalueCommitment	.059	.081	.046	.729	.467
	sum_Pvision	.288	.061	.301	4.712	.000
	sum_creativity	.452	.064	.473	7.015	.000
	sum_optimism	.071	.038	.106	1.888	.040

a. Dependent Variable: API_Score

value (commitment) is also not an effective predicator of academic performance of management faculty. In case of Personal vision calculated t-value corresponding to regression coefficient of academic performance is 4.71 and corresponding p value is .000, which means that Personal vision is significantly and positively affecting the academic performance of management faculty. Creativity is another variable, where calculated t-value is 7.01 and corresponding p value is .000, which means that creativity is also significantly and positively affecting the academic performance of management faculty. The calculated t-value corresponding to regression coefficient of optimism is 1.88 and corresponding p value is .04, which means that optimism is significantly and positively affecting the research activities or API score of management faculty.

DISCUSSION

The purpose of this study was to test the effect of intrinsic motivation on academic performance of teachers in management field. The findings of this study suggest that intrinsic motivational factors have impact on academic performance of teachers. Among six intrinsic motivation factors selected as independent variable, Personal value (commitment) and achievement motivation are not affecting API Scores of teachers in significant manner. Other four intrinsic motivation factors: Personal vision, optimism, self-efficacy, creativity are affecting API Scores of teachers in significant manner. The calculated f-value is 20.25 in ANOVA table and corresponding p value is .000, which means regression model will be a good fit for this data. The overall results indicated that intrinsic motivation factors affect API Scores of teachers. On the basis of the results alternate hypothesis "H11: Intrinsic self-motivating factors influence significantly the overall Academic Performance (API score) of the Management Teachers" is accepted.

LIMITATIONS OF THE STUDY

Firstly, one of the critical assumptions of this work is that the environment in which faculty members of Dr. A.P.J Abdul Kalam Technical University; Uttar Pradesh are serving is constant. There can surely be variance from individual to individual micro cultural differences with in the same macro culture. Secondly, near about 30% variation in the dependent variable i.e. academic performance indicator (API score) explained by variation in the independent variables (i.e. self-efficacy, Creativity, Achievement motivation, Optimism, Personal vision, and Personal value (Commitment), which shows that the unexplainable part is very large, though this percentage of confidence is pretty adequate in inner attribute based behavioral & social science research and lastly reliance on the self-reported questionnaire data is again one limitation of the study.

CONCLUSION

There are different intrinsic factors which affect the performance of individuals. This study contributes towards identification of few selected intrinsic factors of motivation and their impact on academic performance of teachers. Accordingly, this study contributes to improvement of academic performance by obtaining support for hypothesis derived from it among a sample of management teachers.

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Impact of Resources in Enterprise Resource Planning(ERP) Implementation Process on Internal Process of an Organization

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In the previous information systems, processes cannot communicate effectively with each other, owing to many databases and conversion of data from one system to another was expensive. ERP systems was found to be a solution to these problems as they are configurable information system packages that integrate several business functions into a single system with a shared database. But proper implementation of ERP systems is always a major issue because it affects the organizational performance. This research paper focuses on understanding the effect of different resources during ERP implementation on Organizational process. Structural Equation Modeling through PLS software was used for the analysis. The study found that all the resources namely project management resources, software resources, hardware resources and database resources during ERP implementation affects the internal process of an organization.

Keywords: *Internal Process, ERP, Hardware, Software*

INTRODUCTION

According to Colmenares (2008), "Enterprise-wide system has become a format for producing full organization integration by inclusion of all functional areas". Palaniswamy and Frank (2002) based on an exploratory study also stated that, prior to implementation of ERP, many firms faced problems in using the available information because of the incompatibility among the various computer hardware and software systems. Davenport (2000) also asserts that advances in IT and the plethora of mergers and acquisitions in the 1980s and 1990s created a global economy and since in the previous systems, processes cannot communicate effectively with each other, owing to many databases and conversion of data from one system to another was expensive, companies increasingly started investing in ERP systems.

Robey et al. (2002) says, "ERP systems are integrated cross-functional systems containing selectable software modules that address a wide range of operational activities in the firm, such as accounting and finance, human resources, manufacturing, sales, and distribution". "ERP systems consist of a software package that uses database technology to control and integrate all the information related to a company's business including customers, suppliers,

products, employees, and financial data" defines Falk (2005).

Three elements defining ERP are identified in Akkermans et al. (2003), namely, a technical, a functional, or a business perspective. From the technical and functional perspectives, material requirements planning (MRP), manufacturing resource planning (MRP II), and ERP represent the development of methods and software tools for the planning and controlling of resources for manufacturing companies (Bergstro¨m and Stehn, 2005). MRP systems could initially be used for calculating material requirements and handling orders, but were expanded to handle capacity planning and scheduling (Umble et al., 2003). In the business perspective, ERP can be viewed as a business approach integrating strategic and operational functions through the entire organization.

According to Boykin and Martz (2004), ERP systems forced the organization from a task-oriented approach to the newer process view. Davenport and Brooks (2004) emphasized that enterprise systems are main drivers to apply a cross-functional process management. According to Miller (2003), the important elements of ERP are: one comprehensive real-time database for reducing data redundancy and better accuracy; integrated business process and seamless transitions between business transactions.

According to Ushasri (1999), "ERP solutions use technology to address business issues, at the same time striving to keep technology transparent for the users. Users do not need to learn more about bits and bytes but they need to know how operational and long-term business issues could be effectively addressed with technology, with a user-friendly interface". ERP systems are configurable information system packages that integrate several business functions into a single system with a shared database. In the manufacturing industry, the supply chain concept has been one model for improvements in efficiency. Supported by IT-based software systems, holistic production philosophies such as lean production and comprehensive planning methods such as enterprise resource planning (ERP) are used to manage parts of or the entire supply chain (Crowley, 1998).

ERP is defined as asset of combination of software programs based on business organization s need and tying all the separate systems in one system, one screen, so it ties the systems of human resources, accountant, finance, inventory, production, marketing, all in one system; facilitates the job's run, raises the efficiency of employees, giving more reliability, flexibility, saving time and effort of all the people and managers who work in the organization. It will be really a better way to run job in the turbulence environment, also being ready for receiving and development of the coming future, in parallel with the development of information technology which is also changing from time to time (Karen,2007).

RATIONALE

ERP projects always contain a high level of risk and uncertainty. The purchase of ERP software is a high-expenditure activity that consumes a significant portion of their capital budgets (Verville, Bernadas and Halingten, 2005) and since ERP system are profoundly complex pieces of software and costly systems (Al-Mashari et al., 2003; Luo and Strong, 2004, King and Burgess, 2006; Kumar et al., 2003, Somers and Nelson, 2003, Hsu and Chen, 2004), installing them requires large investments of time and expertise (King and Burgess, 2006).Hedman and Borell (2004) explained that evaluating ERP systems is an important tool for improving selection, development, implementation and usage. According to Uwizeyemungu and Raymond (2010) also, the ex-post evaluation of ERP systems is necessary not only to justify the investments made in these systems, but also and above all to better manage the benefits sought by organizations from these systems.

Besides, Reviews by Esteves and Pastor (2001), Jacobs and Bendoly (2003), Møller(2005), Brynjolfsson and Yang (1996), Bharadwaj et al.(2000), Poston and Grabski (2001), Esteves and Bohorquez (2007) and Moon (2007) indicate that a majority of ERP research focuses on ERP selection, success factors, and the implementation phase, but seldom on post- implementation impacts. This highlights a critical research gap, as there is a great need for continued improvement and assessment as ERP use evolves over time. Laudon and Laudon (2000) stressed on viewing ERP system from a comprehensive perspective. Brynjolfsson and Hitt (1998) observe that the IT payoffs are contingent; therefore they encourage the research of factors that leverage the impact of IT on firm performance.

An ERP project failure may threaten the existence of an organization. A wrong ERP project selection would either fail the project or weaken the system to an adverse impact on company performance (Wei and Wang, 2005). Therefore, it is critical for organizations to have as much information as possible prior to embarking on an ERP project and require an evaluation of ERP. Thus, an extensive study of research done with respect to ERP, points at the scarcity of studies on ERP and its effect on organizational performance in the post-implementation stage. In India, the empirical studies on the ERP are almost negligible and very few have focused mainly on pre-implementation. To fill this void, the present study is undertaken with an aim to reassess possible benefits, which could further clarify the myriad of factors affecting the ERP and firm performance relationship.

LITERATURE REVIEW

Davenport (2000) proposed that implementing the ERP systems bring many benefits for the organization including reduction of cycle time, promotion the flowing efficiency of information, generating the financial information fast, proceeding the e-business, and assistance in development of new strategies. Brown (1997), Gilbert (2000), Glover et al. (1999), Knorr (1999), Rizzi and Zamboni (1999), Wah (2000), Davenport (1998), Krumwiede and Jordan (2000), Kang et al. (2008), Pan and Jang (2008) suggested that implementing ERP systems provides many benefits to organizations like integrating organizational processes , reduce costs, procurement leverage, provide accurate and timely globally integrated information across the business partners, conversion to year 20002 compliant software, managing e-business, adaptability to re-configure the business and improve effectiveness, firm performance, decision support and customer's satisfaction.

Most companies expect ERP to reduce their operating costs, increase process efficiency, improve customer responsiveness and provide integrated decision information. They also want to standardize processes and learn the best practices embedded in ERP systems to ensure quality and predictability in their global business interests by reducing cycle times from order to delivery (Ross, 1999). ERP systems are perceived to be a tool to tackle today's increasing complexity, as they provide two major benefits: a comprehensive and unified view of the organization and a common database in which all business transactions are recorded and stored (Umble et al., 2003). Accordingly, some ERP vendors used to boast the ability of their ERP to both improve the operations of the company and to give it a competitive edge (Bailey, 1999). Benefits of ERP include ease of saving and receiving of data, integration of processes, visibility of data, and increase in overall enterprise operational activities quality (Olhager and Selldin, 2003). Nicolaou and Bhattacharya (2006) also opinioned that the factors of the post-implementation review were important and discussed that, using post-implementation review resulted in improved differential performance.

According to Shang (2000), companies expect significant benefits, namely increased operational

efficiency and competitiveness otherwise known as defensive and offensive benefits (Nolan and McFarlan, 2005). Gattiker and Goodhue (2002) suggested four major categories of ERP benefits including: better information flow across subunits through standardization and integration of activities, centralization of administrative activities, lower maintenance costs of information systems and greater ability to deploy new IS functionality, and transformation from inefficient business processes toward an accepted best of practice processes.

But, Adam and O'Doherty (2000) stated that though ERP systems have beneficial effects, these benefits are matched with high level of risk because of complexities of ERP systems. Some companies even abandon implementation of ERP projects or achieve only some of the benefits they aim (Martin and Cheung, 2005; Sammon and Adam, 2004; Al-Mashariet al., 2003). King and Burgess (2006) reported that many implementations of ERP have been criticized regarding the time; cost and disruption caused by the implementation and sometimes limited benefits once the systems become operational. Sammon and Adam (2005) also reported that planning phase of an ERP implementation project, the complexities of the ERP market and complex implementation caused high rates of failure in ERP project implementation.

Karimi et al. (2007) has the opinion that ERP implementation remains however one of the most significant challenges for IS practitioners in the past decade. Implementation related publications account for about one third of the articles reviewed and is the more developed research as far as the researchers related to ERP are concerned. Tsai et al.(2005) and Lui and Chan(2008) also expressed that though ERP system are used around the world since many years, still there are many recent reports saying about the complexity and the difficulties in ERP implementation. This complexity arises mainly because these systems integrate and process large amounts of data.

RESEARCH METHODOLOGY

The study is directed to companies that had already implemented an ERP system. Specifically, the survey was administered to employee of the manufacturing companies who were involved in implementation process and are now the end-users. Three criteria guided the selection of the cases: (a) the firm should be in manufacturing, (b) it must have been using an ERP system for at least 1 year, and (c) it must have been using the system in at least two core business processes.

Data was collected from 67 manufacturing organizations that fulfilled the above criteria's and the sample of the study constituted of 750 individuals working in these manufacturing companies. Using non-probabilistic judgemental sampling, a total of 900 surveys were collected, after several follow-up e-mails and phone calls. The reliability control has shown that 16.7 percent of respondents were unreliable, as some questions were left unattended. Moreover, in some cases, the observed responses were artificially inflated as a result of respondents' tendencies to respond in a consistent manner. The sample of 750 respondents was finalized with respect to the following classifications:

Gender	Male	547
	Female	203
Age	20-35	198
	36-50	422
	51-65	130
Educational Qualification	Graduate	221
	Post Graduate	467
	Diploma	62
Position in company	Junior level	160
	Middle level	485
	Senior level	105

Also, given that the phenomenon under study, effects of ERP, is complex and that one requires a deeper understanding of it in its actual context, a qualitative methodology is more appropriate (Bourlakis and Bourlakis, 2006). Hence, the focus of this paper will be on the operational and intangible gains resulting from ERP implementation (which will be operationalised by many variables tested in this study). The performance indicators chosen were actually taken by the managers and ERP vendors through the interviews, together with the literature review.

PLS-Graph was used to test the hypothesized relationships among the study variables. The choice was motivated by several considerations. PLS is a non-parametric estimation procedure (Wold, 1982). Its conceptual core is an iterative combination of principal components analysis relating measures to constructs, and path analysis capturing the structural model of constructs. The structural model represents the direct and indirect causal relationships among constructs. It can be used to estimate models that use both reflective and formative indicators, is more appropriate for analyzing moderating effects because traditional techniques cannot account for measurement error in exogenous constructs (Fornell and Bookstein, 1982) allows for modeling latent constructs under conditions of non-normality, and is appropriate for small to medium sample sizes (Chin, 1998a,1998b ; Chin and Newsted, 1999).

RESULTS AND DISCUSSION

The model was designed to study the effect of different components of ERP during implementation phase on the changes caused by ERP on organizational performance and productivity. To assess the psychometric properties of measurement model, individual item loadings, internal consistency, convergent validity, and discriminant validity were examined of the reflective first-order factors (database, project management, software and hardware resources).

The loadings of the measurement items on their respective factors were examined. Finally, the model included the items whose loading were above the threshold value on their respective factor and were statistically significant at the 0.001 level, which provides support for convergent validity (Figure 1). Two items (1 database resource and 1 project management resource) were deleted which include There was a difficulty in transferring data from previous software and Task assignments were well-defined during the ERP implementation.

The study assessed convergent validity by examining composite reliability and average variance extracted from the measures. Although many studies have used 0.5 as the threshold reliability of the measures, 0.7 is a recommended value for a reliable construct (Chin, 1998a, 1998b). For the reflective measures, rather than using Cronbach's alpha, which represents a lower bound estimate of internal consistency due to its assumption of equal weightings of items, a better estimate can be gained by using the composite reliability measure (Chin and Gopal, 1995). As shown in Table 1, the internal consistency of all reflective constructs clearly exceeded 0.70, suggesting strong reliability. For the average variance extracted by a measure, a score of 0.4 indicates acceptability (Fornell and Larcker, 1981). From the table it is clear that AVE by all reflective measures (except Internal Process) is more than 0.4, which is above the acceptability value.

Table 1: Verification of Convergent Validity

	AVE	Composite Reliability	Cronbachs Alpha
Internal	0.297326	0.940943	0.935009
database	0.574053	0.728417	0.261031
hardware	0.683388	0.811902	0.536898
project mgmt	0.400127	0.868842	0.831775
software	0.45025	0.70868	0.402665

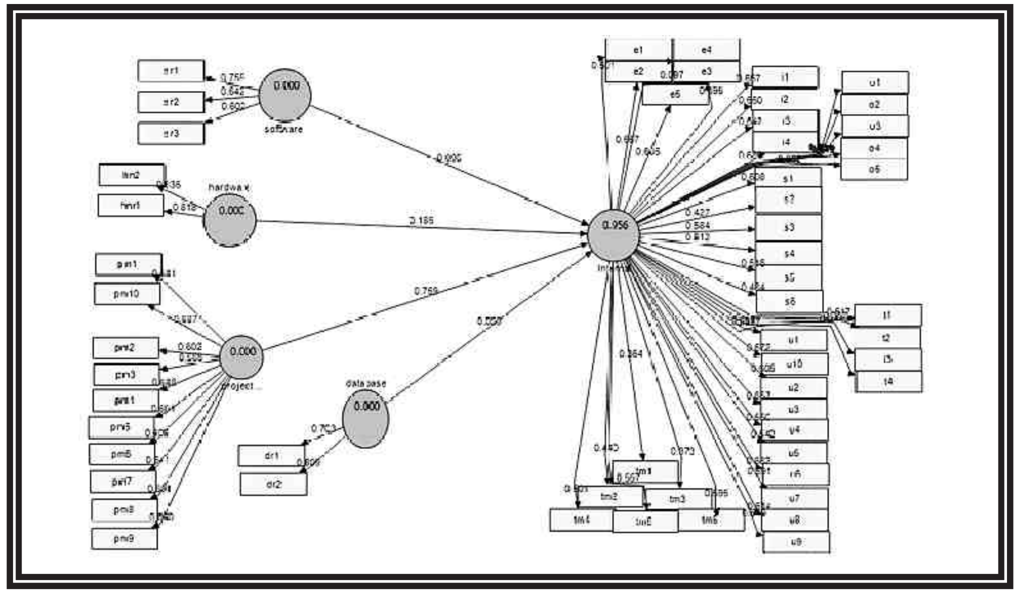

Figure 1: Model Displaying Relationship Between Components of Implementation Phase and Change Caused by ERP on Internal Processes after Removal of Some Items.

Finally, the study verified the discriminant validity of the instrument by comparing the average variance extracted (AVE) (Fornell and Larcker, 1981). It is clear from the table 2 that the square root of the average variance extracted for each construct is greater than the levels of correlations with other constructs. The results of the inter-construct correlations also show that each construct shares larger variance with its own measures than with other measures.

Discriminant validity is also confirmed, when items related to a particular factor have the highest load on that factor and is higher than a difference of 0.2 on the other factor in the cross loadings table. When we look at the cross loadings table-3, we find that these conditions holds good (some cases difference is nearly equal to 0.2, which is acceptable).

The PLS modeling approach involved two steps - validating the measurement model and then fitting the structural model. The former is accomplished primarily by reliability and validity tests of the measurement model, followed by a test of the explanatory power of the overall model by assessing its explained variance, and the testing of the individual hypotheses (structural model). The model shows that the explanatory power is 96.1 % which is considered excellent for the studies of this nature. For testing the individual hypotheses, a bootstrap re-sampling procedure was conducted and coefficients were estimated.

H_{01}: Project Management Resources during implementation phase of ERP system does not have

Table 2 : Verification of Discriminant Validity

	database resources	hardware resources	project mgmt resources	software resources
database resources	**0.7549834**			
hardware resources	0.247158	**0.8246211**		
project mgmt resources	0.501847	0.648164	**0.6324555**	
software resources	0.497841	0.339519	0.573341	**0.6708204**

an association with change caused by ERP system on internal process.

H_{02}: Hardware and Networking Resources during implementation phase of ERP system does not have an association with change caused by ERP system on internal process.

H_{03}: Software Resources during implementation phase of ERP system does not have an association with change caused by ERP system on internal process.

H_{04}: Database Resources during implementation phase of ERP system does not have an association with change caused by ERP system in post implementation phase on internal process.

All the hypothesis are rejected since the tabulated value is more than 1.645, hence there is arelationship between ERP implementation phase and internal process of an organization. However, past research overwhelmingly reports that the immediate after-effects of ERP implementations are fraught with productivity and profitability problems (Davenport, 1998; Poston and Grabski, 2000, 2001; Hitt et al., 2002; Hunton et al., 2003; Nicolaou, 2004a, 2004b). These are thought to be due to possibly severe systems integration problems, misalignment between people, processes and technology, and overall change management issues during and shortly after

Table 3: Cross Loadings Table

	database resources	hardware resources	project mgmt resources	software resources
dr1	0.702563	0.116263	0.332984	0.354314
dr2	0.809018	0.24735	0.422188	0.399005
hn2	0.211708	0.835494	0.515268	0.268148
hnr1	0.196658	0.817756	0.557555	0.293898
pm1	0.370604	0.39294	0.680922	0.363602
pm10	0.285621	0.386529	0.687419	0.386836
pm2	0.336293	0.295305	0.601755	0.36342
pm3	0.183396	0.348745	0.564799	0.291131
pm4	0.175288	0.482165	0.688254	0.329858
pm5	0.229991	0.394278	0.601416	0.291154
pm6	0.297823	0.48378	0.606284	0.370857
pm7	0.312853	0.341128	0.541241	0.34159
pm8	0.423584	0.536886	0.691404	0.487812
pm9	0.5355234	0.401487	0.640318	0.388097
sr1	0.356938	0.324116	0.483097	0.759222
sr2	0.34042	0.199394	0.340157	0.642198
sr3	0.309002	0.124475	0.303021	0.601592

Table 4: Correlation between Different Components of ERP in Implementation Phase and Internal Process of an Organization

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)
Database resources -> Internal	0.058542	0.056996	0.027723	0.027723	2.111683
Hardware resources -> Internal	0.185226	0.185044	0.038694	0.038694	4.786939
project mgmt resources -> Internal	0.758551	0.755281	0.041244	0.041244	18.39191
software resources-> Internal	0.096245	0.097623	0.031682	0.031682	3.037817

the implementation process (Nicolaou, 2004a; Murray and Coffin, 2001; Ross and Vitale, 2000; Scott and Vessey, 2000; Soh et al., 2000).

Having clarity about ERP adoption vis-a` -vis business vision positively impacts the overall success of the software (Davenport, 2000; Deloitte Consulting, 2000; Stefanou, 2001). According to Oesterle et al. (2000), success or failure hinges on the effective collaboration among the project teams, the business knowledge of internal business experts and the technical skills of outside IT consultants. On the other hand, Sammon and Adam (2005) argue that unsatisfactory success rates of ERP implementations to date is not an indication of the failure of ERP as a concept, it is the result of inadequate analysis of business requirements in preparation for ERP projects.

Our study found association between project management resources and change in performance. In accordance to our study, managers have reported that one of the problems associated with implementing packaged software is the incompatibility of features with the organization's information needs and business processes. To achieve the greatest benefits provided by an ERP system, it is imperative that the business processes are aligned with the ERP system. For mid-sized organizations, the risks associated with implementing ERP may be greater than those for larger enterprises, not only because they lack the critical human and technical capabilities of larger organizations, but also because they have fewer resources to rely on in case of disaster. However, Sammon and Adam (2004) noted that high rates of failure also exist in ERP project implementation due to combined effect of inadequate organizational analysis at the beginning of the project, the complexities of ERP market and complex implementation. Ferratt et al. (2006) investigated more than 70 enterprise-resource-planning (ERP) projects and found that greater success in implementation is related to greater adoption of the best practices.

Bergstrorm and Stehn (2005) survey results show a general lack of real drivers for ERP implementation and low awareness of the potential benefits and strategic importance, indicating that ERP is not yet regarded as a way of supporting and improving core business strategies. Hence, it is not the implementation of a software system that will yield the major benefits. Rather, it is the change processes aiming for organisation-wide improvements and the ERP approach adoption that will contribute to increased competitiveness.

The study indicated association between database resources and effect of ERP on internal process of an organization. However, in this context, it has often been argued that the quality of data/information is a major determinant of ERP success (Yusuf et al., 2004; Huang et al., 2004; Zhang et al., 2005; Gattiker and Goodhue, 2005). Hence, companies should pay more emphasis on the quality of data.

The study indicated that Software Resources contribute to ERP system success. However, Umble and Umble (2002) advocated the importance of software capabilities. They found that if the software capabilities and needs are mismatched with a company's business processes, this can lead the ERP implementation to failure.

The results indicated that hardware and networking resource were associated with changes caused by ERP system on internal performance of the organization. Hence, the vendors should make sure that adequate infrastructure is planned for in a way that it becomes reliably available well in time (both for the pre-implementation and the post-implementation stages). They should ensure network support, deploying of adequate server/ network, even during the training/modelling phase and introducing new PCs with latest configuration.

CONCLUSIONS AND LIMITATIONS

Vendors are the individuals who are responsible for the implementation of the software, and it is also their responsibility to make sure that all the resources are properly given complete focus. Since, project management involves, clear outlining of the milestones and critical paths along with the training and human resource plan and creation of a steering committee which includes top level management from diversified business functions. There should be an active monitoring of the status of milestones and targets in order to check the progress of an ERP project. Focus on building a teamwork environment where team size spans across the entire organization. ERP education should be carried out across the organization about ERP success and failure practices. Taking into account the most important needs of the implementation; the overall ERP architecture should be established well before the deployment. To ease the process; rigorous and sophisticated software testing should be performed. Variety of test cases should be executed in order to perform a rigorous system testing before the system goes live. This includes performing simulation and executing test cases to check the robustness of the system. The ERP team should consist of "best and brightest brains" in the organization. It should include cross-functional expertise and a blend of internal staff and the external consultants. The amount of interaction between them makes the contributing factor for the success of the project. Communication among various functions/levels and specifically between business and IT personnel is another identified critical area. This requires a communication plan to ensure that open communication occurs within the entire organization, including the shop-floor employees as well as with suppliers and customers.

As this study was based on a self-administered exploratory survey, where only closed ended questions were used in the response sheet. This restricted the ability of researcher to ask open-ended questions, which may have assisted in offering a better understanding of effect of ERP on organizational performance and productivity. Managers may want an in-depth evaluation of ERP system in their organization. A case-study method might also have been adopted for an evaluation of effect of ERP system on single organization. Similar studies can also be carried on cross cultural domains to explore cultural dissimilarities and to explore whether effect of ERP system is consistent across cultures or not and there by conducting study in these areas, one can compare the results and look the gap in order to further investigate the effect of ERP system.

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BRIEF PROFILE OF THE AUTHOR

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Consumers' Attitude and Purchase Intention towards Counterfeit Products: Empirical Evidence from Uttarakhand State

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The market for consumer goods is immensely significant in India in terms of both magnitude and spending capacity. This makes it a country that is attractive for product counterfeiters, which poses a major risk for both companies and consumers. The aim of the present research study is to identify factors which influence consumers' attitude to purchase counterfeits and its relationship with their demographic characteristics. Data was collected from a sample of 325 consumers using an online questionnaire developed on Google docs. The results indicate that a majority of consumers make a willing decision to purchase counterfeits and fashionwear and its accessories are the prime area for counterfeits. The findings also show that subjective norm and status influence play important roles in consumer intention towards purchasing counterfeits. Similar to prior studies, this study advocates that lower price, customer willingness to purchase, hedonic purpose, reasonable performance and satisfactory past purchase behavior are the strong antecedents of purchase intention of counterfeits. The research findings can help marketers better understand how and why consumers are driven to purchase counterfeit products rather than the originals and thus to create effective marketing campaigns and anti-counterfeiting efforts.

Keywords: *Counterfeits, Consumer Attitude, Purchase Intention, India.*

INTRODUCTION

Globalization, increase in world trade, emerging new markets, technology advancements and the increase in goods those are worth imitating have all contributed to the catalytic growth of counterfeiting across the globe. Globally, sales of counterfeit goods were approximately $300 billion in 2009 and are expected to increase annually due to strong demand (Gentry et al., 2006; OECD, 2007). Counterfeiting is the unauthorized representation of a trademarked brand which is closely similar or identical to genuine articles, including packaging, labeling and trademarks, but normally lowers in performance, reliability, and quality, intended to pass off as the original product (Ang et al., 2001).This unauthorized manufacturing and selling of goods may cause the loss in sales, damages the brand image, loss of goodwill and customer's trust and consequently leads to the failure of the organization. International chamber of commerce estimates that counterfeits worth $750 billion per year globally and holds more than 7-10 % of total trade in the world (ICC, 2011).

It has been recorded that 40-45% of goods sold in the Indian market are counterfeit goods (ASSOCHAM, 2014; FICCI-KPMG, 2015). Indian FMCG counterfeit market at the end of 2014 stood at 65 % of the total market of counterfeit products, which was worth Rs 1.05 lakh crore. The FMCG counterfeit market stood at Rs 68,000 crore at the end of 2014 (FICCI-KPMG,

2015). The counterfeit products market is expected to grow at a compounded annual growth rate of 40-45%. The counterfeit luxury retail market in India is likely to double to Rs. 5,600 crore by 2015 (ASSOCHAM, 2014). Global corporations view India as one of the key markets from where future growth is likely to emerge. The growth in India's consumer market would be primarily driven by a favourable population composition and increasing disposable incomes. The trading of luxury goods in India has proved to be a lucrative market. With such a rampant counterfeit industry, it could reduce profits and attractiveness for companies and may threaten the brand equity of international and local luxury products.

Consumers play a crucial role in counterfeit trade and willing consumer participation is evident worldwide, especially in developing countries like India. People buy the brands which are famous and popular in public in order to get social acceptance. Customers, who cannot afford the genuine brands, generally buy counterfeits. The Price advantage of counterfeits over genuine goods also helps in maintaining continuing demand. Morality and lawfulness in consumers' mind is not strong enough to push them not to buy counterfeit goods (Cordell et al., 1996). Counterfeiting has become a global economic phenomenon considering the demand for such products. This makes the study of why consumers decide to purchase counterfeits more worthwhile. In particular, a study of this nature is justifiable in Indian context as it is the second fastest growing economy in the world, after China. Together with a population of 1.25 billion people, India is designated as the second largest emerging consumer market in the world and rapid economic transformations have led to an increase in consumption. Moreover, this research is interesting to be done because India occupied the third position of nations that had the highest product counterfeiting level in Asia in 2013 (United States Customs and Border Protection, 2014). The outcomes of this study will be of immense value to marketers of genuine brands in framing appropriate strategies to market their products in this emerging market.

LITERATURE REVIEW

Researchers have identified two types of consumers of counterfeit products. The first would be a victim, who unknowingly and unintentionally purchases counterfeits due to it being so closely similar to the genuine articles (Grossman and Shapiro, 1988; Bloch et al., 1993). However, the second is a willing consumer of counterfeits (Bloch et al., 1993; Cordell et al., 1996; Prendergast et. al., 2002). A counterfeit is a lower-quality, lower-price choice whereas a genuine item is a higher-quality, higher-price choice (Gentry et al. 2006; Prendergast et al. 2002). However, counterfeit consumers don't mind low quality and poor materials because they do not see counterfeits as inferior choices and appreciate the economic benefits of counterfeits (Nia and Zaichkowsky, 2000). Consumers easily accept counterfeits when they focus on hedonic rather than utilitarian needs. Consumers, who purchase for a pure hedonic reason, don't feel embarrassed when other notice themusing counterfeits and are less concerned about the low quality of such products. Consumers will have the identical appearance, whether they wear a counterfeit or an original, but consumers for originals purchase originals for what luxury means, whereas consumers for counterfeits, who need only resemblance, purchase just the prestige of the originals without paying for it (Penz and Stöttinger 2005).

Counterfeits do not affect the demand for the originals, since consumers strongly believe that originals provide the exclusivity, durability, better quality, after-sales service, status, ethicality, and legality (Nia and Zaichkowsky, 2000; Cheung and Prendergast 2006). Consumers of genuine brands demand counterfeits less because genuine brands bring them admiration, recognition, and acceptance by others. Consumers are less likely to purchase counterfeits when they are highly involved with the product category, care about brands, brand-loyal and earn a high income enough to afford genuine brands (Wee, Tan, and Cheok 1995;d'Astous and Gargouri, 2001). Experiences of originals provide more satisfaction through better physical quality and interpersonal approvals of the products, and, accordingly, make consumers lose interest in counterfeits. Ritson (2007) advocated that a third of consumers for counterfeits wanted to buy the original in the future as a result of negative counterfeit experiences. In the context of this study, consumer evaluation of counterfeits will be an important predictor of his intention to purchase a counterfeit product. Thus, the factors which drive consumer to purchase counterfeit products become the focus of the investigation. Based on the literature review, the main predictors are presented below.

Price consciousness indicates the extent to which consumers are concerned with paying low prices, orientation to make price comparisons and to gain information to make decisions that minimize prices (Lichtenstein et al., 1993).Price conscious consumers have higher search intentions for lower prices and are more involved in processing price-related information (Kukar-Kinney et al., 2007). Consumers are more likely to buy counterfeits when the price of the genuine is significantly higher than counterfeit (Bloch et al., 1993; Poddar et al., 2012). Even though, consumers overlook the quality due to the lower prices. Value consciousness is a concern to pay at a low price, while expecting to a certain quality constraint (Lichtenstein, et al., 1993). Phau and Teah (2009) found a significant relationship between the consumers' level of value consciousness and their likelihood of buying counterfeits, suggesting that value-conscious consumers may see counterfeits as a better deal than the actual status brand. As counterfeits usually provide the same functional benefits as the original, but at a fraction of the price of the genuine product, it is perceived as 'value for money' and have positive attitudes towards counterfeits of luxury brands (Furnham and Valgeirsson, 2007).

Perceived risk is the concern about the consequences of a poor decision making. The risk may include performance, financial, safety, social and psychological risk. Specifically, counterfeits are considered risky in view of the amount of money lost through quality and performance deficiencies (Cordell et al., 1996; Maldonado and Hume, 2005; Penz and Stöttinger, 2005).Previous researches including Bian and Moutinho (2009), Gentry et al. (2006) and Huang et al. (2004) reported that consumers who perceive higher levels of risk will have a negative attitude and intention towards counterfeits. Personal gratification concerns the need for a sense of accomplishment, social recognition, and the desire to enjoy the finer things in life (Ang et al., 2001).Ang et al. (2001) reveal that there is no significant influence of personal gratification on consumer attitudes toward counterfeits. While in the contrary, some studies found that personal gratification proven to have a significant negative relationship towards attitudes of counterfeits (Phau and Teah, 2009; Nordin, 2009).

