COMPONENTS OF NON-PERFORMING ASSETS (NPAs) OF INDIAN SCHEDULED COMMERCIAL BANKS –A REVIEW.

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Abstract

The Banking industry is one of the basic instruments of economic growth. It must be on a sound footing as it constitutes an important link in various socio-economic activities. A strong banking sector is important for a flourishing economy. The failure of the banking sector in any country may have an adverse impact on other sectors. Non-performing Assets (NPAs) are one of the major concerns for banking sector in India. Non-performing Assets also called NPAs is the term used in banking and finance sector. Basically this term (NPAs) is used in loan department of the bank. The assets of the bank which do not perform any role in getting profit to the organisation are called Non-performing Assets. NPAs reflect the performance of banks in any country. The issue of NPAs has been discussed at length in financial systems all over the world. The problem of NPAs is not only affecting the banks but also the entire economy of any country. In this paper an effort has been made to analyze the concept of NPAs, components of loan assets of the commercial banks in India with special reference to the public sector, private sector and the foreign bank. The study is diagnostic and exploratory in nature and makes use of secondary data. The study finds and concludes that the commercial banks have significantly improved their working performance in the area of NPAs..

Keywords: Non-performing Assets (NPAs), Sub-Standard Assets, Doubtful Assets, Loss Assets, Loan Assets, Reserve Bank of India (RBI).

Introduction

Loans and advances granted by commercial banks are highly beneficial to individuals, firms, companies and industrial concerns. The growth and diversification of business activities are effected to a large extent through bank financing. Loans and advances granted by banks help in meeting short-term and long term financial needs of business enterprises. Granting loans and advances for economic growth is the prime duty of

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banks. Lending by the banking sector is generally encouraged because it has the effect of funds being transferred from the system to productive purposes, thereby the economy grows. However the process of lending also carries a risk called credit risk, which arises from the failure of borrower. Non-performing Asset refer to loans that are in risk of default. Once the borrower has failed to make interest or principal payments for 90 days, then the loan amount is considered to be a Non-performing Asset. Non-performing Assets (NPAs) are problematic and risk for financial institutions since they depend on interest payments for income. Banks are required to classify non-performing assets further into the following three categories based on the period for which the asset has remained non-performing and the realisability of the dues: 1. Sub-standard Assets (A sub-standard asset is one which has remained NPA for a period less than or equal to 12 months), 2. Doubtful Assets (With effect from March 31, 2005, an asset is required to be classified as doubtful, if it has remained NPA for more than 12 months), 3. Loss Assets (such an asset is considered un-collectible).

Statement of the Problem

NPA is defined as an advance where payment of interest or repayment of installment of principal (in case of term loans disbursed by the commercial banks) or both remains unpaid for a certain period. In India, the definition of NPAs has changed over time. According to the Narasimhan Committee Report (1991), those assets (advances, bills discounted, overdrafts, cash credit etc.,) for which interest remains due for a period of 180 days should be considered as NPAs. Subsequently, this period was reduced, and from March 1995 onwards. The assets for which the interest has remained unpaid for 90 days are considered as NPAs. Non-performing Assets (NPA) has emerged over a long period as an alarming threat to the Indian banking industry. Banking reforms by the Government of India and Reserve Bank of India (RBI) in terms of the two Narasimhan Committee Reports have been neutralized by the ill effects of this surging threat. Despite various correctional steps administered to solve and end this problem, concrete results are eluding The severity of the problem is however acutely suffered by almost all the branches of commercial banks. Hence, the present study has focused on the trends in various components of non-performing assets of Indian commercial banks.

Review of Literature

A considerable amount of research has been done in the area of Non-performing Assets (NPAs) of commercial banks in India, by academicians and researchers. The literature obtained by investigators, in the form of reports of various committees, commissions and working groups established by the Union Government, Reserve Bank of India, the research studies, articles of researchers, the comments of economic analysts and news, is briefly reviewed in this part.

Kaveri (2001) studied the non-performing assets of various banks and suggested various strategies to reduce the extent of NPAs.

Prashanth k Reddy (2002) in his study focuses on comparative study of Non-Performing Assets in India in the Global context.

Ramu, N (2009) has made an attempt to analyze the asset quality in selected UCBs in Tamil Nadu. The researcher also pointed out that, with the tightening of prudential norms, the banking sector has been consistently conforming to and adopting international prudential norms and accounting practices.

Meenakshi Rajeev and Mahesh, H.P. (2010) in their study concluded that accounting norms have been modified substantially and mechanisms are in place for reduction of bad debts.

Bhavani Prasad and Veera D (2011) Studied NPAs in Indian Banking sector and concluded that PSBs accounted for 78% of total NPAs and this is due to falling revenues from traditional sources.

Jaynal Ud-din Ahmed (2011) in his study concluded that the earning capacity and profi tability of banks has been adversely affected by the high level of NPAs and the reduction of NPAs in banks is posing the biggest challenge to the Indian economy.

Veerakumar,K. (2012) in his research study concluded that the bank management may speed up recovery of good loans and bad loans through various modes to decelerated growth of NPAs from the present level and also to prevent re-emergence of NPAs over the minimum level.

Siraj.K.K and Prof.P.Sundarsanan Pillai (2012) in their research study concluded that NPA still remains a major threat and the incremental component explained through additions to NPA poses a great question mark on efficiency of credit risk management of banks in India.

Scope of the Study

The study concerns with the components of various non-performing assets of public sector banks, private sector banks and foreign banks which are operating in the country. The period of the study is six years, spanning from 2006 to 2011. As observed from the review of literature, no study has been carried out regarding the recent trends in the components of the non-performing assets of Indian commercial banks. So it becomes imperative to know the recent past working performance of the components of various non-performing assets of the commercial banks.

Objectives of the Study

The study aims to gain insights into the concept of Non-performing Assets (NPAs) and its various components of Indian Scheduled Commercial Banks. The following broad objectives are laid down for the purpose of the study.

(a) To assess the loan assets of all Indian Scheduled Commercial Banks in India;

(b) To analyze the various components of non-performing assets of public, private and foreign banks in India and

(c) To review the working performance of the three sectors of banks in the areas of components of NPAs.

Research Design/Methodology

Data Collection and Sample

The study is based on secondary data. The RBI publications like, "Report on Trend and Progress of Banking in India", "Annual Reports of RBI", and "Reports on Currency and Finance" are the major sources for this study. To supplement the data, the researcher elicits other relevant data available from the annual reports of the various public, private and foreign commercial banks, journal, websites and text books. For the purpose of the study, categories of loan assets of public, private and foreign banks which are listed in the Second Schedule of the Reserve Bank of India Act, 1939 have been considered.

Hypothesis of the Study

To achieve the objectives of the present study, the researcher has formulated and tested the following hypothesis.

H_o: There is no significant difference in loss assets among the three sectors of banks;

H_1: There is significant difference in the loss assets among the three sectors of banks.

Data Analysis

The analysis of the data is the core part of the research. Scientific methods have been used nowadays to get the output or study made authentic and can also sufficed the purpose what the study meant for. The collected data have been processed on computer. To reach certain relevant results, the data collected from all resources have been tabulated, analyzed and interpreted with the help of appropriate statistical techniques. In order to analyze the data and draw conclusions in this study, various statistical tools like Descriptive Statistics and ANOVA-Single Factor have been done using through EXCEL and SPSS Software. The study is confined a period of six years i.e., from 2006 to 2011.

Results and Discussion

1. Loan Assets of Public Sector Banks

The amount of components of loan assets for the period 2006 to 2011 are shown in following Table No.1.

Table-1Classification of Loan Assets of Public Sector Banks. (Rs in Crore)

Years	Sub-standard Assets	Doubtful Assets	Loss Assets
2006	11394	24804	5180
2007	14147	19944	4510
2008	16870	19167	3712
2009	19521	20715	3803
2010	27688	24685	4928
2011	33614	31919	5514
Mean	20539.0000	23539.0000	4607.8333
S.D.	8497.65144	4757.12783	736.32395
C.V. (%)	41.37325	20.20956	15.97983

Source: Department of Banking Supervision, Reserve Bank of India, 2011.

It is clear from the table 1 that the amount of sub-standard assets have been constantly increased over the period of study. In the case of doubtful assets, it has been decreased from Rs. 24804 crores in 2006 to Rs. 19167 crores in 2008. But it has again gone up to Rs.31919 crores in 2011. As far as the loss assets are concerned, it has been decreased from Rs. 5180 crores in 2006 to Rs. 3712 crores in 2008. But it went up to Rs.5514 crores in 2011.

By comparing the performance on the basis of the mean value for the period, it has been noted that the doubtful assets is high in case of the public sector banks, as the mean value is 23539.0000. Next is the place of sub-standard assets whose value is 20539.0000 and it is lowest in the case of loss assets as it is 4607.8333.The degree of variation is very low in loss assets as the CV is 15.97983 and the variation is very high in case of sub-standard assets as the percent of CV is 41.37325. It is found to be more consistent as the CV of the loss assets is less than that of other two categories of assets.

2. Loan Assets of Private Sector Banks

The amount of components of loan assets of the private sector banks for the period 2006 to 2011 are shown in following Table No.2.

Table-2Classification of Loan Assets of Private Sector Banks (Rs in Crore)

Years	Sub-standard Assets	Doubtful Assets	Loss Assets
2006	2396	4438	940
2007	4368	3930	941
2008	7280	4452	1244
2009	10526	5017	1345
2010	8676	6542	2166
2011	4398	10735	2839
Mean	6274.0000	5852.3333	1579.1667
S.D.	3067.64535	2556.18831	763.48082
C.V. (%)	48.89457	43.67811	48.34707

Source: Department of Banking Supervision, Reserve Bank of India, 2011.

It is observed from the above table that the amount of sub-standard assets have been steadily increased from Rs. 2396 crores in 2006 to Rs. 10526 crores in 2009. It is very encouraging sign that this amount of sub-standard assets has decreased to Rs.4398 crores in the year 2011. In the case of doubtful assets, it has been increased from Rs.4438 crores in 2006 to Rs. 10735 crores in 2011. The increase over the period of the study was 2.41 times. As far as the loss assets are concerned, it also shows the constant increase during the period of the study.

By comparing the performance on the basis of the mean value for the period, it has been noted that the sub-standard assets are high, as the mean value is 6274.0000. Next is the place of doubtful assets whose value is 5852.3333 and it is lowest in the case of loss assets as it is 1579.1667.The degree of variation is very low in doubtful assets as the CV is 43.67811 and the variation is very high in case of both sub-standard assets and loss assets as the percent of CV is 48. It is found to be more consistent as the CV of the doubtful assets is less than that of the other two categories of assets.

1. Loan Assets of Foreign Banks

The amount of components of loan assets of the foreign banks for the period 2006 to 2011 are shown in following Table No.3.

Table-3 Classification of Loan Assets of Foreign Banks (Rs in Crore)

Years	Sub-standard Assets	Doubtful Assets	Loss Assets
2006	946	698	446
2007	1367	631	454
2008	1963	768	387
2009	5874	1004	416
2010	4930	1441	757
2011	1865	2113	1087
Mean	2824.1667	1109.1667	591.1667
S.D.	2051.75392	573.22785	277.70734
C.V. (%)	72.64989	51.68095	46.97615

Source: Department of Banking Supervision, Reserve Bank of India, 2011.

It is exhibited from the table 3 that the amount of sub-standard assets have been constantly increased over the period of study But the amount has been reduced in the year 2011. In the case of doubtful assets, it has been increased from Rs. 698 crores in 2006 to Rs. 2113 crores in 2011. As far as the loss assets are concerned, it has also been increased from Rs. 446 crores in 2006 to Rs. 1087 crores in 2011.

By comparing the performance on the basis of the mean value for the period, it has been noted that the sub-standard assets is high, as the mean value is 2824.1667. Next is the place of doubtful assets whose value is 1109.1667 and it is lowest in the case of loss assets as it is 591.1667.The degree of variation is very low in loss assets as the CV is 46.97615 and the variation is very high in case of sub-standard assets as the per cent of CV is 72.64989. It is found to be more consistent as the CV of the loss assets is less than that of other two categories of assets.

1. Loan Assets of All Scheduled Commercial Banks

The amount of components of loan assets of all the scheduled commercial banks for the period 2006 to 2011 are shown in following Table No.4.

Table-4 Classification of Loan Assets of Scheduled Commercial Banks(Rs in Crore)

Years	Sub-standard Assets	Doubtful Assets	Loss Assets
2006	14737	29940	6565
2007	19883	24505	5905
2008	26113	24386	5343
2009	35921	26736	5564
2010	41294	32668	7850
2011	39878	44767	9440
Mean	29637.6667	30500.3333	6777.8333
S.D.	11043.74461	7694.80122	1585.93486
C.V. (%)	37.26253	25.22858	23.39885

Source: Department of Banking Supervision, Reserve Bank of India, 2011.

It is exhibited from the table 4 that the amount of sub-standard assets have been increased from Rs.14737 crores in 2006 to Rs.41294 crores in 2010. However, this amount has been decreased to Rs. 39878 crores in the year 2011. In the case of doubtful assets, it has been increased from Rs. 29940 crores in 2006 to Rs. 44767 crores in 2011. The increase over the period was 1.5 times. As far as the loss assets are concerned, it has been increased from Rs. 6565 crores in 2006 to Rs. 9440 crores in 2011.

By comparing the performance on the basis of the mean value for the period, it has been noted that the doubtful assets is high, as the mean value is 30500.3333. Next is the place of sub-standard assets whose value is 29637.6667 and it is lowest in the case of loss assets as it is 6777.8333.The degree of variation is very low in loss assets as the CV is 23.39885 and it is high in sub-standard assets as the per cent of CV is 37.26253. It is found to be more consistent as the CV of the loss assets is less than that of other two categories of assets.

To test the significant difference in the loss assets of the public sector banks, private sector banks and foreign banks, 'Single Factor ANOVA' has been performed. The Hypothesis framed is as follows:

H_o: There is no significant difference in loss assets among the three sectors of banks;

H_1: There is a significant difference in the loss assets among the three sectors of banks.

The test results are given in Table-5.

Table-5Results of ANOVA

	Sum of Square	df	Mean Squar	F	Sig.
Between Groups	5.257E7	2	2.628E7	65.586	. 000
Within Groups	6010986.500	15	400732.433		
Total	5.858E7	17			

Table above shows that F-ratio and significance values suggests that there is significant difference in the loss assets among the three sectors of banks.

Summary of Findings, Suggestions and Conclusion

Findings

- Analysis of components of various NPAs in Public Sector Banks shows that the doubtful assets is high in case of the public sector banks. The degree of variation is very low in loss assets and the variation is very high in case of sub-standard assets. It is found to be more consistent as the CV of the loss assets is less than that of other two categories of assets.

- Analysis of components of various NPAs in Private Sector Banks shows that the sub-standard assets is high in case of the public sector banks. The degree of variation is very low in doubtful assets and the variation is very high in case of both sub-standard assets and loss assets. It is found to be more consistent as the CV of the doubtful assets is less than that of other two categories of assets.

- Analysis of components of various NPAs in Foreign Banks shows that the sub-standard assets is high. The degree of variation is very low in loss assets and the variation is very high in case of sub-standard assets. It is found to be more consistent as the CV of the loss assets is less than that of other two categories of assets.

- Analysis of components of various NPAs in All Scheduled Commercial Banks proves that the amount of doubtful assets is high. .The degree of variation is very low in loss assets and it is high in sub-standard assets. It is found to be more consistent as the CV of the loss assets is less than that of other two categories of assets.

- There is significant difference in the loss assets among the three sectors of banks(public, private and foreign).

Suggestions

- The management of banks may impart training to the officials in the art of lending to the different categories and they may continue to encourage upgrading their knowledge and skills in recovering the loans and advances.

- Bank management may possess specialized credit rating agencies to finalize the borrowing capacity of the potential borrowers before offering credit to the needy people.

- Steps need to be taken to recover the loan in time by adopting well equipped recovery mechanism.

- There is a wrong opinion in the minds of the farmers that agricultural credit may be waived one day or other. Hence, the agriculturalist who can repay the agricultural credit may not come forward to repay the loans in time. Therefore the farmers in our country require a lot of counselling and the bank officers engaged in this activity should provide necessary advice and counselling.

Conclusion

The problem of NPAs is a serious issue and danger to the Indian Scheduled Commercial Banks, because it destroys their sound financial positions. The customers and the public would not keep trust on the banks any more if the banks have higher rate of NPAs. So, the problem of NPAs must be handled in such a manner that would not ruin the financial positions and affect the image of the banks. The RBI and the Government of India have taken innumerable steps to reduce the volume of NPAs of the Scheduled Commercial Banks. The remedial measures taken by Government of India, Reserve Bank of India and the Bank management in recent years, helped to reduce NPAs considerably as recommended by Shri M. Narasimham. To improve the efficiency and profitability, the NPA has to be reduced further.

Limitations of the Study

The following are the main limitations of the study:

i. In the present study, the components of various NPAs of commercial banks is a three fold type namely public, private and foreign sectors of banks. No such classification as old and new private sector banks has been considered for this purpose.

ii. The study is based on secondary data as published in various publications of RBI and other reports. These data are based on historical accounting concept, which ignores the impact of inflation.

iii. The study, as limitations, is confined only to the selected and restricted indicators and the study is confined only for the period of six years.

Scope for Further Research

The Indian commercial banks have been facing serious problems of raising Non-performing Assets (NPAs). NPAs have been eating the banking industries from within, since nationalisation of banks in 1969. It also affected profitability, liquidity and solvency position of the Indian banking sector. The earning capacity and profitability of banks has been adversely affected by the high level of NPAs. The reduction of NPAs in banks is posing a big challenge to the Indian economy This research paper and its findings may be of considerable use to banking institutions, policy makers and to academic researchers in the area of banking performance evaluation with special reference to components of various non-performing assets/loan assets.

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SYMMETRIC AND ASYMMETRIC RELATIONSHIP BETWEEN SELECT MARKET RETURNS AND IMPLIED VOLATILITY INDEX: A STUDY OF USA, FRANCE, GERMANY, INDIA AND EUROZONE

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Abstract

In present paper the behavior of implied volatility (henceforth IV) index of Indian stock markets in comparison to the American, German, French and Eurozone financial markets is analyzed. The symmetric and asymmetric return-volatility relation is examined for the five markets. A system of equations is developed to examine the symmetric and asymmetric return-volatility relation. The time series tests ADF, PP, KPSS are applied to examine stationarity of series and Granger causality test to study the lead-lag return-volatility. The data set representing five international markets with daily frequency, spanning from March, 2009 to July, 2011 is taken. The findings of the study document an inverse and negative contemporaneous return-volatility relationship for the five countries. The study states that the Indian IV index has vast scope in the global markets and can be used for portfolio diversification by market participants. The IV index may help in trading, hedging and introducing derivative products based on this index.

Keywords- Implied volatility Index, Indian Stock market, CBOE, VIX, symmetric, asymmetric, International markets

Introduction

Expected future volatility statistically observed in various financial markets plays a pivotal role in financial theory. Consequently, an accurate estimation of this parameter is of paramount importance in financial decision making. The future implied volatility (henceforth *IV*) is seen to be superior in forecasting future realized volatility when in comparison to the historical volatility (Christensen and Prabha (1998), Flemming (1998), Dumas *et al.* (1998), Blair *et al*. (2001), Panda *et al.* (2008) and Li and Yang (2009)).

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In 1993, Chicago Board Options Exchange (CBOE)[1] published the first Volatility Index called "VIX", which was calculated by employing both call and put options. This index latter became the benchmark for risk measurement of US equity markets. In 2003, CBOE introduced a new methodology for the computation of VIX index using not only just at-the-money call and put option but also out-of-money call and put options of the underlying index S&P 500. In this case valuation model was not necessary for the computation of VI, thus, it is called model-free methodology. After this many stock markets launched their respective volatility indices base on the same methodology. Table 1 represents some of the major volatility indices developed for measuring the respective market volatilities. Several academicians and professionals have also adopted the model free technique for developing IV index in order to forecast the future market volatility. Skiadopoulos (2004), Maghrebi et al. (2007) and SIX Swiss Exchange Ltd (2010) proposed indices for the Greek, Korean and Swiss stock markets respectively.

The IV index is often referred to as "investor fear gauge" by a term first coined by Whaley (2000), as this index indicates investors' perception about the expected future realized volatility. Several studies have focussed on the asymmetric relationship between the underlying index and IV index. An inverse contemporaneous relationship has been documented between the two in the past (Fleming *et al.* (1995), Giot (2005), Carr and Wu (2006) and Siriopoulos and Fassas (2008)).

IV trading in volatility index can be used as an effective hedging instrument in the derivative market. Golzalez and Afonso (2007) states three main uses of volatility index (i) to analyse the current market volatility expectations; (ii) to make inferences about the current market returns; and (iii) to predict the future volatility in returns.

In April 2008, National Stock Exchange (NSE) launched Indian volatility index "India VIX", reflecting market expectation of volatility over the 30-day period. Consequently, India became the first organized exchange in the Asia- Pacific region to compute and disseminate IV index. The India VIX (henceforth IVIX) is based on Nifty 50 Index option prices. For computation purpose, the best bid – ask quotes of near and next–month NIFTY options contracts are used.

(Footnotes)

[1]The first organized market for options was the Chicago Board Options Exchange (CBOE), established in 1973 and 911 option contracts on 16 different stocks were traded on April 26, 1973. (Source: Chicago Board Options Exchange).

Table 1: Major Volatility Indices of the World

Volatility Index	Computed and disseminated	Underlying Asset
CBOE Volatility Index (VIX)	CBOE	S&P 500
DJIA Volatility Index (VXD)	CBOE	Dow Jones Industrials Average(DJX)
NASDAQ-100 Volatility Index VXN	CBOE	NASDAQ 100(NDX)
Russell 2000 Volatility Index (RVX)	CBOE	Russell 2000
S&P 500 3-Month Volatility Index (VXV)	CBOE	SPX
FTSE 100 Volatility (VFTSE)	Euronext	FTSE 100
CAC 40 Volatility Index (VCAC)	Euronext (Paris)	CAC 40
AEX Volatility Index (VAEX)	Euronext	AEX index options
VDAX-NEW (D.Börse, 2005).	Deutsche Börse	DAX 30
VX1 and VX6	MONEP	CAC 40
BEL 20 Volatility Index(VBEL)	Euronext	BEL 20 index option
VSTOXX (V2TX)	Eurex	Dow Jones Euro STOXX 50 options
VSMI	SWX Swiss Exchange	SMI
MVX	Montreal Exchange	iShares of the CDN S&P/TSX 60 Fund (XIU)
Volatility Index Japan (VXJ)	VXJ Research Group*	Nikkei 225 index
NSE Volatility Index (India VIX)	NSE	Nifty 50 index options

* VXJ research Group, Centre for the Study of Finance and Insurance, Osaka University

The study is divided into four different sections. Section I discusses the review of literature of the selected studies on the volatility index, research gap and rationale of the study. Section II described the research methodology used in the study. Section III is devoted to the empirical analysis and results of the study. Finally, in Section IV the paper closes with findings, conclusion and policy implications.

Section I

1.1 Review of Literature: Most of the volatility index research is based on its applications, uses and its role in predicting the uncertainty prevailing in the market. The original concept of volatility index came from the introduction of organized trading of call options markets of securities on the CBOE in 1973. Gastineau (1977) was the first scholar to devise the methodology for constructing volatility indices based on average IV of at-the-money call option. Galai (1979) gave an individual underlying stock based option index. Brenner and Gali (1993) took the initiative by proposing realized volatility index for currency markets.

Whaley (1993) discussed the construction of volatility index and the benefits of the derivative contracts on the CBOE market volatility index. It was emphasized that volatility derivatives facilitate speculators in trading volatility for high profit booking by predicting the market volatility in a superior way.

Flemming *et al.* (1995) described how the volatility index is calculated from the implied volatilities of eight S&P 100 index options and found that there is large negative contemporaneous correlation between the index returns and VIX changes.

Shu and Zhang (2002) examined the relationship between the implied and realized volatility by using S&P 500 index option prices. The results observed that IV has high explanatory power in forecasting the realized volatility as compared to historical volatility. Similar results were found by Li and Yang (2009) on examination of the Australian stock index option market.

Skiadopoulos (2004) constructed an IV index for the upcoming Greek derivatives market. The researcher studied properties of Greek volatility index (GVIX) and its relationship with the underlying index FTSE/ASE – 20. Granger Causality Test has been applied to examine the lead-lag effect between the daily changes of GVIX and daily returns, and between changes in GVIX and US volatility indices. The result indicates that there is unidirectional Granger causality from the underlying asset i.e. FTSE/ASE – 20 options to GVIX. No lead-lag relationship has been established between the GVIX and US volatility indices.

Giot (2005) examined the relationship of S&P 100 and NASDAQ 100 indices with their respective IV indices i.e. VIX and VXN, and found a strong negative asymmetric relationship between the two. IV

Fernandes *et al.* (2007) studied the time series properties of the CBOE market volatility index (VIX). They employed parametric and semi-parametric heterogeneous autoregressive (HAR) process for both modeling and forecasting purpose. They found that VIX holds a very strong negative relationship with both contemporaneous and lagged S&P 500 index returns.

Whaley (2008) discussed the properties of VIX, its evolution, scientific relation with stock market, normal statistical range and its performance as a predictor of future volatility. This developed a better understanding among the investors and traders for using VIX as a risk hedging instrument.

Sepp (2008) observed the positive skew in the implied volatilities of VIX options. To model this feature, researcher used the square root stochastic variance model with jump process, for the evolution of S&P 500 index volatility. They developed the method of unified pricing and hedging of different volatility products on the implied and realized variance of the S&P 500 index.

Ahoniemi (2008) gave the methods for modeling and forecasting the VIX index. They found that ARIMA (1,1,1)-GARCH (1,1) was able to forecast the direction of change in VIX correctly in over 58 percent of the trading days in out-of-the-sample period of five years. Degiannakis (2008) used fractionally integrated ARMA model, in which IV index of S&P 500 is considered as dependent variable whereas interday and intraday volatility are considered as explanatory variables. It was found that both realized and conditional volatility does not provide any incremental information in forecasting the VIX.

Siriopoulos and Fassas (2008) examined the properties and information content of the newly introduced IV index of NYSE – Euronext i.e. FTSE 100 computed using the model-free methodology. The empirical analysis shows that there is a negative and asymmetric relationship between IV and underlying index. Further, Siriopoulos and Fassas (2009) examined the integration in the international equity markets and volatility spill-over effects. The linkages were investigated for the IV indices of six financial markets for the period Jan 2004 to Dec 2008. The findings of the study indicated linkages with respect to market participant’s expectations about future uncertainty.

Cohen and Qadan (2010) studied a new dimension of the fear gauge index with the gold prices in US markets. The results show that during the stable period, bi-directional causality existed between them but during the non-stable period gold prices acted as a shelter for the fear.

1.2 Research Gaps Identified: The study of past literature lays the foundation for the future research as the IVIX and Indian derivatives markets are emerging in Asian markets, but these are not getting the attention they warrant (Kumar, 2010).The past studies have concentrated on the IV indices of the international markets but not much work is done on studying the properties of the IVIX and comparing it with other markets. Thus, to the best of knowledge of the authors, there is no work of till date, in which the comparison of the IVIX with the four international markets has been done. This makes the study even more important for filling the gaps in the existing literature.

1.3 Rationale of the Study: This study bridges the gap between the theory and practice by studying properties and interdependencies' amongst the various world markets with the help of a new financial asset group. According to Carr and Wu (2006) a better knowledge of volatility indices (VI) throws light on its uses as market timing tool, derivative market hedging instrument, measure of uncertainty of the market and as proxy for stock variance level. This study also assumes significance as it contributes to the existing volatility literature by examining the volatility index of the Indian stock market.

Section II: Research Methodology

2.1 Objective of the Study: The objective of the study is to examine the behavior IV index of Indian stock markets in comparison with the American, German, French and Eurozone financial markets. Our focus is on studying the markets trends, the volatility variance and the relationship, if any, that exists between volatility index and market returns. The symmetric and asymmetric return-volatility relationship is examined for the five markets.

The following hypotheses are formulated for the purpose of the study:

Hypothesis I: Contemporaneous inverse return-volatility relationship exists for the five markets.

Hypothesis II: Asymmetric return-volatility relationship exists for the five markets

Hypothesis III: The Indian Implied Volatility index exhibits similar patterns as those of the other four markets.

2.2 Data Collection: The daily closing values of IV index and stock index prices for five international markets (Table 2) spanning from 2 March, 2009 to 30 July, 2011 has been taken. This time period is chosen because the data for IV index of India is available from Mar, 2009 on NSE database. Thus, for better comparison same time period is selected for all the countries. The data is extracted from the respective authentic websites of various market indices.

Volatility Index Name	Stock index	Index Provider	Market
IVIX (Indian Volatility Index)	S&P CNX Nifty	NSE	India
CBOE Volatility Index, or VIX	Standard & Poor's 500 (S&P 500)	Chicago Board of Option Exchange (CBOE)	USA
CAC 40 Volatility Index, or VCAC	CAC 40	NYSE Euronext	France (Paris)
VDAX-NEW Volatility Index	DAX	Deutsche Börse	Germany (Frankfurt)
Dow Jones EURO STOXX 50 Volatility Index	DJ Euro STOXX 50	STOXX 50 Ltd#	Major markets in 12 Eurozone countries*

Source: Index providers website

A joint venture between Deutsche Börse Group, Dow Jones & Company and SIX Swiss Exchange

**Austria, Belgium, Finland, France, Germany, Greece, Ireland, Itlay, Luxembourg, the Netherlands, Portugal and Spain.*

2.3 Descriptive Statistics: Table 3 represents the relevant descriptive statistics. The index returns and changes in volatility indices exhibit positive skewness and excess kurtosis i.e. leptokurtic or fat tails. The right–asymmetry in data illustrate that there are more above-average index returns and volatility changes as compared to below average ones. This behavior could highlight (on average basis) that due to changes in the IV index, there is an increased volatility risk. The Jarque-Bera test statistics reject the normality assumption for all the data series at 5% level.

Table 3: Descriptive Statistics

	S&P CNX NIFTY	S&P 500	CAC 40	DAX	SX5E	IVIX	VIX	VCAC	VDAX	V2TX
Mean	0.1409	0.1153	0.0827	0.1239	0.0798	-0.0190	0.0156	0.0980	0.0019	0.0454
Median	0.1245	0.1283	0.0660	0.1365	0.0497	-0.3131	-1.0384	-0.3047	-0.4200	-0.7915
Std. Dev.	1.5530	1.2385	1.4379	1.3354	1.4709	5.0846	6.6582	6.7917	5.5251	5.9789
Skewness	2.5131	0.3097	0.4036	0.0880	0.4784	0.3490	1.2208	0.7118	0.9078	1.2449
Kurtosis	31.2453	6.5757	6.9321	5.1068	7.6885	3.5899	7.0163	8.9060	6.6945	7.7566
Jarque-Bera	19856.33	323.1879	402.1586	111.3701	572.4322	20.14785	542.1641	921.158	422.2398	720.608
Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Observations	579	589	599	598	600	579	589	599	598	600

2.4 Distributional properties - Non-parametric test: Figure 1 and 2 represents the histograms and corresponding kernel density function of the index returns and change in IV index. In order to make histograms comparable with the kernel density functions, the relative frequencies are scaled by each bin width. The kernel densities (a non-parametric test in which window width, or the smoothing parameter or bandwidth consists of Silverman bandwidth (Silverman, 1986), and the linear binning method is chosen. The Epanecknikov kernel function is chosen as it tends to minimize the Approximate Mean Integrated Squared Error (AMISE criterion) and is therefore optimal method for estimation (Wand and Jones, 1995).

2.5 Stationarity Study: A time series is characterized as non-stationary if it has a time-varying mean or variance or both. On the other hand, if the mean, variance and autocovariance (at various lags) of a series remain constant over the time period, then it is termed as stationary (Gujarati, 2009). The unit root tests are applied to determine whether the data series are stationary or not. Augmented Dickey Fuller (Dickey and Fuller, 1981), Phillips-Perron (Phillips and Perron, 1988) and KPSS (Kwiatkowski *et al.*, 1992) unit root tests were applied to determine the stationarity of the data. The ADF test is a modified version of Dickey-Fuller (DF) test. The ADF approach takes care for the deterministic part and higher-order correlation by adding lagged terms of the dependent variable in the regression equation:

$$\Delta y_t = \alpha_0 + \lambda y_t + \sum_{i=1}^{p} \gamma_i \Delta y_{t-1} + u_t$$

Though, the Phillips-Perron (PP) test is a non-parametric approach for controlling the higher order serial correlation. This test correct for any serial correlation and heteroskedasticity in errors term of test regression by directly modifying t-statistics.

The KPSS test is a robust method of testing unit root in data. It overcomes a major criticism of ADF method that it does not differentiate between unit root and near unit root process especially in case of small samples. In this test the alternative hypothesis is non-stationary series. The null rejected only if there is strong evidence against it.

These three unit root test are applied to market index returns and change in volatility index of all five markets. The underlying assumption is that the first differenced data series are considered at levels. Table 4 represents the results of the three unit root tests. The ADF and PP test is applied with an intercept term included in regression equation. The lag length for ADF tests is determined on basis of Akakie Information Criteria (AIC). The result for ADF and PP test denotes that null hypothesis of non-stationary data is rejected for all series at 1% level of significance. The KPSS test confirms that data is stationary at levels, as null hypothesis for stationary series is accepted in for all series.

Table 4: Unit Root Test statistic

Test/Series	**S&P CNX NIFTY**	**S&P 500**	**CAC 40**	**DAX**	**SX5E**	**IVIX**	**VIX**	**VCAC**	**VDAX**	**V2TX**
ADF	-6.53(9)*	-15.21(2)*	-18.19(1)*	-18.48(1)*	-18.51(1)*	-17.38(1)*	-10.08(7)*	-20.67(1)*	-11.82(5)*	-19.70(1)*
PP	-23.259(4)*	-26.586(2)*	-25.62(8)*	-25.61(6)*	-25.756(10)*	-25.716(5)*	-25.51(14)*	-29.46(9)*	-25.29(7)*	-26.32(8)*
KPSS	0.660 (3)	0.376 (4)	0.288 (10)	0.294 (7)	0.397 (11)	0.0348 (5)	0.118 (14)	0.0796 (11)	0.0945 (7)	0.096 (9)
Asymptotic critical values		**ADF**			**PP**			**KPSS**		
1% level		**-3.441376**			-3.441074			0.739000		
5% level		-2.866296			-2.866163			0.463000		
10% level		**-2.569362**			-2.569291			0.347000		

*Note: ADF is the Augmented Dickey-Fuller, PP is the Phillips-Perron, and KPSS is Kwiatkowski, Phillips, Schmidt, and Shin test. *, ** and *** indicate the rejection of the null hypothesis at the 1%, 5% and 10% significance levels, respectively. The Null hypothesis for ADF and PP test: H0 = Variable is non-stationary and for KPSS: H0 = Variable is stationary.The proper lag order for ADF test (with intercept term) is chosen by considering Akaike Information Criteria, representing in parenthesis. For KPSS and PP tests, the bandwidth is chosen using Newey–West method and spectral estimation uses Bartlett kernel, representing in parenthesis.*

Figure 1: The graphs display the asymmetric distributional pattern of index returns as well as their corresponding tail fatness using Kernel Density and Histogram

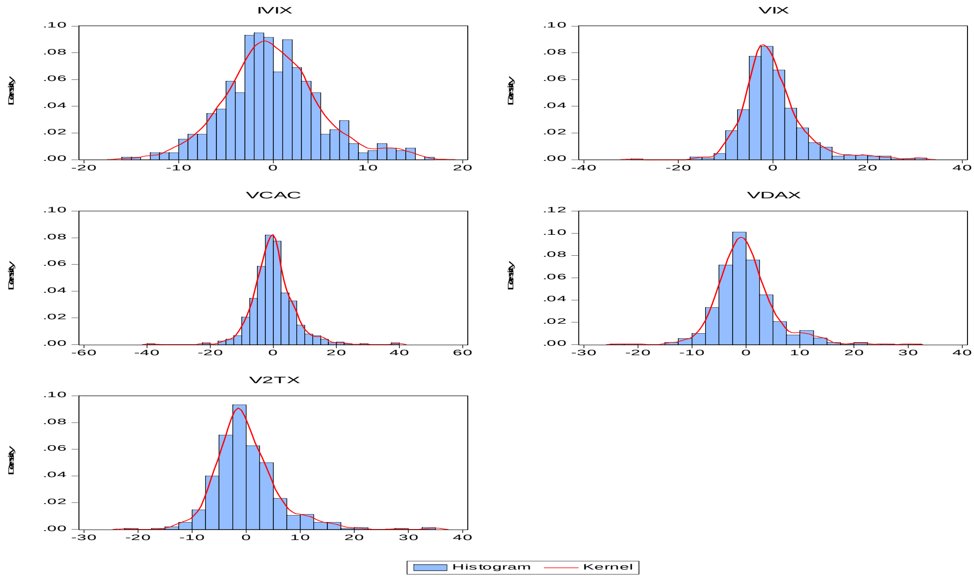
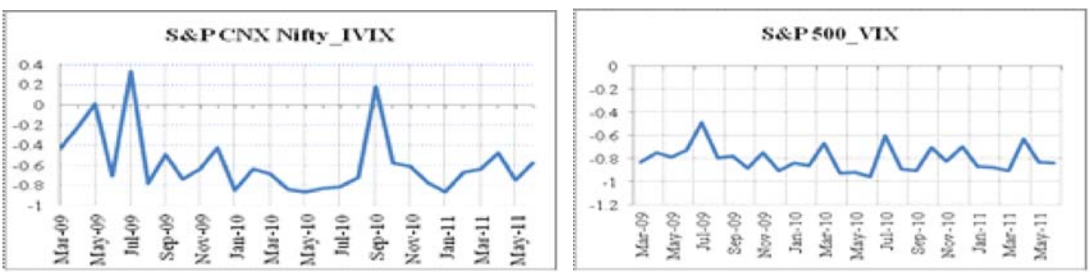