Status consumption indicates the purchase, use, display and consumption of goods and services as a means of gaining status. It involves a social ranking or recognition that a group would award to an individual that is irrespective of social and income level. Status consumers seek to possess brands that exude brand symbols to reflect their self-identity and communicate impressively about themselves to their reference groups. Phau and Teah (2009) found that status consumption influence attitudes towards counterfeits, while Nordin (2009) found no effects of status consumption on attitudes towards counterfeit products. Subjective norm is the apparent social pressure to perform or not to perform a specified behavior. Regarding counterfeits, friends and relatives may act as inhibitors or contributors to the consumption, depending on how much this behavior is approved by them.

Attitude is a learned predisposition to behave in a consistently favorable or unfavorable manner with respect to a given object. Understanding the factors influencing consumers' attitude toward counterfeits

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is important, especially as studies have shown that one-third of respondents would knowingly buy counterfeit goods when available (Phau et al., 2001; Swami et al., 2009). The more favourable consumer attitudes towards counterfeiting are, the higher the chances that they will purchase counterfeit brands and vice versa (Wee et al., 1995).Several studies found that attitudes towards counterfeit products play an important positive influence to purchase intention (Phau and Teah, 2009; Nordin, 2009; Matos et al., 2007; Huang et al. 2004). The more favorable consumer attitudes towards counterfeiting, the higher the chances those consumers will purchase counterfeit brands and vice versa.

OBJECTIVES AND HYPOTHESES OF THE STUDY

The research has been undertaken to investigate the attitude of consumers towards counterfeits and factors which form their purchase intention. The main objectives of the research are:

(a) To analyze the trend of counterfeits across the different product categories.

(b) To analyze the purchase patterns of counterfeits and its relationship with demographic characteristics of consumers.

(c) To identify the factors driving customers to purchase counterfeit products.

Hypothesis 1:

H0: The different socio-economic factors have no significant impact on purchase intention of counterfeits.

H1: The different socio-economic factors have significant impact on purchase intention of counterfeits.

Hypothesis 2:

H0: There is no significant association between counterfeit products purchase pattern and demographic characteristics of consumers.

H1: There is a significant association between counterfeit products purchase pattern and demographic characteristics of consumers.

RESEARCH METHODOLOGY

Data for the present study was collected from Indian consumers using an online survey developed on Google Docs in September and October, 2015. Consumers were invited to participate in the study through email. Online surveys are now common research instruments as they enable quick transmission and fast turnaround as well as significant cost benefits (Wilson and Laskey, 2003). A total of 356consumers participated in the study, with a final valid 325 questionnaire being used in this study, excluding 31 responses that were unreliable or insincerely answered. The survey questionnaire consisted of two sections. The first section contained questions to examine respondents' demographic profile. The second section was concerned with attributes related to consumers' awareness of counterfeits, extent of counterfeits across different product categories, and various factors related to purchase of counterfeits. Respondents were asked to indicate their level of agreement with each of the 36 attributes related to purchase of counterfeits in a five-point Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree). Out of 36 attributes, four were related to price consciousness, three were regarding value consciousness, five were associated with perceived risks, four variables were concerned with the personal gratification, four were related to status consumption, three were regarding subjective norm, nine were associated to attitude towards counterfeit product and four were concerned with purchase intention. The existing literature helped in the preparation of the second section of the questionnaire and included questions were selected based on related studies of consumers' attitude towards counterfeit products. Specifically, it was based on the research works of Ang et al. (2001), Huang et al. (2004), Matos, Ituassu and Rossi (2007), Bian and Moutinho (2009), Phau and Teah (2009), Yoo and Lee (2009). Some questions were then modified by the researchers in order to focus on specific information.

In order to ensure the validity of survey instrument, the initial questionnaire was given to a panel of experts and faculty members to judge its content's validity, the clarity of its items meaning and to assure its linkages with the study objectives. In order to validate the reliability, the questionnaire was pilot tested using 40 respondents, representing 12% of the total sample size, who were considered the representatives of the study population. The value of Cronbach's alpha was found 0.934, which suggested a highly acceptable level of reliability of the questionnaire. The data thus received was systematically arranged, tabulated and analyzed using SPSS 22.0.

RESULTS

Demographic Profile

The demographic characteristics of respondents shown in table 1 reveals that 8.6% of respondents were from the age group of up to20 years, 53.3% were from 21-30 years, 20.6% were from 31-40 years and 17.2% were above 41 years.45.8% respondents interviewed were graduate,32% werepost-graduate, 14.5% were professional and7.7% were having others educational degrees. As regards to the residential status, the majority of respondents were from Metro/urban areas (48.6%), 42.5% were from semi-urban background and 8.9% were from a rural setting. Males dominate the sample with 62.8% of them included in the survey.

Awareness of Counterfeit Products

In order to know whether respondents is a willing customer of counterfeit or have purchased any product in good faith and then realized later that purchased product is counterfeit; it was found that 39.08% consumers were the victims of counterfeit products while 56.30% were willing customers of such products. Interestingly, 4.62% customers were not aware about whether purchased product was genuine or counterfeit.

Table 1: Demographical Profile

Age	Frequency	Percent	Education	Frequency	Percent
Upto 20 Years	28	8.6	Graduate	149	45.8
21-30 Years	174	53.5	Post Graduate	104	32.0
31-40 Years	67	20.6	Professionals	47	14.5
Above 41 Years	56	17.2	Others	25	7.7
Residential Status	**Frequency**	**Percent**	**Gender**	**Frequency**	**Percent**
Metro/Urban	158	48.6	Male	204	62.8
Semi Urban	138	42.5	Female	121	37.2
Rural	29	8.9		**No. of Respondents = 325**	

Table 2: Counterfeit Product Purchase (n = 325)

Counterfeit Product Purchase	Frequency	Percent
Yes	127	39.08
No	183	56.30
Don't Know	15	4.62

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Data summarized in table 3 shows that majority of counterfeit products were fashion wear and its accessories (22.7%). It was followed by music & films (15.4%), perfume (15.4%), spare parts of automotive (12.8%) and software (12.5%).

On inquiring about the stores from where these counterfeit products can be purchased, 53.55% respondents mentioned corner lane shop, 26.31% respondents purchased them from specific market, 17.72% sampled consumers preferred imported stores and 3.7% consumers answered imported stores for such products (Table 4).

Confirmatory Factor Analysis

Past studies indicate that consumers make a purchase of counterfeits based on their own personal attributes such as age, gender, education, economic conditions, material needs and social norms as well as product attributes such as lower price, performance, reasonable quality. Consumer evaluation of counterfeits is an important predictor of his intention to buy a counterfeit, as well as how much agreement about this behavior he receives from his reference group. Keeping these into consideration, respondents were asked to complete a series of attitude statements using a five point scale. The results presented in Table 5, provide further insight about the factors that determine consumer purchase behavior towards counterfeits.

Table 3: Counterfeits across different product categories

Product Categories	Responses		Percent of Cases
	Frequency	Percent	
Music and Film	118	15.4%	37.7%
Fashion wear and its accessories	174	22.7%	55.6%
Software	96	12.5%	30.7%
Perfume	118	15.4%	37.7%
Pharmaceutical Products	55	7.2%	17.6%
Consumer Electricals	94	12.3%	30.0%
Spare Parts of Automotive	98	12.8%	31.3%
Others	14	1.8%	4.5%
Total	**767**	**100.0%**	**245.0%**

Table 4: Stores of Shopping Counterfeit Products

Store Types	Responses		Percent of Cases
	Frequency	Percent	
Online Stores	13	2.43%	4.00%
Specific Market	141	26.31%	43.38%
Corner lane Shop	287	53.55%	88.30%
Import Stores	95	17.72%	29.23%
Total	**536**	**100.0%**	**164.9%**

Table 5: Consumers' attitude towards Counterfeits

Statement	α	Mean	SD
Price Consciousness (PC)	**0.706**	**3.524**	**0.822**
I often find myself checking prices and purchase the cheapest items.		3.492	1.326
The price of a product is a good indicator of its quality.		3.059	1.119
You always have to pay a bit more for the best.		3.886	0.976
A person can save a lot by shopping for bargains.		3.659	1.062
Value Consciousness (VC)	**0.606**	**4.015**	**0.759**
I am concerned about price and product quality.		4.022	1.001
I compare prices for the best value for money.		3.985	1.098
I like to be sure that I get my money's worth.		4.357	0.911
Perceived Risk (PR)	**0.695**	**3.599**	**0.703**
When I buy something, I prefer not taking risks.		3.695	1.118
The risk that I take when I buy a counterfeit product is high.		3.379	0.924
There is a high probability that the product doesn't work.		3.551	1.063
Spending money with counterfeit products might be a bad decision.		3.880	1.022
Buying counterfeit products make me feel unhappy/frustrated.		3.489	1.102
Personal Gratification (PG)	**0.758**	**4.143**	**0.754**
A comfortable life is important to me.		4.379	0.950
I always attempt to have a sense of accomplishment.		3.957	1.244
I value for pleasure.		4.197	0.785
I value social recognition.		4.040	0.923
Status Consumption (SC)	**0.877**	**3.609**	**0.933**
Brands help me communicate my self-identity and express myself.		3.739	1.211
I am interested in new products with status.		4.049	1.203
I would buy a product just because it has a status.		3.034	1.263
A product is more valuable to me if it has 'high status' appeal.		3.277	1.295
Subjective Norm (SN)	**0.574**	**3.150**	**0.951**
I gather information from friends or family about a product before I buy.		3.615	1.273
My relatives and friends approve my decision to buy counterfeited products.		2.760	1.328
If I buy counterfeit, it may negatively affect what others think of me.		3.412	1.223
Attitude towards counterfeit product (ATCP)	**0.886**	**2.890**	**0.904**
Counterfeits are as reliable in quality & function as the genuine products.		2.815	1.188
Considering the price, I prefer counterfeit products.		2.526	1.328
Buying counterfeit products are a wise choice.		2.520	1.224
I buy counterfeit without hesitation if I have a chance to buy it.		2.720	1.247
Buying counterfeits of luxury brands damages interests and rights of the legitimate/original manufacturer.		3.597	1.406
I buy counterfeit products because the prices of designer products are unfair.		2.625	1.303
I usually purchase counterfeits when it is difficult to distinguish between the counterfeits and the genuine products.		3.788	.854
I would buy counterfeit products, even if I could easily afford to buy non-counterfeit products.		2.517	1.469
Purchasing counterfeit brands are illegal.		2.905	1.125
Purchase Intentions (PI)	**0.916**	**2.595**	**1.209**
I would think about counterfeits as a choice when buying something.		2.935	1.305
I will consider purchasing counterfeit products for a friend.		2.452	1.263
I would recommend counterfeit products to friends and family.		2.434	1.466
I would say favourablethings about counterfeit products.		2.557	1.366

The results indicate that personal gratification is the most important dimension related to counterfeits purchase (mean =4.143). This shows that consumers purchase counterfeits to fulfill their sense of accomplishment, gain social recognition and enjoy the better things in life. It is followed by value consciousness (m=4.015), status consumption (m=3.609), perceived risk (3.599) and price consciousness (m=3.524).Consumers purchase counterfeits because to low price, perceive them as good value for money and seek self satisfaction by displaying status in their groups by having fake replica of genuine products. They also believe that buying a counterfeit can be risky as the amount of money would be lost through low quality and poor performance and therefore, have negative attitude towards counterfeits. Interestingly, consumers generally purchase counterfeits due to price advantage over genuine products. Friends and relatives may act as inhibitors or contributors to the purchase counterfeits. Statement, If I buy counterfeit products, it may negatively affect what others think of me (m=3.412), shows that subjective norms also influence consumer decision to purchase counterfeits. Concerning the attitude towards counterfeits, lack of meaningful differentiation between counterfeit and originals may lead to purchase to counterfeits (m=3.788). They also believe that buying counterfeits damages interests and rights of the legitimate producers (m=3.597).Regarding counterfeits purchase intention, consumers gave a low ranking to statement 'I will consider purchasing counterfeit products for a friend' (m=2.452) and 'I would recommend counterfeit products to friends and family' (m=2.434).

The chi-square test is applied to check the degree of association between demographic characteristics (age, gender, education level and residential status) of respondents and purchase of counterfeits across different product categories. It is found that the calculated value for all demographic characteristics is greater than the table value. Therefore, the null hypothesis is rejected, indicating that there is an association between demographic characteristics of respondents and purchase of counterfeits across different product categories.

Table 7 displays R, R squared, adjusted R squared, and the standard error. R value, the multiple correlation coefficients, is 0.872 suggesting a high correlation between dependent and independent variables. R squared value is 0.761.The regression model is able to explain 76% of the variation in the dependent variables so as to conclude that the regression model fits population to a reasonable degree. The value of adjusted R squared is almost same as of R Squared i.e. 0.756 indicating that the model is fit for population.

Table 6: Chi Square Test: Consumer Demography and Counterfeit Product Categories				
Product Categories	**Demographic Characteristics**	**Degree of Freedom**	**Calculated Value of X2**	**Table Value of X2**
Music and Film Fashion wear & its accessories Software Perfume Pharmaceutical Products Consumer Electricals Spare Parts of Automotive Others	Age	21	**66.15**	**32.67**
	Gender	7	**34.86**	**14.07**
	Education Level	21	**65.11**	**32.67**
	Residential Status	14	**46.42**	**23.68**
Total = 767	Level of Significance = 0.05			

Table 7: Regression Analysis: Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	0.872	0.761	0.756	0.597

Predictors: (Constant), Price Consciousness, Value Consciousness, Perceived Risk, Personal Gratification, Status Consumption, Subjective Norm, Attitude towards counterfeit product. Dependent Variable: Purchase Intention.

Table 8: ANOVA Table (Counterfeit purchase factors & Purchase Intention)					
Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	360.259	7	51.466	144.193	0.000^{b}
Residual	113.144	317	.357		
Total	**473.403**	**324**			

Predictors: (Constant), Price Consciousness, Value Consciousness, Perceived Risk, Personal Gratification, Status Consumption, Subjective Norm, Attitude towards counterfeit product. Dependent Variable: Purchase Intention

Sum of squares, degrees of freedom, and mean square are displayed for two sources of variation, regression and residual in table 8. In this study, the regression value is more than the residual value. Thus it can be concluded that the regression model is able to explain good amount of variation in the dependent variables. The F statistic is the regression mean square divided by the residual mean square. If the significance value of the F statistic is small (smaller than, say 0.05) then the independent variables do a good job explaining the variation in the dependent variable and vice-versa. For the current study, the significance value of F is 0.000 and is smaller than 0.05 thus indicating that all the extracted factors have done a good job explaining the variation in counterfeit product purchase intention.

The above table shows the independent variables (factors) with their unstandardized coefficients, standardized coefficients, these are the coefficients of the estimated regression model. The unstandardised regression coefficient beta values, i.e. B for subjective norm is 0.694 and is largest indicating it as the most important factor that affects counterfeit product purchase. Other factors (importance wise) that influence the purchase of counterfeits are attitude towards the counterfeit product (B = 0.684), status consumption (B = 0.349) and personal gratification (B = 0.158. Only factor has been found less significant in explaining counterfeits purchase is value consciousness, indicating that customers may not be concerned too much about the low price of counterfeits while making the decision to purchase.

Table 12: Regression Coefficients					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	-0.541	0.228		-2.367	0.019
Price Consciousness	0.146	0.065	0.099	2.234	0.026
Value Consciousness	-0.099	0.070	-0.062	-1.413	0.159
Perceived Risk	-0.151	0.068	-0.088	-2.202	0.028
Personal Gratification	0.158	0.066	0.099	2.412	0.016
Status Consumption	-0.349	0.053	-0.269	-6.543	0.000
Subjective Norm	0.694	0.064	0.546	10.841	0.000
Attitude towards counterfeit product	0.684	0.070	0.511	9.809	0.000

a. Dependent Variable: Purchase Intention

DISCUSSION

Counterfeiting is a one of the serious problems that put both in the developing countries and developed countries in trouble. Of late, the product counterfeiting has increased fast, from the scope, scale, or complexity side, and influencing the manufacturers of various luxury products. The present study found that 39.08% consumers were the victims of counterfeit products while 56.30% were willing customers of such products. Consumers are victims of counterfeits because they are unable to make a difference between counterfeits and original products. The majority of counterfeits can come across in fashion wear and its accessories, music & films, perfume, spare parts of automotive and software. Corner lane shops and specific markets are the main location of such products.

The findings have reflected that subjective norms and attitude towards counterfeits have significant influences on the consumer purchase intention towards counterfeits. This shows that in this materialistic society, consumers are willing to purchase fake replica of products because friends, relatives, family and peers approve their decision to counterfeits. The favorable attitude of consumers towards lower price and reasonable quality of counterfeits, and unfair prices of original products encourage them to buy counterfeits. The desire for luxury goods is still on the rise, propelling consumers to purchase for the sake of display. This contributes to dissonance, whereby consumers resort to buying counterfeits that can carry the same function as luxury brands, and can be displayed to their peers. The study also advocated that personal gratification motivates consumers to purchase counterfeit. Consumers generally buy counterfeits because they see themselves as financially poor, less confident, less successful and lower status than consumers of original products. In order to fulfill their need of achievement and gain social appreciation they generally prefer counterfeits.

Consumers do not perceive high levels of risk in their purchases of counterfeits due to similarity of such products to originals, moderate level of benefits and social acceptance of counterfeits. The study indicates that consumers' willingness to pay less price and search for lower price products help in increasing the demand of counterfeits. Consumers generally ignore the quality of fake products and buy counterfeits which are offered at reduced prices. Researchers also found no significant relationship between the consumers' level of value consciousness and their chances of purchasing counterfeits, suggesting that value-conscious consumers don't see counterfeit products as a better deal than the actual status brand. Consumers are aware of lower quality of counterfeits and believe that genuine products offer better quality, status, superior performance, admiration and recognition by others. They are less likely to purchase counterfeits when they have experienced the genuine products.

The findings support previous researches that show consumers' attitudes are an important factor affecting the counterfeit purchase. Lower price, customer willingness to purchase, hedonic purpose, reasonable performance and satisfactory past purchase behavior are the strong antecedents of purchase intention of counterfeits. High prices of genuine products and comparatively lower prices of counterfeits motivate consumers' intention towards counterfeits. Further, good quality counterfeits present in the marketplace also offer a greater incentive for consumers to purchase. This is evident when consumers perceive product attributes of counterfeits and originals to be closely similar. Therefore, marketers of original products must attempt to differentiate their products with fake products and introduce as innovative features as possible to be 'a step ahead' of counterfeiters to avoid being easily imitated. Marketers should focus on developing effective measures to discourage consumers to buy counterfeits and encourage them to purchase genuine products. They must convince customers that they are not charging unfair prices for innovative and quality products. Awareness and education can be used to favorably influence consumer attitude towards originals. In addition, anti-social, illegal and unethical issues need to be highlighted to develop negative attitudes toward counterfeits.

CONCLUSION

This study contributes to the existing literature by identifying key drivers which encourage consumers to purchase counterfeit products. It is evident from the present study that consumers' favourable attitudes towards counterfeits of luxury brands play an important role in affecting consumer purchase intention. Subjective norm and status influence of the consumers play important roles in their intention towards purchasing counterfeits. Price and reasonable quality of the counter feitsover the genuine products is the incentive for consumer to purchase counterfeits. It is crucial for managers to understand the fundamentals of consumer attitudes and purchase behaviour of counterfeits to be able to counter the counterfeit epidemic. In order to decrease consumer demand for counterfeits of their products marketing managers need to highlight in their packaging, merchandizing, and ethical issues in advertising and understand the hedonic buying behavior of consumers.

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A Study of Employee Motivation as a Tool for Implementation of Internal Marketing

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Do you usually find your employees reiterating past achievements, industry: how it used to work, quiet in meetings, reluctant to take initiatives, showing moderate enthusiasm for new job roles and so on? As an HR, you have conducted those training and development sessions on time management, prioritizing, scheduling tasks to enhance productivity, but these just temporarily yielded results; you are still chasing both job and organizational productivity and the enigma still looms large on your head? 'Internal Marketing' is the solution to all these problems.

This paper seeks to discuss the profound behavioral intentions and interventions of employees with a special reference to the banking industry. How the banks both national and international motivate their staff towards achievement of organizational goals? How can HR best deliver result and much needed change in the required direction?

The survey included employees from reputed private and public sector banks. Results derived out of the study project that in addition to salary and rewards which are undoubtedly high motivating factors to the construct of motivation, other variables such as goals and recognition and appreciation, training and development along with challenging job assignments contribute to the higher motivational levels of banking employees. Further research may explore the relevance of the concept with the larger sample in the similar industry or may test out in the other industries: insurance, manufacturing, hospitality, etc.

Keywords: *Internal Marketing, Employee Motivation, Banking, Jobs*

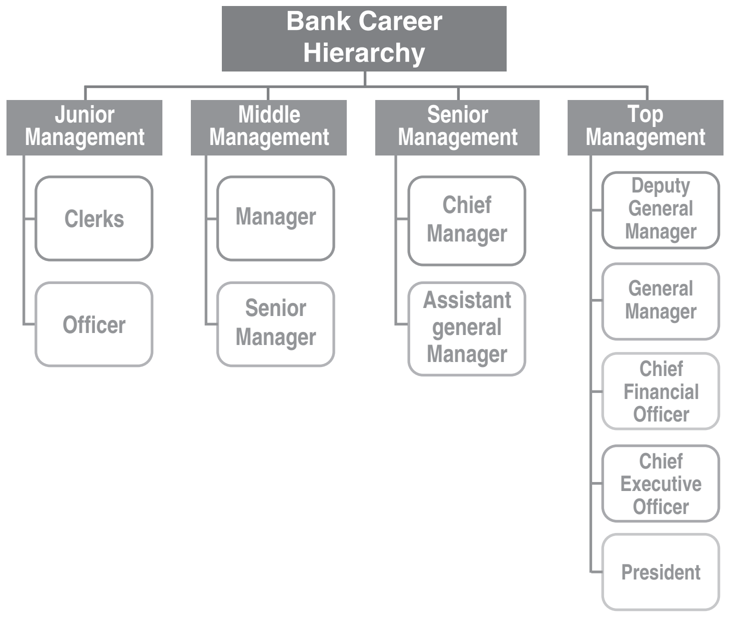
INTRODUCTION

Workplaces today are thronged with employees who are like each other. They become identifiable due to the organizational culture, group norms, working conditions, etc. Similarity often generates monotony while handling heterogeneity is a challenge to many.

Marketing to employees as an umbrella concept covers training and development, rewards and recognition, employee empowerment, inter-functional coordination, job satisfaction, internal communication, rules and regulations, all these effect organization citizenship behavior.

This study examines the influence of internal marketing orientation and employee intrinsic motivation on bank performance. IM is understood to create a psychological environment in the organization to exert better performance.

An entire lifetime is spent on sustaining in an industry and the world has become so dynamic for any of us to calculate and envisage change, but nevertheless, it is a necessity to be prepared to conquer change. Hierarchy in the bank as a concept can be pictorially represented as below:



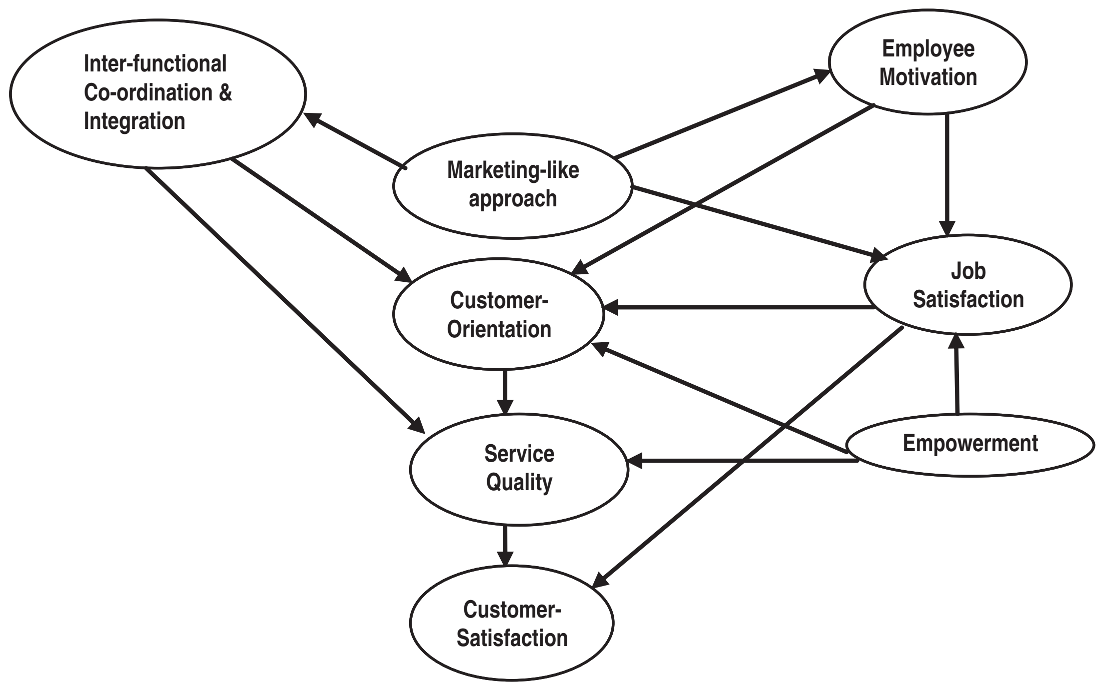
Motivation of employees has reported to be most significant problem in the service roles. Though employees at all levels have successfully been 'meeting expectations' and delivery 'care-giving roles', yet usually they amiss the vision excellence as they accede to the 'power of now' neglecting the 'vision of tomorrow'. In order to overcome this problem, the bank provides solution in the form of being customer-conscious (Gronroos, 1991), service-minded to achieve organizational excellence. Additionally, Yes Bank also provides for a Golden Lapel Pin to recognize its employees who achieve 'herculean' tasks and goals. The mascot of Yes bank is 'Cheetah' that embodies agility and strength which is essentially required to ace and excel in this competitive world. While today, both employees and customers, want everything now, better yesterday, the struggle to survive is getting fierce. This era of instant-intensity, creates a lot of pressure on especially the 'customer-contact employees'. Though leadership development, knowledge enhancement and emotional intelligence programmes are being deployed and self-taught by the employees at times due to requirement and other times out of interest but there still remains a grey zone of moving ahead in this corporate race beyond all means.

Change is a natural requirement in every sphere of all industries and organizations of all shapes and sizes. In the VUCA world where economies are characterized as Volatile, Uncertain, Complex and Ambiguous, thriving in this environment demands competency to face, feel and grow amidst the fast-paced changing world.

Inter-functional co-ordination and integration are fundamentals to the IM theory. Improving customer-orientation of the organization has been a central concern of the IM concept from its inception. At the centre of this framework, is customer-orientation which is achieved through a marketing-like approach to the motivation of employees and inter-functional coordination. The centrality of customer-orientation reflects its importance in the marketing literature and its central role in achieving customer-satisfaction and hence organizational goals.

In order for interactive marketing to occur, front-line employees need to be empowered, that is, they

Framework of Internal Marketing of Services



require a degree of latitude of over the service tasks performance in order to be responsive to customer needs and be able to perform services. Empowerment in our model impacts on job satisfaction, customer orientation and service quality.

According to Ahmed and Rafiq, (2002, p.1) internal marketing requires:

- The acceptance of marketing techniques and philosophy within an organization
- Customer orientation and a market orientation
- A participative approach to management
- A strategic approach to human resources management
- The coordination of all management activity to achieve customer or market orientation or customer focused management.

RESEARCH GAP AFTER THE LITERATURE REVIEW

Internal marketing to employees is a means to build and uphold culture of service (Tansuhaj et al., 1988). Considering the workforce as clients and designations as goods will certainly result in enhancing employee morale and motivation, overall service quality, and organizational productivity. Both internal and external orientation is crucial to the success of the marketing and branding endeavors.

The existing empirical work focuses profoundly on the impact of internal marketing programs. A discrete effort in the form of verifying the depth of implementation of the concept; various industries have been explored for this purpose namely hospitals, aviation, hotels, manufacturing and others (Sargeant and Asif, 1998). An attempt has

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been made to study the impact of IM programmes on service quality in the study of Richardson and Robinson, 1986; Tansuhaj et al., 1991.

After studying and deriving the results from various eclectic sources of information a consistent roadblock that remains is that the same concept of 'Internal Marketing' especially in banking industry has been put to little test and use. It can be used to influence and motivate employees), can be identified from the IM literature, including communication, training, education and information (Gummesson, 1991); motivation work environment that will motivate employees to respond to management's demand. g and developing employees. In addition, Foreman and Money (1995) found that the three components of IM are rewards (rewarding and motivating employees), developing and providing a vision. George and Gronroos (1989) clearly state that IM is basically as philosophy for managing the organization's human resources based on a marketing perspective.

OBJECTIVES OF THE STUDY

The purpose of the present study is to find out relationship between independent and dependent variables of the concept of internal marketing. Independent variables of the construct are: financial rewards, personal characteristics, high salary plan, job design and supervision and dependent variable of the study are employees' motivation.

- To determine the distinction between motivational factors among public and private sector employees
- To explore the factors that motivate employees and whether demographics has any influential role to play
- To understand the factors that motivates employees beyond money

Research Model

The proposed research aims at studying the internal marketing initiatives and activities being used by players in various banks in the country. It will seek to also explore the antecedents and consequences of such internal marketing programmes. In particular, the research would focus on the impact, if any, that internal marketing activities have on employee motivation. The relationship between internal marketing practices and employee turnover can also be examined. It would also explore the relationship, if any, between internal marketing practices and intervention of employees' motivation in banks and organizational growth and profitability.

Internal marketing orientation is a set of managerial behaviors in relation to employees that is proposed to have both internal and external consequences (Lings & Greenley, 2005). Firms with a level of internal market orientation are believed to be firms that have highly motivated and customer-conscious employees which results in satisfied customers and superior market performance. Studies have shown a positive relationship between internal marketing orientation and firm performance (Lings, 2000; 2002; Lings & Greenley, 2005; Hwang & Chi, 2005).

An examination of the literature shows that essentially there are two models of how IM works: one based on the work of Berry's concept of 'employees as customers' and the other based on Gronroos idea of 'customer mindedness' and 'interactive marketing'.

Both Berry and Gronroos do not spell out the exact components of their models and how they are connected with each other. The outcome that both these models underpin is service quality. However, they differ in their methods for achieving it. Both the authors have developed models which have unsystematic elements engendering scope for future research.

The independent variables are internal marketing factors which are represented by training and development, organizational support, incentives and motivation, and retention policy. The dependent variable is represented by employee motivation. A close examination of literature in the service industry especially banking, has led to the formulation of framework model for research as below:

Motivation is defined as "Willing behaviour and contributions of staff to achieve a given task" (Koçel, 2003) and basic instruments studied are economic rewards, psychosocial and organizational and management incentives (Eren 2004, pp. 512-520; Batmaz 2002, pp.46-48; Çeltek 2003; Gibbons 1998, pp.115-132; Sapancalı 1993, pp. 59-65).

Banking is one such industry that has witnessed frequent changes on the factors of macro-environment and brain-drain. In 1990s, about 2/3 of the staff resented change and opted for golden handshake. This led to derailing of the human assets.

RESEARCH METHODOLOGY

The data had been sourced from 175 employees of banking industry through a structured questionnaire as attached towards the end of the paper in the form of appendix

4a. Type of Study

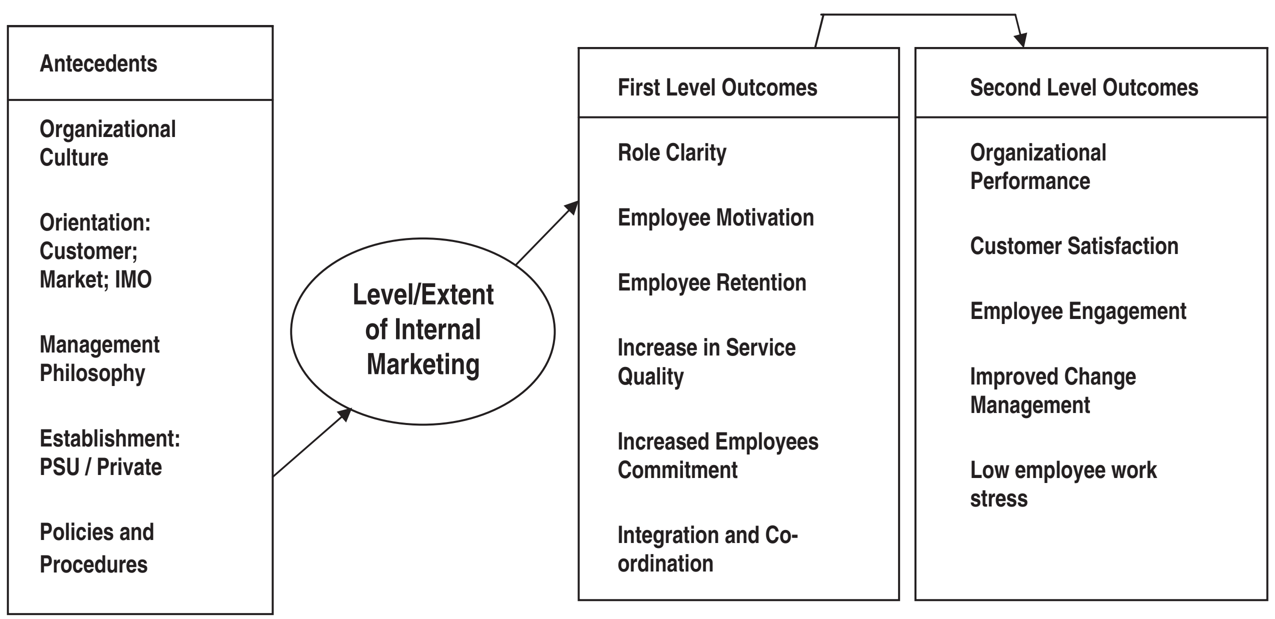
An empirical study was undertaken to explore the applicability and relevance of the concept. The theoretical implications of the concept of employee motivation and internal marketing had been well shoveled from literature review.