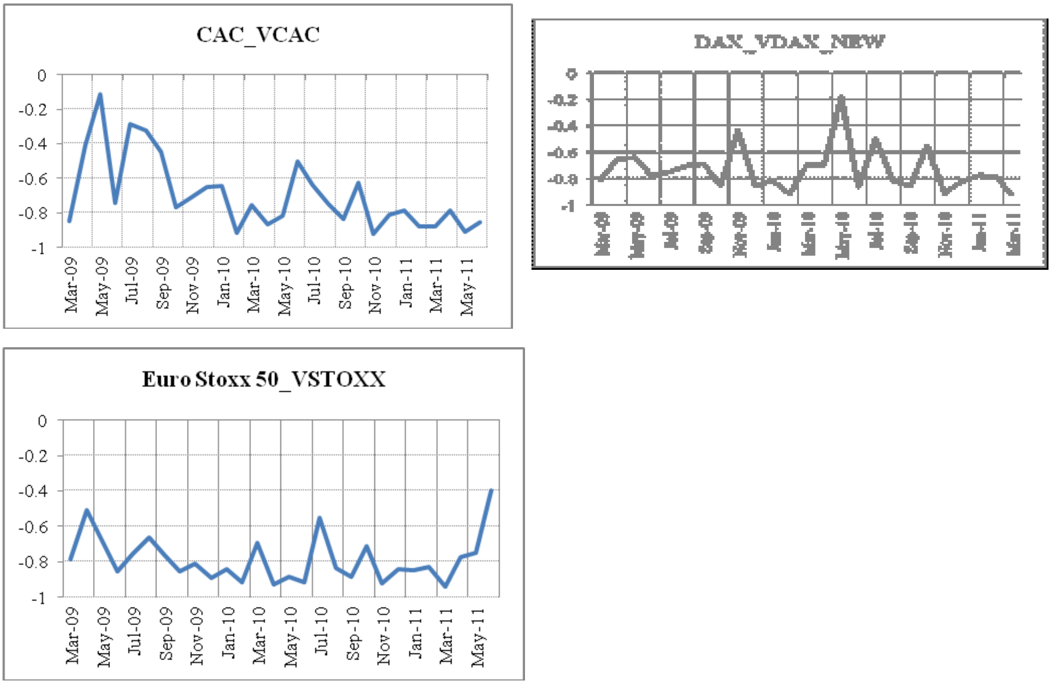
Figure 2: The graphs displays the asymmetric distributional pattern of volatility changes as well as their corresponding tail fatness using Kernel Density and Histogram



Section III: Empirical Analysis and Results

3.1 Correlation Analysis: To analyze the relation between market returns and changes in volatility index, the monthly correlations represented by five graphs (Figure 2) are calculated. In this study, for absolute values of correlation coefficient, 0-0.19 is regarded as very weak, 0.2-0.39 as weak, 0.4-0.59 as moderate, 0.6-0.79 as strong and 0.8-1 as very strong correlation (Kujansivu and Lönnqvist, 2007). There are number of important findings: First the monthly correlation between S&P CNX Nifty index returns and changes in IVIX vary greatly and moderate negative correlation of -0.57 is found on an average. The lowest and highest correlations level is seen in the first half of 2010 at -0.87 and in second half of 2009 at 0.33 respectively. Secondly, there is strong negative monthly correlation of -0.80 on an average between S&P 500 index returns and VIX changes. The lowest and highest level of correlation is seen in first half of 2010 at -0.96 and second half at -0.49 respectively.

Figure 3: Monthly Correlations between returns on the stock indexes and the changes in the Volatility indexes

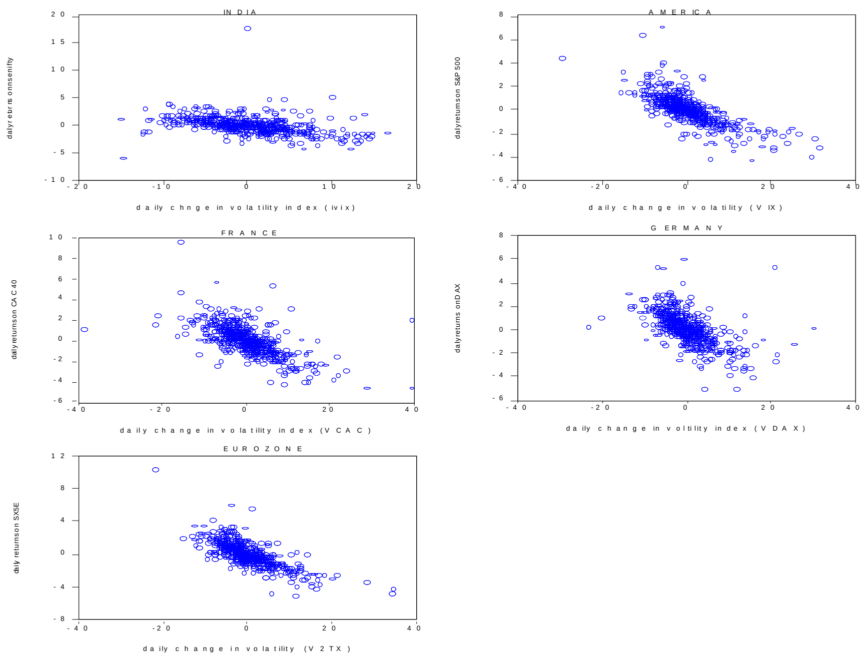


Third, the monthly correlation between CAC index returns and changes in VCAC is moderately negative at -0.69 on an average and has shown a decreasing trend in period of analysis. The correlation ranges from -0.92 to -0.12 in second and first half of 2010 and 2009 respectively. Fourth graph depicts that monthly correlation of index returns of German market and changes in volatility index VDAX is moderately negative at -0.72. The lowest level of correlation is found to be at -0.91 and highest level at -0.18183. Finally, the Eurozone indices, DJ STOXX 50 returns and the index VSTOXX is also found to be negatively correlated and at large -0.78 on an average. The lowest and highest level of correlation is found in first half of 2011 at -0.94 and -0.40 respectively.

Thus, correlation analysis in Figure 3 throw light on important findings: the pattern of negative correlation between index returns and changes in volatility index is observed in American and European markets. The results are consistent with the fact of Jun and Sung (2009) for the Korean markets, where negative correlation between volatility index and underlying index exists. A similar pattern is observed in the Indian markets, as contemporaneous negative monthly correlations are found between the index returns and the volatility index. But the degree of correlation between the two is low in the Indian stock markets as compared to the American and European markets. This relationship can help investors in building their strategies for portfolio management and in analyzing the entry and exit time from the markets. This negative correlation can also be due to the fact that during the market turbulences many investors try to protect their portfolio by entering into the option markets, thus pushing the option prices and the IV upwards.

3.2 Does Volatility Index reflect market expectations*:* In this section, the relation between changes in volatility index and market returns is examined. If there is a negative contemporaneous return-volatility relationship, then the volatility index can be termed as the investor fear gauge.

Figure 4: Graphical analysis



3.2.1 Returns-volatility relationship - Graphical analysis: The graphical analysis of daily markets returns against changes in the volatility index has been done with scatter diagram (Figure 4) for five international markets. The figure 4 suggests that there is an inverse relationship between market returns and changes in volatility index in the American and European markets. Similar pattern is observed in the Indian stock markets. But the scatter plot for America, Germany, France and Eurozone indices depicts a relatively stronger and clear negative relationship between the two when compared with Indian markets.

3.2.2 Symmetric Return-Volatility Relationship: To quantify the effect of daily changes in volatility index on market returns, a common linear projection (Model 1) denoted by equation 1is estimated. In this linear equation, daily change in volatility index is considered as an independent variable and market returns as dependent variable. The daily changes in volatility index are considered as independent variable because it would help in extracting the information stored (in a change) in the volatility indices:

Model 1: $$\nabla \ln(R_t) = \beta_0 + \beta_1 \nabla Z_t + u_t \qquad (1)$$

Where,

R_t = daily log market returns for five international indices i.e. S&P CNX Nifty, S&P 500, CAC 40, DAX and Euro STOXX 50

∇Z_t = daily percentage change in IV indices i.e. IVIX, VIX, VCAC, VDAX and VSTOXX

Table 5: Estimates for the parameters of Symmetric model

	Index (Dependent Variable)				
Independent variable	**S&P CNX Nifty**	**S&P 500**	**DAX**	**CAC 40**	**STOXX 50**
C	0.1266 (2.1080)**	0.1097 (3.4696)*	0.1152 (3.1750)*	0.0858 (2.4612) **	0.0774 (2.22867) **
∇Z_t	-0.1303 (-8.3287)*	-0.1383 (-17.972) *	-0.1453 (-7.276) *	-0.1372 (-7.5673) *	-0.1857 (-21.7516) *
N	579	589	598	599	600
Adjusted R^2	0.18729	0.555349	0.361596	0.421372	0.573016
DW Statistic	1.8219	2.197	2.4039	2.3946	2.0785

*Note: The table reports the estimates of the parameters for the single regime model, with the t-statistic values in the parenthesis. *Significant at the 1% level, ** at the 5% level and ***at the level 10% level. Estimated method is OLS with Newey-West correction for heteroscedasticity and autocorrelation. DW denotes Durbin Waston statistic for autocorrelation.*

Table 5 reveals the results for symmetric model of five international markets. In the symmetric model, the value and sign of the estimated $\hat{a}_1$ coefficient are considered. The value of $\hat{a}_0$ and β_1 is found to be significant at 5% and 1% level for all markets. The results show a negative and significant slope for all markets as expected by an investors fear gauge. The model provides a reasonable fit in all markets as value of Durbin-Waston statistic ranges from 1.8 to 2.4. This suggests that there are negative returns i.e. bearish phase when market volatility tends to increase and positive returns i.e. bullish phase when there is decrease in the volatility, supporting Hypothesis I. The similar negative relationship is established by to the Whaley (2000), Skiadopoulos (2004), Deutsche Borse (2007), Siriopoulos and Fassas (2008) and Gonazàlez and Novales (2009) for the American, Greek, German, UK and Spanish markets respectively.

3.2.3. Asymmetric Return-Volatility relationship: According to the available literature, the asymmetric return-volatility relation depends on the sign of change. To search for possible evidence of asymmetry, the relationship between market returns and their respective volatility index is extended using two dimensions: (i) the sign in volatility change (ups and downs in volatility index), (ii) the sign in index returns (positive and negative returns):

(i)The sign effect (Ups and downs in volatility index)

To capture the sign effect i.e. ups and downs in volatility index, asymmetry in returns–volatility relationship is estimated with Model (2) denoted by equation 2. The model (2) is an extension of model (1) in which asymmetry is content in the intercept and slope term for different signals in the Z_t change. Therefore, for estimating Model (2) a dummy variable D_t^+ is included for the days when there was an increase in the level of volatility [$D_t^+ = 1 \; if \; \Delta Z_t > 0, \; D_t^+ = 0$ otherwise] and magnitude of increase in level of volatility is added that is denoted by $D_t^+ \Delta Z_t$ i.e. days when volatility was positive.

Model 2: $$\nabla R_t = \beta_0 + \beta_0^+ D_t^+ + \beta_1 \nabla Z_t + \beta_1^+ (D_t^+ \nabla Z_t) + \vartheta_t \quad (2)$$

Where,

R_t = daily log market returns for five international indices and ∇Z_t = daily percentage change in IV indices.

Estimated results of Model 2 are reported in Table 6.There is some discontinuity in this relationship at zero volatility change. As, for the small reductions in the volatility, the estimated returns would be of β_0, while if there is small volatility increase then the returns would be of $\beta_0 + \beta_0^+$.The estimates of model 2 depict regression structure in two ways: (i) a positive and a negative with Ð <, constant and drift term, together with (ii) a negative and significant slope and non-significant implies that the expected returns will rise with decrease in volatility (Gonazàlez and Novales, 2009).

In table 6, values of coefficient,, and are denoted along with average increase and decrease in volatility for the five markets. The US markets being the oldest, the reduction of one point in volatility index is causing an rise of 1.56% in index return, while an increase of one point in volatility index is causing a fall of similar size i.e. -1.56% in market index. The coefficient of slope, are significant but effects of increase and decrease in volatility on the market reruns is found to be of similar size. Hence, no sign of asymmetric relationship is observed with Model 2 in the US markets. The similar patterns are observed in the German and Eurozone markets. As increase (decrease) of one point in the volatility index is associated with decrease (increase) of similar size in market index i.e. -0.41(0.37) and -0.21 (0.27) for the German and Eurozone markets respectively. These results are consistent with findings of Gonazàlez and Novales (2009).

Table 6: Estimates of the parameters for the Asymmetric model 2 for the Ups and Downs in the Volatility Index

Independent variable	**S&P CNX Nifty**	**S&P 500**	**DAX**	**CAC 40**	**STOXX 50**
C	0.6467 (8.6995) ***	0.06110 (1.6217) *	0.27870 (2.5445) **	0.3112 (2.688) ***	-0.0052 (-0.0452)
D_t^+	-0.5968 (-4.4541) ***	-0.1470 (-1.6430) *	-0.5538 (-2.9186) ***	-0.4518 (-2.0786) **	-0.1094 (-0.9123)
∇Z_t	.0072 (1.0485)	-1.506 (-9.5430) ***	-0.1335 (-4.2042) ***	-0.1099 (-3.7902) ***	-0.2172 (-6.8854) ***
$D_t^+ \nabla Z_t$	-0.1325 (-5.4526) ***	0.0310 (1.8006) *	0.03930 (1.4234)	-0.0070 (-0.3003)	0.0603 (1.6281)
	Average returns				
Volatility Increases	-0.0754	-1.5609	-0.3693	-0.2575	-0.2715
Volatility Reductions	0.6395	1.5671	0.4122	0.4211	0.212
N	579	589	598	599	600
Adjusted R^2	0.17676	0.559422	0.385117	0.432073	0.579225
DW	1.83252	2.181125	2.353965	2.388754	2.044495

*Note:***Significant at the 1% level, ** at the 5% level and *at the level 10% level. Number in parenthesis denotes t-statistics. Estimation method is OLS with Newey-West correction for heteroscedasticity and autocorrelation. DW denotes Durbin Waston statistic for autocorrelation.*

(i) The sign in Index returns (Positive and negative returns)

In the Model (1) and (2) symmetric and asymmetric effect between the market returns and change in volatility index is studied by capturing effect of the volatility sign. In this sub-section, the opposite is examined i.e. whether returns sign can explain the asymmetric relationship between the returns and volatility.

The Model (3) and (4) are structured for capturing the effect of return sign in daily changes of volatility index. In these models, the asymmetry is allowed by including two dimensions of changes in returns sign: (i) the negative returns and a dummy variable for those days in which markets generated negative return, and (ii) positive and negative daily returns.

In Model 3, the first dimension is assessed:

Model 3: $\nabla Z_t = \beta_0 + \beta_1 D_t^- + \beta_2 \nabla \ln(R_t) + \beta_3 D_t^- . \nabla \ln R_t + \varepsilon_t$

(3) Where, ∇Z_t = daily percentage change in IV indices. R_t = daily log market returns for five international indices. D_t^- characterizes the days when markets generated negative returns ($D_t^- = 1$ if $\nabla \ln(R_t) < 0$, $D_t^- = 0$ otherwise), $\nabla \ln(R_t)$ represents market return itself. Table 7 represents the results of estimating model 3 for all five markets.

The Model 3 depicts that a negative return of 1% is associated, on average to $(\beta_0 + \beta_1 - \beta_2 - \beta_3)$% increase in the level of volatility whereas a positive returns of 1% is associated, on an average to $(\beta_0 + \beta_2)$% decrease in the level of volatility. The results in table 7 depicts that in case of Indian, French and Eurozone indices the 1% negative returns will lead to an increase of 2.54%, 3.61% and 3.42% volatility in their respective markets, whereas, the positive returns of 1% will give on an average -2.2%, -3.10% and -3.10% decrease in level of volatility. Thus, no sign of asymmetry is observed with model 3, when the returns sign is considered, in case of Indian, French and Eurozone indices. However, in case of American and German markets some sign of asymmetry is observed in the volatility-return relationship as 1% negative returns are causing an increase of 5.13% and 3.275% in volatility and 1% of positive returns is causing a decrease of -3.66% and -2.58% in volatility levels.

Table 7: Estimates of the parameters of Model 3 for the Positive and Negative returns

Dependent variable (Change in Volatility Index of respective countries)					
	India	**USA**	**Germany**	**France**	**Euro Zone**
C	-2.0647 (-6.7846) *	-1.6314 (-4.9432) *	-1.4470 (-2.7006) *	-1.5950 (-4.2122) *	-1.4063 (-4.2173) *
$\nabla \ln(R_t)$	-0.1515 (-0.6763)	-2.0344 (-4.7088)	-1.13661(-2.0998) **	-1.5063 (-4.3602) *	-1.7034 (-5.9565) *
D_t^-	2.6093 (3.7417) *	1.2471 (2.24828) **	1.6800 (2.4074)**	.8020 (1.2604)	0.370102 (0.6330)
$D_t^-.\nabla \ln(R_t)$	-1.8470 (-2.5143) **	-3.4801 (-5.6070) *	-1.9055 (-3.2395)	-2.8970 (-4.8460) *	-2.7595(-5.7263) *
N	579	589	598	599	600
		Average change in volatility level			
Negative Returns	2.543100	5.1302	3.27511	3.6103	3.426702
Positive returns	-2.2162	-3.6658	-2.58361	-3.1013	-3.1097
Adjusted R^2	0.2735	0.6145	0.3968	0.4651	0.6251
DW Statistic	2.0210	1.9558	2.3270	2.5450	2.0244

*Note: ***Significant at the 1% level, ** at the 5% level and *at the level 10% level. Number in parenthesis denotes t-statistics. Estimation method is OLS with Newey-West correction for heteroscedasticity and autocorrelation.*

In the second dimension, to assess contemporaneous asymmetric relation between market returns and changes in volatility index, the methodology adopted by Goit (2005) and Badshah (2009) is followed. In this, the daily changes in volatility index are regressed on the daily percentage stock market index returns. The positive and negative returns are incorporated in the equation, as volatility-return relation would behave differently with these two (Model 4):

Model 4: $$\Delta Z_t = \beta_0 + \beta_1 \Delta Z_{t-1} + \beta_2 R_t^{+j} + \beta_3 R_t^{-j} + u_t \qquad (4)$$

Where, ΔZ_t is daily changes in volatility index, ΔZ_{t-1} is Autoregressive i.e. AR(1) term of volatility index, R_t^{+j} is positive stock index returns (R_t = if > 0, and , otherwise) on the other hand is negative stock index return.

The estimated results of Model 4 are presented in the table 8. From values of coefficient of and it is apparent that there large absolute difference between two, which depicts that there is asymmetric effect for all five markets confirming the Hypothesis III. The absolute value of coefficient of negative returns is greater than that of positive returns and the coefficients are statistically significant. The Wald test for coefficients is applied in order to find statistical difference between the coefficient of negative and positive returns in Model 4. The null hypothesis is assumed that the coefficients of both positive and negative returns are equal. The results of Wald Test indicate that the null hypothesis is significantly rejected for all the five markets.

In Indian stock markets the absolute difference between negative and positive returns is not very large as observed in markets of US, Germany, France and Eurozone. This may be due to the fact that as stock markets in India are very volatile and any good or bad news hitting the market immediately generates short-term gains or losses. But, overall results indicate that there is some evidence for asymmetric return-volatility relationship with negative returns for stock market (i.e. bad news) possibly having much higher changes in volatility indices than positive returns (i.e. good news).

Table 8: Estimates of the parameters of the Model 4

Dependent variable (Change in Volatility Index of respective countries)					
	India	**USA**	**Germany**	**France**	**Euro Zone**
C	-1.0096 (-2.7451) ***	-1.0977 (-4.3905) ***	-0.6673 (-2.0214) **	-1.2388 (-3.6530) ***	-1.2270 (-4.4480) ***
ΔZ_{t-1}	-0.0856 (-2.2692) **	0.0099 (0.3952)	-0.0134 (-0.4333)	-0.1590 (-3.3346) ***	-0.0334 (-1.2778)
R_t^{+j}	-0.5713 (-1.7203) *	-2.3509 (-6.0063) ***	-1.5631 (-3.5415) ***	-1.6680 (-5.1737) ***	-2.7943 (-5.6382) ***
R_t^{-j}	-2.8850 (-4.6608) ***	-5.9431 (-10.762) ***	-3.5356 (-11.148) ***	-4.6699 (-10.752) ***	-1.7770 (-7.6718) ***
N	578	588	597	598	599
Adjusted R^2	0.2525	0.6115	0.3865	0.4883	0.6270
DW Statistic	1.8522	1.9844	2.3234	2.2895	1.9720

***3.3 Volatility indices as predictors of future returns**:* The above models depict the existence of negative correlation and asymmetric return-volatility relation. It would be interesting to explore the possibility of existence of short-run relationship and extending this close relationship through time, so that it could allow investors and portfolio managers to improve return-volatility forecasts. The Granger causality test is applied to market returns and change in volatility index to examine short-run and lead-lag relation between the variables of the five markets.

*Note: ***Significant at the 1% level, ** at the 5% level and *at the level 10% level. Number in parenthesis denotes t-statistics. Estimation method is OLS with Newey-West correction for heteroscedasticity and autocorrelation.*

The Granger causality model includes covariance stationary series, thus the explanatory variables in the system are market returns and change in IV index. The Granger Causality test is applied with lag determination in the VAR framework developed by Sims (1980) to investigate the impact of random innovations on system of variables. The optimum lag length is selected on the basis of Akaike Information criterion (AIC); Schwartz information criterion (SIC); and Hannan-Quinn information criterion, as Granger Causality test is sensitive to the number of lags used for test. A time series ΔR_t Granger causes another series ΔZ_t if the lag values of help in predicting the present value of in a better way and vice-versa. The following bi-variate auto-regression is used for testing causality:

$$\Delta R_t = \beta_1 + \sum_{i=1}^{k} \beta_{11} \Delta Z_{t-1} + \sum_{i=1}^{k} \beta_{12} R_{t-1} + \varepsilon_t \qquad (5)$$

$$\Delta Z_t = \beta_2 + \sum_{i=1}^{k} \beta_{21} \Delta R_{t-1} + \sum_{i=1}^{k} \beta_{22} Z_{t-1} + \epsilon_t \qquad (6)$$

Where, R_t = daily log market returns for five international indices and = daily percentage change in IV indices.

The Granger Causality test leads to Hypotheses IV – V:

Hypothesis IV: Change in volatility index does not Granger cause markets returns.

Hypothesis V: Markets returns does not Granger cause change in volatility index.

The hypothesis IV that change in volatility index does not Granger cause market returns in case of all the five markets is rejected if the coefficients in the equation (1) is statistically significant based on a standard F-test. Similarly, in equation (2) if the coefficients is significant, than market returns Granger cause change in volatility index. If both and coefficients are jointly significant than there is feedback or bi-directional causality.

Table 9: Granger Causality Test

Market	**H_0= Change in Volatility Index does not cause Market Returns**	**H_0= Market Returns does not cause change in the volatility Index**
India	0.14688 (0.7017)	10.7540 (0.0011)
America	0.14330 (0.8665)	0.24008 (0.7866)
Germany	0.06260 (0.8025)	25.0254 (0.00000)
France	1.52364 (0.2188)	7.78864 (0.0005)
Eurozone	1.25643 (0.2758)	0.93369 (0.4701)

Note: the left panel shows the F-statistics and p-values in the parenthesis.

Table 9 depicts the results of Granger causality test. The results show that there is no evidence causality in either direction in case of American markets during the period of study. There is no significant impact of volatility on returns in other four markets but dynamic impact of market returns on volatility is found in Indian, German and French markets. Thus, the analysis shows that causality relation cannot be effectively used for the forecasting purpose and can't be put into use for the risk management.

Section IV: Findings, Conclusions and Policy Implications

4.1 Findings and Conclusion: In present study, the properties and characteristics of newly developed volatility index of India are studied in comparison with international market indices of America, Germany, and France and Eurozone countries. The volatility index is often interpreted as capable of capturing the sentiments of investors regarding the level of risk and uncertainty prevailing in markets.

In the preliminary analysis, the monthly correlations between market returns and change in volatility index are examined. The results depict that there is moderate negative correlation between India VIX and its underlying index returns, whereas, strong negative correlation is found between the two for Amercian, German, French and Eurozone markets. The symmetric and asymmetric models document an inverse and negative contemporaneous return-volatility relation for the American, French, German and the Eurozone markets. This states that for negative returns, the increases in level of volatility are higher as compared to the declines when the markets generated the positive returns. . These findings are consistent with the Hibbert *et al.* (2008) contention that asymmetry exist for the return-volatility relation.

The IVIX also shows a negative contemporaneous returns-volatility relationship. Thus, on the basis of empirical analysis Indian stock markets provide some evidence in support of hypothesis III. But the absolute difference between negative and positive returns in Model 4 is smaller for Indian markets vis-à-vis other markets. The possibility behind this may be that Indian markets are not efficient and do not react properly to the global news and shocks and generate abnormal gains/losses.

The results of Granger causality test don't give any robust information. The hypothesis IV of change in volatility index does not Granger cause the markets returns is accepted in all the five markets. Further, there is evidence for the markets returns Granger causes change in volatility index in case of Indian, German and French markets. Thus, results of this test cannot be applied widely for predicting the short-run relationship or risk management.

Thus, conclusion of the study is there is vast scope for the Indian IV index in the global markets as it moves in a similar way as the international markets IV indices. The investors and portfolio managers can use it to effectively predict the current and future levels of volatility.

4.2 Policy Implications: The IV index may help in trading, hedging and introducing derivative products on this index. The information derived from the IV index can be used in identifying the mis-pricing options. Thus, investors could also hedge their portfolios against volatility with an off-setting position in VIX futures and option contracts. This also opens the gates for the future research regarding the scope and growth prospects of the future and options contracts of the Indian IV index.

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INTER RELATIONSHIP AMONG THE ANTECEDENTS OF ROLE CONFLICT AND ITS IMPLICATIONS

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Abstract:

The traditional nuclear family where the husband works out side and the wife cares for the home and children is the system which no longer apply to majority of families in the recent few decades. There has been an accelerated influx of women into paid employment roles that have taken place in the recent past. The study deals with set of antecedents and its relationship among one another. A sample size of 598 was administered for the study. Statistical tools were employed for obtaining the results and its implications

Introduction

Work and family are the two central domains forming the back bone of an individual's life (Howard,1992).They are work domain (employment) and non-work domain (family).These two inevitable institutions namely work and family have historically coexisted, simultaneously as discrete spheres in one's life. But this separation between work and life began to fade with changes in societal demographics.

The growth rate for women entering the workforce is expected to be greater than that for men. During 80's women emerged as a powerful part of the workforce in the world economy. Women became liberated and fought for equal pay and equal status with men in the workplace. A majority of women want everything that men have traditionally wanted - success, power, status, money, as well as committed relationship, love, children and happiness. An important issue our society is facing in the recent past is the changing work and family roles of Indian women. Since many women occupy both work and family roles their experiences in work and family represent primary social contexts for examining women's lives (McBride, 1990).

Women, today, function within multiple roles simultaneously operating in both work and family domains as a mother, spouse, housekeeper, and as well as maintain a full time employment outside the home. The relationship between these dual roles

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has thus become a topic of interest among organizational researchers. In most studies, researchers have found that carrying out these dual roles often leads to work family conflict for both men and women. The profound demographic trends have elevated the need to understand and manage the interface between work and family (Fraser., 2001).

The acquisition of a role requires an individual to take personal as well as the formal expectations of a specified role or position. Although women are working more outside the home than ever before, in home division also labour is more than equal now than in the past (Barnett and Hyde, 2001; Gilbert and Rader, 2001). Working mothers still are expected to be responsible for the majority of household and child care works.

The social belief that women should work and care for their families often conflicts with the limited choices and social realities that women face. Work responsibilities and family obligations compete for time and attention in most working adults; successfully negotiating the interface of these life domains is challenging.

When individuals allocate most of their time to one arena, the less they will have to allocate to the other resulting in role conflict. Role conflict experienced by women is the subjects of concern and interest that have addressed by researchers (Amatea and Beyette, 1987).

The boundaries between work and family were asymmetrically permeable when the demands from one domain intruded into the other domain with unequal frequency (Pleck, 1985). Among women family demands would intrude into the work role than work demands would intrude into the family role because they assumed primary responsibility for managing home related demands. In contrast, among men work demands would intrude into the family role more than the reverse because they were likely than women to take work, home and more likely to use family time to recuperate from the stresses they face in the work place. This pattern show that work to family conflict is more prevalent than family to work conflict suggesting that family boundaries are more permeable than work boundaries (Wiley, 1987). It seems clear that family and work are the most central domains for nearly everyone.

Traditionally, people have allocated their time to these two domains along gender lives. Work /Non work conflict refers to the challenge many of us face trying to juggle work responsibilities with aspects of one's personal life such as caring for ones aging parents or young children.

Many studies have focused on developing and testing models regarding the antecedents and outcomes of work family conflict (Grandey and Cropanzano, 1999). There has been a growing interest in work and family conflict (Carlson, Kacmar and Williams, 2000).The literature on work family conflict has continued to evolve over the past two decades.

Review of literature

Work Life Conflict

Greenhaus and Beutall (1985) defined work and family conflict as a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. Work and family are two central domains in most adult's lives.

Role theory proposes that responsibilities from different separate domains compete for. Researchers in this area have distinguished between two types of work family conflict-work interfering with family and family interfering with work. Work interference family conflict occurs when work related activities interfere with home responsibilities and family interference work conflict occurs when familial activities and thoughts interfere with work responsibilities.

Although strongly correlated with one another they are conceptually and empirically distinct constructs (Frone, Russell, and Cooper, 1992). Greenhaus and Beutall (1985) identified three major types of work family conflict. The first is time-based, time-spent on role performance in one domain often precludes time-spent in the other domain.

The second work family conflict is strain-based, conflict arises when strain in one role affects one's performance in another role. The last type is behaviour based conflict which refers to incompatibility between the behavioral patterns that are desirable in the two domains.

Some of the more prevalent antecedents and outcomes of work life conflict identified in the literature include role commitment, role salience and satisfaction (Barch and Barnett, 1986), parenting (Rousseau, 1984), marriage and spousal support (Barnette and Marshall, 1991) and supervisory and company support (Bowen, 1988).

Grandey and Cropanzano (1999) and others have discovered relationship between work family conflict and overall physical health. Many researchers (Thomas and Ganster, 1995) have concluded that increased work family conflict is related to increased depression and other psychological issues.

Good, Page, and Young (1996) found an indirect relationship between work family conflict and organizational commitment. Carlson et al., (2000) also discovered that work involvement significantly correlate with work to family conflict.

It has been discovered that conflicts between works and personal priorities can actually be catalysts for identifying work inefficiencies that might otherwise have remained hidden or intractable (Friedmann, Christensen and Degrot, 1998).

Causes

Organizational Commitment

Organizational commitment refers to the extent to which employees like and feel a part of the organization for which they work for. It is the relative strength of an individual's identification with and involvement in a particular organization (Mowday et al., 1982).

Work life balance is positively associated with organizational commitment. This finding is consistent with work family conflict. Research that found, employees who experience excess work to family conflict and family to work conflict will be less committed to their work organization (Allen et al., 2000).

Organizational Climate

Organizational climate is defined as the recurring patterns of behaviour, attitudes and feelings that characterize life in the organization more related to atmosphere tone and ethos. An organizational climate is a relatively new concept and refers to the extent to which work environment is supportive with regard to employees work and family needs (Thomas and Ganster, 1995).

The most important issue is whether employees experience or perceive their working organization as family supportive entity. The concept of organizational climate resembles the construction perceived organization support.

Since positive work family climate is a specific form of organizational supportiveness and work family conflict constitutes a stress factor at work, we can conclude that supportive work family climate would alleviate the negative impact of work family conflict on the job related attitudes of the employees, thus improving the productivity of the organization (Thompson et al., 1999).

Work Exhaustion

Work exhaustion is about the work itself and reflects a salient frustration about job outcomes (Moore, 2000).The literature shows that the consequences of work exhaustion include reduced organizational commitment (Thomas and Williams, 1995).

Employee will likely decrease their organizational commitment as their work exhaustion increases because they will lose faith that the company can't take care of them by providing an acceptable work life.

The two variables namely organizational commitment and work exhaustion are complementary because organizational commitment increase positive effect while work exhaustion increases negative effect. Work overload has a strong influence on work exhaustion (Moore, 2000) and thus leads to burn out when overburdened.

Work Thought Interference

Work thought interference is the inability to stop dwelling on work matters or simply an inability to stop thinking about work (Diane, 2002). An unforeseen and illogical consequence of a single sided segmentation has been the amalgamation or blurring of the borders between home and work for the worker, enhancing the intrusion of the work role into the non-work domain (Louis and Sutton 1991). Studies prove that human being can accommodate more than four thousand thoughts per day, showing that one has got the capacity to rapidly shift from one thought to another. Thus higher the degree of work related thoughts hindering ones performance in non-work settings, higher are the damaging effect it has on the work life balance.

Perceived Work and Family Demand

Perceived demand is a global perception of the level and intensity of responsibility within the family and the work domains. It is posited that perceived demand will be identifiable to researchers and perceived by the individuals. Voydanoff (1988) decreased both work and family demand concepts that included variables such as number of hours worked, schedule role conflict, role ambiguity, role overload , stress from work, marital status, spouses working hours, number of children and age of children. Finally, many of these measures are indicators for demand such as hours worked rather perceived demand levels.

Perceived work demand and perceived family demand minimize the negative affect associated with an excessive workload and capture a larger range of perceived demand their role overload.

Job Autonomy

Job autonomy is defined as "The degree to which the job provides substantial freedom, independence and discretion to the individual in scheduling the work and in determining the procedure to be used in carrying it out (Ilgen and Hollenbeck, 1992).

Eden (1975) found that self-employed workers were more likely to have rich autonomy and explained the difference in satisfaction level between the self and organizational employed.

Ettner and Grzywacz (2001) noted that respondents who reported being self-employed and working part time are having greater autonomy. A n o t h e r perspective of job autonomy as stated by Ettner and Grzywacz (2001) found that workers who reported higher levels of dissatisfaction with working conditions and lack of autonomy had more negative health effects. Thus job autonomy has impact not only on the organizations and family but also on the health of the employee.

Job Involvement

The work involvement represents the degree to which the individual's job is central to his /her self-concept and identity. Lodahl and Kejner (1965) conceptualized job involvement as an internalization of work values such that an individual derives self-esteem from involvement in the job. Khan (1990) embedded the concept of job involvement within a broader construct of psychological climate.

Specifically, Adams et al., (1996) found that when job involvement was high, perception of work interfering with family was also found to be high. Researchers have often confused job involvement and work involvement or work centrality. Job involvement is a belief descriptive of one's current job and assesses the degree to which the job can satisfy one's present needs.

Family Involvement

Although, Brett and Yogev (1988) concluded that family involvement was not significantly correlated with restructuring, on the contrary Karambayya and Reilly (1992) determined that family involvement correlated positively with work restructuring for both the husbands and wives in their dual earner sample. Moreover family involvement is the impact of those family roles which have on an individual's image, self -concept and commitment to the roles.

Research Methodology

Research Design: The design applied in the study is descriptive research design. It is appropriate to use this method in which the research describes the relationship among different variables.

Questionnaire: A set of suitable questions were framed to satisfy the objective of the study with the help of the previous studies and literature review for the selected variables.

Sampling: In this study, population refers to women employees in IT and ITES firms located in Chennai city. A convenience sample technique is adopted for selecting the sample units. A set of 598 filled questionnaires are taken into account for the research.

Reliability values of the variables

Causes	
Organization commitment	0.851
Job autonomy	0.762
Job involvement	0.809
Family involvement	0.898
Organizational climate	0.847
Perceived workload	0.817
Perceived family demand	0.793
Work thought interference	0.748
Work exhaustion	0.814
Work family conflict	0.923

Source : Computed from Primary data

As for the causes organizational commitment (Mowday, Steers and Porter., 1979), Job Autonomy (Beehr., 1976), Job involvement (Lodhal and Kejner., 1965), Family involvement (Lodhal and Kejner., 1965), Organizational climate (Patterson et al., 2005), Perceived workload (Moore., 2000), Perceived family demand (Sudman.,1982), Work thought interference (Friedmann and Greenhaus., 2000), Work exhaustion (Moore., 2000).

In order to group the statements based on causes for work life conflict, explorative factor analysis is used KMO Bartletts test have been used for measuring sampling adequacy.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.841
Bartlett's Test of Sphericity, Approx. Chi-Square	1.009E4
Degree of freedom	666
Significance	.000

The results in the table show that the sample size of this study is adequate to conduct factor analysis. Moreover, the correlation between the variables under each factor is significantly strong and that is justified with the chi-square value in the table

Around thirty-seven statements, barring three, are grouped under nine factors. For extraction purpose principle component analysis is applied. Varimax rotation method is needed for rotating the matrix. Factors, which score Eigen value of more than one, are only taken for analysis purpose and statements with loading factor less than 0.5 are suppressed.

Factor 1: Organizational commitment

Statement	Load ing	Eigen value	% of variance	Cronbach alpha
I am extremely glad to have chosen this organization to all other organizations to work for	.785	7.687	9.335	0.851
For me, this is the best possible organization to work	.767			
My organization inspires the very best towards job performance.	.749			
I really care about the success of my organization.	731			
I am willing to put in extra efforts for the success of the organization.	.695			

The first factor comprises five statements with Eigen value of 7.687. The core of statements loading factor varies from 0.785 to 0.695. This factor accounts for the variance of 9.335 per cent with the reliability co-efficient of 0.851.

The statements in the table have similarities in terms of the commitment of an employee towards the organization. All the statements describe the affinity and attachment the individual can have upon his organization. Thus, this factor is named as organizational commitment.

Factor 2: Organizational climate

Statement	Load ing	Eigen value	% of variance	Cronbach alpha
My organization takes pride in my accomplishment at work.	.718			
My organization helps me when I have a problem.	.691			
My organization really cares my well-being.	.672	4.120	8.486	0.847
My organization helps me to perform my job to the best of my ability.	.551			
My organization respects every employee as a part of its culture.	.495			

The second factor consists of five statements with the Eigen value of 4.120 and explains 8.486 per cent of variance. The loading value of these statements varies from 0.718 to 0.495. All the statements have a meaning related to the good atmosphere of the organization. Hence it is named as organizational climate with the reliability co efficient of 0.847.