4b. Sample: After considering the cluster of employees who can potentially contribute to determine the validity of the concept, random sampling study was used as a technique to gauge the results.

4c. Variables Used: Rewards and recognition, salary, job characteristics, training and development, leadership, working conditions, job security, job features, goal-setting and achievement, performance appraisal and feedback.

4d. Statistical Tools Used

SPSS software tool was used to analyze the data and interpret the findings. KMO and Bartlett's test was applied to sieve the most significant variables in the implementation of the construct of motivation.



THEORETICAL FRAMEWORK

The extensive literature review aids in the conclusion of the following model where an organization is a support and infrastructure - provider to both customers and employees. Employees are the primary customer segments to the organization as they are the revenue-generators and brand-builders. HR need to explain the employees just like their customers, their job roles, job descriptions and clarify role ambiguities, if any. The loyalty of employees is equally significant like the loyalty of customers for the organizational operations, economies of scale and overall productivity of employees as well as organizations. It is the compound effort of both employees and customers who contribute in the achievement of organization's both long-term and short-term goals.

IMPLICATIONS OF IM

1. Customer delight parameters are unveiled and strategies are crafted to attain highest standards of excellence.
2. Internal customers deliver quality: It is employees who carve and convey reputation but the question of paramount significance is do they take that responsibility voluntarily? If they do, why do the meetings in office baffling? Why is job stress becoming so much popular?
3. In service industry, inter-personnel frictions are likely and in abundance; IM is the key to solve this intertwined problems.
4. IM prepares its agents to plan and participate in its 'change management' scenarios; the resistance to change is often succeeded by stress and repulsion: the denial to square to reality. It enhances both creativity and sensitivity for its staff wherein phrases like 'I care to meet you in person' is practiced than just merely stated.
5. It enhances connectivity both inside and outside the organization. For instance, legal section due to its rigidity of formal structure might not be over the board in building and managing customer relations.
6. A comprehensive audit with respect to skills, responsiveness and efficiency must be thoroughly carried out as a policy of extension of brand sustainability.
7. For the success of any enterprise it is quintessential that every employee both: internal and external and; existing and potential must know the range of services provided to maximize the organizational goals of: market share and customer satisfaction.

FINDINGS OF THE STUDY

Thirteen variables were studied to sieve out four most important variables. 26 statements were deployed on a five-point likert scale to analyze the significance of the results and relevance of the concept. A profound exploration of the literature brought to the fore many variables as listed in the table in the appendix 1.

A pilot study on a sample of 175 was conducted out of which 141 questionnaires were found fit for the purpose of analysis. Appendix 2 attached towards the end includes the questionnaire used for the present study. SPSS software was used to draw the results which are mentioned as follows:

Firstly, KMO test was applied which revealed the value as .576. The sampling adequacy should be greater than .05, so the value derived validates the study. Secondly, Bartlett's test was applied that projected the value as 0.438 which again qualifies the study as the sampling adequacy should be less than .05.

Communalities show how much the variance in the variables has been accounted for by the extracted factors and the extraction is mentioned in the percentage. The results of the communalities are enclosed in Appendix 3. The results drawn out of the study as summarized in Appendix 1 are as follows:

In our quest to find the most significant and crucial factor that motivates an employee is advancement and growth opportunities. The innate desire of all humans is to explore and enhance their potential. Thus, of all the thirteen variables, this is the most important. Secondary to this was that, 'I find my job challenging and interesting'. The demographic analysis of the respondents projected majority to be millennial who are polychromic in their competencies and task execution. Third significant variable was that 'Employees' achievements are publicized in throughout the bank': HR managers of the private sector banks practice the theory of 'praise in public' that validates the construct of 'reward and recognition' which undoubtedly appeases this energetic generation. As this industry runs the risk of insolvency to the least, thus this also aggravates employees to higher levels of chasing excellence for the banks. The employees who have less than five years of work experience showed high tendency to take more job assignments than the experienced employees (>5 years). The banking industry due to its global confluence experience multidimensional changes of FOREX, funds, securities, etc. Hence, training and development and receiving feedback from the managers seems a corollary to the fact of achieving and progressing on their career paths through the facile and swifter mode.

Appendix 4 includes the Scree Plot which contains the eigen values when the curve starts getting flat. Interpreting the diagrammatic representation of this graph, the interpretation is that rewards, growth opportunities, job features, goals and last but nevertheless salary as the factors that make the utmost contribution and enhancement of the motivational levels of employees.

CONCLUSIONS

Today, intangible assets play a major role in the competitiveness of a business; as such assets are more sustainable and less capable of being imitated. Human capital can be considered as one of the most important intangible assets that includes knowledge, skill and attitudes of employees. As a result, management of the capital is needed to attain competitiveness. A major approach to this is internal marketing, which treats the employees of a typical organization as customers whose needed should be supplied. Managers must understand that their employees' satisfaction is as much-sometimes more-important as satisfaction of external customers. Internal marketing is of an interdisciplinary nature. The philosophy of internal marketing is that employees of an organization constitute its internal market, which has customers and suppliers and as a result, a chain of value if formed inside the organization which must be intended to supply the needs of both the internal and eternal customers. When the internal customers of an organization are satisfied they will perform better and maintain better interaction with the customers. As a result, the customers will get more satisfied, which will bring about their faithfulness in the long run and ultimately a competitive advantage will be obtained from the internal customers. Internal marketing influences the customers' understanding of the quality of services and, on the other hand, can influence both the quality of services and the customers' satisfaction. An irate consumer tends to bristle with righteous rage and is not known to mince words or sugar coat a putdown. Thus, it is important to balance both the external and internal orientation (Lings, 1999).

High levels of motivation are crucial in the implementation of the concept of internal marketing and the most significant variables that have been extracted from this study are rewards, growth opportunities, job characteristics, internal communication and goal-setting as five most significant variables to understand the concept of employee motivation in the banking industry.

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Appendix 1

Researcher	Constituting elements of internal marketing
Ballantyne (2000)	Making the employee engaged in the development of policies, procedure and processes, one-way feedback, training, distribution of information, mutual relation, team learning
Gronroos (2000)	Training, management support and internal relation, mass internal relations and information support, human resources management, mass foreign relations, development of systems and technological support and enhancement of internal service
Pitt and Foreman (1999)	Expense of transactions among the internal customers and internal suppliers
Finn et al. (1999)	Respect, accuracy and speed, useful information, keeping informed and active feedback
Foreman and Money (1995)	Development of employees, rewards, perception and internationalization of organization's vision
Tansuhaj et al. (1991)	Positive attitude towards the employees, having them participate in the employment process, official and on-the-job training, leading them toward attainable individual goals, an open environment for communication, mutual feedback, help to understand the relation between operations and reward

Table 1: Elements of internal marketing

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Appendix 2

	STATEMENT				
	Rewards	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
1	My bank is aware of the rewards its employees value as important				
2	The bank's incentive schemes motivate me to perform better				
	Goal-Setting	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
3	The goals I am supposed to achieve are realistic and attainable				
4	I assist my manager/supervisor in setting my goals				
	Job characteristics	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
5	I find my job both interesting and challenging				
6	Employees are rotated in the bank in order to learn new tasks and I consider this as important				
	Salary	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
7	My salary is at par with industry standards				
8	I feel that my current salary motivates me to perform				
	Opportunity for advancement & growth	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
9	There are good promotion opportunities for employees within my organisation?				
10	The advancement and growth opportunity within the organisation motivates you to perform better?				
	Working Conditions	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
11	I have a pleasant working environment				
12	I am provided with the necessary equipments to adequately perform my duties				
	Recognition and	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
13	I receive recognition for my achievements from my Manager / supervisor				
14	Employee achievements are publicized throughout the organisation				
	Training and development	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
15	I receive ongoing training to improve my ability and skills				
16	I am cross-trained in order to perform duties in other departments				
	Responsibility & Decision-making	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
17	I would like to take more job assignments				
18	My manager/supervisor allows me to make my own decisions on how to perform my tasks in order to achieve my goals				
	Job security	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
19	I have no fear about the financial stability of the bank / heist				
20	I feel secure about my future within the bank				

	STATEMENT				
	Performance Appraisals				
21	You feel that the current performance appraisal system used, adequately measures my true performance?				
22	My current performance appraisal system motivates me to achieve my goals and improve my performance				
	Leadership	**STRONGLY DISAGREE**	**DISAGREE**	**AGREE**	**STRONGLY AGREE**
23	I receive adequate guidance & support from my manager/supervisor				
24	My supervisor/manager is trustworthy				
	Feedback	**STRONGLY DISAGREE**	**DISAGREE**	**AGREE**	**STRONGLY AGREE**
25	I receive adequate feedback from my manager / supervisor				
26	Feedback from my manager/supervisor is clear and directed at improving my performance				

Adapted from Wyk Van Charl, (2011), 'Evaluating motivational levels of employees in a Contemporary South African organization'

Appendix 3

Communalities

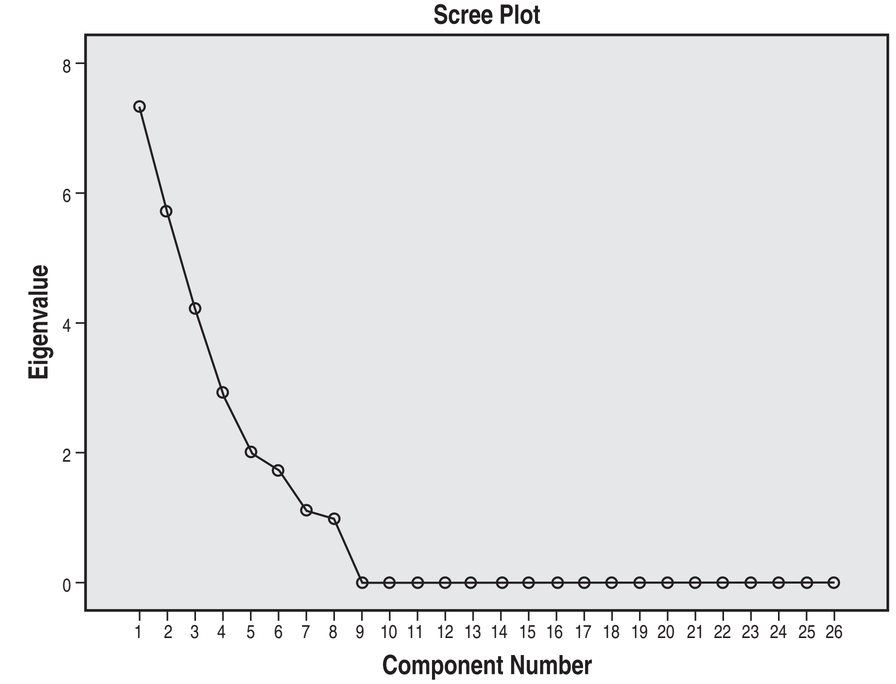
	Initial	Extrachon
My bank Is aware of the rewards its employee value as important	1.000	.959
The banks incentive schemes motivate me to perform better	1.000	.851
The goals which I am supposed to achieve are realistic and attainable	1.000	.998
I assist my manager/supervisor in setting my goals	1.000	.886
I find my job both interesting and challenging	1.000	1.000
My salary is at par with the industry standards	1.000	.995
Employees are rotated in the bank in order to learn new tasks and I consider this as important	1.000	.942
There are good promotion opportunities for employees within my organization	1.000	.994
The advancement and growth opportunity within the organization motivates me to perform better	1.000	1.000
I have a pleasant working environment	1.000	.873
I feel that my current salary motivates me to perform	1.000	.999
I am provided with the necessary equipments to adeqautely perform my duties	1.000	.940
I receive recognition for my achievements from my Manager/supervisor	1.000	.991
Employee achievements are publicized throughout the organization	1.000	1.000
I am cross-trained in order to perform my duties in other departments	1.000	.969
I would like to take more job assignments	1.000	.992
My manger/supervisor allows me to make my own decisions on how to perform my tasks in order to achieve my goals	1.000	.978
I have no fear about the financial stability of the bank / heist	1.000	1.000

	Initial	Extrachon
I feel secure about my future within the bank	1.000	.985
My current performance appraisal system motivates me to achieve my goals and improve my performance	1.000	.948
You feel that the current performance appraisal system used, adeqautely measures my true performance	1.000	.996
I receive ongoing training to improve my ability and skills	1.000	.901
I receive adequate feedback from my manager / supervisor	1000	.925
I receive adequate guidance and support from my supervisor/manager	1.000	.976
My supervisor/manager is trustworthy	1 000	.946
Feedback from my manager/supervisor is clear and directed at improving my performance	1.000	.984

Extraction Method: Principal Component Analysis.

Appendix 4

Scree Plot



BRIEF PROFILE OF THE AUTHOR

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Improving Engagement of Concessionaire Employees

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In addition to brands and visual merchandizing, the concessionaire employees' behaviour and functioning at the airports is expected to influence passenger experience. Engaged employees are a boon to any business. This paper aims to develop a model to measure and improve the engagement levels of concessionaire employees at Indira Gandhi International Airport, Delhi. This paper aims to identify the factors that contribute to employee engagement and job satisfaction of concessionaire employees.

The model consisting of measuring criteria of employee engagement constructs has been empirically validated. A structured questionnaire has been developed to collect primary data from 362 employees on a five point Likert scale. Structural Equation Modeling (SEM) was used to analyze the data and four employee engagement factors were identified. In order to ensure inclusion of each factor to measure employee engagement, they were put to test through confirmatory factor analysis. The model fit to the empirical data was found to be satisfactory. The model can be used by concessionaires to measure their employees' engagement at the outlets. This could help them plan appropriate initiatives to increase employee satisfaction and retention.

Keywords: *Employee Engagement, Airport, Concessionaires, CFA, Model Fit.*

INTRODUCTION

Employee engagement can be explained as the degree to which an employee feels engaged and involved with his organization and the value it promotes. Kahn (1990) defined Employee Engagement as "the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances". Work engagement relates to an individual's psychological state of mind while at work (Purcell, 2014).

In the recent times employee engagement has drawn significant managerial attention (Crabb, 2011), more so, since engaged employees are found to provide competitive edge to the organization (Towers, 2007).

More recently, Reilly (2014) propounded that "Engaged workers stand apart from their not-engaged and actively disengaged counterparts because of the discretionary effort they consistently bring to their roles. These employees willingly go the extra mile, work with passion, and feel a profound connection with their company. They are the people who will drive innovation and move your business forward".

REVIEW OF LITERATURE

The concept of employee engagement was first explained by Kahn (1990) to be a motivational and unique concept. He defined employee engagement as "the harnessing of an employee's full self in terms of physical, cognitive and emotional energies to

work role performances" (Kahn, 1990). It is a social or psychological contract between employees and organizations. Later, many scholars contributed to the concept of employee engagement. Kahn's (1990) theory was further expanded by Shuck (2011) who stated that employee engagement may be seen as "an individual employee's cognitive, emotional and behavioural state directed toward desired organizational outcomes".

Harter et al. (2002) defined engagement as "the individual's involvement and satisfaction with as well as enthusiasm for work". Schaufeli, Salanova, Gonz'alez-Rom'a, and Bakker (2002) defined the same as "a positive fulfilling, work related state of mind characterized by vigour, dedication, and absorption". For Saks (2006), employee engagement is "a distinct and unique construct that consists of cognitive, emotional, and behavioural components that are associated with individual role performance".

Also, Hewitt Associates LLC (2004) defined the concept as "the state in which individuals are emotionally and intellectually committed to the organization or group, as measured by three primary behaviours: Say, Stay, Strive".

Gallup researchers added a spiritual element in the Gallup's conventional cognitive and emotional aspects of engagement. They defined employee engagement as "the ability to capture the heads, hearts, and souls of your employees to instill an intrinsic desire and passion for excellence" (Fleming & Asplund, 2007). Development Dimensions International (DDI) (2005) defines Employee Engagement as "the extent to which people value, enjoy and believe in what they do".

The Corporate Leadership Council's outcome focused model, defines engagement as employees' commitment to their organization. According to them, commitment makes employees to work hard and leads to stability (The Corporate Executive Board, 2010).

Employee engagement is the cognitive aspect related to employees' beliefs about the organization, its leaders and working conditions (Bhatnagar, 2007). Employees exert physical energy to accomplish their roles in the organization while their emotional aspect influences their attitude towards the organization and its leaders, which may be positive or negative (Kahn, 1990).

Emotional engagement is the willingness of employees to put efforts and utilise their knowledge, skills and personal resources in achieving organizational goals. Employees, at this level, connect with the organization and its goal. They develop a feeling of pride and are excited to be associated with the organization and its objectives. Mani (2011) stated "when employees feel positive emotions toward their work, they find their work to be personally meaningful, consider their workload to be manageable, and have hope about the future of their work". An engaged employee illustrates high focus levels. He makes willing decisions to invest time, shows productivity and aligns his personal goals with that of the organization (Mathieu & Zajac, 1990). Further, an engaged employee puts in extra effort in his work. He works beyond the required minimum, in the form of extra time, brainpower or energy (Devi, 2009).

The employees are considered to be engaged when they invest their cognitive, physical and emotional abilities while performing their tasks, while employees who are disassociated from their job are considered to be disengaged (Kahn, 1990).

Drivers That Lead to Engagement

Gallup Inc. (2006) identified 12 elements of employee engagement – alignment, recognition, role clarity, role fitment, care, co-workers, development, opinions count, materials and equipment, best friend, progress discussion and learn and grow. In line with Gallup Inc., Society of Human Resource Management (SHRM) recognized 18 variables of employee engagement including autonomy and independence. C Balakrishnan (2013) confirms that through non-financial drivers, employee engagement and retention can be improved. These drivers may include recognition, communication, work engagement, relationship with manager, role clarity and team work. Mani (2011) predicted four drivers namely empowerment, employee welfare, growth and interpersonal relationship as the critical employee engagement predictors. Engagement was found to be a catalyst for business success.

Seijit (2006) identified the 10 Cs of employee engagement namely clarity, connect, career, convey, contribute, congratulate, control, collaborate, credibility and confidence. Britt et al. (2001) predicted employee involvement and commitment as employee engagement drivers. Robinson, Perryman, & Hayday (2004) defined leadership, total reward, relationship at work, recognition, work life balance and work itself as engagement predictors.

Shuck, Reio and Rocco's (2011) employee engagement conceptual model specifies that job fit, psychological climate and affective commitment variables influence the development of employee engagement.

There is a link between employee engagement and organizational performance. Organizations with a focus on employee development, demonstrate substantial positive impact on productivity, employee satisfaction and financial performance (Kular & Mark, 2008). Revenue-based measures such as sales and profitability are found to be significantly correlated to work-related perceptions of employees (Gelade & Young, 2005). Evidence suggests that business units with collective favourable perceptions of employees perform better.

The present study focused on empowerment, policy and procedure, motivation, communication, job satisfaction, job involvement and relationship at work as engagement drivers which influence employee and organizational performance.

Empowerment

Empowerment is defined as "the degree to which an individual can influence strategic, administrative and operating outcomes at work" (Spreitzer, 1995). Employees are able to perform better when given autonomy in decision making. It is important that employees in decision making positions, who are committed to their role, are provided with the requisite amount of authority in making decisions.

Empowerment translates into the level at which the employees are involved in decision making process which may affect their work and impact the organization. Empowerment improves employees' confidence and ability to complete the task. Leadership style plays a major role in deciding employees' empowerment in decisions. The feeling of empowerment is found to be closely correlated to the authoritarian and transformational style of leadership (Avey, Hughes, Norman & Luthans, 2007). Transformational leadership influences behaviour through inspirational motivation, intellectual stimulation and individualized consideration. Mohamed, Sulaiman, Mohamad, and Yusuf (2011) explain that transformational leadership relates to empowerment, which is positively and significantly correlated with organizational commitment.

Motivation

Motivation is the state of mind and feelings used to explain behaviour of employees. It drives an employee's actions, desires, and needs.

Organizations adopt various strategies to motivate their employees in order to keep them engaged and improve their performance. Motivation can be intrinsic as well as extrinsic. Both intrinsic and extrinsic motivation lead to employee performance and productivity, which further has a positive impact on organizational performance (Locke, 1969). Intrinsic motivation significantly influences employee performance (Akanbi, 2002; Tahir et al., 2011; Aworemi et. al., 2011).

Communication

Communication helps employees understand what is expected from them. Employees require clarity in communicating the vision of the organizational leadership and their manager's expectations in order to deliver better (MacLeod & Clarke, 2009). Communication plays an influential role in employee engagement (Pugh and Dietz, 2008; Wiley et al, 2010; Kahn 1992; MacLeod and Clarke, 2009). Communication is split in two branches, internal and external. Internal communication is used to effectively convey organizational values, company vision, policies, practices and business updates to employees and obtain their support in achieving organizational goals. It involves information exchange among organizational leaders, with the objective to convey the values and goals of the organization. Researches strongly support that communication has a positive impact on employee engagement (Hayase, 2009; Kahn, 1992; Welch, 2011). Specifically, open and effective senior management communication is shown to have a positive influence on employee engagement (Bakker et al., 2011).

Thus, the significance of internal communication for ensuring employee engagement is very critical (Bindle & Parker, 2010; Papalexandris & Galanaki, 2009; Bakker et al, 2011, as cited in Welch, 2011).

Welch (2011) worked out empirical model of linkages between engagement and communication. He concluded that communication strategies and tactics affect potential employee engagement. He suggested that communicators should consider the communication needs of employees. He defined organizational engagement as "a dynamic, changeable psychological state which links employees to their organizations, manifest in organisation member role performances expressed physically, cognitively and emotionally, and influenced by organisation-level internal communication".

The internal communication function should strategically support supervisor and organizational communication so as to facilitate interactions between the organization, supervisors, and employees to build a healthy work environment (Karanges, Johnston, Beatson, & Lings, 2015). This research acknowledged the "importance of internal communication in facilitating supervisor-employee relationship as a vehicle to express values and goals, and in turn, pave the way for favourable organization-employee relationships."

Job involvement

Job involvement is the extent to which one is cognitively occupied in one's current job (Paullay, Alliger & Stone-Romero, 1994). It is related to job performance and organizational citizenship behaviour (Diefendorff, Brown, Kamin, & Lord, 2002). Wellins and Concelman (2004) used 'job ownership' as a synonym of 'engagement'. Job involvement is defined as "the degree to which an employee psychologically relates to his or her job and the work performed therein" (Cooper-Hakim & Viswesvaran 2005). May et al. (2004) proposed that job involvement, job satisfaction and job commitment are the outcome of employee engagement.

Job Satisfaction

An engaged workforce is committed, satisfied, motivated and finds meaning at work. It lives with a feeling of pride and connection towards its organization and advocates its overall mission and vision (Clifton, 2002). Employee satisfaction is key to employee engagement. Harter et al. (2002) have compared engagement to involvement and satisfaction. Engaged employees perform extremely well in their job (Abraham, 2012). The employee retention measures improve job satisfaction, loyalty and productivity, which further results into financial benefits, improved work environment and growth opportunities (Hanif, 2013), while a negative relationship exists between job stress and job satisfaction (Iqbal, 2012).

Job satisfaction, an extensively researched construct, is defined as a positive emotional state which results from the appraisal of one's job or its experiences (Locke & Henne, 1986). It is positively related to organizational commitment, organizational citizenship behaviour, job involvement and mental health, while it has a negative relation to pro-union voting, turnover and perceived stress (Kreitner & Kinicki, 2004). Although a weak relationship is established between job satisfaction and performance on an individual level, it is found to be stronger at an aggregate level (Ostroff, 1992).

Relationship at work

May et al. (2004) explain that relations with co-workers and supervisors affect the psychological condition of employees. These psychological conditions include availability, safety and meaningfulness. The research results state that "employee relationship with co-workers and supervisors will increase the psychological meaningfulness and employee engagement in the workplace. The relationship will increase the friendship and sense of belonging that enhances psychological meaningfulness. Appreciation from co-workers and supervisors will create a feeling of caring and improve the safety of employees in the workplace" (May et al., 2004; Edmondson, 1999; Whitener, Brodt, Korsgaard, & Werner, 1998; Kahn, 1990).

The good relationship between employee and supervisor influences employees' perception of the workplace. It may create a feeling of psychological safety and enhance their creativity (Edmondson, 1999). A supervisor who encourages a supportive work environment, provides positive and constructive feedback and encourages employees' development will help them build a favourable psychological state and thus increase engagement.

The relationship among co-workers is different from that between a subordinate and his supervisor. Employees' interaction with their supervisors is based on hierarchical status whereas that of co-workers is horizontal, without any formal authority (Basford & Offermann, 2012). Relationship with colleagues is a central part of an employee's work life. Cordial relationship with colleagues develops a sense of belongingness and the feeling of being an important entity for the organization, with a strong social identity.

OBJECTIVES

This research focuses on the employee engagement and job satisfaction of concessionaire employees working at Delhi International Airport (T3 and 1D Terminals). The three objectives of this research were as follows:

1. To identify the factors that contribute to employee engagement of concessionaire employees;
2. To identify the factors that contribute to job satisfaction of concessionaire employees;

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3. To study the relationship between employee engagement and job satisfaction of concessionaire employees.

RESEARCH METHODOLOGY

Employee engagement drivers were identified from the review of literature. A structured questionnaire was developed to measure employee engagement and job satisfaction. A 5 point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree was used.

A purposive sample of 362 employees of various outlets of concessionaires was selected. A similar sample was used to develop a loyalty model (Moolla, 2010). The present study is confined to the concessionaire employees working at Indira Gandhi International Airport, Delhi including both the terminals, Terminal 1D for domestic routes and Terminal 3 for domestic and international routes.

Data Analysis and Findings

The Statistical Package, SPSS along with add-on package AMOS for the Social Sciences, was used for structural equation modeling, confirmatory factor analysis and quantitative analysis.

Reliability Analysis

The Cronbach's Alpha test was used for testing the reliability of the scale. It is a "measure of the internal consistency of the construct indicators, depicting the degree to which they 'indicate' the common latent (unobserved) construct" (Hair, Black, Babin, Anderson, & Tatham, 2006). The reliability of the questionnaire was found to be 0.877 (>.5), hence, the instrument is reliable for further analysis.

Sampling Adequacy

Factor Analysis was used as a data reduction technique to remove the redundant variables and to reduce the number of significant parameters. The KMO and Bartlett's test was performed to measure sampling adequacy, which should be greater than 0.5 for a satisfactory analysis. Bartlett's test indicated that the observed correlation matrix is significantly different from the identity matrix. The results show a high KMO value of 0.844 and Bartlett's test value 0.000 (<0.05) indicates that the data is appropriate for factor analysis.

Factor Analysis was performed using the Principal Component Analysis (PCA) method with Varimax Rotation. The result identified 5 factors which explained 66 % of the total variance of employee engagement. The indentified constructs were Empowerment (EMPT), Culture (CULT), Policy and Procedure (PYPE), Motivation (MOTI), and Communication (COMM.). Based on the PCA results, the model has been further developed through various stages.

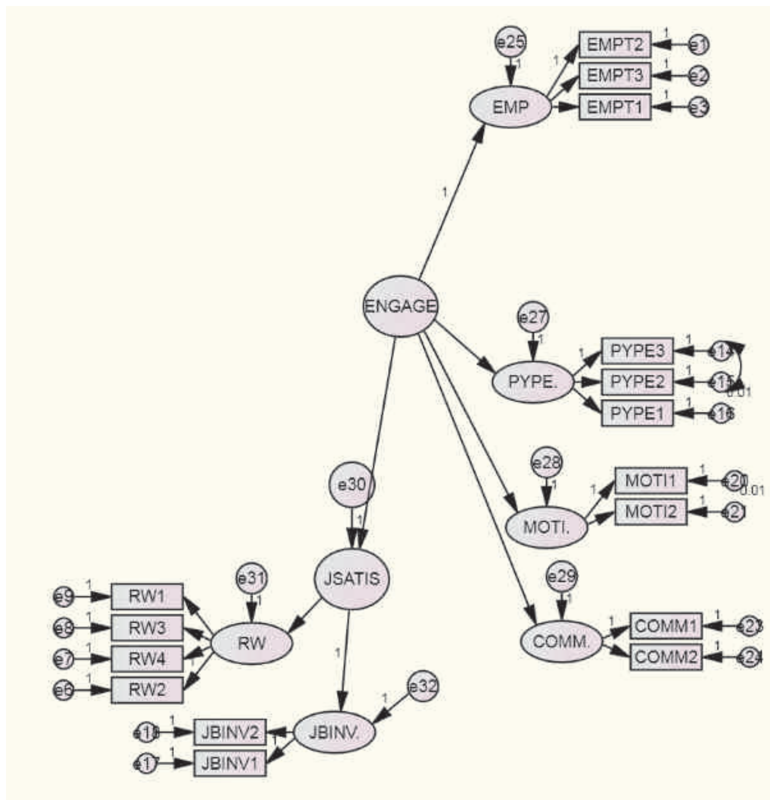
Model Fit Indices

Confirmatory factor analysis (CFA) confirmed goodness of model fit, which indicated the relative importance and significance of the factors. CFA was used as a data reduction technique to reduce the number of significant parameters and to remove the redundant variables using the Principal Component Analysis (PCA) method with Varimax Rotation.

The chi-square is identified as classic goodness of fit index and routinely reported in CFA research; other fit indices are considered for evaluation of model fit.

For this study, the goodness of fit (GFI), standardized root mean square residual (SRMR), root mean square error of approximation (RMSEA), Tucker-Lewis index (TLI), comparative fit index (CFI) and the Hoeltex index are considered as goodness of fit measures with the given acceptable threshold values (Hair, Black, Babin, Anderson, & Tatham, 2010; Hu & Bentler, 1999; Arbuckle, 2012; Moolla & Bisschoff, 2013). Each of these fit indices provide some different information about the model fit.

Figure 1: Structural Model



Two models were tried out. One was a seven-construct model and the other was a six-construct model. The six-construct model depicted in Figure 1 above was found to fit the empirical data better. This model shows that empowerment; policy and procedure; motivation; and communication lead to employee engagement and further engagement leads to employees' job satisfaction which has been measured by relationships at work and job involvement. It has been observed that culture has no impact on the engagement model, possibly because of the controlled and unique working environment within the airport area, as per the guidelines issued by the Ministry of Civil Aviation.

Examining the Model Fit Indices

The calculated value of CMIN/DF = 2.627 was <3, which indicates a good model fit (Field, 2007). The comparative fit index (CFI) value achieved was 0.933, which indicates a very good fit since it is above 0.9 (Konovsky and Pugh, 1994). In exploratory research, a CFI index of 0.80 is considered satisfactory, while 0.75 also is considered a fair fitting model (Du Plessis, 2010; Moolla & Bisschoff, 2013). Hence, this index signifies a very good fit as index value.

The RMSEA is a widely and popularly applied model fit index (Zen, 2007). An RMSEA value lower than 0.05 is considered "acceptable model fit". RMSEA index below 0.080 is considered "adequate model fit" and RMSEA value more than 0.10 is considered "poor fit" (Zen, 20017, Dixon and Dixon, 2010). Therefore, for the current model, with an RMSEA of 0.067, which is below 0.080 and SRMR of 0.055, which is very close to the threshold limit of 0.05 (Schumacker and Lomax, 1996), it was concluded that an adequate model fit exists.

To judge the critical sample size (N) for the model, Hoelter Index is used. A Hoelter's N returns values at the significance level of 0.05 and 0.01 and under 75 Hoelter's value is considered 'unacceptable' or low to accept for a model by chi-square (Newsom, 2005; Arbuckle, 2012). For the current model to measure employee engagement, Hoelter's value of 172 at the 0.05 significance level and 188 at the 0.01 level of significance were achieved; this signifies a very good model fit.

Relationship of Engagement with Selected Variables

The standardized regression weights facilitate to prove convergent validity through factor loadings and also explain uni-dimensionality of constructs. Standardized estimates permit to assess the comparative offerings of each predictor variable to each outcome variable. The regression weights and sub-factors of the summarized model are presented in Table 1.

Table 1: Standardized Regression Weights

			Estimate
JSATIS	<---	ENGAGE	.946
EMP	<---	ENGAGE	.827
PYPE.	<---	ENGAGE	.569
MOTI.	<---	ENGAGE	.424
COMM.	<---	ENGAGE	.503
RW.	<---	JSATIS	.858
JBINV.	<---	JSATIS	.675

Each standardized regression weight explains the degree of change in the dependent variable for each one unit change in the variable predicting it. From the figures in Table 1 above, it is clear that when engagement goes up by 1, job satisfaction goes up by 0.946, empowerment by .827, policy and procedure by .569, motivation by .424, while communication by .503.

Explained Variance of the Constructs

Table 2: Squared Multiple Correlations:

Constructs	Estimate
JSATIS	.895
COMM.	.253
MOTI.	.179
JBINV.	.455
PYPE.	.324
RW.	.736
EMP	.683

The model was able to explain, to a fairly high level, the variance in constructs ranging from 89.5 percent of Satisfaction to 17.9% of Motivation as shown in Table 2 above.

DISCUSSION

The research has a unique finding that employee engagement leads to job satisfaction amongst concessionaire employees at Indira Gandhi International Airport, Delhi. Employee engagement comprises empowerment; policy and procedure; motivation; and communication, while job satisfaction comprises relationships at work and job involvement. Harter, Schmidt, and Hayes (2002) explicitly referred to their measure (The Gallup Workplace Audit) as "satisfaction-engagement" and defined engagement as "the individual's involvement and satisfaction with as well as enthusiasm for work". Many researchers (Christian, Garza, & Slaughter, 2011; Macey & Schneider, 2009) considered that there are fundamental differences between employee engagement and job satisfaction whereas Christian et.at (2011), through meta-analysis, argued that satisfaction is comparable because satisfied individuals have positive or negative emotions towards their jobs, while engagement connotes energy and activation. Rich, Lepine, and Crawford (2010) propounded that employee engagement can enhance job performance, task performance and organizational citizenship behaviour.

This study also found that culture has no influence on engagement. Most of the researchers explain that culture has significant influence on employee engagement (Mani, 2011; Balakrishnan, 2013; and Robinson, 2004). In this case it was found that the airport is a restricted area where only authorized persons can enter and rules, regulations and working conditions are defined by the Ministry of Civil Aviation. The standardized work culture and guidelines are defined for all the concessionaire employees irrespective of their own organizational culture. All the concessionaire employees are working under one roof and their behaviour and actions are controlled by a uniform code of conduct. The work culture is significantly influenced by The International Airport Council and global competition because airport rankings are decided through Airport Service Quality (ASQ) Ratings worldwide. The ASQ ratings evaluate facilities, working conditions, employee behaviour, hygiene and passenger experience at the airports, irrespective of individual brands and concessionaire values. This is the evaluation of not only airport services but also the national image in the international airport community. However, other sectors, mainly retail outlets, malls and hospitality, have developed their unique individual work cultures because they are spread over different locations and do not work in a controlled environment like concessionaires do.

CONCLUSION

In view of all the results, it is concluded that the proposed employee engagement model is good and workable to measure and improve employee engagement. Since it is an exploratory model and not a final and operationalized one, it is not deemed imperative to achieve a good fit in all respects (Bisschoff & Moolla, 2014). In addition, considering GFI, CFI, RMSEA, SRMR and Hoelter index value, it signifies an adequate model fit. It can be concluded that all five factors and two sub factors are important and their measuring criteria pertaining to each factor are both important and significant ($p \le 0.05$). This contributes to the model for measuring employee engagement.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The scope of the study has been limited to Delhi International Airport concessionaire employees. Due to restricted entry into the airport outlets, purposive sampling was carried out. In future, other airports within India may also be studied and employee engagement predictors could be compared with international airports across the globe.

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Evolution of Exchange Traded Funds (ETFs) – Comparison U.S. and Indian Bourses

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Bourses across the world have endeavored to satisfy the varying risk appetites of investors through innovations undertaken in the existing financial products. Exchange traded funds (ETFs) have debut the stock markets as close competitors to both open-ended funds as well as close-ended funds. The present paper attempts to provide an insight into the mutual fund industry of the world's two major economies, one representing the developed nations i.e. U.S. and the other symbolizing the developing nations i.e. India. The ETF industry in the two countries is found to differ on account of number of ETFs active in the respective countries, resources mobilized as well as the types of investors participating in the relatively new industry. ETFs are found to have strengthened their roots in the U.S. economy whereas they are yet required to undergo a long journey before they could gain momentum in India. The study will be beneficial for the research and investment community keen at understanding the evolution and growth of exchange traded funds.

Keywords: *Evolution, Exchange-traded funds, Index funds, India, Mutual funds, U.S.*

INTRODUCTION

Exchange traded funds (ETFs) symbolize a new investment avenue that aim to provide investors with the dual advantages of diversifying their portfolio through investment in a ingle security while simultaneously enabling real time trading which, however, were not available in case of traditional mutual fund trading. ETFs had their foundation laid in open-ended and close-ended mutual funds. Hence, an insight into the mutual fund industry is essential to understand the evolution of Exchange Traded Funds (ETFs). The present study studies the antecedents of ETFs that evolved over a period of time to form the present structure of ETFs. The paper lays emphasis on the origin, growth and development of ETFs in US that holds the credit of providing the world with its first-ever ETF i.e. SPDR and extends the same to India which accounts for one of the fastest growing economies of the world.

SOURCES OF QUANTITATIVE INFORMATION

Since the present study attempts to provide a brief view of the US and Indian ETF industry and its growth over time, reports by various investment institutions such asBlackrock, ETFGI(for the US market), AMFI (Association of Mutual Funds of India), SEBI (Securities and Exchange Board of India) (for the Indian market) and respective AMCs (Asset Management Companies) (of both the

markets) till 2015 have been studied. The sources include ETP Landscape- industry highlights (Blackrock), ETFGI monthlynews letters (ETFGI) and annual reports of SEBI besides the abstracts obtained from the websites of AMFI and respective AMCs.

EVOLUTION OF MUTUAL FUND INDUSTRY

The mutual fund industry owes its existence to a Dutch merchant and broker Abraham van Ketwich who invited people to collectively pool their savings to form an investment trust named "EendragtMaaktMagt" meaning "Unity Creates Strength" in 1774. The trust provided small investors an opportunity to invest in profitable avenues and hedge risk through diversification (Rouwenhorst, 2004). The trust was a huge success in Netherlands and survived for about 120 years but was finally dissolved in 1893 (Ferri, 2007).

United States (U.S.) had its first investment trust formed in 1893 named "Boston Personal Property" which was the first close-ended fund that traded on the U.S. stock exchange (Lofton, 2007). Since these funds restricted the ability to create or redeem underlying shares, they started trading at excessive premiums or discounts to their net asset value (NAV) which made them unpopular among the investment community (Davidson, 2012). Thereafter, the formation of the "Alexander Fund" in Philadelphia in 1907 paved way for the development of open-ended mutual fund that allowed the creation and redemption of shares at regular intervals. However, the "Massachusetts Investors Trust (MIT)", formed in 1924, holds the privilege of being the first true U.S. mutual fund that is designed in accordance with today's open-end structure (Ferri, 2007). The U.S. mutual fund industry witnessed peaks and valleys for the next few years and with the establishment of the Investment Act of 1940, the count of mutual funds increased substantially in the next few decades (Lofton, 2007).

Up to 1970, the mutual fund industry followed active management and tried to outperform the market through active selection of stocks. Owing to the high expense ratio, rapid stock turnover and difficulties encountered while forecasting market trends, mutual funds failed to provide returns superior to those of the market (Wiandt and McClatchy, 2002; Lofton, 2007). The investment community, thus, started calling for a passively managed fund that could provide returns similar to those of a stock index at minimum cost (Ferri, 2002; Lofton, 2007). Also, Eugene Fama in his paper on efficient market hypothesis further proposed that the markets are efficient enough to reflect all the available information and hence, any endeavor to beat the market wisdom will be futile (Wiandt and McClatchy, 2002). Wells Fargo Bank developed the first index fund in 1971 that aimed to replicate the returns of all the stocks comprising the New York Stock Exchange but the idea could not succeed owing to the huge expenses incurred while executing strategies associated with the fund management (Ferri, 2002). John Bogle and Dr. Burton Malkiel introduced the first commercially successful index fund titled Vanguard 500 Index Fund in 1976 that comprised of stocks included in the S&P 500 index (Lofton, 2007). However, it was only after 1986 that the fund got wide acceptance from the investment community (Ferri, 2002). In addition, the index fund industry in U.S. gained impetus only from the year 1996 (IISP Ltd., 2013).

ORIGIN OF EXCHANGE TRADED FUNDS (THE U.S. SCENARIO)

With investors now tracking the market indexes through holding a basket of securities, only one step remained for Exchange Traded Funds (ETFs) to enter the market place (Wiandt and McClatchy, 2002). ETFs already had their genes laid in the program trading or portfolio trading that revolutionized the notion "trading" in late 70s and early 80s (Gastineau, 2001). Program trading allowed the trading of a "basket of securities" like those in an index, as against the trading of an individual security, through the execution of a single order placed at the stock exchange (Carlson, 2006). The simultaneous evolution of S&P 500 index futures enabled large institutional investors to utilize program trading to hedge their positions through portfolio insurance, indulge in index arbitrage activities and pursue their other hedging objectives (Furbush, 2002). As such, institutional investors started exploiting the strategy aggressively in both cash and futures markets in order to protect their respective interests. All these developments aroused interest among the small institutions and retail investors for a portfolio that could be traded easily in the market without incurring any substantial cost (Gastineau, 2001). Although futures and program trading were the best available investment options at that time, they failed to cater to the needs of small and retail investors who found them complex and expensive (Wiandt and McClatchy, 2002).

Set against this background were the Cash Index Participations (CIPs) which were introduced in 1989 on the Philadelphia Stock Exchange. These were followed by the introduction of Index Participation Shares (IPS) on the American Stock Exchange. The market showed a great degree of enthusiasm in the new financial products. Both these instruments possessed much of the characteristics of futures than the ETFs of today since like future contracts, there was a short for every long and vice-a-versa (Wiandt and McClatchy, 2002). As such, the Chicago Mercantile Exchange (CME) and the Commodity Futures Trading Commission (CFTC) filed a suit against the Securities Exchange Commission (SEC), who had allowed the trading of such products, claiming that these products should trade on a futures market and not on a cash market. Ultimately, the SEC lost the case to CME and CFTC and stock markets were directed to close down the products (Gastineau, 2001).

At the same time, the U.S. Securities and Exchange Commission (SEC), on the request of Leland, O'Brien and Rubinstein (LOR) was making efforts to make way for the creation of a new exchange traded product that could provide institutional and retail investors with an easy way to hedge their positions. As such, the Investment Company Act Release No. 17809 was passed in 1990 that resulted in the formation of a new investment vehicle called SuperTrust. These advancements were in response to the stock market crash of 1987, a glimpse of which has been provided in the box. The structure of SuperTrust was similar to that of index fund which enabled institutional investors to trade an entire portfolio consisting of S&P 500 stocks in a single trade (Ferri, 2007). The new investment vehicle combined the characteristics of both open-end and closed-end funds. It allowed the creation and redemption of units like open-end funds and enabled intraday trading similar to closed-end funds. If the units were found to trade at a discount to their NAVs, institutional investors would step-in to arbitrage the situation. They would buy the underpriced units and at the same time sell the underlying the securities in the unit. The units would then be delivered to the fund manager who will in turn issue the underlying securities to the institutional investors. The securities would then be used to cover up the short position in the securities sold earlier. This arbitrage mechanism allowed institutional investors to lock in a risk-free profit. The procedure was reversed in case the units were found to trade at a premium. The creation and redemption process of SuperUnits helped to overcome the issues of discount and premium that were prevalent in closed-end funds (Ferri, 2002).

Owing to the regulatory delays observed in the completion of the process, the "SuperTrust" was finally launched in December 1992. The trust was formed with a maturity of 3 years and the idea was to replace the maturing units in 1995 but the replacement could not occur since it failed to attract the small and retail investors who found it to be

complex, expensive and bearing only institutional appeal (Ferri, 2007).

The American Stock Exchange (AMEX) was quick enough to take advantage of the SuperTrust Act of 1992 and filed a petition with the SEC to grant approval for the creation of the first ETF named Standards and Poor's Depository Receipts (SPDRs), popularly known as spiders(Ferri, 2002). Spiders, managed by State Street Global Advisors (SSGA), started trading at AMEX in January 1993 (Ferri, 2007). The structure of SPDRs is relatively simple and comprises of all the S&P 500 stocks, the proportion of which can be adjusted in accordance with the changes in the underlying index (Gatineau, 2001). Each unit of the SPDRs is valued at 1/10th of the value of the underlying index (Ferri, 2002). Any discrepancy observed in the market value of spiders and the stocks in the underlying index is corrected though an arbitrage process described in case of SuperUnits. The arbitrage is repeated until the deviation in prices is eliminated to such an extent that there is no profit opportunity left from such an arbitrage. SPDRs recorded an immediate success (Ferri, 2007). Ferri (2002) cites that the affordability offered by spiders to retail investors as one reason for the success of spiders over SuperUnits. The author further states that the low cost spiders had such a wide investor appeal that they stood in close competition to Vanguard 500 Index Fund.

The success story of SPDR prompted many other global players such as Morgan Stanley, Barclays Global Investors and Vanguard to enter the industry with a new generation of ETFs that aimed to replicate the performance characteristics of varied asset classes such as sector-specific ETFs, country ETFs, commodity ETFs, currency ETFs and many more (Ferri, 2002, 2007).

Since 2006, the U.S. ETF industry has grown tremendously with the number of ETFs increasing from 350 in 2006 to 1,259 ETFs in 2013. The assets under ETFs increased simultaneously from U.S. $ 416 billion to U.S. $ 1,614 billion in 2013. Presently, the industry comprises of a wide variety of ETFs such as actively managed ETFs, fixed income ETFs, global emerging market ETFs, leveraged ETFs and so on. As on 31 March 2015, the U.S. ETF industry comprised of 1,405 ETFs from 59 providers with assets under management of around U.S. $ 2007 billion, listed at the three stock exchanges of the U.S. (ETFGI, 2015).

THE INDIAN SAGA

The year 2014-15 witnessed an increased investor confidence in the financial stability of the Indian capital markets on account of strong fundamentals and growth prospects reported for the Indian economy. During the year 2014-15, Indian ETFs listed abroad such as the WisdomTree India Earnings Fund, iShares India 50 ETFand PowerShares India Portfolio recorded a gain of 27%, 26.4% and 26.7% respectivelyagainst the 4.8% gain recorded for iShares MSCI Emerging Markets ETF (Lydon, 2015).Hence, the following section proceeds to discuss the budding ETF sector in the Indian mutual fund industry.

The mutual fund industry in India evolved with the establishment of the Unit Trust of India (UTI) in 1963 as a joint effort on the part of the Government of India and the Reserve Bank of India (AMFI, 2014). UTI Mutual Fund launched its first open-end scheme named US64 in 1964 which was accredited with a huge success (Singh, 2003). This era marked the beginning of the first phase of mutual fund industry from the year 1964 to 1987. The second phase of the mutual fund industry (1987-1993) broke the monopoly of the UTI with the entry of various public sector mutual funds managed by public sector banks, Life Insurance Corporation (LIC) of India and General Insurance Corporation (GIC) of India (AMFI, 2014). State Bank of India (SBI) launched the first non-UTI mutual fund named SBI Mutual Fund in 1987. Canbank Mutual Fund (December 1987), Punjab National Bank Mutual Fund (August 1989), Indian Bank Mutual Fund

(November 1989), LIC Mutual Fund (June, 1989), Bank of India (June 90), GIC Mutual Fund (December, 1990) Bank of Baroda Mutual Fund (October 1992) were some of the other schemes that followed the pursuit (Kapil, 2011). With the liberalization of the financial sector in 1993, the mutual fund industry entered its third phase of growth that led to the entry of private sector players in the industry. The year 1993 was also marked by the introduction of mutual fund regulations that required all the mutual funds to be registered with the Securities Exchange Board of India (SEBI, 2013). These guidelines were later revised and replaced by the SEBI (Mutual Fund) Regulations 1996. In view of the mushrooming growth of the mutual fund industry, Association of Mutual Funds in India (AMFI) was set up in 1993 in order to ensure ethical code of conduct and protect investors' interests. The UTI reigned the industry till 1994-95 with around 76% of the resources being mobilized by the trust. However, a shift was observed in the year 1995-96 when the trust repurchased its large number of units, thus, providing an opportunity to the private sector players to grow and expand. As a result, the year 1999-2000 witnessed a sharp transposition in the industry when out of the total funds mobilized, private sector funds (with around 120 schemes offered to the investors) contributed 78.15% share to the total funds mobilized (Machiraju, 2010). The bifurcation of the UTI into Specified Undertaking of the UTI (governed by the Government of India) and UTI Mutual Fund (governed by the Mutual Fund Regulations) in 2003 led to the beginning of the fourth phase of the mutual fund industry. As of today, the industry is heralding towards a new era of consolidation with a number of mergers and acquisitions taking place among the private players (AMFI, 2014). As on 31 March 2005, the industry comprised of 29 mutual funds with eight in the public sector and twenty one in the private sector (Machiraju, 2010).With regard to the present scenario, out of Rs. 1,10,86,260 crores (gross) funds mobilized during the year 2014-15, Rs. 91,43,962 crores were mobilized by private sector mutual funds and Rs. 19,42,297 crores by public sector mutual funds (SEBI, 2015). Hence, private sector was found to continue to lead the mutual fund industry with 82.48% of the resources being mobilized by the private players.

Initially, open-ended schemes were more popular in India compared to the close-ended schemes which failed to attract the Indian investors during the early years of their inception. However, the scenario changed in 2006 when SEBI prohibited open-ended funds to amortize their initial expenses incurred at the time of initiating a new fund offer. This announcement made close-ended funds more appealing to the mutual fund houses who believed that the lock-in period involved in case of close-ended funds would restrict pre-mature withdrawals by investors which, in turn, would help them earn returns higher than those of the open-ended funds on account of the stable corpus of resources available with the fund (Adajania, 2010). As such, the number of close-ended schemes increased considerably from 47 in 2004-05 to 129 in 2005-06 and then further to 364 in 2007-08 (SEBI, 2005, 2006 and 2008). On 31 March 2015, there were 1,884 mutual fund schemes operating in the country out of which 810 (42.99%) comprised of open-ended schemes, 1002 (53.18%) comprised of close-ended schemes and 72 (3.82%) of interval schemes (SEBI, 2015).

The growing sophistication of the world equity markets and tremendous growth observed in the mutual fund industry made it difficult for the fund managers to outperform the market consistently. As such, managers started buying stocks, either deliberately or accidentally, similar to those comprising the market index. This led to the development of passive investment strategy that allowed control over the cost and risk associated with the portfolio (IISP Ltd., 2013). As a result, index funds were formed with Principal Index Fund being the first index fund to be launched in India in 1999. The fund is designed to track the performance of

CNX Nifty. The next index fund to enter the industry was UTI Nifty Index Fund in 2000. The race was followed by Franklin India Index Fund (June, 2000), SBI Nifty Index Fund (Dec, 2001), ICICI Prudential Index Fund (Feb, 2001), HDFC Index Fund (Jul, 2002), Birla Sun Life Index Fund (Sep, 2002), LIC NOMURA MF Index Fund (Nov, 2002), Tata Index Fund (Feb, 2003), Canara Robeco Nifty Index Fund (Sep, 2004), IDFC Nifty Fund (May, 2010), Taurus Nifty index Fund (Jun, 2010), IDBI Nifty Index Fund (Jun, 2010) and Reliance Index Fund (Sep, 2010). All these funds are designed to replicate the risk-return characteristics of the CNX Nifty index. Goldman Sachs Asset Management (India) Private Limited launched its first index fund named Goldman Sachs CNX 500 Fund in Nov 2008 that consisted of stocks comprising the CNX 500 index. ICICI Prudential Asset Management Company and IDBI Asset Management Company launched their own respective index funds in June 2010 and September 2010 respectively that tracked the performance of CNX Nifty Junior index. IIFL Dividend Opportunities Index Fund (Jun, 2010) and Principal Index Fund (May, 2014) were the next index funds to enter the industry that aimed to follow the CNX Dividend Opportunities and CNX Midcap Index respectively.

The rationale behind the introduction of exchange traded funds (ETFs) in the Indian market is not far different than that of the U.S. market. The inflexibility of intra-day redemption associated with open-ended funds and the tendency of close-ended funds to trade at excessive premiums or discount aroused the need for a readily tradable exchange traded vehicle that could be traded throughout the day and the market value of which does not deviate significantly from that of its underlying portfolio (or asset).

In India, Benchmark Asset Management Company Pvt. Ltd. (taken over by Goldman Sachs Asset Management Company in 2011) launched the first ETF named Nifty BeES on the National Stock Exchange (NSE) in December 2001. The fund is promoted as a hybrid security combining the advantages of both open-ended and close-ended funds. It allowed investors to gain exposure to S&P CNX Nifty Index through the trading of a single security listed on the stock exchange. It is priced at 1/10th of the value of the index and is traded on the capital market segment of the stock exchange. The in-kind creation and redemption feature of the fund allowed authorized participants to exploit any mispricing observed between the market price and Net Asset Value (NAV) of the fund (Nifty BeES: India's first ETF launched, 2001). The fund was not an immediate success. It took a couple of years for the fund to gain momentum and today the fund accounts for the largest fund among the available ETFs with assets under management (AUM) reported to be Rs. 888.93 crores as on 31 March 2015 (Goldman Sachs, 2015).

Benchmark mutual fund house came out with its next schemes titled Junior BeES and Bank BeES in 2003 and 2004 that aimed to provide exposure to risk-return characteristics of stocks comprising the CNX Nifty Junior and CNX Bank Index respectively. Each unit of Junior BeES is priced at 1/100th of the CNX Nifty Junior index and each unit of Bank BeES is priced at 1/10th of the value of the CNX Bank index. ICICI prudential mutual fund came out with the first ETFnamed SENSEX Prudential ICICI Exchange Traded Fund (i.e. SPIcE) to be traded on Bombay Stock Exchange (BSE)in 2003 which was designed to track the value of 1/100th of the SENSEX. Unit Trust of India also joined the quest with its first ETF titled UTI Sunder launched in 2003 (Pathak, 2010). However, the fund was merged with UTI Nifty Index Fund on 15 March 2012 and at present, the fund aims to replicate the performance of CNX Nifty index. Thereafter, a number of new schemes entered the industry. A brief view of the various equity ETFs available in India is given in Table I.

Table 1: Profile of Equity ETFs available in India as on 31 March 2015					
S. No.	Fund Name	Symbol	Launch Date	Benchmark Index	Fund House
1.	Goldman Sachs Nifty Exchange Traded Scheme	NIFTYBEES	Dec 28, 2001	CNX Nifty	Goldman Sachs Mutual Fund
2.	Goldman Sachs Nifty Junior Exchange Traded Scheme	JUNIORBEES	Feb 21, 2003	CNX Nifty Junior	Goldman Sachs Mutual Fund
3.	ICICI Prudential SPIcE Fund	ISENSEX/SPICE	Jan 10, 2003	S&P BSE Sensex	ICICI Prudential Fund House
4.	Goldman Sachs Banking Index Exchange Traded Scheme	BANKBEES	May 27, 2004	CNX Bank	Goldman Sachs Mutual Fund
5.	Goldman Sachs PSU Bank Exchange Traded Scheme	PSUBNKBEES	Oct 25, 2007	CNX PSU Bank	Goldman Sachs Mutual Fund
6.	Kotak PSU Bank ETF	KOTAKPSUBK	Nov 8, 2007	CNX PSU Bank	Kotak Mahindra Mutual Fund
7.	Kotak Sensex ETF	KTKSENSEX	June 6, 2008	S&P BSE Sensex	Kotak Mahindra Mutual Fund
8.	R*Shares Banking Exchange Traded Fund	RELBANK	June 19, 2008	CNX Bank	Reliance Mutual Fund
9.	Quantum Index Fund	QNIFTY	July 10, 2008	CNX Nifty	Quantum Mutual Fund
10.	Goldman Sachs S&P CNX Shariah Exchange Traded Scheme	SHARIABEES	March 18, 2009	CNX Nifty Shariah	Goldman Sachs Mutual Fund
11.	Kotak Nifty Exchange Traded Scheme	KOTAKNIFTY	Feb 8, 2010	CNX Nifty	Kotak Mahindra Mutual Fund
12.	MoSt Shares M50	M50	July 28, 2010	CNX Nifty	MotilalOswal Mutual Fund
13.	Goldman Sachs Infrastructure Exchange Traded Scheme	INFRABEES	Sep 29, 2010	CNX Infrastructure	Goldman Sachs Mutual Fund
14.	MoSt Shares M100	M100	Jan 31, 2011	CNX Midcap	MotilalOswal Mutual Fund
15.	Religare Invesco Nifty Exchange Traded Fund	RELGRNIFTY	June 6, 2011	CNX Nifty	Religare Invesco Mutual Fund
16.	Birla Sun Life Nifty Exchange Traded Fund	BSLNIFTY	July 22, 2011	CNX Nifty	Birla Sun Life Mutual Fund
17.	India Infoline Nifty Exchange Traded Fund	IIFLNIFTY	Oct 18, 2011	CNX Nifty	India Infoline Mutual Fund
18.	SBI SENSEX ETF	SBISENSEX	March 8, 2013	S&P BSE Sensex	State Bank of India Mutual Fund
19.	R*Shares CNX 100 Fund	RELCNX100	March 22, 2013	CNX 100	Reliance Mutual Fund
20.	ICICI Prudential Nifty ETF-Growth	INIFTY	March 20, 2013	CNX Nifty	ICICI Prudential Mutual Fund
21.	ICICI Prudential CNX 100 ETF-Growth	ICCNX100	Aug 20, 2013	CNX 100	ICICI Prudential Mutual Fund
22.	R*Shares Nifty Exchange Traded Scheme	RELNIFTY	Nov 22, 2013	CNX Nifty	Reliance Mutual Fund
23.	R*Shares Consumption Exchange Traded Fund	RELCONS	Mar 28, 2014	CNX Consumption Index	Reliance Mutual Fund
24.	Goldman Sachs Mutual Fund- CPSE Exchange Traded Scheme	CPSEETF	March 28, 2014	CPSE Index	Goldman Sachs Mutual Fund
25.	R*Shares Dividend Opportunities ETF	RELDIVOPP	April 7, 2014	CNX Dividend Opportunities	Reliance Mutual Fund
26.	Kotak Banking Exchange Traded Fund	KOTAKBKETF	Nov 28, 2014	CNX Bank	Kotak Mahindra Mutual Fund
27.	R*Shares Dividend Opportunities ETF	RELDIVOPP	April 7, 2014	CNX Dividend Opportunities	Reliance Mutual Fund
28.	Kotak Banking Exchange Traded Fund	KOTAKBKETF	Nov 28, 2014	CNX Bank	Kotak Mahindra Mutual Fund
29.	SBI ETF Nifty Junior Fund	SETFNIFJR	Mar 16, 2015	CNX Nifty Junior	SBI Mutual Fund
30.	SBI ETF Banking Fund	SETFBANK	Mar 16, 2015	Bank Nifty	SBI Mutual Fund

(Compiled from: NSE, Moneycontrol, Valueresearchonline)

In 2014, the Government of India (GOI) conceived the idea of ETFs as a tool to disinvest a portion of its holding in Public Sector Units (PSUs). Goldman Sachs Asset Management (India) Pvt. Ltd. was given the responsibility of managing such a fund and as such, the fund house came out with Central Public Sector Enterprises Exchange Traded Fund (CPSE ETF) in March 2014 with the aim to provide returns similar to those of the CPSE index. The fund proved to be a great success since it enabled government to harvest Rs. 3000 crores through the disinvestment process undertaken by this route (Palande, 2014).

The notion of commodity ETFs was first introduced in the world in May 2001 in India when Benchmark Asset Management Company filed its prospectus with SEBI with regard to the introduction of gold ETFs. However, the idea could materialize only in 2007 after certain regulatory restrictions were imposed. Gold BeES was the first ETF to be launched in India in 2007 by Benchmark mutual fund house (Benchmark, 2009). Thereafter, a number of schemes such as Goldshare (Mar, 2007), Kotakgold (Jul, 2007), Relgold (Nov, 2007), Qgoldhalf (Feb, 2008), Sbigets (April, 2009), Religarego (March, 2010), Hdfcmfgetf (Aug, 2010), Igold (Aug, 2010), Axisgold (Nov. 2010), Bslgoldetf (May, 2011), Idbigold (Nov, 2011), Crmfgetf (March, 2012) and Mgold (Mar, 2012) were launched in India that were designed to track the real-time price of gold. Each unit of these gold ETFs, except for Qgoldhalf, is priced at approximately one gram of the price of gold. Qgoldhalf tracks the price of approximately half gram of gold. All these schemes are statutorily required to pool all their resources in gold and gold related instruments (Pathak, 2010).

India holds the privilege of being the first country to design an ETF that caters to the needs of risk-averse investors who wish to invest their funds in risk-free securities. Liquid BeES is the first money market ETF launched in India in 2003 by Goldman Sachs Asset Management Company. The funds gathered through Liquid BeES are invested in short-term debt and money market securities (Benchmark, 2009). Later on, in 2014, LIC Nomura Mutual Fund launched the G-Sec Long Term Exchange Traded Fund that comprised of the securities held by GSEC 10 NSE Index. The fund is the second of its type in the money market ETF category.

Catering to the advantages that international investment adds to an investor's portfolio, international ETFs were launched in India in 2010.The investment domain of international ETFs is the stocks that are domiciled in other countries. Goldman Sachs Asset Management (India) Pvt. Ltd. launched the first international ETF in India in March 2010 and named it Hang Seng BeES. The fund aims to provide returns corresponding to those of Hang Seng Index, the index that serves as the economic barometer of Hong Kong. This was followed by the launch of N100 in March 2011 by MotilalOswal mutual fund house that invests in stocks that form part of the Nasdaq 100 of U.S.

India also has its presence felt in the global ETF industry through some of its exchange traded products listed at the international financial markets. India is seen as one of the most vital emerging economies in the world on account of its huge population and growth prospects. The Indian ETFs listed in U.S. are MSCI India Index Fund (INDA), India Earnings Fund (EPI), S&P India Nifty Fifty Index Fund (INDY), India Portfolio (PIN), MSCI India Index ETN (INP), India Small-Cap Index ETF (SCIF), Daily India Bulls 2x Shares (INDL), India Consumer ETF (INCO), India Infrastructure ETF (INXX), MSCI India Small Cap Index Fund (SMIN) and India Small Cap ETF (SCIN). Among the available ETFs, MSCI India Index Fund (INDA) accounts for the largest and the most popular ETF in U.S. (ETFdb, 2015).

During the financial year 2015, out of the 1,638 mutual fund schemes operating in the country, 1346 accounted for income/debt oriented schemes, 434 accounted for growth/equity oriented schemes, 25 for balanced schemes, 48 for exchange traded schemes and 31 for fund of funds investing overseas.

With regard to the funds mobilized during the period, the mutual fund industry had Rs. 10,82,757 crores of assets under management (AUM) out of which 64.11% comprised of income/debt oriented schemes, 31.87% comprised of growth/income oriented schemes, 2.43% of balanced schemes, 1.36% of exchange traded schemes and 0.22% of fund of funds investing overseas (SEBI, 2015). In view of the fact that ETFs account for only 1.6% of the total funds mobilized by the mutual fund industry, ETFs have a long voyage to undertake before they could taste success in India.

U.S. VS INDIA

The above discussion provides a glimpse of the mutual fund industry of both U.S. and India with special reference to the ETF segment. The two industries exhibit a large variation in terms of their origin and operational characteristics. The U.S. investors have already embraced the concept of exchange traded funds as reflected in the number of ETFs active in the country (1405 as on 31st March 2015) and assets managed by the ETF industry (US$ 2007 billion as on 31st March 2015). On the other hand, the investors in India are still reluctant to adopt the new investment idea. As on 31 March 2015, there are 45 ETFs listed with the two stock exchanges of India (i.e. NSE and BSE) with assets under management amounting to Rs. 14715 crores. The various myths surrounding ETFs with respect to their structure, liquidity, cost-effectiveness etc. have held them back from becoming popular in the country. While the U.S. ETF industry has witnessed an increasing participation on the part of both retail and institutional investors over the past few years, the Indian industry continues to be dominated by the corporate houses and institutional investors. Although a significant increase has been observed in the amount of resources invested by retail investors i.e. from Rs. 233.19 crore in 2008-09 to Rs. 3094.48 crore in 2014-15, the giant corporate houses and big financial institutions continue to be the major players in the Indian ETF industry. The U.S. industry has evolved over a period of time with a lot of innovation taking place in the ETF market. The industry has witnessed an increase in the variety of ETFs available ranging from those tracking a particular index or sector of the home country to those tracking the specific sectors of another country. There are ETFs that provide exposure to the dynamics of an emerging economy to those that are based on theme investing (that covers the area of clean energy, social responsibility etc.), leveraged investing (that aims to provide returns twice or thrice than that of the market index) and short investing (that aims to provide returns opposite to that of the market). Leveraged and short ETFs are much popular among the hedge fund community since they enable them to implement their mega bets in either direction in the most convenient way. However, the industry in India is much at a nascent stage with the total number of ETFs categorized into four different categories i.e. equity ETFs, gold ETFs, fixed income (or debt) ETFs and ETFs tracking international indices. Owing to the cultural preferences and the love that Indians attach to the yellow metal, Indian investors are more inclined towards gold ETFs compared to equity ETFs which came much earlier than the former. The country has only two ETFs i.e. Hang Seng BeES and N100 that are designed to trace the returns of Hang Seng Index and Nasdaq 100 respectively. The lack of awareness about the new exchange traded vehicle among the investment community has also hindered the progress of ETFs in the country. In addition, the conventional fund managers are still cautious to embrace the new idea. They fear the changes that their present business structures would have to undergo in case they adopt the new exchange traded vehicle. Although the reasons underlying the introduction of exchange traded products in both the countries remain more or less the same, the industry in India is much narrow compared to that of the U.S. and has a long way to evolve before it could compete with the world's major powers.