Factor 3: Work exhaustion

Statement	Load ing	Eigen value	% of variance	Cronbach alpha
I feel burnedout from work.	.811			
I feel fatigued when I get up in the morning and have to face another day on the job.	.809	2.950	8.029	0.814
I feel exhausted physically at the end of the work day.	.697			
I feel emotionally drained from my work.	684			

Source : Computed from primary data

The factor three is represented by four statements mentioned in the above table. Eigen value for this factor is 2.950 and it is accounted for 8.029 per cent of variance. The loading factor for the statements ranges from 0.811 to 0.684 with the cronbach alpha value 0.814 All the above statements exhibit physical and emotional drain because of work. Therefore, it is appropriate to label the factor as work exhaustion.

Factor 4: Perceived workload

S. L	Statement	Load ing	Eigen value	% of variance	Cronbach alpha
1.	My job requires lot of effort.	.815	2.144	7.818	0.817
2.	My job requires all of my attention.	.814			
3.	My work requires a lot from me.	.781			
4.	I am given a lot of work.	.519			

Source : Computed from primary data

The factor four consists of four statements and has obtained the Eigen value of 2.144 with 7.818 percent of variance. The highest loading factor is 0.815 and the lowest is 0.519 and the reliability co-efficient is measured as 0.817. All the statements which are grouped together in this category give the meaning of workload that is being perceived by the employees Hence, this factor is labeled as perceived workload.

Factor 5: Family involvement

Statement	Load ing	Eigen value	% of variance	Cronbach alpha
The major satisfaction in my life comes from my family life	.800	1.770	7.185	0.781
The most important things that happen to me involve my family	.775			
I am very involved in my family	.718			
I am really a perfectionist about my home/ family life.	.653			

Source : Computed from primary data

The next factor consists of five statements giving the meaning of an individual involvement with the family activities. Out of the five statements loading factor less than 0.5 is suppressed barring one statement the rest ranges from 0.800 to 0.653

with the Eigen value of 1.770 and accounts for 7.185 per cent of variance. The reliability co-efficient of 0.781, since it denotes involvement in family activities this variable is called as family involvement

Factor 6: Work thought interference

Statement	Load ing	Eigen value	% of variance	Cronbach alpha
Even when away from work, I find it hard to let go of work related feelings.	.779	1.469	6969	0.748
When away from work I find myself rehearsing work related scenario in my mind.	.770			
When outside of work I have a tendency to discuss work more than anything else.	.746			
Thoughts about work disturb my sleep.	.629			
I am preoccupied with work related duties while away from work.	.515			

Source : Computed from primary data

The next factor comprises five statements with the Eigen value of 1.469 and the reliability co-efficient of 0.748. The loading factor for the above statements ranges from 0.779 to 0.515 with 6.969 per cent variance. All these statements signify the interfering thoughts of work related activities always even when out of work. Therefore, this factor is termed as work thought interference.

Factor 7: Perceived family demand

S. L	Statement	Load ing	Eigen value	% of variance	Cronbach alpha
1.	My home life requires a lot of effort.	.817	1.435	6.281	0.793
2.	I have to work hard on family related activities.	.773			
3.	My family requires all of my attention.	.706			

Source : Computed from primary data

The next factor contains three statements with the loading factor ranging from 0.817 to 0.706, with the Eigen value 1.435 and accounting for 6.281 per cent of variance. The reliability co-efficient measured is 0.793. All the three statements talk about the familial demand of an employee. Hence, the name of the variable is perceived family demand.

Factor 8: Job autonomy

Statement	Loading	Eigen value	% of variance	Cronbach alpha
I set my own schedule for completing assigned tasks.	.812	1.328	5.857	0.777
I have the authority to initiate projects at my job.	.673			
I have a lot of freedom to decide on how to do my job	.663			

Source : Computed from primary data

This factor which is comprising of four statements barring one with the loading factor less than 0.45. So, only three statements with the loading factor ranging from 0.812 to 0.663 are taken into consideration. The Eigen value is 1.328 with 5.857 per cent variance. The reliability co-efficient is 0.77. The above statements denote the freedom and authority in the job that an employee can enjoy. Job autonomy is thesuitable term that can be called for this factor.

Factor 9: Job involvement

Statement	Loading	Eigen value	% of variance	Cronbach alpha
I am really a perfectionist about my work.	.620	1.219	5.232	0.693
I am very much involved personally in my work.	.588			
The major satisfaction in my life comes from my job.	.561			
The most important things that happen to me involve my work.	.553			

Source : Computed from primary data

The last factor comprises of five statements signifying the individual's involvement in the job. One statement with the loading factor less than 0.45 is suppressed. For the rest of the four statements the loading value ranges from 0.620 to 0.553 with the eigen value of 1.209 and 5.232 per cent of variance. The reliability co-efficient is 0.629. This factor is labeled as job involvement because all the statements above give a similar meaning in their own concept

RELATIONSHIP AMONG THE ANTECEDENTS OF WORK FAMILY CONFLICT

Correlation among antecedents

Variables	Organizational Climate.	Work exhaustion	Perceived work load	Family involvement	Work thought interference	Perceived family demand	Job autonomy	Job involvement
Organizational Commitment.	.559**	-.077	.216**	.128**	-.036	.258**	.454**	.460**
Organizational Climate.		-.171**	.284**	.216**	-.102*	.252**	.495**	.490**
Work exhaustion			.256**	.056	.262**	.223**	.094*	.079
Perceived work load				.237**	.105*	.437**	.159**	.385**
Family involvement					-.175**	.259**	.133**	.213**
Work thought interference						.060	-.088*	-.002
Perceived family demand							.298**	.354**
Job autonomy								.362**

Source : Computed from primary data

*** Significant at .05, ** significant at .01**

The cause for the occurrence of work life conflict has been identified in the study and the correlation technique is administered to analyze the relationship between each cause with another. From the table it is evident that some of the variables show very high correlation exhibiting very high correlation values.

Organizational commitment is found to have high relationship with job autonomy (0.454) ** and job involvement0.460**. This finding is coinciding with the research conducted by Mowday et al., (1982) on employed women. Similarly, organizational climate is having high coincidence with job autonomy and job involvement (0.490) **. Almost all the variables taken for the study show significant relationship except a few to name organization commitment and work exhaustion (-.077), also there is no relationship between perceived family demand and work thought interference (0.060) and work thought interference and job involvement (-0.002).

The highest co-relationship is found between organizational commitment and organizational climate (0.559). A similar finding was encountered by Leyners, Thompson, Francessno and Judiesh, (1999) in their research study. From the correlation table it can be understood that each factor is having relationship with other factor as a cause.

The reason that can be deduced is either one is dependent on another or interrelated or there may be an underlying single external parent factor which is responsible for all the occurrence of these factors to be interrelated.

The next highest relationship is found between perceived workload and job involvement (0.385**) and job autonomy and job involvement (0.362**). There is negative correlation between organizational climate and work exhaustion (-0.171**) which is significant and also perceived workload and family involvement (-0.237**).

Similar kind of negative relationship is found between organizational climate and work thought interference (-0.102) and family involvement and work thought interference (-0.175**) at 0.01 significant level. Likewise, there is a negative relationship between family involvement and job involvement (-0.213**) at 0.01 level of significance. The same finding is given by Karambayya and Reilly, (1992).

Results and Discussion

Co-relationship among the causes of work family conflict

There is a high correlation found between organizational commitment and organizational climate. A similar coincidence of organization commitment is found with job autonomy and job involvement, and perceived workload and job involvement. Organizational commitment is found to have a negative relationship with work exhaustion and work thought interference. This interprets like when work exhaustion and work thought interference increases organizational commitment decreases. Organizational commitment is having the least relationship with family involvement. Organizational climate is found to have the highest correlation with job autonomy and job involvement which means that when there is conducive climate, both the autonomy and the involvement in the job also increases.

Organizational climate is found to negatively influence the work exhaustion and work thought interference; as the former increases the latter decreases and vice versa. Family involvement and organizational climate do not have high correlationship though significant. The highest correlation of work exhaustion is found with work thought interference; as the exhaustion increases, work thought interference also increases. The next highest correlation is with perceived workload and the least with job autonomy.

There is no correlation of work exhaustion with family involvement and job involvement. Perceived workload is found to have highest correlation with perceived family demand and the next highest correlation with job involvement. The least level of correlation is observed between perceived workload and work thought interference. Family involvement is highly correlated with perceived family demand and job involvement and least influences job autonomy. Family involvement is negatively correlated with work thought interference.

When the involvement towards family increases, interference of work thoughts decreases. Work thought interference is negatively correlated with job autonomy. As the autonomy in the job increases the work thoughts interference gradually decreases. Work thought interference is not found to correlate with perceived family demand and job involvement. Perceived family demand is observed to have the highest correlation with job involvement and the next highest with job autonomy.

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REVISITING THE RURAL CONSUMER

*Dr. Sumana Chatterjee

"1% of rural India is more than a million households." - Census of India

"Improving the lives of billions of people at the bottom of the economic pyramid is a noble endeavor. It can also be a lucrative one." - C.K. Prahlad

Abstract:

Consumer demand in India is the aggregate of several 'micro consumer' demands, spread over time and space across the economic diversity of the country. Each of these 'consumers' have their own demand identity determined by a multitude of environmental forces. Over the last few years a new picture of consumer demand has emerged, in which the 'Rural Indian Consumer' seems to occupy the center stage. Marketers and the policy makers believe that in the present times of an economic slow down, the rural market apparently holds immense potential to counter balance the effects of reduced urban spending in the market.

At the same time, ironically, the Indian rural image is still that of one which is stuck in a dark age. Though there are visible signs of economic progress in terms of increased sales of consumer durables and non-durables, the recent rural social indicators are not very promising. Many schools of thought claim that the market reforms have discriminated against the rural consumer. The recent attention that the rural market is getting makes it seem that the rural consumer is a different Indian altogether. However, this is not the case. We cannot shy away from the fact that the divide between the top and the bottom income quintiles is increasing in the rural as well as the urban areas.

In light of these facts it would be pertinent to identify the actual rural consumer in these changing parameters. A question that needs to be answered is how safe and insulated is the rural consumption and can it be the panacea for marketers in troubled times? The rural Indian market raises many such interesting debates and calls for new marketing strategies and paradigms.

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Introduction

In the recent times the Indian economy has witnessed tremendous growth, witnessing buoyant trends in per capita income which grew at much impressive levels, even higher than many other Asian economies. However on the flip side, the growth story has been lop sided. For instance the PCI in the richest state in India is five times that of the poorest state in India. There is no shying away from the fact that the diversity which the country enjoys in social and cultural arenas extends to income distribution too. This dichotomy leads to the emergence of an entirely new set of consumers with varied income levels and spending habits. Accordingly there can be two sets of consumers:

a) Inter-Income Groups-Consumers with different buying behaviour with different income levels
b) Intra- Income Groups-Consumers with different buying behaviour within the same income level

Since these consumers are spatially and economically divided, each comes with their own 'demand identity'. This identity is shaped by a multitude of evolving environmental forces. The last few years have seen the rising of a new picture of consumer demand in which the 'Rural Indian Consumer' seems to occupy the centre stage. The attention that the rural consumer is getting makes it seem that the rural consumer is a completely different Indian. Especially during the troubled times of an economic slow down, the rural market seems to appear with a promise to save the marketers from the mal-effects of a reduced urban spending. At the same time our image of rural India is one steeped in economic and social darkness. An Indian's understanding of rural India is driven by these two opposing forces. Though there are visible signs of economic progress in terms of increased sales of consumer durable and non-durable products, however the social indicators are not very promising. (Census 2011) These facts change the views and perspectives of 30% people who stand a much greater chance to make decisions on behalf of the rest 70% of the population. A small segment of this 30% is the marketing community.

In light of the fact that the market reforms have discriminated against the rural consumer, increasing the divide between the top and the bottom quintiles, and at the same time that the rural market is being considered a panacea to the saturating urban markets, certain questions need to be answered:

a) Who is the true rural consumer and how has he evolved over time and space?
b) How different is rural consumption from urban consumption?
c) How is the rural spending behaviour determined?
d) How secure, insulated and promising is rural consumption?

The data used for various analysis purposes is based on secondary sources and have been obtained from various published sources such as consumer expenditure surveys of NSS (National Sample Survey Organization) and Market Information Survey of Households by NCAER (National Council of Applied Economic Research), Nielsen Data Analytics, market reports and other secondary data sources in public domain.

Literature Review

In the context of Indian rural marketing, the dominant literature is on marketing of agricultural products to the urban areas as compared to the rural markets. Studies on marketing and business related to the bottom of the pyramid and the rural markets have started catching on.

Lumpkin et al. (1986) have contributed a study on examining the shopping orientation profiles of rural consumers. The purpose of the study is to determine whether or not there exist segments of rural consumers that have unique shopping orientations. Rogers et al. (1988) have focused on the socioeconomic aspect of the urban and rural populations and the expenditure pattern of the two populations. The income and expenditure pattern in terms of transportation, food, apparel, automobile and housing were compared with rural and urban population. The urban counterparts had the higher level of expenditures on food, housing and apparel where as the rural population average income was spent on transportation, health care, tobacco and other personal expenses. Therefore there are differences in the way that urban and rural consumers allocate their expenditures budgets as regard to socio-economic changes. Sun et al. (2004) have identified the impacts of economic development on consumer lifestyles. The objective of this study was to understand the Chinese rural and urban consumers who are different in terms of their attitudes toward the whole marketing mix. Tull et al. (2005) have explored the Indian rural consumers' patronage aspects of shopping behaviour regarding two major retail formats i.e. village shops and periodic market in the rural market. The study also covers the factors which influence the decision of rural consumers in the selection of a particular retail format, from which a large part of their goods are purchased.

Sanal Kumar Velayudhan (2009) gives a detailed profile of the rural consumer. He also propagates the relevance of 'haats' and 'melas' and highlights their underutilisation. He also highlights various emerging channels to access the rural markets. Prof Ramkishen Y. (2004) discusses through various case studies, the product lifecycle of rural products and how they differ from urban products. He has also discussed standardization and grading systems in India and their relevance in rural markets. An in-depth analysis on the telecom sector, conducted by Kurian and Toyama (2007) brings out the shift of the rural population towards the use of technology and modern means of communication. Researchers have also proposed a number of theoretical frameworks for understanding the reasons for success and failures of rural projects. Shainesh et al (2006) in his research highlights long term sustainability strategies for the rural markets.

While researchers have explored in detail the existing marketing strategies and success stories, this article tries to highlight the need for understanding the evolving rural consumer in the changing economic perspective.

The Indian Rural Consumer-Evolving Perspective

The NSSO (National Sample Survey Organization) classifies a rural area as one which has the following:

- Population density not more than 400 per sq km
- At least 75% of male working population engaged in agriculture and allied activities
- Villages with clear surveyed boundaries not having Municipality Corporation/ Board However, according to the Planning Commission, the criteria is
- Towns having population up to 15000

These definitions are based on physical parameters and not on socio economic variables. However the rural consumer is evolving over time and space. The income levels are changing, occupations are shifting from agriculture to manufacturing and construction, life styles and the consumption patterns are evolving. Hence for effective insights, the rural consumer needs to be understood in a dynamic perspective.

India is divided into 450 districts and about 630000 villages. These villages can be segmented on the basis of various parameters like literacy levels, accessibility, income levels, distribution networks, market penetration and so on. The rural market makes up to 3/4ths of India's population and around 51% of total disposable income. It forms about 41% of India's middle class and a meager one percent increase in the rural income would translate to a staggering Rs. 10000 crore of buying power. In the face of such startling facts knowing the actual rural consumer would be much called for (NCAER various reports).

The term 'Rural Indian Consumer' cannot be generally applied because of various socio economic differences prevalent across villages in India. However based on various statistics available from the planning commission, reports of NCAER and Economic Survey, the following characteristics could easily portray the evolving rural consumer.

1. The rural consumer is not homogeneous because of disparate levels of development across different states in India.

2. A rural Indian is much more than just being a farmer. There is a structural occupational change witnessed in the village economy.

3. Owing to improved infrastructure and general awareness, the rural Indians are exposed to and influenced by developments around them.

4. The size of a rural family is just like that of an urban Indian family. According to NCAER data, the average rural family has 5.08 persons and that of an urban family has 4.81 persons.

5. The rural economy is still lagging behind in terms of education. 26% of rural India's chief wage earners are illiterates compared to 8% in urban areas. 7% of rural chief wage earners are graduates as compared to 29% in urban India.

6. The per capita income in rural India is half that of urban India. 21.7% of the rural population is below the poverty line while the figure is 20.8% for urban India.

7. In the rural economy there is a shift from agriculture based occupations to various other occupations owing to government sponsored schemes like National Rural Employment Guarantee Act (NREGA) etc.

8. As compared to their urban counterparts, the aspiration levels of the rural consumer have graduated from the 'Need' to the 'Desire' stage. Rural areas are now being fashionably termed as semi urban with the consumers having an urbanized rural mind set.

Dynamics of the Indian Rural Market

According to estimates, by 2025, the Fast Moving Consumer Goods (FMCG) market in rural India will hit $100 billion and that inflation and pricing will be outstripped by consumption (Nielsen India, 2010). In twenty years the Indian rural market will be larger than the total consumer markets in countries such as South Korea or Canada today, and almost four times the size of today's Indian urban market. The estimated size of the rural market will be USD577 billion (McKinsey 2007).