Evolution of Exchange Traded Funds (ETFs) –
Comparison U.S. and Indian Bourses

CONCLUSION

During the last few years, the global ETF industry has seen a tremendous growth in both the number and wealth invested in ETFs. As on 31 March 2015, the global ETP industry comprised of 5497 ETPs with assets under management of around U.S. $ 2933 billion and iShares acquiring the top position followed by Vanguard and State Street Global Advisors. U.S. occupies a pivotal position in the global ETP industry with U.S. $ 2097.3 billion being mobilized by the U.S. ETP industry alone (Blackrock, 2015). The present paper attempts to understand the evolution of one of the fastest growing segment of the mutual fund industry i.e. exchange traded funds (ETFs) in U.S. and India. The paper provides a glimpse of the various antecedents of exchange traded products that evolved over a period of time and brought about changes in the underlying structure of ETFs that gave rise to the currently traded ETFs. The paper also reviews the stock market crash of 1987 which aroused the need for the development of such an exchange traded vehicle that could provide immediate liquidity. The paper then focuses attention on the variety of ETFs offered in the two countries, the amount of resources mobilized by the funds and the types of participants in the market that set the two countries apart from each other. On the basis of discussion and statistics stated in the present study, the U.S. ETF industry is found to be much more flourished than that of the Indian ETF industry. The various myths surrounding the exchange traded funds, reluctance on the part of fund managers to embrace the new concept and lack of awareness among the investment community about the new investment avenue have held back the ETFs from becoming popular in India.

Owing to the special features inherent in the exchange traded funds,the industry holds the potential to grow by leaps and bounds in the near future. The convenience in investment, market traced returns, cost effectiveness combined with massive liquidity can make ETFs an irresistible product for a varied class of investors. ETFs enable retail and small investors to diversify their portfolio through a single investment vehicle and to change their position (long or short) as and when desired at any time of the day. ETFs enable large institutional investors such as Foreign Institutional Investors and Financial Institutions (like banks, mutual funds, pension funds and insurance companies) to easily allocate their investment resources without being affected by the implicit cost incurred in the form of cash drag. As regards active managers, ETFs offer them an opportunity to equitize their cash without sacrificing liquidity. Internationally, ETFs have occupied a prominent place in the portfolios of hedge fund managers who find them as an attractive investment option for executing their hedging strategies. With ETFs tracking a wide variety of asset classes such as equity, fixed income, commodity, real estate, currency and so on, it has become easy for both retail and institutional investors to gain exposure to a variety of asset classes which was difficult a few years back. There is no doubt that ETFs have made their presence felt in the global mutual fund industry and are likely to gain momentum in the forthcoming future.

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Creative Accounting Practices at Satyam: The Fraud Methodology Revealed

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Creative accounting (CA) involves the 'manipulation' of company financial records towards a 'pre-determined' target. Unfortunately, few 'loopholes' exists in the accounting standards, which provide 'enough-rooms' for the use of CA practices. In fact, Satyam example has been widely regarded as the debacle of the Indian financial system, which is very often referred to by the media as India's 'Enron'. Unlike Enron, which sank due to 'agency' problem, Satyam was brought to its knee due to 'tunneling' effect. Keen to project a perpetually rosy picture of the Satyam to the investors, employees and analysts, Mr. Raju (CEO and Chairman) manipulated the account books so that it appeared to be a far bigger enterprise than it actually was. The Satyam fraud has shattered the dreams of different categories of investors, shocked the government and regulators alike, and led to questioning of the accounting practices of statutory auditors and CG norms in India.

The present study of Satyam provides a 'snapshot' of how Mr. Raju'master-minded' this maze of CA practices? Undoubtedly, the Satyam scam is clearly a glaring real-life corporate example of abuse of CA, in which the account books were cleverly manipulated by following the modus-operandi of creating fake invoices, inflating revenues, falsifying the cash and bank balances, showing non-existent interest earned on fixed deposits, showing ghost employees, and so on. This type of CA is both illegal and unethical. In its recent indictment of the former promoters and top managers of Satyam, various investigative agencies (viz., SEBI, CBI, CID, SFIO,etc.) in India had finally provided minute and fascinating details about how India's largest corporate scam at Satyam was committed. An attempt has been made by the author, based on the media reports, to provide a description about the CA methodology used by the Satyam to commit the accounting fraud duly supported by evidence, wherever possible.

An attempt has been made to provide an explanation for various 'intriguing' questions about Satyam scam, such as: What was the need to commit a fraud on such a large scale?, HowRaju managed to cooked up books?,What was Raju's realmodus operandi to manipulate the accounts for eight years?,Why was Raju forced to blow his own whistle?, Why was not there a stricter punitive action against the auditors of Satyam PwC, etc.?"Now, after thorough investigations done bythe CBI and SEBI, they have unveiled the methodology by which Satyam fraud was engineered. Finally, we recommend that "CA practices should be considered as a serious crime, and as such, accounting bodies, law courts and other regulatory authorities in India need to adopt very strict punitive measures to stop such unethical CA practices."

Keywords: *Creative accounting, Satyam computer services limited, modus operandi unveiled, financial statements, corporate governance, auditors, forensic accounting, SEBI, SFIO, CID, India.*

INTRODUCTION

In the modern globalized and liberalized era, the corporate-sector across the globe is facing stiff competition andtherefore, they are under acute pressure to show good financial results in their financial reports. Under such an environment, corporate firms are motivatedto start using the "Creative Accounting" (henceforth, CA) practices (especially in an unsuitable situation) to boost up the profit (or manipulate the assets and liabilities) in order to report to the stakeholders' the image that is far better than the actual image. Thus, corporate scams (or frauds) are the result of 'manipulation' of books of accounts and doing accounting 'jugglery' designed to deceive others for 'wrongful-gains'. In fact, suchCA practices, by 'fudging' (or window-dressing) the accounts,are very often attributed to the 'flexibility' provided by the 'accounting' system. After reviewing the narrow and wide definitions of CA,Jones (2011) ended up with the definition of CA as follows: "Using the flexibility in accounting within the regulatory framework to manage the measurement and presentation of the accounts, so that they give privacy to the interest of the preparers, not the users." Thus, CA uses the various 'loopholes' in accounting principles, asdescribed in standards to show the 'desired' results to the stakeholders. Recently, Bhasin (2016a) commented, "The CA is the transformation of financial accounting figures from what they actually are to what the preparer of financial reports desires by taking advantage of the existing rules and/or ignoring some or all of them." However, Jawad and Xia (2015) have emphasized "the 'innovative' aspects of CA in maneuvering accounting numbers and argued that innovation is an essential part of CA practices in accounting practices." Indeed, CA is like a double-edged weapon, which can be used or abused by the management. If it is abused, then the sole fault is of the management and not of CA itself.For example, the Satyam Computer Services Limited (henceforth, Satyam) accounting scam, a glaring example of India's Enron, was "clearly a case of abuse of CA. Here, it is worthwhile to quote Bhasin (2016c) as, "The Satyam CA fraud started by showing 13,000 'ghost' (or fictitious) employees, and by creating over 7,500 fake invoices (worth Rs. 5,117 crores) for services not provided. From time to time, these fake invoices were entered into the company's financial statements from the fiscal 2004 to the second quarter of fiscal 2009. After creating fake invoices and thereby generating false revenues, the next step was to show these as cash receipts in account books. Therefore, the senior management falsified the bank statements that showed the higher bank balances than what was actually. The next level of fraud was to falsify interest on fixed deposit receipts to show that fictitious bank balances were earning interest income, and so on." The 'abuse' of the CA, in the case of Satyam, was made possible due to audit failure and total failure of the company Corporate Governance (henceforth, CG) system. These CA practices in financial reporting have been termed by Tassadaq and Malik (2015) as "the art of faking or calculating or presenting the balance sheet, and the art of saving money."Thus, CA is a starting point of number of accounting scandals, which collapsed during the last decade, applied CA techniques and manipulated financial record. No doubt, these accounting scandals have diminished the confidence of stakeholders in financial reporting all over the world.

Indeed, Creative Accounting (henceforth, CA) involves the 'manipulation' of company financial records towards a 'pre-determined' target. To get benefits from top management, managers are frequently tempted to show higher profits, which lead to adopting CA tactics (Vyas et al., 2015). This target can be motivated by a preference for more stable earnings. Even if there exists strong accounting standards to guide financial accounting activities, sometimes it becomes impossible to prevent the manipulative behavior of Financial Statement (FS) preparers', who wants to affect the decisions of the users' in favor of their companies. These manipulative behaviors are often called "Creative Accounting" (CA) and/or "Earnings Management" (EM). The 'CA' is the more preferred term in Europe, whereas it is more common to use 'EM' in the USA. Bhasin (2015) stated that "there exists strong evidence that the emergence of 'Forensic Accounting' has restored confidence in the credibility of corporate firms and their financial reports." Very often, a question that arises is: whether CA is good or bad? The answer to this question lies in the purpose for which it is used and whether it is in conformity with the existing accounting principles or standards. It is legal and ethical if it is done using the discretion in the accounting principles or standards with the objective of saving the company in hard times without any intention of making the private gains by the management. However, it is unethical and illegal if it does not follow any rule, principle, or standard and it is used by the management to make private gains at the cost of other stakeholders. While on one hand, the CA practices helps in reducing the risk of a company by increasing the share price and, on the other hand, it helps to boost a profit trend for the company. Various benefits, like ease of raising capital by issue of shares, defy takeover bids by other companies, and offering its own shares in takeover bids, etc. all go in favor of the CA practices. Moreover, the CA practice also helps to reduce the fluctuations of income/profit of the company, which helps it to gain a good image in the market (Nag, 2015). Moreover, CA practices should be considered as a serious crime and as such accounting bodies, law courts and other regulatory authorities need to adopt strict measures to stop this unethical practice.

At present, there are 32 Accounting Standards in India, which have been issued by the Accounting Standard Board of the Institute of Chartered Accountants of India (ICAI).

Creative Accounting Practices Scenario in the Indian Corporate Sector

India is a 'developing' economy, where the corporate-sector is contributing a major part in national income. Bhasin (2013) remarked, "Most of the Indian corporations are spreading their wings all over the world, where they get lots of opportunities to go for 'creative'accounting (CA) since all countries have different accounting systems, which creates ambiguity in investor's mind." Thus, the number and magnitude of accounting scandals have also increased in India. Over recent years, India has developed its corporate-sector, stock-markets and the accounting profession. The growing importance of the corporate-sector calls for its 'efficient' working and 'greater' transparency. However, the prevalence of creative (or fudging) accounting, and various fraudulent practices followed by some of the Indian companies hinders this. In spite of the large number of checks and balances required by the multiple regulatory agencies, there have been growing numbers of accounting scandals since the 1980s. Firms adopt accounting procedures that minimizes unfavorable economic effects and enhance favorable ones. As Bhasin (2012) stated,"Corporate frauds are the results of manipulation of accounts and accounting 'jugglery' designed to deceive others for wrongful gains. Such CA by 'fudging' the accounts is attributed to the 'flexibility' provided by the 'accounting' system." In India, the Companies Act requires that accounts must be "true-and-fair". Sometimes, however, management 'abuses' the freedom of choice in the accounting systems. Methods are adopted to 'hide' the true-picture, and show an 'improved' performance of the firm. In fact, the company management may adopt various methods to dress up financial statements to show improved performance. In respect of profit and loss account (or income statement), the accounting risk is usually the overstatement of income or understatement of expenses. For the balance sheet, it may exist in three areas: the correct valuation of company's assets, accounting for all liabilities and over or understatement of net worth. The effect of CA has defeated the 'fundamental' purpose of presentation of "true and fair" FS, as required by Section 211 of the Indian Companies Act. Table 1 shows some examples of Indian companies, who have practiced CA from 1996-97 to 2008-09.

Recently, Bhasin (2016) concluded that "Satyam Computers Services Limited inflated cash and bank balances of more than $1.5 billion (Rs. 7,000 crore), overstated debtors position of $100 million and understated liability of $250 million under the directive of CEO Raju." Even though Satyam is not only the first major accounting scandal that India has seen, one of the release by the India Credit Rating Agency "CRISIL" seems to have sounded an alarm signal. This study is based on the analysis of 639 companies. Of these, as many as 226 companies (forming 33.33%) of the universe were found to be inflated their profit and 21.91% deflated their position through clever, though legal accounting practices. Even though banks and financial institutions are unhappy with the existing accounting practices followed by their corporate borrowers, they are helpless in taking any legal action.

Most of the examples cited above are from the "cream of Indian companies". And even they hide expenses and prop-up incomes with a view to posting better profits and inflating their "profitability", without violating accounting rules and conventions. Management of the firms could "indulge in the above-mentioned practices because of the flexibility in accounting standards and other regulatory provisions, thus, leading to CA and fraudulent accounting practices." The best thing about the Satyam episode, as far as investors are concerned, is that it forced more companies to clean up their account books and governance practices. As

Table 1: Creative Accounting and Fraudulent Practices followed by the Indian Companies		
Company Name	**Year(s)**	**Nature of CA Practices Followed**
WIPRO Ltd.	1996-97 to 1999-2000	Transfer of land to stock creating capital reserve with the fair value and using it to neutralize the effect on profit of reduction of land value.
Bombay Dyeing & Manufacturing Company Limited	2003-04 and 2004-05	Creating provisions for possible loss on firm purchase contract and subsequent write-back of such provision thereby converting operating losses into operating profit.
Larsen & Toubro Limited	1999-2000 and 2001-02	Income recognition through transfer of loan liabilities at a lower consideration.
Apollo Tyres Ltd.	2004-05	Debiting profit and loss account with additional excise duty payable to the government and transferring equivalent amount from general reserve to neutralize the effect.
Asian Electronics Ltd.	2004-05	Impairment of assets: treatment of deferred tax.
Oil and Natural Gas Commission, Mukund Ltd., Torrent Power ACE Ltd. and Tata Motors Ltd.	2004-05	Capitalization of interest as well as other intangible assets to show fixed assets value upward and understating revenue expenses.
Hindustan Zinc Limited	2003-04 and 2004-05	Reclassifying assets in the balance sheet.
Tata Motors, Bombay Dyeing, Mahindra and Himachal Futuristic		2001-02Direct write-offs from reserves.
Satyam Computers Services Limited	2008-09	Fraudulently incorporated a non-existent cash component by inflating the bank balances, fudging bills, accounts receivables, interest and liabilities.

(Source: Compiled by author from Jones, M. (2011) 'Creative accounting, Fraud and International Accounting Standards,' John Wiley & Sons, London, page 235)

Mampatta and Shrivastava (2010) remarked, "The year after the Satyam Computer Services fiasco came to light, corporations were less inclined to indulge in "CA." With the stocks of companies perceived to be flouting prudent CG practices—particularly real-estate companies—taking a beating, India Inc. had little choice but to take notice. In a report, Noble Group (a UK-based investment bank) has evaluated the accounting practices for 313 BSE 500 companies. In fact, 63 BSE 500 financial services sector companies were excluded because they do not lend themselves to the 'forensic accounting' techniques used and 124 companies were excluded because their 'consolidated' financial statements for the past two financial years were not available.

A July 2014 report, prepared by India Ratings (a credit assessor), points to the poor quality of FS(s) prepared by the publicly-listed companies in India, with "significant likelihood that companies in the top-100 of BSE 500 companies could be involved in Creative Accounting (CA) practices (Livemint, 2015). The figure comes from the study of the financial data of 421 companies over 12 years." Among all, the pharmaceutical, automobile and packaged consumer goods sectors remain most prone to the malice of accounting gimmickry. Under-reporting tax liabilities, depreciation and other costs (such as, interest, selling & distribution expenses) are some of the techniques used to misreport actual costs; while channel pushing is a favorite tool to create illusory sales that boost revenue. Bhasin (2016 f) pointed out,"The urge for companies to meet street expectations is a crucial factor driving the adoption of CA practices, especially during economic downturns, when the pressure on earnings increases considerably. If the current accounting framework is restructured and strict adherence to CG guidelines is ensured, then practices of CA can be curbed."

REVIEW OF LITERATURE

Shah (1998) tried to explore the environment of CA in the UK, focusing on the motivations and constraints on such practices, by examining the accounting practices of two UK companies which issued creative financing instruments. He found that CA is influenced by two key motivators: stakeholder contracts and performance indicators. However, Amat et al., (1999) have reported on surveys of auditors' perceptions of CA in the UK, Spain and New Zealand to investigate the ethical issues raised by CA. It was revealed in their studies that the aggregate impact of CA practices on earnings amounted 20% of total reported earnings. They found that New Zealand offered an example of a country where a well-designed framework of accounting regulation has curbed CA. Similarly, Baralexis (2004) investigated "why, how, to what extent, and in what direction, the CA was practiced in Greece. Knezevic et al., (2012) useda questionnaire to conduct a study of companies in Serbia. A study by Momani and Obeidat (2013) investigated the effect of audit ethics on auditors' ability to detect the practices of CA in Jordan.

Osazevbaru (2012) investigated the effect of CA on firm value in Nigeria, and the findings of the study revealed that it can positively affect firm's value. Similarly, Sansusi and Izedonmi (2014) made an empirical investigation on the opinions of experienced staff of commercial banks on CA practices in Nigerian commercial banks. They recommended that "CA should be considered as a serious crime and as such accounting bodies, law courts and other regulatory authorities need to adopt strict measures to stop the practice." Moreover, Micah and Chinwe (2014) have used survey data and financial reports on 14 manufacturing firms over 5 year period to "examine whether CA and organizational effectiveness has any significant relationship." Besides, a study by Blessing (2015) evaluated the use of forensic accounting techniques in curbing CA.

As per a study conducted by Bhasin (2015a), thequestionnaire-based survey methodology was used, 14 specific research questions were asked, and 120 questionnaires were distributed to the preparers' and users' of the company FS(s). The study revealed that "the practice of CA is always a deliberate attempt to gain undue advantage for accountants, managers and companies. Strong punitive measures should be promptly taken against all those found culpable in the act of CA." We recommend that effective rules and regulation of accounting, audit and CG practices should be put in places, within the corporate-sector, to forestall the negative incidence of CA practices in India. Similarly, Patnaik et al., (2014) made an empirical analysis by undertaking a survey in some selected private sector undertakings in Kolkota, Bhubaneswar and Cuttack. They used questionnaire and Likert scale method and concluded that "window dressing practices are prevalent in majority of corporations and external auditors encourage such practices for their own interest." In addition, Tassadaq and Malik (2015) in their empirical study collected the data through structured questionnaire from industrial sector of Pakistan. They concluded that "a company is involved in frauds or scandals because of several factors like unethical behaviors, agency problem and non-professional attitude."

The above highlighted reviewed studies are focusing on different dimensions of the CA. However, Bhasin (2013a) conducted a qualitative, descriptive and exploratory study of Satyam. The main objectives of this study was "to highlight the accounting scandal by portraying the sequence of events, the aftermath of events, the key parties involved, and major follow-up actions undertaken in India; and lesions to be learnt from Satyam scam." So far, unfortunately, no detailed and in-depth research study has been undertaken to find out the actual modus operandi followed by Satyam, specifically in light of the recent legal investigations carried out by the Indian authorities. Hence, the present study seeks to fill this gap and contributes to the literature.

MATERIAL AND METHODS

The present study is primarily based on "secondary" sources of data, gathered from the related literature published in the journals, media reports in newspaper, websites, and latest reports of the various investigation authorities in India. However, the nature of the study is "primarilyexploratory, qualitative, descriptive and analytical." Best possible efforts have made by the authors to provide the latest evidence supporting the case.

The main objective of this study is "to highlight in-depth the Satyam Computer Services Limited's Creative Accounting practices, as used by the senior management, to commit scandal by portraying the emergence of Satyam, sequence of events, key players involved in the scam process, modus operandi of fraud, the aftermath of events, auditors role, major follow-up actions, regulatory reforms undertaken in India, etc."We recommend that "CA practices should be considered as a serious crime, and as such, accounting bodies, law courts and other regulatory authorities need to adopt very strict punitive measures to stop unethical CA practices."

CREATIVE ACCOUNTING PRACTICES AT SATYAM COMPUTER SERVICES LIMITED: A CASE STUDY

The Satyam Computer Services Limited (hereinafter, 'Satyam'), a global IT company based in India, has just been added to a notorious list of companies involved in fraudulent financial activities. Satyam's CEO, Mr. B.Ramalingam Raju (hereinafter, 'Raju'), took responsibility for all the accounting improprieties that overstated the company's revenues and profits, and reported a cash holding of approximately $1.04 billion that simply did not exist. "This leads one to ask a simple question: How does this keep on happening for five years, without any suspicions?" asked Bhasin (2016b). So, while Raju ran his fraud, the auditor slept, the analysts slept, and so did the media. To be fair, the media and a whistle-blower did an excellent job of exposing Raju and his many other "shenanigans" after he had confessed (Kaul, 2015; Miller 2006). In his letter (of Jan.7, 2009) addressed to board of directors of Satyam, Raju showed the markers of this fraud 'pathology'. Now, more than six years later, the final decision in the Satyam scam has been made and all accused charge-sheeted in the case have been awarded punishment by the Court.

Satyam was a 'rising-star' in the Indian 'outsourced' IT-services industry (Fernando, 2010). The company was formed in 1987 in Hyderabad (India) by Mr. Ramalinga Raju. The firm began with 20 employees, grew rapidly as a 'global' business, which operated in 65 countries around the world. Satyam was the first Indian company to be registered with three International Exchanges (NYSE, DOW Jones and EURONEXT).Satyam was as an example of India's growing success; it won numerous awards for innovation, governance, and corporate accountability (Agrawal and Sharma, 2009).AsBhasin (2013, 2013a) commented, "From 2003-2008, in nearly all financial metrics of interest to investors, the company grew measurably, as summarized in Table 2. Satyam generated Rs. 25,415.4 million in total sales in 2003-04. By March 2008, the company sales revenue had grown by over three times. The company demonstrated an annual compound growth rate of 38% over that period. Similarly, operating profits, net profit and operating cash flows growth averaged 28, 33 and 35%, respectively."Thus, Satyam generated significant corporate growth and shareholder value too. The company was a leading star (and a recognizable name) in a global IT marketplace.

Unfortunately, less than five months after winning the Global Peacock Award, Satyam became the center-piece of a 'massive' accounting fraud. Satyam's top management simply cooked the company's books by overstating its revenues, profit margins, and profits for every single quarter over a period of 5-years, from 2003 to 2008. Shockingly, on

January 7, 2009, Mr. Raju disclosed in a letter (see Exhibit-1), "He had been manipulating the company's accounting numbers for years. He overstated assets on Satyam's balance sheet by $1.47 billion, andnearly $1.04 billion in bank loans and cash that the company claimed to own was non-existent. Satyam also under-reported liabilities on its balance sheet and overstated its income nearly every quarter over the course of several years in order to meet analyst expectations." For example, the results announced on October 17, 2009 overstated quarterly revenues by 75% and profits by 97%. Mr. Raju and the company's global head of internal audit used a number of different techniques to perpetrate the fraud (Willison, 2006). As Ramachandran(2009) pointed out, "Using his personal computer, Mr. Raju created numerous bank statements to advance the fraud. He falsified the bank accounts to inflate the balance sheet with balances that did not exist. He also inflated the income statement by claiming interest income from the fake bank accounts. Mr. Raju also revealed that He created 6,000 fake salary accounts over the past few years and appropriated the money after the company deposited it." AsBhasin (2016d) pointed out, "The Satyam's global head of internal audit created fake customer identities and generated fake invoices against their names to inflate revenue. The global head of internal audit also forged board resolutions and illegally obtained loans for the company." It also appeared that the cash that the company raised through American Depository Receipts in the United States never made it to the balance sheets (Wharton, 2009).

Table 2: Operating Performance of Satyam (Rs. in millions)

Particulars	2003-04	2004-05	2005-06	2006-07	2007-08	Average Growth Rate (%)
Net Sales	25,415.4	34,642.2	46,343.1	62,284.7	81,372.8	38
Operating Profit	7,743	9,717	15,714.2	17,107.3	20,857.4	28
Net Profit	5,557.9	7,502.6	12,397.5	14,232.3	17,157.4	33
Operating Cash Flow	4,165.5	6,386.6	7,868.1	10,390.6	13,708.7	35
ROCE (%)	27.95	29.85	31.34	31.18	29.57	30
ROE (%)	23.57	25.88	26.85	28.14	26.12	26

Source: www.geogit.com)

Exhibit-1: Satyam's Founder, Chairman and CEO, Mr. Raju's Letter to his Board of Directors

To

The Board of Directors,
7 January, 2009
Satyam Computer Services Ltd.

From: B. Ramalinga Raju
Chairman, Satyam Computer Services Ltd.

Dear Board Members,

It is with deep regret, and tremendous burden that I am carrying on my conscience, that I would like to bring the following facts to your notice:

1. The Balance Sheet carries as of September 30, 2008:

   (a) Inflated (non-existent) cash and bank balances of Rs.5,040 crore (as against Rs. 5,361 crore reflected in the books); (b) An accrued interest of Rs. 376 crore which is non-existent; (c) An understated liability of Rs. 1,230 crore on account of funds arranged by me; and (d) An over stated debtors position of Rs. 490 crore (as against Rs. 2,651 reflected in the books).

2. For the September quarter (Q2), we reported a revenue of Rs.2,700 crore and an operating margin of Rs. 649 crore (24% of revenues) as

against the actual revenues of Rs. 2,112 crore and an actual operating margin of Rs. 61 Crore (3% of revenues). This has resulted in artificial cash and bank balances going up by Rs. 588 crore in Q2 alone.

The gap in the Balance Sheet has arisen purely on account of inflated profits over a period of last several years (limited only to Satyam standalone, books of subsidiaries reflecting true performance). What started as a marginal gap between actual operating profit and the one reflected in the books of accounts continued to grow over the years. It has attained unmanageable proportions as the size of company operations grew significantly (annualized revenue run rate of Rs. 11,276 crore in the September quarter, 2008 and official reserves of Rs. 8,392 crore). The differential in the real profits and the one reflected in the books was further accentuated by the fact that the company had to carry additional resources and assets to justify higher level of operations —thereby significantly increasing the costs.

Every attempt made to eliminate the gap failed. As the promoters held a small percentage of equity, the concern was that poor performance would result in a take-over, thereby exposing the gap. It was like riding a tiger, not knowing how to get off without being eaten.

The aborted Maytas acquisition deal was the last attempt to fill the fictitious assets with real ones. Maytas' investors were convinced that this is a good divestment opportunity and a strategic fit. Once Satyam's problem was solved, it was hoped that Maytas' payments can be delayed. But that was not to be. What followed in the last several days is common knowledge.

I would like the Board to know:

1. That neither myself, nor the Managing Director (including our spouses) sold any shares in the last eight years—excepting for a small proportion declared and sold for philanthropic purposes.
2. That in the last two years a net amount of Rs. 1,230 crore was arranged to Satyam (not reflected in the books of Satyam) to keep the operations going by resorting to pledging all the promoter shares and raising funds from known sources by giving all kinds of assurances (Statement enclosed, only to the members of the board). Significant dividend payments, acquisitions, capital expenditure to provide for growth did not help matters. Every attempt was made to keep the wheel moving and to ensure prompt payment of salaries to the associates. The last straw was the selling of most of the pledged share by the lenders on account of margin triggers.
3. That neither me, nor the Managing Director took even one rupee/dollar from the company and have not benefitted in financial terms on account of the inflated results.
4. None of the board members, past or present, had any knowledge of the situation in which the company is placed. Even business leaders and senior executives in the company, such as, Ram Mynampati, Subu D, T.R. Anand, Keshab Panda, Virender Agarwal, A.S. Murthy, Hari T, SV Krishnan, Vijay Prasad, Manish Mehta, Murali V, SriramPapani, Kiran Kavale, Joe Lagioia, RavindraPenumetsa, Jayaraman and Prabhakar Gupta are unaware of the real situation as against the books of accounts. None of my or Managing Director's immediate or extended family members has any idea about these issues.

Having put these facts before you, I leave it to the wisdom of the board to take the matters forward. However, I am also taking the liberty to recommend the following steps:

1. A Task Force has been formed in the last few days to address the situation arising out of the failed Maytas acquisition attempt. This consists of some of the most accomplished leaders of Satyam: Subu D, T.R. Anand, Keshab Panda and Virender Agarwal, representing business functions, and A.S. Murthy, Hari T and Murali V representing support functions. I suggest that Ram Mynampati be made the Chairman of this Task Force to immediately address some of the operational matters on hand. Ram can also act as an interim CEO reporting to the board.
2. Merrill Lynch can be entrusted with the task of quickly exploring some Merger opportunities.
3. You may have a 'restatement of accounts' prepared by the auditors in light of the facts that I have placed before you. I have promoted and have been associated with Satyam for well over twenty years now. I have seen it grow from few people to 53,000 people, with 185 Fortune 500 companies as customers and operations in 66 countries. Satyam has established an excellent leadership and competency base at all levels. I sincerely apologize to all Satyamites and stakeholders, who have made Satyam a special organization, for the current situation. I am confident they will stand by the company in this hour of crisis. In light of the above, I fervently appeal to the board to hold together to take some important steps. Mr. T.R. Prasad is well placed to mobilize support from the government at this crucial time. With the hope that members of the Task Force and the financial advisor, Merrill Lynch (now Bank of America) will stand by the company at this crucial hour, I am marking copies of this statement to them as well.

Under the circumstances, I am tendering my resignation as the chairman of Satyam and shall continue in this position only till such time the current board is expanded. My continuance is just to ensure enhancement of the board over the next several days or as early as possible.

I am now prepared to subject myself to the laws of the land and face consequences thereof.

Signature

(B. Ramalinga Raju)

(Source: Letter distributed by the Bombay Stock Exchange and Security Exchange Board of India.Available at www.sebi.gov.in)

Creative Accounting Practices at Satyam:
The Fraud Methodology Revealed

Indeed, the Satyam fraud activity dates back from April 1999, when the company embarked on a road to double-digit annual growth. As of December 2008, Satyam had a total market capitalization of $3.2 billion dollars (Dixit, 2009).The fraud took place to divert company funds into real-estate investment, keep high earnings per share, raise executive compensation, and make huge profits by selling stake at inflated price. In this context, Kripalani (2009) stated, "The gap in the balance sheet had arisen purely on account of inflated profits over a period that lasted several years starting in April 1999." This gap reached unmanageable proportions as company operations grew significantly. Every attempt to eliminate the gap failed, and the aborted Maytas acquisition deal was the last attempt to fill the fictitious assets with real ones." But the investors thought it was a brazen attempt to siphon cash out of Satyam, in which the Raju family held a small stake, into firms the family held tightly (D'Monte, 2008). Fortunately, the Satyam deal with Maytas was 'salvageable'. It could have been saved only if "the deal had been allowed to go through, as Satyam would have been able to use Maytas' assets to shore up its own books." Raju, who showed 'artificial' cash on his books, had planned to use this 'non-existent' cash to acquire the two Maytas companies (Ahmad et al., 2010). "The greed for money, power, competition, success, prestige etc. compelled Raju to "ride the tiger," which led to violation of all duties imposed on him as fiduciaries: the duty of care, the duty of negligence, the duty of loyalty, and the duty of disclosure towards the stakeholders, says Bhasin(2010b).

The Indian government immediately started an investigation, while at the same time limiting its direct participation. The government appointed a 'new' board of directors for Satyam to try to save the company: goal was to sell the company within 100 days. On 7 Jan. 2009, the Securities andExchange Board of India (SEBI) commenced investigations under the various SEBI regulations. The Ministry of Corporate Affairs (MCA) of the Central Government separately initiated a fraud investigation through its Serious Fraud Investigation Office (SFIO). In addition, the MCA filed a petition before the Company Law Board (CLB) to prevent the existing directors from acting on the Board and to appoint new directors. On 9 Jan. 2009, the CLB suspended the current directors of Satyam and allowed the Government to appoint up to 10 new "nominee" directors. Subsequently, the new, six-member Board had appointed a chief executive officer and external advisors, including the accounting firms KPMG and Deloitte to restate the accounts of Satyam.

FINDINGS AND ANALYSIS OF RESULTS

The unfolding of Satyam sage has been a watershed event in the Indian corporate history. According to the founder's own public confession, Satyam had inflated its reported revenues by 25%, its operating margins by over 10 times, and its cash and bank balance by over 1 billion dollars. The magnitude of this fraud makes it by far the biggest accounting scandal in India's history (Ingram, 2015). Now, it is good to see that the Satyam case is different at least in one respect—we now have all the details about the modus operandi of the fraud. In its recent indictment of the former promoters and top managers of Satyam, the various investigating agencies in India, such as, Securities and Exchange Board of India (SEBI), Special Fraud Investigation Office (SFIO), Crime Investigation Department(CID) and Central Bureau of Investigation (CBI) and so on have provided minute and fascinating details about how India's largest corporate scam was committed. But SEBI's account also reveals how stupendously easy it is to pull off financial fraud on a grand scale, even in publicly listed companies. Perpetrators often manage to evade the long-arm of the law. When they are brought to book, the actual details of the crime get lost in legal technicalities. And untangling the mess usually takes such a long time that, by the time the wrongdoer is hauled up, most people have forgotten what the crime was all about.