Population, GDP and MPCE[1] (figures in %)

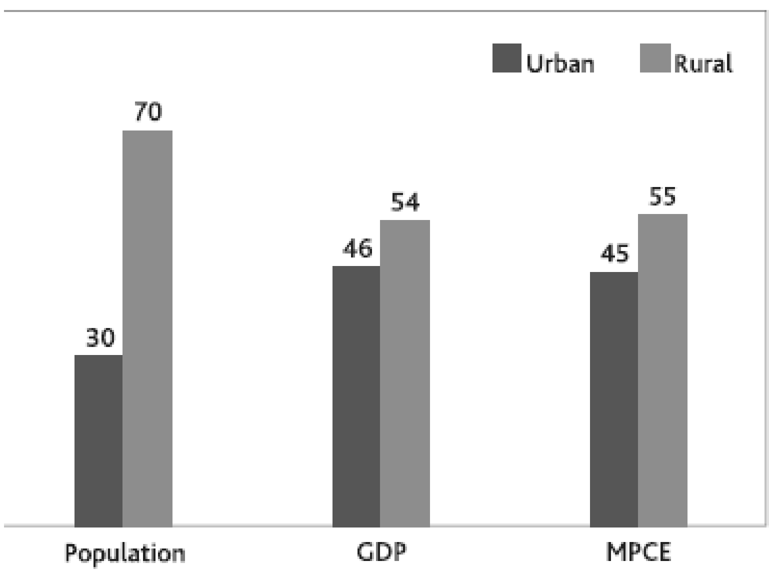
(Footnotes)

[1] MPCE: Monthly Per Capita Expenditure [1] MPCE: Monthly Per Capita Expenditure

Source: NSS, 63rd Round

The contribution of the rural economy to the GDP is 54% and in monthly expenditure the share of the rural economy is 55% of total national monthly per capita expenditure. The Engel's law is applicable to the rural markets as well. The growth in the rural household non food expenditure segment has matched that of the urban trend. (Economic times, 2007)

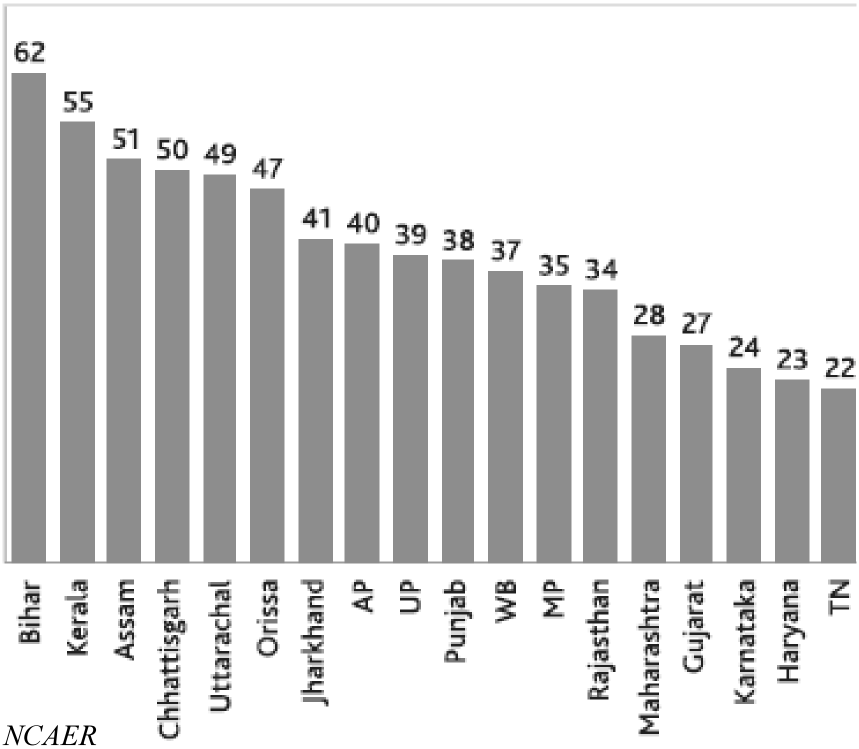
Contribution of Rural to total FMCG Sales (%)



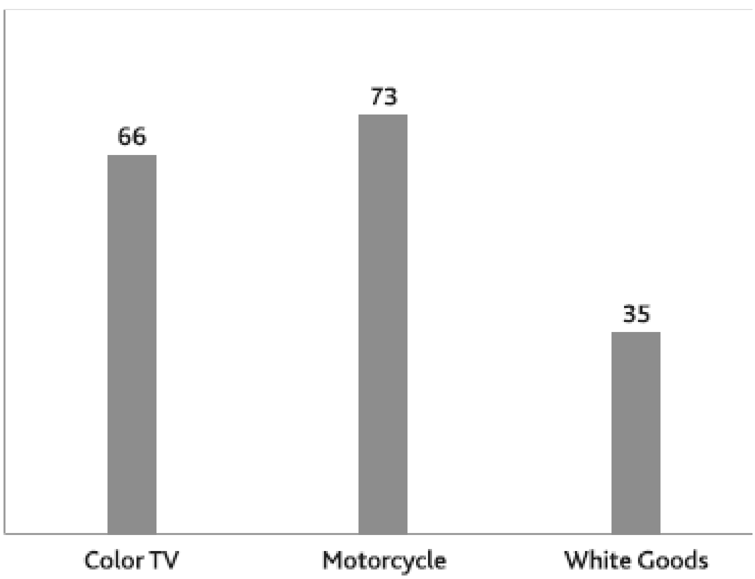
Source: Nielsen, 2010

The Nielsen data shows that the rural share is about 34% of the total FMCG sales. The state wise data show that the contribution of the rural sector is higher in the states having a higher rural population.

Demand Among Rural Households, 2010 (Millions)



Source: NCAER



FMCG	Rs.65,000 crore
Agri-inputs	Rs.45,000 crore
Durables	Rs.5,000 crore
Automobiles (2 & 4 Wheelers)	Rs.8,000 crore
Clothes, footwear etc.	Rs.35,000 crore
Construction material	Rs.15,000 crore
Total	Rs.1,73,000 crore

Source : CII Report, 2008

Rural Demand- Consumer Durables (% of All India)

Consumer Durables	1995-96	2001-02	2009-10
Scooters	33.1	39.4	39.9
Motorcycles	47.3	39.8	48.3
Mopeds	52.7	58.2	57.7
Cars/Jeeps	2.1	8	10.9
Automotives	37.9	36	37.9
Television	54	54.5	44.2
White goods	23.8	23.9	23.7
Fans	50	56.9	56.7
Low cost items	58.1	60.1	61.3

Source : NCAER, 2010

<u>Rural Demand- Expendables (% of All India)</u>

Consumer expendables	1995-96	2001-02	2009-10
Edible oil	64.3	67.1	62.9
Health beverages	28.6	27.3	28.1
Packaged biscuits	36	42.8	30.3
Shampoos	27.2	31.9	33
Toilet soaps	49.8	52.5	54.7
Washing cakes	68.7	71.4	75.6
Washing powder	50.4	50.8	54.9

Source : NCAER, 2010

According to the industry reports the market for consumer durables in the urban areas is growing at almost 10%per annum while that in the rural economy is growing at 25% per annum. NCAER data shows that the demand for durables like motor cycles, white goods and CTVs is very high. The rural and semi urban markets account for almost 40% of the sales in the auto industry.

There are four key areas that have emerged as key areas that will help to drive increased sales across Rural India (Nielsen Wire).

1. Premiumization – With access to more disposable income, Indian consumers, including the rural consumers are indulging more in expensive products. The premium products are contributing the most (+21%) to FMCG growth than other price tiers.

2. Commodity to Brands – As rural consumers experiment and adopt, they are switching out everyday commodity products like loose oil for the refined variety, which increased 44 percent every year in two years.

3. Indulgence to Regular – What once may have been considered an occasional treat is now becoming routine. The salty snack category is a good example, which grew at a compound annual growth rate of 55 percent from 2009 to 2011 in rural India.

4. Acceptability – Increased exposure to the benefits of new products is leading to acceptance and a higher rate of return purchasing patterns.

Sustainable Ongoing and Future Growth

Rural India, which houses one of seven Indian consumers, will be the driving force for continued and sustained growth in the future. A stable consumer base with high aspirations leads to higher affordability and consumption. Six out of ten rural Indian consumers intend to stay living where they are today, which contrasts sharply with 43 percent of urban consumers that feel the same. However, when it comes to aspirations for higher education, fully 79 percent of both urban and rural consumers plan to pursue a professional degree. Reaching rural Indian consumers today has become easier. Increasingly, rural consumers are upgrading technology with 84 percent having a television and 80 percent owning a mobile phone (Nielsen Wire).

The following factors would contribute for a strong emerging rural market in India:

1. Rapid infrastructure penetration, specially roads and electricity, transport, telecom, water and sanitation in the rural areas

2. Upward rise in the middle class sectors with an increase in disposable income. This is largely due to increase in the share of the services sector and increasing incidence of double income families.

3. Changing preferences of the consumers more towards durable and non essential goods from essential goods like food, clothing, electricity, fuels etc.

4. Changing priorities of consumption in the rural areas evidenced by high annual growth rate of sales of white and FMCG products.

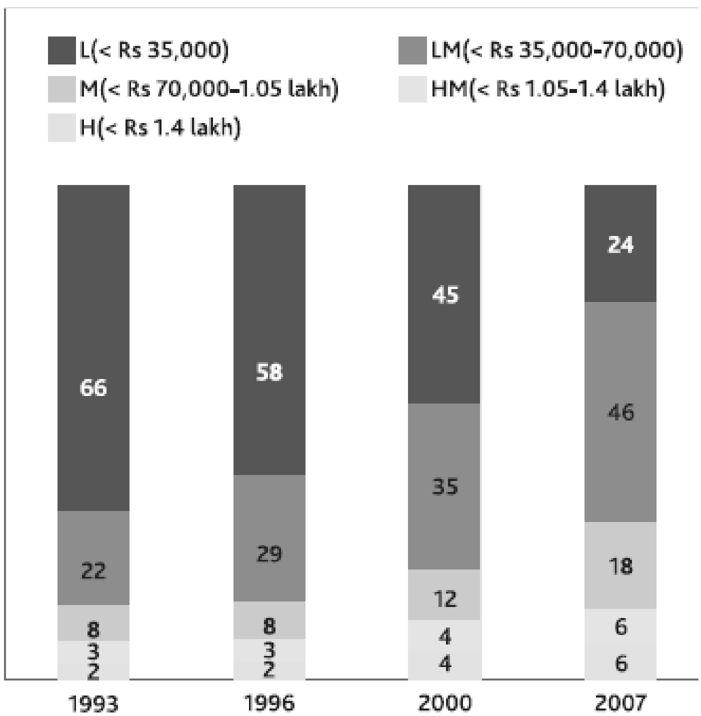
5. Marked shift in consumer spending from primary products to higher value added manufactured goods and services. Expenditure on hotels and restaurants and transport and commodities rose at an annual average rate of 9% till 2010 (NCAER).

6. A marked shift was also noticed in the consumption especially on food and beverages in favour of milk products, fruits and vegetables.

Rural India- An Economic Profile

The above analysis points out that an increase in the incomes across India including rural India has been an important contributing factor for the increase in consumption levels. Therefore before any further analysis can be done it would be pertinent to assess the economic profile of the Indian rural consumer. A related question is how important is rural India to India's consumption driven GDP growth story? One cannot overlook the fact that the rural economy is besieged with problems of backwardness, illiteracy and consists of small farmers. Yet 70% of the population, 56% of income, 64% of expenditure and 33% of savings come from rural India. The rural share of popular consumer goods and durables ranges from 30% to 60%. Collectively it is a very strong force. (NCAER, various reports)

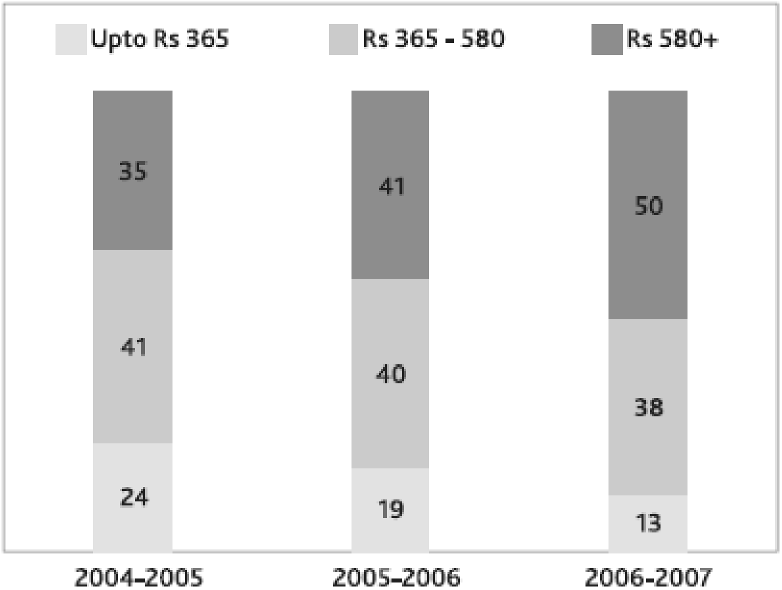
Income Split in Rural Areas (%)



Source: NCAER, 2010

According to NCAER estimates, the lower income class has shrunk by 2/3rd in the last 15 years.

Distribution of Income Class



Source: NSS, 63rd Round

Riding on this trend, the contribution share of the category of Rs. 580 monthly per capita expenditure has grown by 1/3rd to 50% in the past three years.

The Indian consumers' earning, saving and consumption patterns are rapidly changing as discussed below.

1. By 2015, incomes of more than 42% of rural households in India will shift from agriculture to non-farm sources like construction, retail, trading etc.

2. The top 44% households in the country currently have 93% of the country's surplus income, even as the bottom 60% of households have 40% of total household expenditure, indicating the consumption power at the bottom of the pyramid. "The bottom of the pyramid' consumer is hard to ignore for any marketer because that is the segment that is driving through sheer numbers.

3. Barely 14% of rural households have a graduate and above as a chief bread winner accounting for over 28%of the total household income. Thus the level of educational attainment is directly related in proportion to growth in household income.

4. as many as 81% rural households save a part of their income for the future, even as more than 50% of households are confident about the stability of the future reinforcing the perception of Indians as a people who save for the rainy day (Economic Times, 2010, NCAER,2010)

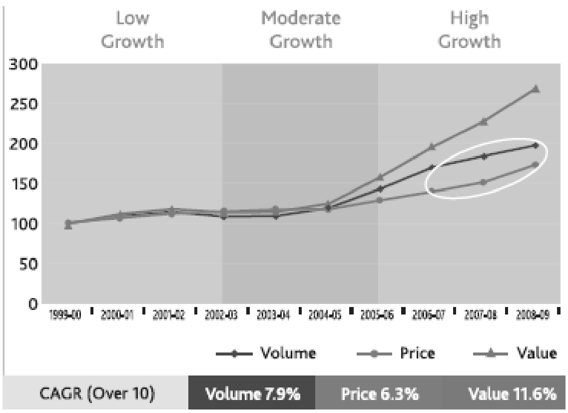
Earning profile of Rural India

Earning Rank	Occupation Category (OC)	% share of rural Households in each OC	% Share of rural income in each OC	[earning Weight**]
1	Regular salary/ wages	11%	20%	[1.80]
2	Others	2%	3%	[1.50]
3	Non-agri self-Employed	12%	15%	[1.25]
4	Self-employed in agriculture	41%	43%	[1.07]
5	Piece work labour (casual and agriculture)	36%	20%	[0.60]

Source: Bijapurkar and Shukla, 2008

Rural Markets-Moving Beyond Agriculture

According to the 2003-04 NSS data, 62% of consumer expenditure originates from Rural India. NCAER estimates tell that by 2012 2/3rd rural incomes will be non farm which is presently 1/3rd.



Source: Nielsen, 2010

[1] *In 2000, ITC embarked on an initiative to use technology to reengineer the procurement of soybeans from rural India. These kiosks known as e-choupals consisted of personal computers with internet access set across villages.*

In the last ten years the rural retail FMCG market has shown different patterns. 1990 to 2003 witnessed low growth. One reason could be the drought in many parts of the country. From 2003 to 2006 there was moderate growth owing to good monsoon, government employment programs like FRBMA and NREGA. From 2006 to 2008 the value has grown withstanding the price index.

If we look into the agriculture sector, we find that the growth has been very slow because majority of the farmers work in small holdings and farming is not profitable for them. 4% of the rural households are the large farmers having land in excess of 10 acres. 30% are marginal farmers having less than 2 acres and other 15% have between 2 to 4 acres. (NCAER) Given such a scenario it is difficult to see productivity driven growth in agriculture. Rather it will be a price driven growth story. S. Sivakumar of ITC's EChoupal[1] makes the point that 'even though we don't see improvement in agricultural productivity, we are probably seeing some improvement in terms of income growths because of better price discovery.'

Thus the rural market as seen is much more and is moving beyond its dependence on agriculture for income generation Following points prove the fact. (NCAER, CMIE, NSSO)

1. Firstly, the contribution of agriculture to India's GDP has steadily decreased to mere 17.5%. Almost 50% of the rural Indian economy is non agriculture based and a third of the households are engaged in various non agricultural activities as follows:

a. Labour engaged in manufacturing

b. Labour engaged in shop keeping and trading

c. Labour engaged in providing services like electricity generation, construction, mining and quarrying trade, transportation and haulage services

d. Handloom and handicraft-making,

e. Oil processing, paddy-husking, fishing, coir rope-making, village services

f. Professionals like tailors carpenters, jewelers, blacksmiths, teachers, bankers, etc

2. Most agricultural families supplement their farm income with non-farm activities. About 40% of rural households are landless. Considering the rest, 60%, half of them are marginal farmers owning less than 2 hectares of land. Large farmers, owning more than 10 acres of land only form a tiny 4% of the rural population. Yet, despite accounting for less than 5% of rural households, these large farmers and village landlords make up the image of a rural consumer.

3. The share of non agricultural activities contributing to rural income is increasing. Even agricultural income is far more stable now. In 1980, two-thirds of rural income was farm income while one-third was non-farm income. By 2012 according to NCAER estimates the situation would be exactly the reverse. In 2007, by NCAER estimates, the split was about 40:60, 41% being the farm income. According to CMIE data, despite the monsoons being erratic, India Inc managed to grow at average of 6.0 per cent with agricultural GDP and IIP[2] also growing at a robust pace.

4. Rural consumers are enjoying higher purchasing power

5. Though the rural consumer is generally less affluent than his urban counterpart, the situation is fast changing. According to NSSO report no. 527, there was little difference between rural and urban households in the share of the budget allocated to fuel and light. It was 10% for rural and 9% for urban areas. For clothing, including bedding and footwear it was 7% for rural and 6% for urban areas. While in 1998-99 over 83% of rural households fell in the lower and lower middle classes, the number has fallen to 70% in 2006-07; the comparative fall for urban India is from 53% to 27% (NCAER). The number is set to fall at a rapid rate over the next 20 years. Thus the future of the rural market is in the non agriculture sector which is expected to drive consumption growths for rural India. Following points favour this fact:

1. Non agricultural income which accounts for about 50% of rural income is far more stable than agricultural income

2. NSS data shows that the rural households which have non agriculture as their main source of income have higher expenditure levels and resemble urban consumers in their food pattern.

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[1] *Index of Industrial Production*

3. Non-agricultural income is widespread, and of different kinds. Data show that 25% of rural households can be classified as solely non-agricultural income earners and they have a 38% share of rural income (NCAER).

4. Piecework labour accounts for 20% of rural income and 36% of the rural population, but depending on the work available it can be both agricultural and non-agricultural.

5. Farmers or those "self-employed in agriculture" comprise 41% of the rural population, and provide 43% of the income, according to NCAER. Even these farmer households whose main source of income is agriculture have a non-agricultural income stream

6. On an aggregate, 29% of all farm households also have non-agricultural income streams, led by large farmers.

7. In real terms, real rural income has grown three times as fast as agricultural income.

Subir Gokarn, Chief Economist at Crisil, makes the point that some of this income from "other sources" is also, in states such as Kerala, Uttar Pradesh and Bihar, made up of remittances from rural migrants to urban cities.

Thus it can be said that though the heart of the market is still the farmer, the premium layer which hold immense potential for the rural consumer goods business is the non farm, educated, non agricultural households. If this section of the rural house holds is profiled then among the top 20%, in terms of income, 39% are land owning farmers, 31% are regular salaried, and another 18% are self employed in non agricultural activities. So close to 60% of the top earning households are 'urban' in the sense that they earn money from non agricultural work. Between 2005-08 CTV sets penetration increased by 7%, packaged biscuits by 10%, shampoo by 37% (IRS). It remained shock proof even in the recent economic slow down. It proves that the rural consumption power especially in the category of non farm income group is strong. However, one needs to ask is this growth sustainable, stable, and free from market volatility? Passing the data through a tight sieve, it can be seen that there were many other factors which needs to be factored in while analyzing the spurt in the rural consumption.

a. Good monsoon in the last few years,

b. Increase in agricultural support prices at around 10-15% CAGR in 2005-08 as compared to 2.5-4% in 2002-05.,

c. Increased cash outflow from NREGA,

Allocation in Crore Rupees

Scheme	2006-07	2007-08	2008-09	2009-10
NREGA	11,300	12,000	27,150	39,100
SGRY	3,000	2,800	7,500	-
PMGSY	5,225	4,040	7,530	12,000
SGSY	1,200	1,800	2,150	2,350
Total	20,725	20,640	44,330	53,450

Source: Ministry of Rural Development

The various schemes like National Rural Employment Guarantee Act, Sampoorna Grameen Rogar Yogna, Pradhan Mantri Gram Sadak Yogna, Swarna Jayanti Gram Swarogar Yogna is helping in rural development as seen by the high correlation coefficients.

Impact of Government Spending on FMCG Sales

States	Correlation Coefficient between Govt Expenditure & FMCG Value Offtake (Years: 2004-05 to 2008-09)
Rajasthan	0.987
Punjab	0.984
Tamil Nadu	0.978
UP / Uttaranchal	0.965
Assam & NE	0.936
West Bengal	0.777

Source: Nielsen, 2010

Change in rural road connectivity from less than 40% in 2004 to at least 70% in end of 2008. (IIFL research).

Infrastructure	Status
Road Connectivity	14,454 km roads constructed – 100% increase vs. 2005
Sanitation	61% families have access to toilet –100% increase vs. 2005
Education	99% has primary school in less than 1 km Gender parity improved at primary upper school from 0.77 (2001) to 0.92 (2008) Drop out rate at primary school reduced to 14–26% (2008) from 39% (2001)

Source: Nielsen, 2010

Developments in infrastructure are helping to generate employment opportunities and generate income outside agriculture.

- Relative insulation from changes in the stock market,
- Loan waivers from the government.

On closer scrutiny it can be seen that this non agricultural income is also dependent on the agri, urban and global economy. IIFL data show that of 54% of non farm rural income, 12% is dependent on overseas or urban market, 42% on farming and hunting. Based on the data NCAER has on occupation and share of earnings, perhaps most of the 20% share of rural income from salaried earners will be urban-dependent, but not agriculture dependent, and most of the 15% share of rural income from those self-employed in nonagricultural is probably agricultural income-dependent. Therefore, assuming that higher the income, the more urban-dependent the occupation is, perhaps 20-25% or rural income is definitely urban-dependent but agriculture-independent, and it has to be assumed that the rest depends on the local economy.

However, before we declare rural income independent of agriculture, we must realize that half of this income is urban dependent, migrant and agriculture dependent. However in certain time periods and in certain geographic pockets, rural farm incomes may show temporal variations. In bad years it acts as a moderator and in good years it works as a multiplier.

In view of the fact that the rural economy is undergoing a vast change, the success of doing a sound business in this market needs radical thoughts and analysis. Following are some implications for the marketer:

- Communication planning needs to take into account the presence of different groups and sub groups within the rural economy.

- Newer categories might seem relevant in wake of the evolving economic scenario.

- Targeting strategies might need to be revisited for the intergroup and intra group consumers.

- Though the importance of agriculture is on a decline it will perhaps remain rural India's backdrop and therefore the tonality of rural marketing communication should continue to take that into account.

- Marketing should no longer assume the rural market as potential for just tractors, fertilizers and seeds.

- With more stable incomes around the year, consumer demand from rural markets is bound to become strong and consistent. This would enable marketers to prepare rural plans with longer focus needed to develop rural markets for newer categories.

- Rural shopping basket should have products that till now were thought of as urban. Purchases shall grow out of the leash of demand and will also be affected by desire.

- For business priorities and investment based on demand forecasts, reliable estimates of income and expenditure elasticities of different commodities are important. Thus to depict better consumption patterns accurately income specific estimates are likely to provide a better understanding

- It is time for marketers to think of rural as the new emerging market and create businesses and business models especially made for it rather than recycling redundant old urban models. For e.g. ITC E-chaupal, HLL's project Shakti[1] that emerged as a big winner.

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(Footnotes)

[1] Project Shakti was an initiative by Hindustan Unilever to create income generating capabilities for poor rural women by providing small scale enterprise opportunity.

FDI IN RETAIL SECTOR-HRM PARADIGMS WITH SPECIAL REFERENCE TO WAL-MART

*Dr. Muktha

Abstract

Substantial effort has been devoted to exploring the transfer of human resource Management practices within multinational companies. Particular attention has been paid to countries with 'strong' HRM traditions, to transfers between economically developed countries and to firms in manufacturing sector. This paper addresses the transfer of a US owned retail firm's HRM practices from the USA to India. Retail firms operate in a multi-domestic context directly serving local customers rather than as part of an integrated international production network and there is a high cultural distance between the US and India, When these multinational retailers enter the Indian market the express intention is to replicate as nearly as possible the management style of its stores. This paper examines the firm's parent-country HRM practices, which the company increasingly considers as a key source of competitive advantage, the indigenous retail sectors HRM practices and the adoption of new HRM policies required to sustain. The paper seeks to provide fresh insights on the HRM practices by adopting qualitative case study approach Several aspects of HRM transfer are explored briefly: communication with the workforce, work pattern, age composition of the workforce, diversity of work force, reward system, training, women empowerment and employee representation. Attention then focuses on the organizational structure. This paper provides useful insights into the nature of the HRM practices followed by Wal-Mart. It also recommends the changes in HRM practices required.

Keywords: Human Resource Management; India; Retail sector; foreign direct investment; women empowerment, Human Capital Risk.

Introduction

In this era of rapidly globalizing businesses, there has been extensive debate on the extent to which human resource management practices can be transferred from one national context to another. Despite its significance both in economic terms and as a source of employment, the transfer of HRM in the service sector and retailing in particular has been rather neglected. Similarly, despite the global orientation of many US firms, few studies have explored the impact to which US-owned retail will have on local firms. It seems timely, therefore, to focus upon the HRM practices of a US multinational retailer.

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Statement of problem

Lack of quality manpower is viewed as serious issues by the retail industry. With attrition rates in the **retail** industry ranging from 39 percent-52 percent, retailers are luring workforce with the promise that **retail** is not just a job, but a career. This will definitely have an enormous influence on the HRM practices of indigenous firm. Hence it becomes important to understand the HRM practices of giant global retail stores for sustainability and to achieve competitive edge.

Research objectives

In this paper an attempt is made to analyze HRM practices of indigenous retail firms, HRM practices of Wal-Mart and to discover the impact of FDI in retail sector on HRM practices of indigenous stores.

Research Type

The present research paper is a descriptive and analytical. The present research is conducted through secondary data with the help of published research work and information available. It is also supplemented through focus group discussions.

Results and Discussion

A) Human Resource Management practices at Wal –Mart

Analysts attribute Wal-Mart's success to its strong and pervasive culture. Walton believed that happy and satisfied employees performed well and were responsible for happy customers. It has a culture which encouraged employees to contribute their best. It also ensured discipline and uniformity in an organization that was growing at such a rapid pace and had been operating for over 40 years. Wal-Mart's culture was essentially customer-centric and service-oriented. A unity of purpose and a spirit of oneness was created and maintained across the organization. To instill a spirit of equality and oneness among employees, the company adopted the practice of terming employees **'associates',** thus creating in them a sense of belonging and involvement in Wal-Mart's activities and success.

It has built an environment that emphasizes integrity, respect, open communication and innovation. Whether it's a part-time job or the career of a lifetime, working at Wal-mart means opportunity. Wal-Mart built its unique culture by communicating a clear set of cultural standards and company values. This is not a perfect science but here are just some of the reasons that capture many of Wal-Mart's Cultural Standards & Values that form the foundation of "The Wal-Mart Way" and create the cult-like commitment of its managers and employees:

Wal-mart embraces three core leadership values –
The three core leadership values are: Respect for the Individual, Strive for Excellence, and Serve Your Customers. Today's executives still embrace and communicate these three values in the stores and distribution centers around the world.

"People division" not "human resources" –
Human Resources was the job of every single manager in the company. Sam Walton understood the reality of manager and employee interaction, and the problems associated with human relations so he created a department to address people. Hence HR department was established and named as "The People Division".

Employees are business partners –
Creates a true employee partnership. Believes employee has the capacity to be a business leader. Hence decision-making is pushed downward by empowering all employees to act like business owners. "Employees" are referred as "associates" so they would act like entrepreneurs, and take ownership of the business. The company was also committed to improving the career prospects of its employees. It had a policy of recruiting more than 70 percent of its personnel in managerial positions from the ranks of hourly workers in the stores. Nearly 75 percent of the company's managers began their Wal-mart careers as hourly associates.

Managers are both "coaches and servant leaders" –
Company managers are expected to lead by their own example. Emphasis is placed on store managers getting to know a little bit about each associate who works in their store, on a personal level, and of course getting to know each of the associate's names. As servant leaders the company's managers are really there to serve those they lead! By showing they really care, trust is created which leads to teamwork, and the ultimate goal, team synergy.

Bias for action and results –
An acronym at Wal-Mart called "H.E.A.T.K.T.E." The company's managers use this acronym to remind all of the 2.3 million employees that High Expectations Are The Key To Everything and they mean it! Wal-Mart's executives believe in continuous improvement, continuous learning, and they expect all of management's efforts to

yield results. When an employee has two tasks to perform, and asks the question "which one should I do?" . . . their manager will respond . . . BOTH!

No sacred cows, everything can be improved –
Sam Walton even created an idea generation program with financial rewards to openly solicit employee ideas that could save the company money! There is a belief at Wal-Mart that the best solutions to problems come from the employees closest to the work, and the employees are encouraged and expected to challenge the way things are currently done and to come up with method improvement ideas. Many of the hourly paid employees' ideas have been implemented over the years and those ideas have transformed Wal-Mart's operations, and helped to catapult the company to the top of the Fortune 500.

Communicate / communicate / communicate –
Through a combination of bulletin board postings, and as part of management's daily stand-up meetings, each store management team shares the P&L with all of that store's associates.

Average people / above average results –
It is believed Wal-Mart's Associates are one of Wal-Mart's most important sustainable competitive advantages. The cultural "people" mantra at Wal-Mart is to try to "hire the best, provide the best training, and be the best place to work". Interestingly, Wal-Mart's employees and their managers for that matter are in actuality a collection of average people! Also interestingly, Wal-Mart's leaders gain above average results from their army of average folks!

Employees control company expenses like their personal expenses –
Wal-Mart's employees are expected to manage company expenditures in the same penny pinching manner as they would in managing their personal expenses at home. By sharing the P&L Wal-Mart employees understand the important link between company profitability and the potential for receiving profit-sharing!

Simplify everything you do –
Each store manager at Wal-Mart is an entrepreneur who operates their store as if they own it. They don't think about being part of the world's largest company but rather focus on being the store of that community. Managers are taught to simplify by worrying about one store at a time, one department at a time, and one customer at a time!

Embrace change, take risks, and innovate –
Wal-Mart is a company that expects its leaders to innovate, embrace change, and take risks. Every week of the year Wal-Mart's leadership team gets together to discuss new ideas and strategies, ways they can adapt and change, and low and high risk, high reward competitive strategies.

Rewards
Offer competitive wages, good benefits and the chance to grow and build a career. Provide Profit sharing and stock options for its employees. The plans offer an opportunity to its employees to improve their income depending on the profitability of the store. Employees are also offered stock options and store discounts. Wal-Mart offers profit-sharing to all of Its employee associate partners. Only when predetermined sales, expense, and profit goals are met, the associates share in the company's profits

Eligible full-time and part-time associates at Wal-mart are able to take advantage of many employment benefits, including a wide variety of health care plans, discounts, membership at Sam's Club.

Diverse workforce –
Wal-Mart embraces associates of all backgrounds, perspectives and ideas. Has the strongest workforce. **Women** make up more than **57%** of U.S. workforce, 27% of corporate officers, and comprise 20% of our Board of Directors. Walmart actively recruits former military personnel, It also includes foreign nationals.

Overtime
One of the unique features of Wal-Mart's human resource policy was that the company did not authorize overtime work. However there are lots of overtime woes about Wal-mart.

College Students

At Wal-mart Internship program are offered to students. As one of the world's largest companies and a leader in dozens of industries, they have many paid internship opportunities for recent or soon-to-be college graduates.. The project-based internships allow students to take classroom learning and apply it to real-world experience on a fast-paced, global scale. This helps the company for recruitment too.

B) Human Resource Management practices at indigenous retail sectors

Pantaloon Group, Aditya Birla group , Reliance Retail, Tata group, Heritage foods, life style, shoppers stop, Spencer's, Dairy Farm International, Oswal group, Future group etc. to name a few retail giants operating in India comprising of thousands of stores together all over the country. In general their HRM practices include as given under:

Recruitment is mostly based on word of mouth or through referrals. A large number of employees have more than one position

Retailers do not pay too much attention to knowledge of English, since most people are comfortable interacting in the local language

Retailers are also becoming less particular about education levels of employees. Currently most major retailers opt for those who've completed high school or class 12. But analysts predict that the levels of education are likely to go down to as low as class five, simply because basic literacy, ability to learn and native intelligence are what front end staff need to be equipped with

Work Pattern-mostly full time.

Composition of work force - mainly young employees recruited from local area. Women representation at lower level is adequate. However up the ladder women representation is low. Expats employment is negligible.
Multilayered Hierarchy is followed. Career development for employees at lower lever is limited.

Reward system- Incentive based Pay is most common. Incentives are becoming more attractive. Insurance schemes are made attractive

Training- Training is to deal in their respective business is common. Certain companies are tied up with Universities to offer correspondence courses in retail management to employees to aid growth in the organization.

Employees Turnover - In the metros, attrition is almost 50 percent Retailers are finding their answer in soft skills. Training, for instance, goes beyond basic service techniques and includes English language fluency, overall floor management and consumer behavior insights — an aspect that not just polishes employees and fosters loyalty, but boosts self-confidence. Some even include yoga and meditation to help combat stress and build stamina. However employers accept that there is shortage of attitude in the workforce

Communication with work force is formal and restricted.
No trade unions. Individual and direct grievance redressed.
Working conditions and facilities provided to employees especially at shop floor is average.
Motivation of employees and innovation by lower cadre employees are at infancy stage.

C) Impact On Indigenous Retail Sector

The HR department of indigenous retail sector is likely to face the challenges which shall include: High attrition rate-The more the people leave an organization, the more it is a drain on the company's resources like recruitment expenses, training and orientation resources and the time. The high attrition rate also affects the productivity of the organization.

Absenteeism, - The employer incurs loss of work hours, sick pay, overtime or payroll plus training costs of temporary staff as well as costs in lowered productivity, quality and output with a possible loss of customers. There will be additional administrative costs with the rescheduling and hiring efforts, and some end up over-staffing at additional cost. Colleagues suffer stress brought on by the additional load of work and deadline pressures along with a feeling of demoralization and/or victimization the morale and motivation level will be reduced.

Lack of quality work force -will have an impact on performance, customer satisfaction and profits of the organization.

Strife amongst the employees.-This will lead to disputes, strained relationships etc.,

Implementation of innovative practices will be pretentious as the management will have to concentrate more on day to day administrations
Elevated Cost of Operations-The overall cost of operations will be escalated.
The above factors will also have an adverse impact on the Brand image which in turn will impinge on the sustainability of the organization.

Summary & Conclusion

In conclusion, the HR function plays a great role in the execution of company's goal. Through effective implementation from the start up to the end, it will yield to higher employees' productivity and increase of revenue. All HRM functions are deliberate and directed to the success of the organization. Richard Pinola, chair and CEO of *Right Management Consultants, Inc.*, has identified what administration officials require from lead professionals in terms of HR. He also added that to increase real value to a company, HR must relate to the organization's overall strategy. When this approach is accomplished, affirmative changes can occur in talent management, leadership development, and organizational performance (Hornsby & Kuratko 2005, p.26).

The function of HRM is for the betterment of the organization's working force. It is very essential for the HRM officer to concentrate on the feature wherein it needs special kind attention. Everything changes. In order for companies to go with the flow of current trends, they must be fully equipped with all the necessary factors affecting a satisfactory HRM system. As from the conception of an employee up to the end of his/her service to the organization, the HRM function will always be directed to the purposes of holistic human development to attain the ultimate goal – competitive growth rooted on people's trust, commitment, loyalty, adaptability, and high-quality knowledge and abilities.

Sam Walton created a unique culture at Wal-Mart, and by investing in cultural indoctrination of all of his managers he turned Wal-Mart's Culture into a powerful sustainable competitive advantage. The ideas and concepts behind "The Wal-Mart Way" of doing things are easy for competitors to understand but brutally difficult for others to copy and successfully replicate in their businesses. This is a serious threat to the existing indigenous retail sector. Wal-Mart's success in Human Resource Management is keeping their workforce of millions from unionizing, while adding to it and pursuing other HR activities to further Wal-Mart's success. Wal-Mart would not have been able to expand and have the same level of success without hiring and taking care of quality employees

The HR department of indigenous retail sector is likely to face the challenges which include high attrition rate, absenteeism, lack of quality work force and implementation of innovative practices in the retail outlets. Hence, from the study, it was found that the HR management practices in these need be developed and improved. The Recruitment policy, employee participation, employee facilities and proper rewards and career part should be designed so as the employees to achieve the best. Also improve employer-employee relationship. Develop a communication system where he/she is connected to every employee. It is important to build and create a strong culture within the organization. It should be value based. It should be a role model driven. Empowerment of employees for 'on the spot decision making' is important. New employees to be given a chance to work with experienced employees as learning from peers help. To motivate employees and for business success, customer service excellence should be felicitated. It is very important to create an environment for the employees to fit in.

Hence, the retail outlets should design and implement new HR practices in order to retain and develop the work force who is the asset for the development of the organization and to sustain international competition.

The government also has a very important role to play. It should bring revision of existing rigid labor laws. Laws relating to recruitment, social security, flexibility in working hours need to be modified and should encourage with its laws that can bring **Conducive environment** in retail sector organizations. It should also have proper machinery for licensing and timely monitoring the new entrants coming through FDI in retail sector to protect the indigenous retail sector.

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POST –PURCHASE BEHAVIOUR OF CONSUMER – A STUDY

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Abstract

India's automobile industry has undergone a great transformation in the last decade owing to liberalization of the Indian economic policy. This period has seen a remarkable expansion of this industry and the entry of a host of new ventures as well as orientation on the part of some existing firms, which is the result of an abundance of choice and significant upgradation in technologies from the point of view of the consumer. At the same time, vehicles with outdated technology changed mostly to the use of contemporary products available in the global markets. It is very strong because of the brand value, price and the other supporting values offered on the product that makes consumers to choose. To analyze this growth, the research was done on the primary data collected from 537 consumers who owned Maruthi Suzuki cars and found that many are extremely satisfied with the price, features, performance, style & design, fuel efficiency, comfort & space, resale value, maintenance cost and after sales service. The company should keep up their promises and satisfy both the actual and potential consumers. To conclude, the brand name is well registered in the minds of each and every Indian consumer who own as well as who are likely to purchase in near future.