SATYAM FRAUD METHODOLOGY UNVEILED

Shockingly, how did Raju mastermind this maze of Creative Accounting (CA) practices at Satyam? Keen to project a perpetually rosy picture of the company to the investors, employees and analysts, Raju manipulated the account books so that it appeared a far bigger enterprise than it actually was. Here,Bhasin (2015, 2016) remarked, "The Satyam scam is clearly a case of abuse of creative accounting, in which the accounts were 'cooked-up' by creating fake invoices for the services not rendered, recognizing revenue on these fake receipts, falsifying the bank balances and interest on fixed deposits to show these fake invoices are converted into cash receipts and are earning interest, and so on." This type of CA is both illegal and unethical.In its recent indictment of the former promoters and top managers of Satyam, the SEBI and other investigative agencies in India had finally provided minute and fascinating details about how India's largest corporate scam was committed. An attempt has been made by the author to provide a brief description about the methodology used by the Satyam to commit the accounting fraud. An attempt has been made by the author(s), based on the media reports, to provide a description about the CA methodology used by the Satyam to commit the accounting fraud duly supported by evidence, wherever possible.

WEB OF COMPANIES

A web of 356 investment companies was used to allegedly divert funds from Satyam. Under Ramalinga Raju, Satyam floated 327 companies and published inflated financials. These front companies purchased 6,000 acres of land, taken loans of Rs. 1,230 crore from these companies, which were not even accounted in books. The CID investigation also revealed that Satyam had executed projects in the name of 7 non-existent companies: Mobitel, Cellnet, E Care, Synony, Northsea, Autotech and Hargreaves. All these companies had several transactions in the form of inter-corporate investments, advances and loans within and among them. One such 'sister' company, with a paid-up capital of Rs. 5 lakh, had made an investment of Rs. 90.25 crore, and received unsecured loans of Rs. 600 crore.

Bhasin (2016a) remarked, "About Rs. 1,425 crore, out of Rs 1,744 crore loans obtained from non-banking finance companies were transferred to the bank accounts of Satyam by 37 entities as loans between November 17, 2006, and October 30, 2008, to meet the expenses of the company. Of this amount Rs. 194 crore was returned by the company between October and November 2008 to 15 out of the 37 companies. That left an outstanding liability of Rs. 1,231 crore—the sum Raju says He infused into the company."The key puzzle the CBI was trying to solve was also about the claims of Raju, as per Jan.7, 2009 letter, infusing Rs. 1,230 crore into the company.

COOKED UP BOOKS OF ACCOUNTS

Raju maintained thorough details of the Satyam's cooked-up accounts and minutes of meetings since 2002. He stored records of accounts for the latest year (2008-09) in a computer server called "My Home Hub." Details of accounts from 2002 till January 7, 2009 (the day Mr. Raju came out with his dramatic 5-page confession) were stored in two separate Internet Protocol (IP) addresses. Keeping in view the media reports,Bhasin (2016f) is of firm opinion that "Satyam's top management simply cooked the company's books by overstating its revenues, profit margins, profits, ghost employees etc. for every single quarter over a period of 5-years, from 2003 to 2008. In his letter, Raju admitted to inflating the cash and bank balances of the company by Rs. 5,040 crore. The company's total assets as on Sept. 30, 2008, stood at Rs. 8,795 crore. Of this cash and bank balances stood at Rs. 5,313 crore (which was nearly 60% of the total assets). This was overstated by Rs. 5,040 crore. The company basically had cash and bank balances of less than Rs. 300 crore."

Raju also admitted to fudging the last financial result that the company had declared, for the period of three months ending Sept. 30, 2008. The company had reported revenues of Rs. 2,700 crore, with an operating margin of 24% of revenues (or Rs. 649 crore). According to Bhasin (2016b),"In fact, these numbers were made-up. The actual revenues were Rs. 2,112 crore, with an operating margin of Rs. 61 crore (or 3% of the total revenues). So, Satyam had made a profit of Rs. 61 crore but was declaring a profit of Rs. 649 crore. The difference was Rs. 588 crore. The operating profit for the quarter was added to the cash and bank balances on the balance sheet. Hence, cash and bank balances went up by an "artificial" Rs. 588 crore, just for the three month period ending Sept. 30, 2008. This was a formula that Raju had been using for a while." First, Satyam over-declared its operating profit. Once this fudged amount of operating profit was moved to the balance sheet, it ended-up over-declaring its cash and bank balances. And this led to a substantially bigger balance sheet than was actually the case. The company had total assets of Rs. 8,795 crore, as on September 30, 2008. Once the Rs. 5,040 crore of cash and bank balances that were simply not there were removed from this, the "real" total assets fell to a significantly lower Rs. 3,755 crore.

So, how did Raju managed to boost revenues? Here, Bhasin (2016a) provides an explanation as:"In order to do this, Raju created fictitious clients (to boot sales revenue) with whom Satyam had entered into business deals. In order to record the fake sales, Raju introduced 7,000 fake invoices into the computer system of the company. Since the clients were fictitious, they could not make any real cash payments. Therefore, the company kept on inflating the money due from its fictitious clients (or what Raju called debtors position in his letter). Further, once fake sales had been recorded fake profits were also made and reported in accounts. Ultimately, the fake profits brought in fake cash, which therefore, needed to be invested somewhere. This led Raju to creating fake bank statements (showing forged fixed deposit receipts), where all the fake (or non-existed) cash that the company was throwing up was being invested. Finally, Raju tried his best to use this "fake cash" to buy out two real-estate companies, called Maytas Properties and Maytras Infra (both promoted by the family members) for a total value of $1.6 billion. The idea was to introduce in company accounts some "real" assets against all the "fake" cash that the company had managed to accumulate, so far. Unfortunately, that did not happen, and after this, Raju had no other way out but to come clean. So, Raju finally confessed about fudging the accounts in his Letter." While the Satyam accounting scam, which involved unethical and illegal CA tactics, was to the tune of Rs. 8,000 crore. Shockingly, the scam had caused an estimated notional loss of Rs. 14,000 crore to investors and unlawful gains of Rs. 1,900 crore to Ramalinga Raju and others.

The balance sheet of Satyam (as on September 30, 2008) carried an inflated (non-existent) cash and bank balances of Rs. 5,040 crore, non-existent interest of Rs. 376 crore, and understated liability of Rs. 1,230 crore. In fact, the balance sheet carried an accrued interest of Rs. 376 crore, which was non-existent. Table 3 depicts some parts of the Satyam's fabricated 'Balance Sheet and Income Statement' and shows the 'difference' between 'actual' and 'reported' finances. Keeping in view the modus operandi successfully used by Satyam, Bhasin (2015b) remarked: "To show excess cash, several banks have to be 'fooled' (or asked to look the other way). They probably were. To show huge fake revenues, everyone, from sales teams to MIS managers to accountants, had to be kept in the 'dark' (or conscripted into the conspiracy). Some probably were. To hide it all from investors and analysts, auditors had to be 'fooled' (or roped in as co-conspirators). Some surely were. It is frightening that such large-scale fraud, which is precisely the kind of thing our various 'watchdogs' are meant to prevent, can be perpetrated so casually by just a few people at the top!"

Table3: Fabricated Parts of Balance Sheet and Income Statement of Satyam			
	Actual (Rs.)	Reported (Rs.)	Difference (Rs.)
Cash and Bank Balances	321	5,361	**5,040**
Accrued Interest on bank FDs	Nil	376.5	**376**
Understated Liability	1,230	None	**1,230**
Overstated Debtors	2,161	2,651	**490**
Total	Nil	Nil	**7,136**
Revenues (Q2 FY 2009)	2,112	2,700	**588**
Operating Profits	61	649	**588**

FALSIFICATION OF BANK'S FIXED DEPOSITS ACCOUNTS

The promoters of Satyam regularly used to generate monthly bank statements to be fed into the bankbooks. Similarly, they also used to generate confirmations of bank balances, at the end of every quarter, against non-existent fixed deposit receipt (FDRs) and interest earned/due thereon. As Bhasin (2013b) commented,"From the records of Satyam, as well as, the books held with the auditors, it was noted that two sets of letters of confirmation of balances of FDRs were available with the auditors. These two sets included confirmations actually sent by banks directly to the auditors (the genuine ones) in the prescribed format, and confirmations through forged letters purportedly sent from various bank branches, but forged." Thus, as on 30 Sept. 2008, while the actual FDs balances with various banks was just under Rs. 10 crore, fake FD receipts shown to the auditors totaled over Rs. 3,300 crore. At HDFC Bank, for example, Satyam claimed Rs. 704 crore in deposits without having a single rupee parked with the bank branch concerned. With Citi Bank, it reported Rs. 613.32 crore of FDs when it actually had just Rs. 1.32 crore. And so on. Providing an explanation, Bhasin (2016c), described the motto and rationale for the process as,"Fake FDs had to be generated since fake business had to be shown to the stock markets, which meant the creation of fake customers and fake invoices from these businesses. Fake businesses generated fake revenues which, in turn, created the illusion of fake profit margins, and, finally, fake cash in the bank. Satyam apparently was very poor on its business fundamentals—with margins being low in many quarters, including negative margins in some quarters."

Indeed, falsification with regards to fixed deposit have been done since 2001-02 till 2007-08 and also for the quarter ended June 2008 and Sept. 2008. Further, Bhasin (2016f) observed, "All the misleading actions of window dressing and camouflaging created a larger than life picturesque image year-after-year in the minds of millions of gullible investors whose fate underwent a depressive spin." Satyam's balance sheet (as on Sept. 7, 2008) carried an accrued interest of Rs. 376 crore, which was non-existent. These figures of accrued interest were shown in balance sheets in order to suppress the detection of such non-existent fixed deposits on account of inflated profits. As shown above in Table 4, the company had created a false impression about its fixed deposits summing to be about Rs. 3,318.37 crores, while they actually held FDRs of just about Rs. 9.96 crores. Many experts cast partial blame for the scandal on Satyam's auditor Price Waterhouse (PwC) India, because the fraud went undetected for so many years.

Table 4: Falsification of Fixed Deposits Accounts (Rs. in Crores)			
Financial Year	Amount as per Balance Sheet/Trial Balance	Amount as per Bank Confirmation	Amount Falsified
2001-02	1243.15	5.43	7,000.00
2002-03	1252.37	0.00	1252.37
2003-04	1465.33	1.89	1446.46
2004-05	1801.47	5.97	1795.50
2005-06	1906.47	1.11	1795.50
2006-07	3364.94	5.65	3308.41
2007-08	3316.93	8.53	3308.41
Sept. 2008	3318.37	9.96	3308.41

(Source: SFIO Report published in the Pioneer (New Delhi), May 4, 2009, p 10)

FAKE INVOICES AND BILING SYSTEM

By using the IT skills in-house and tampering with the invoice management system (IMS) of the company, a software module that was internally developed (Bhasin, 2008).The Central Bureau of Investigation (CBI) has revealed details of the fake invoicing system used by Satyam. Documents released by media reports(for example, Verma and Ramana, 2009) to the general public in India showed how the company's standard billing systems were subverted to generate 'false' invoices to show 'inflated' sales, before its former boss, Ramalinga Raju, admitted to his role in the India's largest-ever corporate scandal. The investigators had used cyber forensics to uncover how in-house computer systems were exploited to generate fake invoices. Regular Satyam bills were created by a computer application called 'Operational Real Time Management (OPTIMA)', which created and maintained information on all company projects.The 'Satyam Project Repository (SRP)' system then generated project IDs; there is also an 'Ontime' application for entering the hours worked by Satyam employees; and a 'Project Bill Management System (PBMS)' for billing. An 'Invoice Management System (IMS)' generated the final invoices.

From the above, an intriguing question that arises here is:"how were the fake invoices created by subverting the IMS?" In the IMS system, there is a mandatory field earmarked 'Invoice Field Status'. Unless this is filled, processing of the order does not go ahead. So, what Raju & Company did was to use two alphabets 'H' (Home) or 'S' (Super) in the Invoice Field Status to process the entry. The invoices, thus created were 'hidden' from the view of those who ran the finance units. There were about 74,625 invoices generated in the IMS between April 2003 and December 2008. About 7,561 invoices out of 74,625 had 'S' marked in their invoice field status. Out of this, 6,603 were also found on the company's Oracle Financials software system, to make it seem like these were actual sales. Entries into this system get reflected straight in the Profit and Loss Statement. The balance of 958 invoices remained in the invoice state, and therefore, within the IMS system—they were not keyed into the Oracle enterprise-ware. The total revenues shown against these 7,561 fake invoices were Rs. 5,117 crore.Of this, sales through the 'reconciled' 6,603 invoices were about Rs. 4,746 crore. The CBI has also found that "sales were inflated every quarter and the average inflation in sales was about 18%.After generating fake invoices in IMS, a senior manager of the finance department (named Srisailam), entered the 6,603 fake invoices into Oracle Financials with the objective of inflating sales by Rs. 4,746 crore. By reconciling the receipts of these invoices, the cash balances in the company's account were shown at Rs. 3,983 crore."

The CBI officers have concluded that "the scandal involved this system structure being bypassed by the abuse of an emergency 'Excel Porting System', which allows invoices to be generated directly in IMS…by porting the data into the IMS.” This system was subverted by the creation of a user ID called 'Super User' with “the power to hide/unhide the invoices generated in IMS.” By logging in, as Super User, the accused were hiding some of the invoices that were generated through Excel Porting. Once an invoice is hidden the same will not be visible to the other divisions within the company but will only be visible to the company's finance division sales team. As a result, concerned business circles would not be aware of the invoices, which were also not dispatched to the customers. Investigation revealed that all the invoices that were hidden using the Super User ID in the IMS server were found to be false and fabricated. The face values of these fake invoices were shown as receivables in the books of accounts of Satyam, thereby dishonestly inflating the total revenues of the company.

SHOWING FAKE AND UNDERUTILIZED EMPLOYEES

To quote Bhasin (2012a), “One of the biggest sources of defalcation at Satyam was the inflation of the number of employees. Founder chairman of Satyam, Raju claimed that the company had 53,000 employees on its payroll. But according to investigators, the real number was around 43,000. The fictitious/ghost number of employees could be fabricated because payment to the remaining 13,000 employees was faked year-after-year: an operation that evidently involved the creation of bogus companies with a large number of employees.” The money, in the form of salaries paid to ghost employees, came to around $4 million a month, which was diverted through front companies and through accounts belonging to one of Mr. Raju's brothers and his mother to buy thousands of acres of land. Making up ghost employees might sound complicated, but investigators said it was not that difficult. “Employees are just code numbers in your system; you can create any amount of them by creating bogus employee IDs with false address, time-sheets, opening salary accounts with banks, and collecting payments through an accomplice.”

Interestingly, the charge-sheet filed by the investigators is of the view that Satyam employees remained underutilized. For instance, the utilization level shown in the latest investor update by the company is about 74.88% for offshore employees. However, the actual utilization was 62.02%. This clearly shows that the bench strength was as high as 40% in the offshore category. Further, as a result of underutilization, the company was forced to pay salaries to associates without jobs on hand, which increased the burden on company's finances. Even in the onshore category, the bench strength was around 5% (of total staff).

WHY DID RAJU (CHAIRMAN) NEED THE MONEY?

Indeed, it started with Raju's love for land and that unquenchable thirst to own more and more of it. Satyam planned to acquire a 51% stake in Maytas Infrastructure Limited for $300 million. The cash so raised was used to purchase several thousands of acres of land, across Andhra Pradesh, to ride a booming realty market. It presented a growing problem as facts had to be doctored illegally to keep showing healthy profits for Satyam that was growing rapidly, both in size and scale. Unfortunately, every attempt made by Raju to eliminate the gap ultimately failed. Cashing out by selling Maytas Infrastructure and Maytas Properties to Satyam for an estimated price ofRs. 7,800 crore was the last straw.

Satyam had tried to buy two infrastructure company run by his sons, including Maytas, in December 2008.However, on Dec. 16, Satyam's board cleared the investment, sparking a negative reaction by investors, which pummeled its stock on the New York Stock Exchange and Nasdaq. The board hurriedly reconvened the same day a meeting and called off the proposed investment. Unfortunately, the matter did not die there, as Raju may have hoped. In the next 48 hours, resignations streamed in from Satyam's non-executive director, Krishna Palepu, and three independent directors. As Bhasin(2016c) reported, “The effort failed and in Jan. 2009 Raju

Creative Accounting Practices at Satyam:
The Fraud Methodology Revealed

confessed to irregularity on his own, and was arrested two days later. This was followed by the law-suits filed in the U.S. contesting Maytas deal.” Four independent directors quit the Satyam board and SEBI ordered promoters to disclose pledged shares to stock exchanges. The trigger was obviously the failed attempt to merge Maytas with Satyam.

LAX BOARD OF DIRECTORS

The Satyam Boardwas composed of “chairman-friendly” directors, who failed to question the management's strategy and use of leverage in recasting the company. Moreover, they were also extremely slow to act when it was already clear that the company was in financial distress.Here, Bhasin (2011) observed,“The directors acted as mere rubber stamps and the promoters were always present to influence the decision. The glue that held the board members together was Mr. Ramalinga Raju (Chairman). Each of the board members were there on his personal invitation and that made them ineffective. The Board ignored, or failed to act on, critical information related to financial wrong-doings before the company ultimately collapsed.” It was only when Raju in the Dec. 2008 announced a $1.6 billion bid for two Maytas companies (Maytas Infra and Maytas Properties) and while the share market reacted very strongly against the bid and prices plunged by 55% on concerns about Satyam's CG, that some of the independent directors came into action by announcing their withdrawal from the Board, by than it was too late.

Satyam board's investment decision to invest 1.6 billion dollars to acquire a 100% stake in Maytas Properties and in 51% stake in Maytas Infrastructure (the two real estate firms promoted by Raju's sons) was in gross violation of the Companies Act 1956, under which no company is allowed, without shareholder's approval to acquire directly or indirectly any other corporate entity that is valued at over 60% of its paid-up capital. “Yet, Satyam's directors went along with the decision, raising only technical and procedural questions about SEBI's guidelines and the valuation of the Maytas companies. They did not even refer to the conflict of interest in buying companies in a completely unrelated business, floated by the chairman's relatives,” remarkedBhasin(2016f). Indeed, one of the independent directors, Krishna Palepu, praised the merits of real-estate investment on Satyam's part.

UNCONVINCING ROLE OF INDEPENDENT DIRECTORS

With regard to the role of the 'independent' directors (IDs) at Satyam, we should understand: how 'independent' they actually were?It was seen that all the non-executive directors (NEDs) at Satyam have been allotted significant stock options at an unbelievable low strike price of Rs. 2 per share, and apart from this, all the NEDs have also earned handsome commissions during 2007-08, as reflected by Satyam's audited results. Table 5shows the details of number of Stock options and commission given to different NEDs, as per Satyam's audited results for 2007-08.

Table 5: Satyam's Sumptuous Gift to its Non-Executive Directors

	No. of Options	Commission (in Rs.)
Krishna Palepu	10,000	1.2 millon
Mangalam Srinivasan	10,000	1.2 million
T R Prasad	10,000	1.13 million
V P Rama Rao	10,000	0.1 million
M Ram Mohan Rao	10,000	1.2 million
V S Raju	10,000	1.13 million
Vinod Dham	10,000	1.2 million

(Source: Satyam's Balance Sheet for 2007-08, Satyam Computer Services Limited, Hyderabad).

Naturally, a basic question that arises here is:"how can directors who had enjoyed such a huge largesse from the Company's promoters, had been beneficiaries of stock options given at an unbelievable strike price of Rs. 2 per share (against the ruling price of Rs. 500 per share in 2007- 08) and who had received such high commissions could be expected to be 'independent'? According toHasan and Bhasin(2016), "The idea of giving stock options to the independent directors, was perhaps, an intelligent ploy by Raju to successfully implement his plot at Satyam, with little resistance from the so-called independent directors, to whom, he was supposed to report to. It sounds ridiculous to listen to some of the independent directors at the Press interviews post-scandal that they were not aware of what was going on at Satyam."Furthermore, it is very disturbing that highly respected persons like T. R. Prasad and Dr. Rammohan Rao, both received stock options and commissions from Satyam, without wondering how this was acceptable to their status of independent directors.Take the case of another independent director, the well-known Prof. Krishna Palepu. Prof. Palepu accepted more than $200,000 in total compensation along with 10,000 stocks (equivalent to 5000 ADR) and getting paid a fabulous fee of Rs. 9.2 million for conducting training programs for Satyam employees on CG principles and their compliance, even if not expressly forbidden statutorily, will still place him as one having a vested interest in accepting the unethical policy of the management as a quid pro quo. As an 'independent' director, he should not have accepted any consulting assignment from Satyam."Satyam scam is one more proof that the mere compliance of SEBI's rule of the minimum number of independent directors does not guarantee ethical practices. Corporate history of thepast decade has more than clearly shown that independent directors havenot served their purpose," stated Bhasin (2013, a).

Notwithstanding Raju's confession, the Satyam episode has brought into sharp focus the role and efficacy of "independent" directors. The SEBI requires the Indian publicly held companies to ensure that independent directors make up at least half of their board strength. The knowledge available to independent directors and even audit committee members was inherently limited to prevent willful withholding of crucial information. The reality was, at the end of the day, even as an audit committee member or as an independent director, I would have to rely on what the management was presenting to me, drawing upon his experience as an independent director and audit committee member. As Bhasin (2010) pointed out, "It is the auditors' job to see if the numbers presented are accurate. That is what the directors should have been asking… Like the dog that didnot bark in the Sherlock Holmes story, the matter was allowed to slide. Even if outside directors were unaware of the true state of Satyam's finances, some 'red' flags should have been obvious." The closely-held structure of many Indian companies suggests a need for improved transparency and accountability for independent directors. Apart from improving disclosure standards, re-auditing norms, and greater shareholder activism, there is also a need to counter corruption.

TUNNELING STRATEGY USED BY SATYAM

As part of their "tunneling" strategy, the Satyam promoters had substantially reduced their holdings in company from 25.6% (in March 2001) to 8.74% (in March 2008). Furthermore, as the promoters held a very small percentage of equity (mere 2.18%) on December 2008, as shown in Table6, the concern was that poor performance would result in a takeover bid, thereby exposing the gap. The aborted Maytas acquisition deal was the final, desperate effort to cover up the accounting fraud by bringing in some real assets into the business. When that failed, Raju confessed the fraud. Given the stake the Raju's held in Matyas, pursuing the deal would not have been

terribly difficult from the perspective of the Raju family.

As pointed out by Shirur (2011), "Unlike Enron, which sank due to agency problem, Satyam was brought to its knee due to tunneling. The company with a huge cash pile, with promoters still controlling it with a small per cent of shares (less than 3%), and trying to absorb a real-estate company in which they have a majority stake is a deadly combination pointing prima facie to tunneling." The reason why Ramalinga Raju claims that he did it was because every year he was fudging revenue figures and since expenditure figures could not be fudged so easily, the gap between 'actual' profit and 'book' profit got widened every year. In order to close this gap, he had to buy Maytas Infrastructure and Maytas Properties. In this way, 'fictitious' profits could be absorbed through a 'self-dealing' process. Bhasin (2013a) concludes, "The auditors, bankers, and SEBI, the market watchdog, were all blamed for their role in the accounting fraud."

INSIDER TRADING ACTIVITIES AT SATYAM

Investigations into Satyam scam by the CID of the State Police and Central agencies have established that "the promoters indulged in nastiest kind of insider trading of the company's shares to raise money for building a large land bank." According to the SFIO Report (2009) findings, "promoters of Satyam and their family members during April 2000 to January 7, 2009 sold almost 3.9 crore number of shares thereby collecting in Rs. 3029.67 crore. During this course, the founder ex-chairman Ramalinga Raju sold 98 lakh shares collecting in Rs. 773.42 crores, whereas, his brother Rama Raju, sold 1.1 crore shares pocketing Rs. 894.32 crores." Please note that Table 7 (given above) provides details of sale of shares by the promoters and their family. Finding these top managers guilty of unfair manipulation of stock prices and insider trading, SEBI has asked them to deposit their 'unlawful gains' of Rs. 1850 crore, with 12% interest, with the regulator within 45 days. They have also been barred from associating with the securities markets in any manner for the next 14 years.

GAPS IN SATYAM'S EARNINGS AND CASH FLOWS

Through long and bitter past experience, some investors have developed a set of early warning signs of financial reporting fraud. Bhasin (2007) described it as: "One of the strongest is "the difference between income and cash flow. Because overstated revenues cannot be collected and understated expenses still must be paid, companies that misreport income often show a much stronger trend in earnings than they do in cash flow from operations." But now, we can see there is no real difference in the trends in Satyam's net income and its cash flow from operations during 2004 and 2005, as shown in Figure 1 below. Both net income and cash flow lines were almost overlapping each other for 2004 and 2005. That is not because the earnings were genuine; it is because the cash flows were manipulated too. To do that, Raju had to forge several big amount accounts receivables, and simultaneously falsify about their cash collections. Thus, the fake cash flows had led to the bogus bank balances.If cash flow from operating activities of a company is consistently less than the reported net income, it is a warning sign. The investor must ask

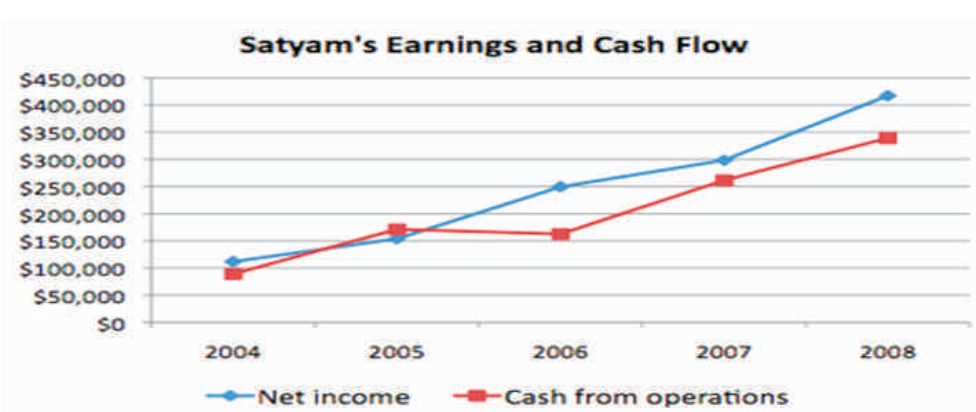
Table6: Promoter's Shareholding pattern in Satyam

Particulars	March 2001	March 2002	March 2003	March 2004	March 2005	March 2006	March 2007	March 2008	Dec. 2008
Promoter's holding (in %-age)	25.6	22.26	20.74	17.35	15.67	14.02	8.79	8.74	2.18

why operating earnings are not turning into cash.To keep from tripping the income-cash flow alarms, Raju had to manipulate almost every account related to operations. However, wide gaps can be noticed in net income and cash flow from operation during 2006, 2007 and 2008, respectively. "During 2006 to 2008, cash flows were far less than net income due to accounting manipulations. Indeed, Satyam fraud was a stunningly and very cleverly articulated comprehensive fraud, likely to be far more extensive than what happened at Enron," (Bhasin, 2015a). The independent board members of Satyam, the institutional investor community, the SEBI, retail investors, and the external auditor—none of them, including professional investors with detailed information and models available to them, detected the malfeasance.

Table7: Stake Sold by the Promoters of Satyam Computers Limited

Name of Promoter	No. of Shares Sold	Money Earned Rs. in Crore
B. Ramalinga Raju	98,25,000	773.42
B. Rama Raju	1,13,18,500	894.32
B. Suryanarayana Raju	1,11,000	12.81
B. Nandini Raju	40,47,000	327.59
B. Radha	38,73,500	313.55
B. Jhansi Rani	1,00,000	11.25
B. PritamTeja	9,42,250	49.01
B. Rama Raju (Jr.)	9,34,250	48.59
Maytas Infra Ltd (Satyam Construction Ltd.)	0	0.00
B. Satyanarayana Raju	0	0.00
B. AppalAnarsamma	0	0.00
Elem Investments Pvt. Ltd.	25,47,708	181.29
Fincity Investments Pvt. Ltd.	25,30,400	180.41
Highgrace Investments Pvt. Ltd.	25,30,332	170.83
Veeyes Investments Pvt. Ltd.	57,500	71.79
Other Individuals connected to investment co's	68,000	515.58
Off-market transfers by investment co's in the year 2001 (value estimated)	1,90,000	78.29
Promoters Group Total	**3,90,75,440**	**3,029.67**



FAKE AUDIT AND DUBIOUS ROLE PLAYED BY THE AUDITORS

Many experts cast partial blame for the CA scandal on Satyam's auditor 'Price Waterhouse (PwC)' India, because the fraud went undetected for so many years. In fact, global auditing firm used Lovelock and Lewis as their agent, who audited the Satyam's books of accounts from June 2000 until the discovery of the fraud in 2009. Several commentators criticized PwC harshly for failing to detect the fraud (Winkler, 2010). As Bhasin (2012a) stated, "The PwC India signed Satyam's financial statements and hence it, was responsible for the numbers under the Indian law. The fraudulent role played by thePwC in the failure of Satyam matches the role played by ArthurAnderson in the collapse of Enron." However,Mr. S.Goplakrishnan and Mr. S.Talluri, partners of PwC had admitted they did not come across any case or instance of fraud by the company.However, Raju's admission of having fudged the accounts for several years put the role ofthese statutory auditors on the dock.

The SFIO Report (2009) stated that "the statutory auditors instead of using an independent testing mechanism used Satyam's investigative tools and thereby compromised on reporting standards." PwC did not check even 1% of the invoices; neither did they pay enough attention to verification of sundry debtors, which (according to Raju's confession) was overstated by 23% (SFIO report says it was overstated by almost 50%). The Statutory auditors also failed in discharging their duty when it came to independently verifying cash and bank balances, both current account and fixed deposits. Hence, it was required that the auditors (PwC) independently checked with the banks on the existence of fixed deposits, but this was not done for as large as a sum of Rs. 5,040 crore. "The statutory auditors on whom the general public relied on for accurate information not only failed in their job but themselves played a part in perpetrating fraud by preparing a clean audit report for fudged, manipulated and cooked books," concluded Bhasin (2012a).It is shocking to know that "PwC outsourced the audit function to some audit firm, Lovelock and Lewis, without the approval of Satyam."

To be fair, there were probably thousands of Satyam cash accounts that had to be confirmed by the auditor, as the outsourcer has nearly 700 customers (including 185 Fortune 500 companies) in 65 countries. The audits for a company of that size would have been staggered, with millions of dollars of outstanding receivables pouring in to different locations at any given time. As Veena et al., (2014) commented, "The Satyam case focuses on auditors' responsibilities related to obtaining and evaluating audit evidence, particularly as it relates to confirming cash and receivables. It also explores the quality control responsibilities related to audit procedures performed by foreign affiliates of a large international audit firm."One particularly troubling item concerned the $1.04 billion that Satyam claimed to have on its balance sheet in "non-interest-bearing" deposits.Bhasin (2016d) pointed out,"The large amount of cash should have been a 'red-flag' for the auditors that further verification and testing were necessary. While verifying bank balances, they relied wholly on the (forged) fixed deposit receipts and bank statements provided by the 'Chairman's office'. As to the external auditors, who are supposed to look out for investors, they seem to have been quite a trusting lot."The forensic audit reveals differences running into hundreds of crores of Rs. between the fake and real statements, as captured by the computerized accounting systems. But for some strange reason, everyone, from the internal auditor to the statutory auditors, chose to place their faith in the 'Chairman's office' rather than the company's information systems, stated (Bhasin, 2015). Furthermore, it appears that the auditors did not independently verify with the banks in which Satyam claimed to have deposits" (Kahn, 2009). Unfortunately, the PwC audited the company for nearly 9 years and did not uncover the fraud, whereas Merrill Lynch discovered the fraud as part of its due diligence in merely 10 days. Missing these "red-flags" implied either that the auditors were grossly inept or in collusion with the company in committing the fraud.

When scams break out in the private sector auditors too end up on the firing line. The CBI, which investigated the Satyam fraud case, also charged the two auditors with complicity in the commission of the fraud by consciously overlooking the accounting irregularities. On April 22, 2014 "The Institute of Chartered Accountants of India (ICAI)" has imposed a life-time ban on four auditors (Mr. S.Gopalakrishna, Mr. Talluri Srinivas, Mr. V. Srinivasa and Mr. V.S. Prabhakara Rao) involved in the Satyam CA fraud. All of them had been found guilty of gross negligence in discharge of their duties by the Disciplinary Committee of ICAI and they were barred from practicing as a Chartered Accountant. A penalty of Rs. 5 lakh each was also levied on them. Strangely, Satyam's auditor, PwC, got away with a rap on its knuckles.

ABNORMAL AUDIT FEES PAID TO PwC INDIA AGENT

A point has also been raised about the unjustified increase in audit fees. A reference to the figures of audit fee in comparison with total income over a period of time may be pertinent. Table8 shows that over a period of four years, 2004-05 to 2007-08, the audit fee increased by 5.7 times, whereas total income increased by 2.47 times during the same period. Here, Bhasin (2013) remarked, "Nevertheless, it is difficult to draw any conclusion as to whether the increase in audit fee was justified or not. Suspiciously, Satyam also paid PwC twice what other firms would charge for the audit, which raises questions about whether PwC was complicit in the fraud." Another development that came under investigators lens was that between 2003- 2008, audit fee from Satyam had increased three times. For instance, Satyam's auditor's fee jumped from Rs. 92 lakhs in 2004-05 fiscal to Rs. 1.69 crore the next year. But it was the financial year 2006-07 when PwC's auditing fees shot phenomenally to Rs. 4.31 crores. The Chairman of the AC's in the relevant years should have been interrogated by the investigators as to what justification did the AC have for recommending such a hike?

The Price Waterhouse received an annual fee of Rs. 37.3 million (or Rs. 4.31 crore) for financial year 2007-2008, which is almost twice, as what Satyam peers (i.e., TCS, Infosys, Wipro), on an average, pay their auditors. Bhasin (2015) stated, "This shows that the auditors were being lured by the monetary incentive to certify the cooked and manipulated financial statements. Events of such nature raise doubts about statutory auditors' discharging their duty independently." Consequently, on 24th Jan. 2009, two senior partners of PwC, Mr. S. Gopalakrishna (was due for retirement by March 09) and Mr. Srinivas Talluri were booked by Andhra Pradesh CID police on charges of fraud and criminal conspiracy. The PwC has suspended the two partners, who signed on Satyam's balance sheet and are currently in prison. The SFIO report also states that PwC outsourced the audit function to some audit firm, "Lovelock and Lewis," without the approval of Satyam.

Table 8: Satyam's Total Income and Audit Fees (Rs. in Millions)

Year	2004-05	2005-06	2006-07	2007-08
Total Income (A)	35,468	50,122.2	64,100.8	83,944.8
Audit Fees (B)	6.537	11.5	36.7	37.3
% of B to A	0.0184	0.0229	0.0573	0.0444

(Source: Annual Reports of Satyam, Percentage computed)

QUESTIONABLE ROLE OF THE AUDIT COMMITTEE

As Bhasin (2016d)strongly observed, "Surprisingly, the failure to detect the Satyam fraud is 'unimaginable' because it involves violating basic audit procedures. Auditing cash is so basic that people do not think twice about accepting the number, never thinking to ask questions about it." Still, a basic question arises: "Where was the Audit Committee (AC)?" As an AC member, we understand that board members are not responsible for re-auditing financial statements. However, the directors have access to the auditors and the right and responsibility to question the audit. For instance, in the case of seeing an accumulated $1 billion on the books, the ACshould have raised questions about what the company planned to do with the cash, or how much it was earning on the money, and so on. It also has been suggested that the Public Committee on Accounting Oversight Board (PCAOB)—the U.S. entity charged with auditing firm oversight—bears some responsibility for the alleged poor performance of Price Waterhouse India. Unfortunately, one possible culprit that escaped blame for the Satyam scandal is the accounting rules used by the company. Satyam used both U.S. GAAP and IFRS to report its financial results, which means that one set of accounting standards did not trump the other with respect to shedding light on the fraud. The realization that accounting rules neither helped nor hindered the fraud should help to quell some of the fierce debate regarding which accounting standards are more transparent and therefore better for investors: U.S. GAAP or IFRS.

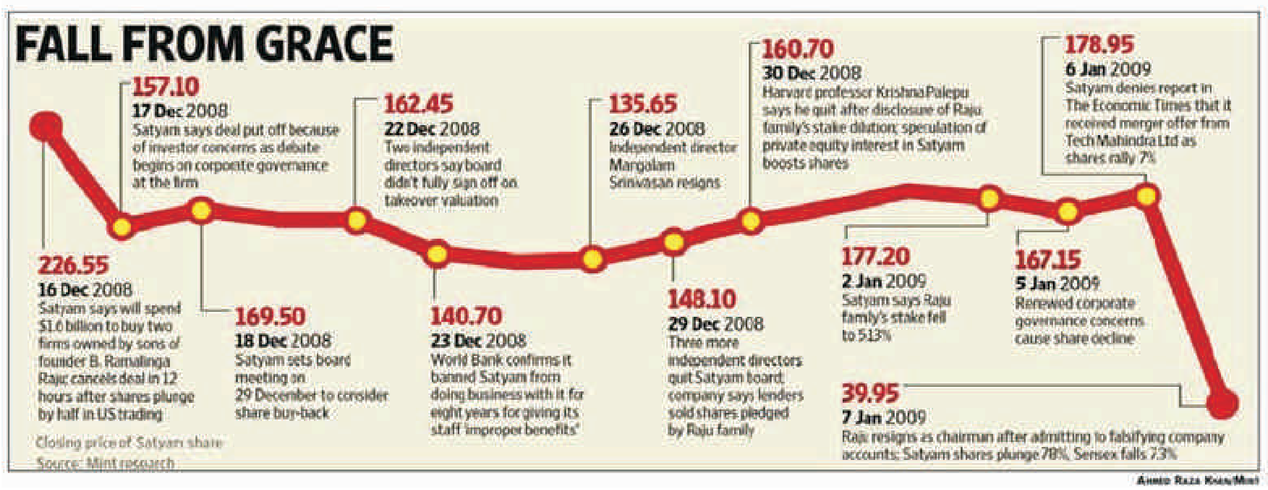
Moreover, Bhasin (2016f) observed that "the timely action on the information supplied bya whistleblower to the chairman and members of the AC (an e-mail dated December18, 2008 by Jose Abraham), could serve as an SOS to the company, but, they chose to keep silentand did not report the matter to the shareholders or the regulatory authorities." The Board memberson AC, who failed to perform their duties alertly be therefore tried out under theprovisions of the Securities Contracts (Regulation) Act, 1956 (an unimaginable fine extendable toRs. 25 crore but also including imprisonment for a term, which may extent to 10 years).

THE AFTERMATH OF SATYAM SCANDAL

At its 'peak' market-capitalization, Satyam was valued at Rs. 36,600 crore in 2008. Following the shocking disclosure, the traders counter saw frantic selling on the bourses and nearly 143 million shares (or a quarter of the total 575 million shares) had changed hands and finally, the shares closed down 77.69% at Rs.39.95 at the Bombay Stock Exchange (BSE), wiping out Rs.139.15 per share in a single day. After Wednesday's fall, the firm's market value has sunk to little more than $500 million from around $7 billion as recently as last June. The stock that hit its all-time high of Rs. 542 in 2008 crashed to an unimaginable Rs. 6.30 on the day Raju confessed on January 9, 2009. Satyam's shares fell to 11.50 rupees on January 10, 2009, their lowest level since March 1998, compared to a high of Rs. 544 in 2008. In the New York Stock Exchange, Satyam shares peaked in 2008 at US$ 29.10; by March 2009 they were trading around US $1.80. Thus, investors lost $2.82 billion in Satyam.

Criminal charges were brought against Mr. Raju, including: criminal conspiracy, breach of trust, and forgery. After the Satyam fiasco and the role played by PwC, investors became wary of those companies who are clients of PwC (Blakely, 2009), which resulted in fall in share prices of around 100 companies varying between 5-15%. The news of the scandal (quickly compared with the collapse of Enron) sent jitters through the Indian stock market, and the benchmark Sensex index fell more than 5%. Shares in Satyam fell more than 70%. The graph, "Fall from Grace," shown in Figure 2, depicts the Satyam's stock decline between December 2008 and January 2009.

Figure 2: Stock Charting of Satyam from December 2008 to January 2009



Just a year later, the scam-hit Satyam was snapped up by Tech Mahindra for a mere Rs. 58 per share—a market cap of mere Rs. 5,600 crore. In the aftermath of Satyam, India's markets recovered and Satyam now lives on. India's stock market is currently trading near record highs, as it appears that a global economic recovery is taking place. Civil litigation and criminal charges continue against Satyam. Shubhashish (2015)concluded,"On 13 April 2009, via a formal public auction process, a 46% stake in Satyam was purchased by Mahindra & Mahindra owned company Tech Mahindra, as part of its diversification strategy. Effective July 2009, Satyam rebranded its services under the new Mahindra management as Mahindra Satyam. After a delay due to tax issues Tech Mahindra announced its merger with Mahindra Satyam on 21 March 2012, after the board of two companies gave the approval. The companies are merged legally on 25 June 2013."As Winklerstates (2010), "With the right changes, India can minimize the rate and size of accounting fraud in the Indian capital markets."

INVESTIGATION INTO SATYAM CASE: CRIMINAL & CIVIL CHARGES

"The Satyam fraud has highlighted the multiplicity of regulators, courts and regulations involved in a serious offence by a listed company in India. The lengthy and complicated investigations that were followed up after the revelation of the fraud has led to charges against several different groups of people involved with Satyam," saysBhasin (2013). Indian authorities arrested Mr. Raju, Mr. B. Ramu Raju (Raju's brother), its former managing director, Mr. Srinivas Vdlamani, the company's head of internal audit, and its CFO on criminal charges of fraud. Indian authorities also arrested and charged several of the company's auditors (PwC) with fraud. The Institute of Chartered Accountants of India (ICAI 2009) ruled that "the CFO and the auditor were guilty of professional misconduct." The CBI is also in the course of investigating the CEO's overseas assets. There were also several civil charges filed in the U.S. against Satyam by the holders of its ADRs. The investigation also implicated several Indian politicians. Both civil and criminal litigation cases continue in India and civil litigation continues in the United States.

All the accused involved in the Satyam fraud case, including Raju, were charged with cheating, criminal conspiracy, forgery, breach of trust, inflating invoices, profits, faking accounts and violating number of income tax laws. The CBI had filed three charge-sheets in the case, which were later clubbed into one massive charge-sheet running over 55,000 pages. Over 3000 documents and 250 witnesses were parsed over the past 6 years. A special CBI court on April 9, 2015 finally, sentenced Mr. B. Ramalinga Raju, his two brothers and seven others to seven years in prison in the Satyam fraud case. The court also imposed a fine of Rs. 5 crore on Ramalinga Raju, the Satyam Computer Services Ltd's founder and former chairman, and his brother B Rama Raju, and Rs. 20-25 lakh each on the remaining accused. The 10 people found guilty in the case are: B. Ramalinga Raju; his brother and Satyam's former managing director B. Rama Raju; former chief financial officer Vadlamani Srinivas; former PwC auditors SubramaniGopalakrishnan and T. Srinivas; Raju's another brother, B Suryanarayana Raju; former employees (G. Ramakrishna, D. Venkatpathi Raju and Ch. Srisailam); and Satyam's former internal chief auditor V.S. Prabhakar Gupta.

REGULATORY AND CORPORATE GOVERNANCE REFORMS IN INDIA

After the Satyam scandal, both the investors and regulators have called for strengthening the regulatory environment in the securities markets. As Bhasin (2016c) concludes,"In response to the scandal, the SEBI revised CG requirements and financial reporting requirements for publicly traded corporations listed in the country. The SEBI also strengthened its commitment to the adoption of International Financial Accounting Reporting Standards (IFRS). In addition, the Ministry of Corporate Affairs (MCA) has devised a new CompanyLaw and has changed the securities laws to make it easier for shareholders to bring class-action lawsuits. Some of the recent CG reforms undertaken in India, as summed up by Sharma (2015), are: (a) Appointment of Independent Directors, (b) Disclosure of Pledged Securities, (c) Increased Financial Accounting Disclosures, (d) IFRS (Adoption of International Standards), and (e) Creation of New Corporate Code by the Ministry of Corporate Affairs.

Satyam grossly violated all rules of corporate governance (Chakrabarti et al., 2008). The Satyam scam had been the example for following "poor" CG practices. It had failed to show good relation with the shareholders and employees. As Kahn (2009) stated, "CG issue at Satyam arose because of non-fulfillment of obligation of the company towards the various stakeholders. Of specific interest are the following: distinguishing the roles of board and management; separation of the roles of the CEO and chairman; appointment to the board; directors and executive compensation; protection of shareholders rights and their executives." Scandals from Enron to the recent financial crisis have time and time again proved that there is a need for good conduct based on strong ethics. It is suggested by Goel and Ansari (2015) that "the abuse of CA can be prevented and detected by the measures like good CG, periodic rotation of auditors, due diligence by auditors, efficient whistle-blower system, sound system of internal control and audit, timely examination of the cases of pledging (or selling of shares) by promoters and controlling shareholders, heavy penalties by regulators for non-compliance to any regulation, mandatory course on ethics in accounting and auditing, and more campaigns on awareness and education of investors."Not surprising, such frauds can happen, at any time, all over the world. Satyam fraud spurred the government of India to tighten CG norms to prevent recurrence of similar frauds in the near future. The government took prompt actions to protect the interest of the investors and safeguard the credibility of India and the nation's image across the world.

CONCLUSION AND RECOMMENDATIONS

The Satyam scam is clearly a glaring example of 'abuse' of creative accounting (CA), in which the accounts were cooked up by creating fake invoices for the services not rendered, recognized revenue on these fake receipts, showed 13,000 ghost employees on payroll, falsified the bank balances, FDR's and interest on fixed deposits to show these fake invoices

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are converted into cash receipts and are earning interest. The purpose was to inflate the share price of the company and sell the promoters holding at inflated price. This type of CA is both illegal and unethical. As a result of this fraud, the share of the company fell drastically thus, wiping out Rs. 9,376 crores of investors' wealth in just one single day. The Satyam fraud seriously affected all the stakeholders of the company. Moreover, Satyam investigators have uncovered “systemic” insider trading. The ED claims to have found prima facie evidence against Raju and others of violating the Prevention of Money Laundering Act. Sources at the SFIO revealed to the Press that several institutional investors dumped shares in the firm on “large scale” up-to-two-days before Ramalinga Raju confessed to “wildly” inflating the company's assets and profitability. Most of the sales seemed to have taken place after Satyam failed in the bid to acquire Maytas Infra and Maytas Properties. Even to a casual observer of the Satyam fiasco, the enormity of the scandal is a great eye-opener.

The CA scam committed by the founders of Satyam is a testament to the fact that the science of conduct is swayed in large by human greed, ambition, and hunger for power, money, fame and glory.Bhasin (2016a) lucidly pointed out that“the culture at Satyam (especially dominated by the board) symbolized an unethical culture. Unlike Enron, which sank due to 'agency' problem, Satyam was brought to its knee due to 'tunneling' effect.” All kind of frauds have proven that there is a need for good conduct based on strong ethics. The debacle of Satyam raised a debate about the role of CEO in driving an organization to the heights of success and its relation with the board members and various core committees. This scam brought to light the role of CG in shaping the protocols related to the working of Audit Committee and duties of Board members (Niazi, and Ali, 2015).At last, Tech Mahindra purchased 51% of Satyam shares on April 16, 2009, and successfully saving the firm from a complete collapse. Undoubtedly, the inability of stock analysts to identify the 'gaps' in Satyam's books and ring warning bells proved costly for investors.

Now, it is amply clear that the Satyam scam was plotted at the top and driven by Ramalinga Raju and his brother. They were the key players in the plot to falsify the accounts and hide the bottom-line truth from everyone. It is also clear that all the culprits—from Raju down to the finance guys—did everything possible to give Sebi and other investigative agencies a run-around and delay the verdict. This is what explains, why it took more than five-and-a-half years to close an open-and-shut-case. It took nearly 2 years, involvement of multitude of investigation agencies, and over 200 experts to assess the total damage of the scam perpetrated by Raju. Now, the final figure is a shade under Rs. 8,000 crore. A special CBI Court in Hyderabad on April 9, 2015 finally, sentenced all the 10 people involved in the multi-crore accounting scam found guilty of cheating, forgery, destruction of evidence and criminal breach of trust, almost the six-year-old case has reached its logical conclusion. This includes the founder and the Chairman of the company B. Ramalinga Raju. The Court pronounced a 7 year-jail term for the founder and also imposed on Raju a fine of Rs. 5 crore. Undoubtedly, the Indian government took quick actions to protect the interest of the investors, safeguard the credibility of India, and the nation's image across the world.

The Satyam scam, involving the misuse of CA, has shattered the dreams of different categories of investors, shocked the government and regulators alike, and led to questioning the accounting practices of statutory auditors and CG norms in India. The accounting scandal at Satyam has raised several governance questions about the company's board and its auditors. The most perplexing question is: “Why did not the oversight mechanisms at Satyam uncover the fraud sooner?” One CG expert claims that a lax regulatory system in India bears at least some of the blame. Here, Bhasin (2010a) commented as: “CG in India was late on the scene, it is more politically motivated than legally based and regulatory laws and agencies are burdened with the

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complex, slow-moving legislative and judicial processes. The Satyam scam has exposed huge cracks in India's CG structures and system of regulation through the SEBI, Ministry of Corporate Affairs and the SFIO. Unless the entire system is radically overhauled and made publicly accountable, corrupt corporate practices will recur, robbing wealth from the exchequer, public banks and shareholders. Thus, a governance disaster was predictable.” Moreover, Satyam fraud has forced the government to re-write CG rules and tightened the norms for auditors and accountants. The Indian affiliate of PwC“routinely failed to follow the most basic audit procedures. The SEC and the PCAOB fined the affiliate, PwC India, $7.5 million: in what was described as the largest American penalty ever against a foreign accounting firm” (Norris, 2011). According to Mr. Chopra (2011), President of ICAI, “The Satyam scam was not an accounting or auditing failure, but one of CG. This apex body had found the two PwC auditors 'prima-facie' guilty of professional misconduct.” The CBI, which investigated the Satyam fraud case, also charged the two auditors with complicity in the commission of the fraud by consciously overlooking the accounting irregularities. As Krishnan (2014) pointed out,“Yet both Satyam's internal as well as statutory auditors did not bring it to anyone's notice. Well, the internal auditor hauled up by SEBI has frankly admitted that he did notice differences in the amounts billed to big clients, such as Citigroup and Agilent, when he scoured Satyam's computerized accounts. But when he flagged this with Satyam's finance team, he was fobbed off with the assurance that the accounts would be 'reconciled'. Later, he was 'assured' that the problem had been fixed.”

However, Kumar et al., (2012) recommended that “Indian regulatory framework needs to be strengthened and the roles of independent directors need to be clearly defined to prevent such frauds. They made some recommendations to improve the auditing infrastructure in India that will enhance the corporate governance mechanism.” Keeping in view the “modus operandi” used by the management in Satyam scam, we recommend the followings: (a) Corporations must uplift the moral, ethical and social values of its executives. (b) Board members need to feel the importance of the responsibility entrusted with them: be proactive and watchful in protecting the interests of owners. (c) There was a lack of proper and timely information in Satyam's case. (d) Shareholder activism is an excellent mechanism of keeping a check on the corporation and its executives. (e) Block-holders and institutional investors can also serve as an effective means for board's and management's accountability. Since liberalization, serious efforts have been directed at overhauling the CG system, with the SEBI instituting the Revised Clause 49 of the Listing Agreements dealing with CG. With the right changes, India can minimize the rate and size of accounting fraud in the Indian capital markets. And finally, CG framework needs to be implemented in letter as well as spirit.

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Total Quality Management in Engineering Education in India With special reference to Punjab and Chandigarh

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India is in a state when it is trying to be a global manufacturing hub and it also trying to develop itself as a knowledge economy with skilled manpower. Ambitious programs like Make in India can be successfully implemented only by having skilled and qualified manpower. For this purpose it is very essential that our engineers, are able to contribute towards the manufacturing processes meeting the global standards. However, while the number of institutions has grown substantially - both in the categories of public and private engineering colleges, there is a concern regarding the quality of education imparted. A Total Quality Management based approach, that has been applied to Higher Education internationally, can provide important pathways in enhancing quality in Engineering Education.

Keywords: *Engineering Education, Quality of Education, Total Quality Management*

INTRODUCTION

In the last two decades, India has witnessed an eight-fold increase in the number of institutions imparting Engineering Education at the undergraduate level. According to the estimates of the Eleventh Five year plan, the country is expected to be home to a skilled workforce of 500 million by 2022 (Planning Commission, 2007). The Plan also focuses on expansion proposing establishment of 30 new universities. Further, as per the plan, eight new Indian Institute of Technology (IITs), seven new Indian Institute of Management (IIMs), 20 new Indian Institute of Information Technology (IIITs), five new Indian Institutes of Science, two Schools of Planning and Architecture, 10 National Institute of Technology (NITs), 373 new degree colleges and 1000 new polytechnics are to be established (National Knowledge Commission, 2009). A good number of these institutes have already been set up and the rest are under establishment. Between 2009 and 2011, the elite technical institutions recorded a 55 percent increase in seats from 90,513 to 140,000 (Loyalka et al, 2013).The growth in number of non-elite institutions and the seats therein has been much more.

However, there are concerns regarding the quality of Engineering Education imparted. Existing studies point to growing skill gaps resulting not just in unemployment but also in employer dissatisfaction (Latitude Group, 2013). The growth in numbers has

not been accompanied by corresponding quality standards. Several studies have observed the inadequacies in both quality and quantity of Engineering Education-while a 2005 NASSCOM report foresaw shortage of 500,000 knowledge workers by 2010, the U R Rao Committee has projected that India needs well over 10,000 PhDs and twice as many M Tech degree holders for meeting its Research and Development (R&D) needs (FICCI, 2013). However, commenting on quality, the aforementioned NASSCOM report shows that the multinational companies find only 25 percent of Indian engineers employable in the IT sector. Other studies have also raised concerns that the quality of IT services in specific and the firms in general may stagnate because of the poor quality of technical skills of the of the employees. Consequently, the response from the industry regarding the job preparedness of the engineering graduates has been very poor and about three-quarters of India's technical graduates are considered inadequately skilled and therefore unemployable by India's high-growth global industries (Anand, 2011). It is on such counts that the quality of technical education in India has often been found to be inadequate especially in comparison with the United States. Making such a comparison, scholars have discussed the poor opinion that employers have of the quality of engineering graduates in the BRIC countries concluding that the overall competitiveness of India was nowhere near such countries as the United States (Blom, et al 2011).

The recent and enormous increase in engineering graduates from India makes it important to asses if the quality of such education and the professionals it produces is globally comparable or competitive. This is of interest as countries like India have been producing graduates in technical education from both elite and non-elite institutions resulting in a range of quality. While some of the colleges are recognized as institutes of excellence with impressive faculty and student profile, there are several that do not meet the requisite quality standards.

In this context, a Total Quality Management (TQM) based approach offers interesting possibilities to understand the quality of Engineering Education. Total Quality Management is an approach of managing the whole to achieve excellence. It is defined both as a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization. It is the application of methods and human resources to improve all the processes within an organization so as to enhance present and future efficiency and productivity. The approach, with a focus on stakeholders provides an important lens to look at the important aspects of quality such as communication, leadership and commitment of the management. Customer-orientation, Total stakeholder involvement, Process-centered, integrated systems, Strategic and systematic approach, Continual improvement, Fact-based decision makingand Communications. These elements are important components of TQM and represent the fundamental principles on which organizations committed to TQM are expected to operate.

REVIEW OF LITERATURE

Some of the important issues concerning the quality of engineering education in India faces: curriculum and its delivery, low financial allocation per student, inadequate infrastructure, Quality of faculty, number of faculty members per student, management issues pertaining to institutions, limited research resulting in too few publications, student perspective and industry interaction (Loyalka, et al 2013; MHRD, 2011 Carnoy 2013; National Knowledge Commission, 2009).

It is important to note that these concerns are not new. Close to two decades back, Jain et al (2000) in their paper discussing the lacunae in the present technical education system in India based on understanding of the technical education scenario had recommended skill development, with regard to industry-academia interaction, academic audits, information systems and filling faculty vacancies. However given the similar issue persist till date and in greater magnitude due to sudden increase in the number of colleges, new approaches have become necessary.

Tiwari (2000) in his paper on Total Quality management in Technical Institution had enlisted the main messages from the though leaders of TQM to set the visions for embedding quality assurance initiatives in technical education.

Achintya and Mishra (2000) in their paper titled quality Assurances in Engineering Education while mapping the trajectory and evolution of Engineering education had also expressed their concerns about the falling quality of such education and steered attention towards the need to address the same. Bhat (2000) in a perspective paper on quality of education in technical institutions identified the teachers as the driving force of Engineering education and focused on creating opportunities of their professional growth. The author identified four phases for ensuring quality standards: 1) Providing the vision, 2) Management Action 3) Increasing participation and 4) Business alignment

Naik (2000) in his paper on internationalisation of higher education also talks about competitiveness of Indian engineers globally. Emphasising the need to upgrade the quality substantially, he emphasises on the need for creating research facilities, incubation centres and technology transfer centres. Comparing the educational scenario of India with that of the developed countries, the author argues that investment in Engineering Education with a focus on research and development while appearing to be expensive, yields significant dividends that can actually propel the growth of the country. He emphasises that such education should not be starved of funds so that India can be a proactive participant in the global knowledge society.

One of the approaches tried has been the Balanced Scorecard (BSC) system. Venkatesh and Datta (2007) based on their review paper discuss the BSC concept and assess the ways in which it should be applied to higher education programs/ institutions in the Indian context. BSC approach offers an institution to formulate a cascade of measures to translate the mission of knowledge creation, sharing and utilization into a comprehensive, coherent, communicable and mobilizing framework for external stakeholders and for one another. However, in the absence of evidence of the application of BSC to the educational institutional domain in India, it is difficult to comment on its suitability.

While TQM in Engineering Education is not new, many educational institutions in the developed countries follow some or most of the principles without explicitly calling it TQM. Existing studies have indicated the use of TQM perspective for and assessment of the quality of education with specific reference to higher education (Sahney et al, 2004). Research also point to the need for higher quality in Engineering Education and the possibilities that TQM offers in this regard (Mahapatra and Khan, 2006; Sahu et al 2008). While there have been some attempts to use TQM to education in the West (Winn and Green, 1998), such efforts are at a very preliminary stage in India. Also, the existing studies are yet to consider a stakeholder satisfaction oriented approach to Engineering Education.

Given this context, an extensive literature review was carried out focusing on the following five themes -

- Identification of components of TQM for technical education
- Accreditation for Quality Improvement
- Leadership and Management Commitment to Quality
- Stakeholder focus
- Industry interaction

Table 1 presents the summary of the key concepts, authors and key ideas around TQM in Higher Education with specific reference to Engineering Education

Table 1: TQM in Engineering Education: Key Ideas

Concept	Authors	Key ideas
Management approach to Higher Education	Winn and Green, 1998; Sahney et al, 2004; Mahapatra and Khan, 2006; Sahu et al 2008;	Total Quality management approach to Higher Education
Components of TQM	Lagrosen, 2004 Sakthivel and Rajendran, 2005; Begum et al, 2010 Senthilkumar and Arulraj, 2010 Sahu et al, 2013	5-C TQM Model in engineering institutions of India focused on management commitment, course delivery, campus facilities, courtesy and customer feedback and improvement. Identification of 27 components reiterating positive relationship between TQM dimensions and institutional performance
Leadership and Management Commitment	Sohani and Sohani 2011; Ola 2013; Sudha, 2013	Top management has to be involved and provide leadership to the process of quality enhancement
Accreditation	Bhat 2000, Natarajan, 2000; Sudha, 2013; Das et al (2014); Thandapani, 2010	Indicators of accreditation around stakeholders self-evaluation mechanisms for the higher educational institutions.
Stakeholder Engagement	Alridge and Rowley, 1998; Wills and Taylor, 1999; Chua 2004;Khanna, 2012; Masood, 2007; Gulbarga et al, 2012a; Efthimia , 2006; Sudha, 2013	Need to identify and engage with different set of stakeholders including management, faculty, industry and students
Industry Interaction	Nair and Banerjee, 1982; Bansal and Singh, 2000Jain, 2000; Murthy, 2002; GoI, 2009; MHRD, 2011; Gulbarga et al, 2012a; Gulbarga et al, 2012b; FICCI, 2013; Loyalka, et al 2013; Carnoy 2013;	Need for greater and regular industry interaction Fellowship and Exchange programmes between industries and technical education institutions Universities as incubators of ideas for the industries with shared research spaces Dynamic curriculum based on changing industry needs
Barriers to TQM Implementation	Grant et al 2002; Talib F, 2011; Brookers and Becket (undated web publication)	Challenges pertaining to the implementation of quality models especially those concerning performance quality Two levels of problems- at the level of Top management with low levels of commitment to high quality and at the level of Human Resources with high attrition of managers Focus of TQM more towards non academic and Managerial functions

Identification of components of TQM for technical education

One of the early studies that attempted to use quality model to Higher Education was was carried out by Lagrosen et al (2004) who use student interviews with Swedish and Austrian students to capture their perspective on quality. The researchers used a questionnaire to developed based on in depth interview with students to elicit response from 448 students on components of quality that they considered important. Against these components, the student perspective on what they considered most important for quality was mapped and differences in responses documented across different groups of students. This elicited that Corporate collaboration, Information and responsiveness, courses offered, internal evaluations, computer facilities and library resources. Though the study was limited in terms of engaging with only students, it elicited important dimension concerning one of the most important stakeholders.

Sakthivel and Rajendran (2005) in their research on the implementation of TQM and students' satisfaction regarding academic performance based on a sample study of students from ISO and non-ISO engineering institutions from South India have looked at developing models of TQM variable for academic excellence. They study reiterates the 5-C Total Quality Model of academic excellence in engineering institutions of India with a focus on commitment of top management, course delivery, campus facilities, courtesy and customer feedback and improvement. However, it is important to undertake similar research across various categories of institutions.

Begum et al (2010) in an empirical study of total quality management in engineering educational institutions of India explore the management practices in engineering educational institutions in India. Identifying 27 critical factors of quality management, they conclude that there is a positive relationship between TQM dimensions and institutional performance in term of quality of education.

Senthilkumar and Arulraj (2010) in their engagement with quality in higher education with specific reference to placement have collected data comprising six sections covering Teaching Methodology (TM), Environmental Change in Study Factor (ECSF), Disciplinary Measures, Placement, Service Quality, Satisfaction level. Data were collected from final-year students of higher educational institutions across Tamil Nadu. Based on their study, they propose service quality measurement (SQM-HEI) model. Specifically, they emphasize that quality of education depends on the quality of faculty teaching, physical resources and infrastructure and a range of Disciplines that facilitates the creation of a diverse set of students and also improves placement prospects.

Sahu et al (2013) undertake a review of existing literature to identify critical factors that can facilitate use of TQM and other quality enhancement models in education to improve the quality of higher education. Based on their content analysis, they conclude that adoption of TQM in technical universities need a dedicated approach that take into account certain critical factors. These include Repositioning of the Senior Management (with a focus on vision, commitment, resource allocation, etc), infrastructure including appropriate R&D space, good ambience, libraries and classroom environment; intermittent development and alteration of curriculum with a focus on teaching methodology, student teacher ratio and R&D and technical education , excellence training , development and placements with a focus on skills and related competencies of the students and their communication skills.

Leadership and Top Management Commitment

Based on their study conducted with the objectives of developing a quality based structural framework of education system in higher education in India, Sohani and Sohani, 2011, have engaged in identification, sequencing, categorizing and prioritizing quality characteristics into a systematic model. In doing so the authors have emphasized on the role of the top management. They have discussed that leadership with vision and effective allocation and financial management plays critical role in setting up management system for higher education, leading to overall improvement of quality.

Ola (2013) in his research on Total Quality Management (TQM) and continuous improvement considers TQM as a philosophy seeking to integrate all organizational functions. Using the TQM principles and Baldridge model based on European Federation for Quality Management (EFQM) model of business excellence framework, he emphasizes that top management should be involved in the application of quality and all employees should participate. He also identifies the key principle of TQM as management commitment, employee empowerment, fact based decision making, continuous improvement and customer focus.

Sudha (2013) based on her study with faculty members across Higher Education institution has also reinforced the importance of the commitment of the top management emphasizing on their role in reflection and self-evaluation.

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Accreditation for Quality Improvement

Natarajan (2000) in his research on the role of accreditation in promoting quality assurance of technical education emphasized the importance of accreditation and objective parameters on accreditation. In doing this, he proposes to have develop indicators of accreditation around stakeholders, a key focus on the TQM approach. The paper emphasis the significance of accreditation of institutes for promoting the quality assurance of technical education and demonstrating impact through indicators around student, faculty and institutional quality.

Bhat (2000) also focuses on the role of accreditation for ensuring quality in technical education. He emphasises that accreditation helps the stakeholders including parents, students and employers to identify institutions that meet the standard quality indicators. It also plays an important role in terms of benchmarking institutions for upgradation. Finally, it helps to maintain high standards and encourage institutions to move towards excellence through a process of continuous improvement.

Sudha (2013) based on her study involving faculty members of educational institutions emphasizes the importance of self-evaluation mechanisms for the higher educational institutions. She emphasizes that such an evaluation should include the top management, faculty and students, taking into account multiple perspective to arrive at a comprehensive understanding of the performance of the academic institution with regard to quality.

Das et al (2014) in their study on Multi-criteria performance evaluation of Indian technical institutions focus on the performance analysis of seven premier technical institutions under a multi-criteria environment, for which a multi objective decision making model (MOORA method) is explored. Uses quantitative data, institutions are considered as alternatives and measured against six attributes. The paper evaluates the output produced by institutions and compares them against the resources used in doing the same. They emphasize on the use of methods like MOORA for ranking of institutions and making relative comparisons.

Thandapani et al (2010) in their work on tracing the quality journey across organisations and engineering educational institutions by a comprehensive review of the literature also emphasised on the importance of accreditation for the modern Engineering Educational Institutions (EEIs) from the Accreditation Board for Engineering and Technology (ABET)-meeting the required stipulations. This would lay the foundation for more implementation of quality models. The authors emphasise that the industries adopt the ISO 9000 certification for embedding quality in their performance, while the engineering education institutions have focused on accreditation for meeting quality standards. The authors conclude that the Washington accord favours ABET for the standardization of the accreditation process and should be the core function of modern institutions.

Stakeholder Focus

Babai KS, Dharmambal (2000) based on their study on TQM in Stakeholders from Dr Dharmambal Govt Polytechnic, emphasize that the students are the first customers of educational institutions and the way institutions can align their activities to the satisfaction of this customer. Focusing on quality creation, rather than on quality control., they emphasize that the quality creation consciousness and implementation in engineering institutions comes through innovation in curriculum development, staff development, facility development and a focus on personality development of students, continuous improvement, industry interaction and consultancy & research, field work orientation approach to complement library oriented approach. The paper speaks of quality as an organization wide activity which involves all stakeholders

Chua (2004) in her paper titled Perception of Quality in Higher Education discussed the issues of quality in higher education from a marketing perspective. While looking at quality in higher education from multiple perspective including those of students, parents, faculty members and employers, she focuses on quality from a marketing perspective with a view to understand the needs of the customers of higher education and their perceptions.She uses a Input (Selection of students, entry requirements) , process (teaching and learning, content and delivery, professor's knowledge, curriculum, assessments etc) and Output (Financially rewarding job, placement, academic performance) . The study elicited that that the different stakeholders: parents, students, members of the faculty and potential / existing employers perceived quality differently. While the parents view quality as relating to input and output, the students perceived quality in terms of educational process including courses and teaching) and outputs. The faculty members demonstrated a comprehensive understanding of quality relating the same to the entire education system. The employers perceived quality in terms of skill sets of the students, focusing on the output aspect.

Aldridge and Rowley (1998) based on their study of the student experience at Edge Hill University College, UK use a questionnaire-based survey. Focused on the experience of the students covering both their personal attributes as well as their feedback on the institution, they propose a theoretical model that emphasizes the need to respond to student dissatisfaction- whether they pertain to individual incidents leading to complaint or more longer term issues. Emphasizing on the issue of quality, they argue that continued perception of poor quality leads to disconfirmation. They further discuss that disaffirmation occurs when student withdraws as an effective member of the educational institutional community. This can both be through formal withdrawal from the institution or manifest in failure. Disaffected students also continue to remain in the institution while performing poorly, perceiving a lack of other options.

Willis and Taylor (1999) in their study to gauge employer's perspective on quality based on data collected from business organizations emphasize that the performance of the employees is not used by the businesses to arrive at decisions regarding the quality of institutions of higher education. Rather, the emphasis in the work setting is on the kind of skills that are required by them. The authors emphasize the need to extend the TQM principles to teaching and learning processes, administrative and operational processes of the colleges.

Khanna (2012) based on his research using a qualitative approach to improvement in technical education using Total Quality Management (TQM) concept has studied the engineering degree and diploma institutions across the country. Based on the study, he has emphasized the need to focus on the stakeholders like faculty with measures for them to improve motivation levels. He also emphasizes on the need to focus on the students with greater industry based exposure and training.

On similar lines but in a different country, Pakistan, Masood (2007) based on his application and analysis of Total Quality Management in colleges of education in Pakistan covers colleges, faculty members and students emphasizes the need for engineering education to be practical skill oriented. Gulbarga et al (2012a) in their review exploring the impact of TQM on higher education also focus on similar points pertaining to client satisfaction, employee involvement and continuous improvement. In addition, they also lay emphasis on a dynamic curriculum for technical education that is continuously upgraded based on new developments in the field.

Efthimia (2006) also looks at TQM in technical education from a stakeholder perspective. Focusing on the process orientation she cautions against looking at TQM as a quick fix measure. Focusing on the implementation of the TQM approach and the challenges therein, she emphasizes the importance of leadership with a commitment to quality,

customer focus, employee empowerment and communication.

Sudha (2013) also focuses on the importance of stakeholder engagement to understand the level of schuss of a TQM approach to technical education. Based on a study involving faculty members from Technical, management and Pharmaceutical education, she emphasizes on the need to create synergistic relationship among the stakeholders.

Industry Interaction

Nair and Bannerjee (1982) based on their interaction with faculty of IITs and captains of the industries examine factors related to technical institutions (including IITs) not giving the desired and expected outcomes They emphasize that engineering education curriculum, instructions and institutions are not relevant to the Indian industrial situation, in fact, they tend to become theoretical and esoteric. Both students and faculty look at options outside India and in other areas (publications in foreign journals, careers outside India, management courses) as options instead of relatively limited industry related possibilities in India. Focus on indigenous and high quality research, even in IITs, is low. To address these issues, the study recommends constant industry interactions to keep curriculum relevant and practical, increases role of academics in industrial establishments, make an engineering program flexible by having the first two years common and giving choices to specialize in years 3 and 4, offer a mix of technology and management courses . However, the study was largely restricted to IITs, a set of premier institutions and undertaken in an era when private education in engineering was almost non-existent. Also, it does not capture student perspective, is largely oriented around the perspective of educational institutions and the industry.

Bansal and Singh (2000) in their paper on the Role of Industry- Institute interaction in Curriculum Development had emphasised on the need to greater engagement with industries to enhance human resource development that is sensitive to the growing and sometimes changing needs of the industries. Indicating some areas that should see greater collaboration, they include R &D support, knowledge transfer arrangements, shared facilities like computer labs, libraries, scholarship arrangements for students, engagement of industries in curriculum development and course design of the institutions and managing industry-institution collaborative projects. The authors specifically focuses on the engagement for curriculum development , given the fast changing nature of industrial development and the need for the educational institutions to keep pace with such changes. The authors suggest greater 'sandwich' programmes for student exposure to industrial settings, industrial visits, industry based teacher training programmes , exchange programmes involving teachers and industry personnel and summer placements of students to industries.

Murthy (2002) in his paper on Industry institute interaction describe different modes of industry-academia interaction. He presents an overarching view of the Industry-academia interaction based on his experience and examples from IIT Delhi. Looking at the modes for institute to industry, industry to institute and joint activity, he list down the support systems required for the same and the benefits of implementing these modes. The paper emphasizes that the subjects of prime importance to industry are in wide variance with what is taught in the classrooms. To address these, the following modes of interactions are recommended - Student (visits, interactions, internships, projects), Teachers (deputation, expert lectures), Industry (Depute personnel for higher education, assign consulting jobs, sponsor R&D projects, get industry experts to be resource persons and adjunct faculty), Joint actions (Consortiums in mission mode, Technology transfers, Prototyping, Field trials, International linkages)

Khanna (2012) based on his research using a qualitative approach to improvement in technical education using Total Quality Management (TQM) has also emphasized on the need to focus on the students with greater industry based exposure and training. Masood (2007) based on his application and analysis of Total Quality Management in colleges of education in Pakistan emphasizes the need for engineering education to be practical skill oriented.

Gulbarga et al (2012a) also focus on similar points pertaining to continuous improvement laying emphasis on a dynamic curriculum for technical education that is continuously upgraded based on new developments in the field.

Gulbarga et al (2012b) in their study of the perception of staff and students on three categories of institutions with regards to the quality management practices also emphasize the need for greater and intense industry-institute interaction.

Barriers to TQM

Despite the many advantages, the TQM approach is not without its set of challenges with regard to implementation. Based on an Interpretive Structural Modeling (ISM) based on a series of interviews with experts and desk review of literature based approach to understand the barriers the ways these influence one another, Talib (2011) et al identify 12 barriers. Classifying these into two broad heads-a) those that are of high influence and strategic importance including such factors as inadequate commitments of the top management, lack of inter-departmental coordination and b) those pertaining to high levels of attrition at the managerial level, absence of a culture of regular improvement of quality and resistance on the part of the employee to any kind of change. Based on their engagement with these factors, the authors argue that an attention toward these barriers would considerably address the barriers to implementation.

Much earlier to this Grant et al (2002) based on their review of Higher education institutions in the United States had attempted to understand and analyze the implementation of quality in US higher education through adherence to the management framework developed by Mergen in 2000, specifically assessing the three components of the model- quality of design, quality of conformance and quality of performance in the existing institutions . The study elicited that while Quality of design and quality of comformance could be found, quality of performance was one of the most difficult to assessed because of lack of data or lack of access to data. An assessment would require an ability to scrutinize the performance of alumni over a period and across organizations that might be difficult to access due to issues pertaining to consent as well as confidentiality issues of the organizations.

An important point raised by Brookers and Becket in their review paper that looked at the models developed and published in academic journals over a ten year period between 1996 and 2006 across 34 countries pertain to the approach taken by models for quality improvement. Questioning a privileging of a management approach over a Teaching and learning approach to Modelling, they argue that the focus of most models is on industry requirement. While they acknowledge the benefits in terms of improved results in managerial functions, they emphasize that most gains are in the realm of non academic functions end up relegating the academic to the second position,,privileging the managerial over the academic in Higher Education. They assert that institutions of higher learnings Universities need to rethink their approach placing academic activities at the core of their engagement.

TQM IN ENGINEERING EDUCATION: A CONCEPTUAL FRAMEWORK

For the purpose of the present study, TQM in Engineering Education is defined as an approach that is completely oriented around meeting and exceeding the satisfaction of all its stakeholders. As such, it is an approach that invokes the proactive participation and involvement of all its stakeholders

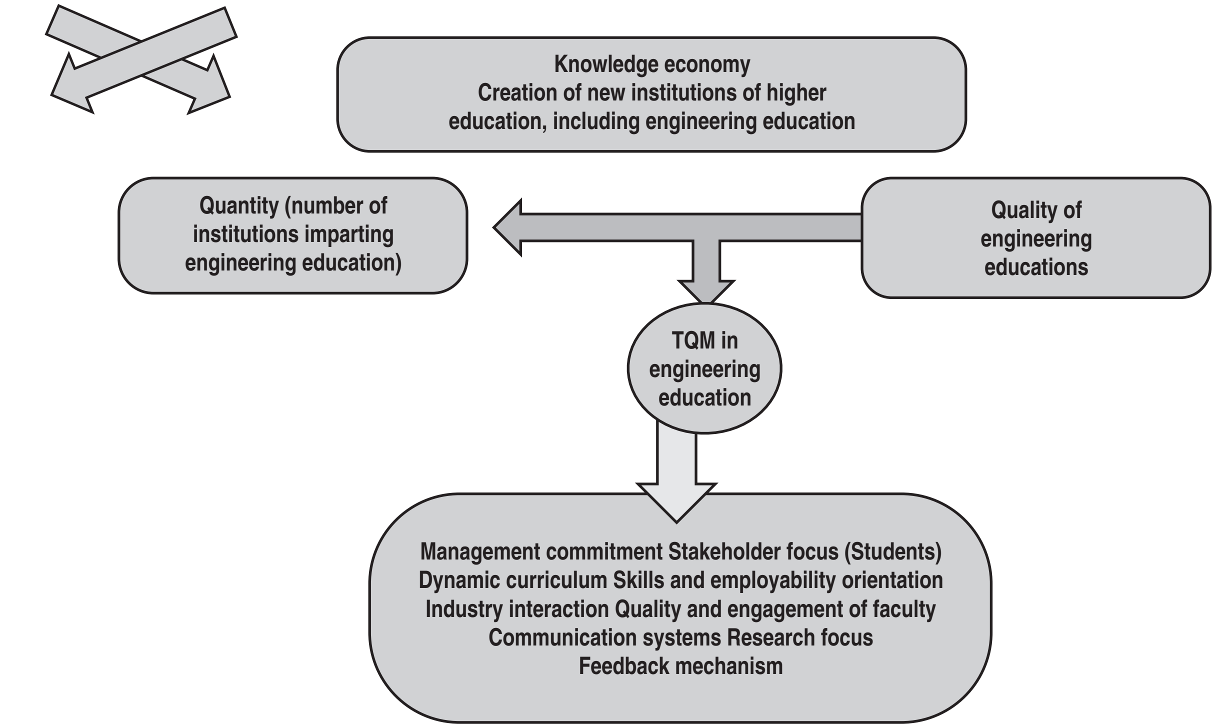
in achieving and sustaining high quality standards in Engineering Education. In engaging in the pursuit of quality enhancement, it remains process oriented and integrates diverse systems within the Engineering Educational institutions, interconnecting different functional specialties to ensure an institutional focus on implementing quality enhancement measures. It builds on a strategic approach with quality not just as a core component but as an area of continual improvement for the institution that can be sustained over time and supported by a robust evidence and fact -based decision making process.

Conceptualizing TQM variables a 5-C Total Quality Model of academic excellence in engineering institutions of India has also been developed that includes: commitment of top management, course delivery, campus facilities, courtesy and customer feedback and improvement. Similar framework has also been developed for quality values in higher education which includes, course design, course marketing, student recruitment, induction, course delivery, course content, assessment monitoring, miscellaneous and tangibles.

Understanding quality in education from TQM perspective, an educational institution may be viewed as an open system i.e. management system, technical system and social system. It includes within it the quality of input in the form of students, faculty, supporting staff and infrastructure, the quality of processes in the form of the learning and teaching activities and the quality of output including examination results, employment, earning and satisfaction.

This model takes into account some of the general principles of TQM like stakeholder satisfaction, communication systems and feedback mechanisms, it adapts them to the engineering education scenario and takes into account specific aspects related to engineering education like an up-to-date curriculum, a structured way of engaging with industry and research focus of faculty.

Figure 1 : Conceptual Model of TQM in Engineering Education



TQM IN ENGINEERING EDUCATION: A MANAGEMENT FRAMEWORK

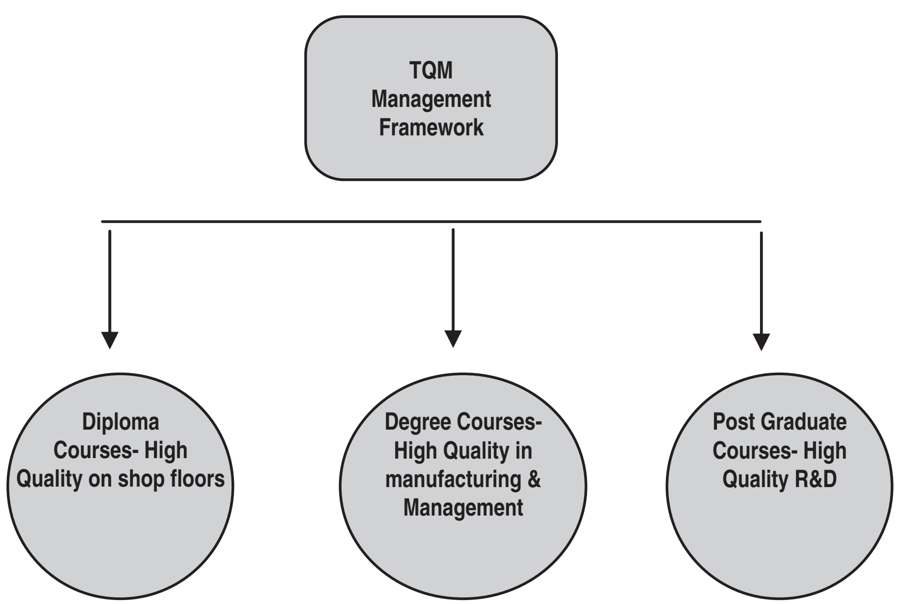
Based on this review and the conceptual framework, the pathways for a management framework can also be spelt out. The management framework need to engage with different levels of Engineering Education, specifically Diploma, Undergraduate Graduate and Post Graduate level. All three levels have important implications for the industry. The Diploma programs equip the students with hands-on skills and capacities. The students, who complete this program, work at a supervisory level in Workshops, Power Stations, Operation and maintenance of sophisticated machines like Computerized Numerical Controlled (CNC) machines, Machining Centers and Flexible Manufacturing Systems, (FMSs) and also at middle level in Design Offices , etc.

The Graduate programs provide a techno-managerial perspective. The students who complete this program work at Senior supervisory and/ or at Management levels in manufacturing organizations, Design offices, software industry , Quality Control/ Quality Assurance, etc.. The Post Graduate programs provide the ground work for engagement in basic research students who complete this program engage themselves mainly in teaching activities and Research and Development activities.

Figure 2 depicts the ways in which the TQM model can be integrated in the Engineering Education. It illustrates the way in which the model can potentially contribute towards improved management across these three levels of Engineering education contributing eventually to high quality in terms of contribution to the industry.

Across these levels, in order to arrive at the institutions to be selected for detailed investigation towards ascertaining the quality of Engineering Education, the Universities/ Institutions can be classified as: Central Universities and National Institutes of Excellence under the Ministry of Human Resource Development; State Universities; Deemed Universities; Private Universities and; Institutions under the State Board of Technical Education.

Figure 2 : TQM results across levels and work stations



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CONCLUSION

High quality Engineering Education corresponds to a set of requirements: not only is it an aspiration of millions of students, it is also the backbone of industrial development in the context of India that needs a driving force led by a skilled workforce. As the country positions itself as a knowledge economy, it has seen a tremendous spurt in the number of educational institutions, especially, engineering colleges. However, there are increasing concerns about the quality that makes it important to reflect on the nature and content of the growth and the direction that it has taken.

It is critically important also to invest heavily in enhancing the quality of Engineering Education that is presently being imparted. Given that TQM is acknowledged as a proven way of enhancing quality, it is important to look at its various components and indicate ways in which TQM principles can be used by the institutions to transform their systems and processes. In doing so, engineering education institutions have to not only progressively integrate the different components that the management framework facilitates but also look at dynamic ways in which it can evolve to continuously meet and indeed preempt the industry requirement.

Engagement with TQM as a conceptual as well as management framework for Engineering education, therefore, opens up a new visioning for Engineering education indicating concrete pathways to enhance the quality of such education which is of relevance for the entire country.

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BRIEF PROFILE OF THE AUTHOR

KL Sapra is a Mechanical Engineering Graduate from the Punjab Engineering College (Now PEC University of Technology), Chandigarh, 1964 and an MBA (with Specialization in Production Management) from the Indian Institute of Social Welfare & Business Management (IISWBM), Kolkata (Calcutta University), 1985.He carries with him a long experience of over 51 years (including over thirty six years and a half in Industry and over fourteen years and a half in Teaching). Out of his industry experience, he worked for over a year in the Geological Survey of India and the balance in the Indian Ordnance Factories Service (Ministry of Defence, Department of Defence Production) as a Class I Officer. He worked in areas of Production, Maintenance, Projects and Administration and finally for five years as General Manager/ Senior General Manager in Field Gun Factory, Kanpur, which is one of the most modern Weapon Production Factories in the country. He was also deputed for a 22 weeks training course on Design, Development and Testing of Armaments, Ammunition & Vehicles at the Institute of Armament Technology (IAT), Pune in 1970-71 and stood First in the same.He was also sent abroad to UK,USSR (twice) and Sweden for Training, Technology Familiarization and High level discussions on indigenization / Project matters.

Out of his teaching experience, he worked for over a year and a half as Lecturer in Mechanical Engineering/ Workshop Superintendent at the Government Polytechnic, Sundernagar (Himachal Pradesh)and for over eight years and a half in the Chitkara Institute of Engineering & Technology (later upgraded as Chitkara University, Punjab) from where he superannuated as Professor and Dean (Planning & Development) in December, 2012. He was also the Management Representative for the Quality Management System and was the convening faculty for accreditation of the Institute by the National Assessment & Accreditation Council (NAAC),Bangalore. He also successfully coordinated with the Government of India for establishment of a Community Radio Station at the University. He taught students of B. Tech, BBA and MBA at the University.

At present, Shri Sapra is a visiting Faculty at the PTU NalandaSchool of TQM & Entrepreneurship, Mohali and a Guest Faculty at his Alma Mater, the PEC University of Technology, Chandigarh. By virtue of his passion and zeal to learn continuously, he is also successfully registered for Ph. D. at the Chitkara University with a carefully chosen subject as 'Designing a model for Total Quality Management in Engineering Education'Shri Saprais a Life Member of the Indian Society for Technical Education (ISTE) and Indian Institution of Industrial Engineering (IIIE), and also a Fellow of the Institution of Engineers (India).

Book Reviews

Author: Dharm P.S. Bhawuk

Title of the Book: Spirituality and IndianPsychology: Lessons from the Bhagavad-Gita

ISSN 1574-0455

ISBN 978-1-4419-8109-7 e-ISBN 978-1-4419-8110-3

DOI 10.1007/978-1-4419-8110-3

Springer New York Dordrecht Heidelberg London

Library of Congress Control Number: 2011921339

The book authored by Dr. Dharm P. S. Bhawuk on Spirituality and Indian Psychology: Lessons from the Bhagavad-Gita provides deep insights about the learnings from the Bhagavad Gita and a worth reading book by the students and teachers of psychology, spirituality, management, and social sciences.

The foreword has been written by Anthony J. Marsella which says, "the fact that India, as a nation, has emerged today as a global economic, political,and cultural power, makes Professor Bhawuk's volume particularly valuable for ourcurrent time, for his volume captures a world view – a culturally shaped reality – thatoffers insights into a land, history, and people formed across millennia."

The preface provides a journey of the life of Prof. Bhawuk and the experiential learning and spiritual practices followed by him. He says, "I started reading the entire text of the hagavadgItA, and began by reading it once a year, then once a month, to finally twice a month. I have also learned from other spiritual traditions, and see the convergence of spiritual practices. I have become a vaiSNava in my thinking and behavior, thanks to my wife and children's many reminders and encouragement. I am at peace, and peace and spirituality is no longer only an intellectual pursuit but a way of life for me. I don't think it makes me a biased researcher; instead it makes me an informed researcher.

Much like when I teach and write about training and intercultural training, I am able to take the perspectives of both a researcher and a practitioner (i.e., a trainer); I write and teach about spirituality both as a thinker and a practitioner. A current steady sAdhanA of 3–4 hours a day has been both an academic and personal investment in self-development, and without the practice of zravaNa, manana, and nididhyAsana, I could not have come this far in my research program in Indian Psychology.

What has emerged in this journey is an approach or a methodology for developing models from the scriptures that can be used in general for developing models from folk wisdom traditions. In my research, I have never worried about the methodology, and have instead focused on the questions that have interested me, and the methodology has always emerged. I followed a historical analysis and complemented it with case studies to develop a general model of creativity, which served me well in pursuing the research question that was somewhat unprecedented (Bhawuk, 2003a). The model building efforts (Bhawuk, 1999, 2005, 2008b, c) have also not followed any prescribed methodology, and thus contribute to the emergence of a new approach. The foundation of this emerging methodologylies in the spirit of discovering and building indigenous insights (Bhawuk, 2008a,b), which in itself is a new approach to indigenous psychological research. This proves that it has been written by a Sadhak, a practitioner of spirituality. I am fortunate to have interacted with him a number of times and can appreciate his journey of life since 1999.

The book has been divided into 11 chapter (pages 1 to 209) followed by references, author index, and subject index.

This book is about spirituality, and offers perspectives from indigenous perspectives, which should offer some fresh ideas to this area of research. To meet both the above needs, this book uses the bhagavadgItA as its foundation, which is a sacred Hindu text which has been studied by international scholars and has been translated in about 50 languages. This book provides examples of how psychological models can be distilled from such texts.

This book essentially makes three contributions:

First, it presents a research methodology for building models in indigenous psychology that starts with indigenous insights.

Second, the proposed research methodology is applied to develop many indigenous models from the bhagavadgItA. This validates both the practicality and usefulness of the methodology.

Finally, since the models presented in the book deal with spirituality from the Indian perspective, the book contributes to the emerging field of psychology of spirituality. With globalization and the growth of multiculturalism in many parts of the world, spirituality has become an important issue for the workplace, and the book contributes to this new area of research and practice by presenting models from an indigenous worldview that would help expand the perspectives of psychologists and managers.

After an in-depth introduction Chapter 1 makes a case for indigenous psychology which provides an interesting reading.

Chapter 2 entitled, "Spirituality in India: The Ever Growing Banyan Tree" used two qualitative methods, historical analysis and case-analysis, to document how spirituality is valued in India, and

much like a banyan tree, how it continues to grow even today leading to many innovations in the field of spirituality from India. The chapter ends with a theoretical discussion of how culture shapes creativity, and its implications for global psychology.

Chapter 3 provides a contrast between the Indian cultural worldview and the culture of science to demonstrate how conflict exists between many traditional cultures and the culture of science. Further, research on Transcendental Meditation (TM) is presented as a vehicle to examine the interaction between Indian cultural worldview and what is called scientific thinking. This discussion leads to the development of a methodology – model building from cultural insights, which is one of the major contributions of this book. The chapter is concluded with a discussion of the implications of this approach to cultural research for global psychology.

Chapter 4 presents material from ancient and medieval texts that describe the indigenous concept of self in India which is very interesting reading.

In Chapter 5, a model is drawn from the bhagavadgItA that shows how our physical self is related to work. The model shows how doing the work with the intention to achieve the fruits of our labor leads to an entrenched development of social self, but letting go of the passion for the reward for our actions leads us toward the real self. These two distinct paths have been discussed in detail in this chapter which is the crux of bhagavadgItA. The neglect of the second path in western psychology leads us to miss out on the immense possibility of leading a spiritual life. Considering that spirituality is a defining aspect of human existence and experience, this is not a small loss, and the chapter contributes by presenting a psychological model capturing the paths of bondage and liberation as processes.

Chapter 6 examines the cognition, emotion, and behavior by anchoring them in desire which has been derived from the bhagavadgItA. The model presented here posits that cognition, emotion, and behaviorderive significance when examined in the context of human desires, and starting with perception and volition, cognition emerges when a desire crystallizes. Desires lead to behaviors, and the achievement or non-achievement of a desire causes positive or negative emotions. Through self-reflection, contemplation, and the practice of karmayoga, desires can be better managed, which can help facilitate healthy management of emotions.

A model of how personal harmony can be achieved is derived from the bhagavadgItA in Chapter 7.

In Chapter 8, the concept of karma has been examined to present an Indian Theory of Work, and implications of this theory for global psychology has been discussed.

In Chapter 9, the epistemological and ontological foundations of Indian Psychology (IP) have been derived from the IzopaniSad and corroborated by verses from the bhagavadgItA. In doing so, epistemological questions like what is knowledge in IP or what knowledge (or theories) should IP develop and how (the methodology) are answered. Similarly, ontological questions like what is the being that is the focus of IP research or are biomechanical or spiritual–social–biological beings of interest to IP have been addressed. The chapter has been concluded with a discussion of the role of epistemology and ontology in constructing cultural meaning for theory, method, and practice of Indian Psychology.

In Chapter 10, approaches to model building presented in the first nine chapters have been formalized into five approaches. First, a content analysis of the text(s) by using key words can lead to the development of models about constructs such as peace, spirituality, karma, dharma, identity, and so forth. Second, a process of model building from indigenous insights has been discussed. Third, the process of discovering and polishing models that already exist in the scriptures to fit with the relevant literature has been presented. Fourth, an approach of developing practical and useful theories and models by recognizing what works in the indigenous cultures has been discussed. And finally, how one can develop indigenous models by questioning western concepts and models in the light of indigenous wisdom, knowledge, insights, and facts has been presented. These approaches steer away from the pseudoetic approach, and allow theory building that is grounded in cultural contexts. The chapter also presents LCM and GCF models of etic, which moves the field of cultural research beyond the emic-etic framework.

In Chapter 11, the major methodological, theoretical, and practical contributions of the book have been summarized, followed by future research directions.

This book has proposed a methodology for developing models from indigenous ideas, and has demonstrated that this methodology is useful by presenting a number of models employing it. Methodologically, the book advances cultural research beyond the etic-emic framework by presenting the concept of LCM-etic and GCF-etic. Theoretical contributions of the book can be found in the models presented in each of the chapters in the book. These models also serve as self-help frameworks for practitioners, thus contributing to the world of practice.

Overall, it is an excellent contribution to the body of knowledge which challenges the structured pattern of doing research and provides insights into developing new methodologies and models.

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Title of the Book: Epic Content Marketing: How to tell a Different Story, Break through the Clutter, and Win More Customers by Marketing Less.

ISBN: 9780071819893

E-ISBN: 9780071819916

Mc-Graw Hill Education

Rs. 1683 (Print Price Hardcover).

Marketing is an ever evolving field. Marketers have to continuously find new and innovative ways to communicate with their potential consumers. As the author, Joe Pulizzi says, the era of one-way, single threaded, brand directed mass communication is over. With the advent of technology, the consumer process of seeking information has changed. Unlike earlier, when the consumer was dependent on the information provided by the manufacturer, now the information is available just at the click of a mouse.

The Foreword has been written by Michael Brenner, Vice President of Marketing and Content Strategy, SAP has observed, 'The world is now swimming in content and information. While content consumers are having fun creating and consuming all of this content that moves around the world in milliseconds, marketers and businesses are struggling in a growing battle for consumer attention. As marketing tactics have become less and less effective, businesses have responded by creating more and more promotional content that no one wants, no one likes and no one responds to. The only way to reach your audience in today's information drenched content-saturated world is through Epic Content Marketing that emotionally attracts the audience.'

Though, the internet has been full of information and contents, yet the relevance of content is a growing concern. In this book, the author has explained the importance of developing the right content. The book has five parts. Part I of the book is about explaining what content marketing is and the importance of content marketing. Content marketing has been defined as 'the marketing and business process for creating and distributing valuable and compelling content to attract, acquire and engage a clearly defined and understood target audience – with the objective of driving profitable customer action' .A more interesting explanation of content marketing that has been provided by the author is - 'Marketing by selling less'. Instead of pitching your products or services, you are delivering information that makes your buyers more intelligent or perhaps entertaining them to build an emotional connection.

Part II talks about defining your content niche and strategy. The first chapter more right or less right notes that there is no magical solution to content marketing.Infact, certain things may be more right and some may be less, but there is no right or wrong. The next chapter defines the six principles of 'epic' content marketing naming – filing a need; consistency; being human; having a point of view; avoiding sales speak and being the best in the breed. The chapter further defines the need of setting up clear goals of content marketing that the organization wants to achieve such as brand awareness or led generation or customer service etc. Another important aspect that has been addressed is that of identifying and understanding the target audience persona, which has been covered in great depth. It is the most important factor that will define the content marketing strategy of the organization.

Part II defines the engagement cycle considering whatthe target audience would want in terms of different types of information depending on what stage they are in their buying process. Then comes the stageof defining the content niche which is fundamental to understanding the potential customeras discussed in the earlier chapters .

Finally the author addresses the significance of writing a content marketing mission statement as this will be the guiding force for the organization to go further.

Part III talks about managing the content process. The first step is to develop a content calendar which is the most important planning tool that defines what content will be published and when. The sub-parts of the book highlight the content generation process, which has been defined as the internal development or outsourcing; content types such as blogs, videos, emails etc. Part III ends with chapters on selecting the online content platform and creating an action plan.

Part IV of the book explains the compulsion of creating a marketing story and helping or enabling thepeople to find the content that is of interest to them. Even if an organization has developed great content but if the potential customer has not been able to find that content, all the efforts are futile and organizational objective will remain unachieved. Part IV of the book also sheds light on and defines the growing importance of social media in distribution of content and also other strategies like the use of search engine optimization and search engine marketing. It draws attention to thedefining role of social media influencers who can be leveraged to distribute the content.

Finally, Part V is about making content work. The chapter discusses in detail about the KPIs (Key Performance Indicators) and ROI (Return on Investment). The book ends with content marketing success stories.

The book has been very well planned. It starts with the basics and ends with in-depth observations about the content marketing strategies. This book is a must for the marketing professional and students because it provides a structured approach to content marketing. With the growing clutter in advertising, content marketing is the most differentiated and growing stream which all marketers need to be abreast with.

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Manuscript Requirements: Manuscripts should be submitted electronically (via e-mail) by sending MS Word File addressed to: The Editor, Amity Business Review, Amity Business School, Amity University, Noida. email: abr@amity.edu, Phone: 0120-4392557. For detail about author guidelines, manuscript requirements and e-copy of ABR, see Amity Business Review's website at **www.amity.edu/abs/amitybusinessreview.asp**

Published by: Amity University Press, E-27, Defence Colony, New Delhi 110024.

Printed at: Venus Print Solutions, D-84/3, Okhla Industrial Area, Phase-I, New Delhi 110020.

STATEMENT ABOUT OWNERSHIP AND OTHER PARTICULARS OF THE JOURNAL AMITY

FORM - IV
(Rule 8)

1.	Place of Publication	:	NOIDA
2.	Periodicity of its Publication	:	Bi-Annual
3.	Printer's Name Whether citizen of India Address	:	Venus Print Solutions Yes D-84/3, Okhla Industrial Area, Phase I, New Delhi -110020
4.	Publisher's Name Whether Citizen of India Address	: : :	Amity Business School Yes Amity Business School Amity University, Uttar Pradesh, Sector-125, NOIDA -201 313 (INDIA)
5.	Editor-in-chief's Name Whether citizen of India Address	: : :	Dr Sanjeev Bansal Yes Amity Business School Amity University, Uttar Pradesh, Sector-125, NOIDA -201 313 (INDIA)
6.	Name and address of the individuals who own the Newspaper and Partners or Shareholders holding more than one per cent of the total capital.	:	Amity Business School Amity University, Uttar Pradesh, Sector-125, NOIDA -201 313 (INDIA)

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(Sd/-)

Sanjeev Bansal
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