Keywords: Consumer behavior, Post-purchase behavior, factors Influencing.

Introduction

Consumer markets in India undergo rapid changes. The evolution and revolution in the field of science and technology have brought in drastic changes in every business and its allied activities. Such situations have demanded the governments, both the central and the state, to bring in changes in the existing business policies. These new policies of the governments influence very much the national and the multinational companies.

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Along with this evolution in technological characteristics of the vehicles that are marketed in the country, there have been concomitant changes in the manufacturing and assembling processes, and within the suppliers of components and fuels. As a result there has been a substantial deepening of technological capabilities in the industry. This is a welcome development because such capabilities are essential for managing technological changes, which lie at the heart of any approach to meet market or environmental challenges that face the automobile industry in the future.

Consumers and their Behaviour

According to Wikipedia, the free encyclopedia, "Consumers are individuals or households that consume goods and services generated within the economy". A consumer is assumed to have a budget which can be spent on a range of goods and services available in the market. Under the assumption of rationality, the budget allocation is chosen according to the preference of the consumer. Based on the above discussion consumer preference could be a study in the context of consumer behaviour.

According to Tamar and Tory, "Consumer behaviour is a study of individuals, groups, or organization and the processes they use to select, use and dispose of products, services, experiences, or ideas to satisfy their needs and desires". It is important to understand consumer behaviour and realize that consumers are never naive. The marketer must offer the goods and services according to the needs and desires of the consumer. Nevertheless, marketers must study their target customer's wants, perception, preferences, attitudes, experience and shopping and buying behaviours.

The study of consumer behaviour is the study of how individuals make decisions to spend their available resources such as time, money and effort on consumption related items. It includes the study of what they buy, why they buy it, when they buy it, where they buy it, how often they buy it and how often they use it. Thus, it is further observed from Norris, Preyas Desai and Richard that, "The consumer's behaviour models has helped in giving a framework for studying the buying preferences of the consumers and changes taking place in their order in view of the fast changes occurring in the socio-economic environment in all parts of the world". Every day individual consumers make choices regarding the products they want to purchase and perhaps more importantly where they decide to purchase them.

Consumer preference surveys are commonly used to assess and understand these choices. John and Jagdish, in their survey indentified that, "Consumers have a wider variety of options to choose from, before selecting the item they will actually purchase". So, the consumers preference among the alternatives come first before they could actually initiate to make the purchase. The term consumer preference needs to be defined for its importance and better understanding of the same.

Review of Literature

In order to appreciate the significance and an importance of changes brought in the marketing scenario towards consumers post- purchase behaviour, the literatures have been reviewed in the following areas.

Randi Grossman and Joseph Z. (2000) assessed in their empirical research work that a product's attributes play an important role in a consumers post-purchase behaviour, they applied an associative learning framework to the color literature to help understand consumer color choices. They adopted the principles of classical conditioning, a form of associative learning, also used to make suggestions to practitioners who wish to create or change color associations for their products. Odekerken, Hans Ouwersloot, Jos Lemmink and Janjaap Semeijn (2003) assessed consumer segments based on relational aspects, service aspects, or price aspects has different preferences concerning these three key decision-making variables when buying a car. They used conjoint analysis that showed dealer relationships represent a very important decision-making variable when buying a car and consumer preferences concerning relationships provide a useful instrument for segmenting markets. They analyzed through cluster analyses of three aspects simultaneously that revealed some consumers do value relationships and emphasize the service package in their post-purchase behavior. Hundai, B.S. and Saurabh Grover (2010) in their perceptual study examined the Tata Nanoand came to the conclusion that it was one of the longest awaited and most talked about automobile debuts in India. It is known as people's car. It is an engineering marvel to come out of India in terms of cost efficiency, fuel efficiency and space efficiency. Their paper attempted to study the consumer behaviour and also their perception towards car in the post-launch period.

Objectives of the Study

The following are the objectives:

1. To identify the factors responsible for consumers car purchase behaviour.
2. To analyze the consumers perception and satisfaction of their behavior.
3. To study the factors accountable for post-purchase behaviour

4. To measure the influence of demographic variables on the factors of consumer behavior.

5. To indentify and analyze the consumer benefits.

Research Design

This is a scientific and systematic study. The basic information is obtained through the survey method by administering a questionnaire through personal enquiries. The sources of data are primary as well as secondary. The data collected from the consumers in Chennai are analyzed descriptively as well as empirically. The data collected from both the sources are scrutinized, edited and tabulated. The data were analyzed using Statistical Packages for Social Science (SPSS) and other computer packages.

Questionnaire Design

The study depends upon both independent and dependent variables. In the present study, the demographics of consumers are considered as independent variables and the variables in Likert's five point scale are dependent variables. A well structured questionnaire is administered with closed ends to exactly ascertain the perception of the customers and the responses are structured into three sections. Section 1 of the questionnaire was framed to obtain general information about the consumers of cars. Sections 2 to 3 deal with attributes on purchase decision and post-purchase behavior respectively.

Sample Size and Sample Criteria

Six hundred samples have been selected from the Chennai city. The researcher has taken due care in selecting the Maruti car owners from the population by giving proportionate weightage to all the five areas such as East, West, Central, North and South from Chennai city and also by adopting convenient sampling technique. All the six hundred samples were given a questionnaire to obtain the necessary and relevant information regarding the research problem to carry out the research more effectively and efficiently. The selected consumer samples are expected to be fairly representative samples with special reference to the Chennai City. About 565 filled in questionnaires are received from the respective customers. The researcher has rejected 28 incomplete questionnaires and the remaining fully completed 537 questionnaires are duly selected for analysis after a careful scrutiny.

Data analysis

The processing, classification, tabulation, analysis and interpretation of data were done with the help of SPSS software package. The following statistical tools and mathematical techniques have been applied depending on the nature of data collected from the respondents.

Details of statistical tools used for analysis noted against each are given below:

1. Factor analysis by principle component method is applied to analyze the various elements of post -purchase in respect of consumers of cars.

2. K means cluster analysis is applied to classify the respondents into various groups based on the mean scores of various elements of consumer behaviour towards cars

3. Simple percentage analysis technique was used to analyze consumers demographicprofile

Limitations of the Study

1. The sample size of the study is restricted to 537 and it covers the consumers of Chennai city only due to time and cost factors.

2. The study takes into account only limited factors influencing the post-purchase behavior of consumers.

3. The study assumes information given by the consumers as valid and reliable.

4. This study is not a comparative study between different companies.

5. The study focuses mainly on the factors influencing the purchasing behaviour of the consumers of cars. However, the role of dealers is not analyzed through the views of the consumers.

Factors of Post-Purchase Behaviour

The car purchase decision of the consumers comprises 12 variables in Likert's five point scale, which need to be reduced. The application of factor analysis presented the following table.

Table No. 1KMO and Bartlett's Test of Post-purchase Behaviour

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.744
Bartlett's Test of Sphericity	Approx. Chi-Square	3124.930
	df	153

Source: Computed data

From the above table it is found that the Kaiser-Meyer-Olkin value point is .744 and Bartlett's Test of Sphericity is approximately 3124.930 which are statistically significant. This indicates that the sample size is adjustable for the data reducing.

The following communality table gives the variance range of the 18 variables.

Table No. 2
Communalities of Post-purchase Behaviour

	Initial	Extraction
PO1	1.000	.685
PO2	1.000	.554
PO3	1.000	.648
PO4	1.000	.566
PO5	1.000	.574
PO6	1.000	.741
PO7	1.000	.688
PO8	1.000	.663
PO9	1.000	.694
PO10	1.000	.651
PO11	1.000	.732
PO12	1.000	.621
PO13	1.000	.697
PO14	1.000	.757
PO15	1.000	.604
PO16	1.000	.638
PO17	1.000	.593
PO18	1.000	.549

Source: Computed data

From the above table it is found that the variance ranges from .549 to .757. This indicates the variance of 18 variance range from 54.9% to 75.7%. These indicate the variance is sufficient for grouping the variables.

The following total variances table of the Post-purchase Behaviour states the formation of predominant factors. The 18 variables are reduced into 6 predominant factors with its underlined variances 14.437, 12.790, 11.183, 9. 255, 8.778 and 8.299 along with cumulative variance 64.743 which is statistically significant to carry on the data reduction process.

Table No. 3

Total Variance of Post-purchase Behaviour

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	%of Variance	Cumula tive%	Total	%of Variance	Cumula tive%
1	4.920	27.334	27.334	2.013	11.183	38.410
2	1.619	8.992	36.326	1.666	9.255	47.665
3	1.559	8.662	44.988	1.580	8.778	56.443
4	1.364	7.579	52.567	1.494	8.299	64.743
5	1.154	6.412	58.979			
6	1.037	5.763	64.743			
7	.987	5.481	70.224			
8	.919	5.104	75.328			
9	.737	4.093	79.421			
10	.659	3.660	83.081			
11	.549	3.049	86.130			
12	.496	2.755	88.885			
13	.465	2.585	91.470			
14	.411	2.282	93.753			
15	.358	1.989	95.742			
16	.286	1.589	97.331			
17	.260	1.446	98.777			
18	.220	1.223	100.000			

Source: Computed data

The following table gives variables grouping for the formation of factor.

Table No. 4
Variable grouping of the Factors of Post-purchase Behaviour

	Component					
	1	2	3	4	5	6
PO14	.835					
PO13	.796					
PO18	.632					
PO12	.610					
PO6		.778				
PO7		.732				
PO3		.666				
PO4			.418			
PO9			.784			
PO10			.704			
PO16				.714		
PO17				.678		
PO8				.463		
PO11					.754	
PO15					.640	
PO5					.437	
PO1						.814
PO2						.476

Source: Computed data

From the above table it is found that Factor One consists of four variables:

1. Product Technology (.835)
2. Maneuverability (.796)

3. Overall Performance (.632)

4. Safety Features (.610)

Therefore this factor can be appropriately Called **“Features and Performance “.**

Factor Two comprises three variables:

1. Dealers service during warranty period (.778)

2. Dealers service after warranty period (.732)

3. Comfort & space (.666)

Therefore the factor can be named as “**After sales Service**”.

Factor Three comprises three variables:

1. Style and design (.418)

2. Appreciation from viewers (.784)

3. Availability and cost of spare parts (.704)

Therefore the factor can be called as “**Appearance and Appreciation**”.

Factor Four comprises three variables:

1. Cargo (.714)

2. Easy repayment of car loan (.678)

3. Marketability (.463)

Therefore this factor can be appropriately named as “**Resale and Convenience**”**.**

Factor Five comprises three variables:

1. Environmental friendly (.754)

2. Parking space (.640)

3. Easy maintenance (.437)

Therefore this factor can be aptly named as “**Favorable Maintenance**”**.**

Factor Six comprises two variables:

1. Fuel Efficiency (.814)

2. Value for money (.476)

Hence this factor is called "**Mileage and Value Appraisal**".

The post-purchase behaviour of consumers towards the car purchase is directly linked with after sales Service, Features and Performance delivered to the consumers. The Post-purchase Behaviour is also influenced by the Car Appearance and the Appreciation consumers receive from the society and careful analysis of resale value and convenience of the car. The primary data reveals Favorable Maintenance, Mileage and Value Appraisal which are the predominantly satisfying elements of the consumers of Maruti Suzuki cars.

Classification of Consumers Based on the Factors of Consumer Post-Purchase Behaviour

Factor analysis by principal component method is applied on the variables of consumer post-purchase behaviour and six predominant factors, namely features and performance, after sales service, appearance and appreciation, resale and convenience, favorable maintenance and mileage and value appraisal are derived. The total average score of these factors treated as dependent variables. These dependent variables act as a base to classify the consumers into predominant heterogenic group. The result of K-Mean cluster analysis is presented below:

Table No. 5
Final Cluster Centers of Consumer Post-purchase Behaviour

	Cluster		
	1	**2**	**3**
Features and performance	3.39	4.31	3.61
After sales service	2.64	4.41	4.35
Appearance and appreciation	2.98	4.52	4.10
Resale and Convenience	3.24	4.47	3.88
Favorable Maintenance	3.73	4.47	3.12
Mileage and value appraisal	3.94	4.69	4.36

Source: Computed data

Table No. 6
Number of Cases in each Cluster

Cluster	1	66.000
	2	308.000
	3	163.000
Valid		537.000

Source: Computed data

From the above table nos. 5 and 6 it is found that the first group consists of 66 consumers (12%) who disagree with after sales service. This indicates that this group is not satisfied with the service rendered. Therefore this heterogenic group is appropriately called "**Expecting Consumers**".

The second cluster comprises 308 consumers (57%) with strong agreeableness for Features and Performance, After sales Service, Appearance and Appreciation, Resale and Convenience, Favorable Maintenance and Mileage and Value Appraisal. Hence this group is known as "**Delighted consumers**".

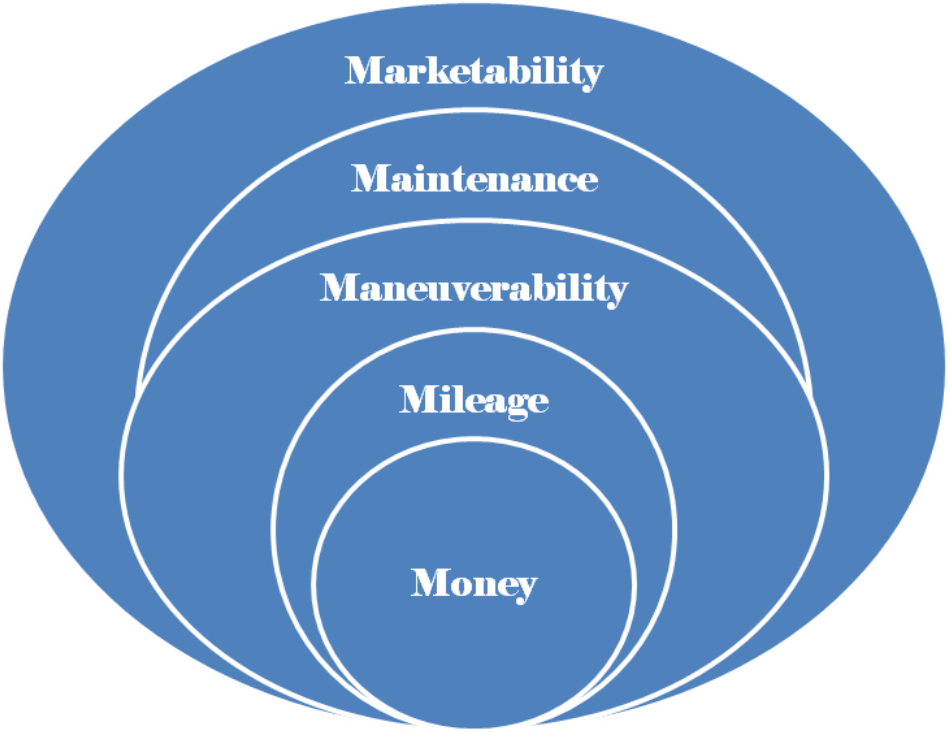
The third cluster comprises 163 consumers (30%) who are appropriate in their post purchase behaviour. Consequently this heterogenic group is called "**Appropriate Consumers**".

The cluster analysis reveals that the consumers post-purchase behaviour of the Chennai city is broadly classified into three groups **Expecting Consumers**, **Delighted Consumers** and **Appropriate Consumers.**

The Researcher Has Brought Out A New 5 M's After Analyzing The Overall Process Of Car Consumers Behaviour, Which Is Of Self Explanatory

Figure No: 1

5 M's of Maruti Car Attributes



Summary of the Findings

❖ The female consumers are highly influenced with the innovative features, service viability and external influence. It also determined uniquely that the female consumer is meticulous about brand and price value, marketability benefit and augmented attributes. It revealed that the female consumers have got high influence towards enterprising dealers, safe and efficient and conducive economy.

❖ The predominant factors of post-purchase behaviour comprises features and performance, after sales service, appearance and appreciation, resale and convenience, favorable maintenance, mileage and value appraisal which are the major rewarding aspects on the post-purchase behaviour of car consumers

❖ The cluster analysis of post-purchase behaviour indicate three groups such as expecting consumers (12%), delighted consumers (57%) and appropriate consumers (30%).

❖ The demographic factors such as age, gender, income, education, area of residence, type of family, type of residence, occupation, marital status, number of family members are well associated with the clusters of expecting consumers, delighted consumers and appropriate consumers and do not differ significantly with post-purchase behaviour of car consumers.

Suggestions

❖ Fuel efficiency and environmental issues have moved to the forefront in the minds of consumers and factors including global warming, fluctuating gasoline prices, and proposed legislation to increase fuel efficiency and reduce CO2 emissions are the big concerns for the car consumers.

❖ The importance of incentives as a deciding factor has declined for the past several years, indicating that consumers today seem less interested in gimmicks when it comes to their car purchases. When consumers are in the buying cycle they can make a difference in how they rank the factors that influence their vehicle choice

❖ Five important attributes such as Value for Money, Mileage, Maneuverability, Maintenance and Marketability are identified as the most influencing factors in choosing cars. These factors may be given due importance to maximize their sales.

❖ The company could increase the availability of diesel engine models. Since the consumers prefer light weight engine, the company can extend its KB engine to other models too.

Conclusion

The present study is aimed at examining the consumer post- purchase behaviour with the help of background literature and survey method, it is found that innovative features, service viability and dealers service capabilities are the key factors highly influencing the consumers to buy a car and consumers are extremely satisfied with the features and performance of the car. The brand also carries very good appearance and appreciation in the minds of consumers and they are also delighted towards resale and convenience factors.

The prime objective is to meet the growing demand of a personal mode of transport, which is caused due to lack of efficient public transport system. It changed the 4Ps of marketing mix into 4Cs.Product to Customers Solution, Price to Customer's cost, Place to Customer's convenience and Promotion to Customer's Communications. Things are now changing with LPG polices and disinvestment; the real competitions has already began. The smarter will certainly will be the next leader, but till then...Maruthi is going to be brand on which customers will always…..COUNT ON.

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WE ARE NOT ONLY DOING BUSINESS!: AN INTROSPECTION ON CORPORATE SOCIAL RESPONSIBILITY (CSR) OF SELECTED INDIAN COMPANIES

*Dr. Nanjunda

Abstract

The magnitude of CSR emerged significantly in the last decade in India. Since business houses required to do business in the society it would be their obligation to share small portion of their profit for betterment of society to help the excluded section of the country. To relate fundamental business philosophy to make CSR sharper, smarter, and focused is what really matters and is the chore for ahead. However according to the new bill it would mandatory on the part of the companies to involve in social causes. Indian companies also involved in various CSR activities. Some of the big corporate like Infosys, WIPRO, TATA, have become a kind of role model in CSR activities in India. TATA group spending more than 40% of its profit for social service. It should be an example for other companies. Recent Government bill on CSR is a good move to make mandatory on the part of the companies to spend small portion of the profit on social causes. However it should not be a mere exercise to escape from the different taxes to be remitted by the companies to the Government exchequer This study conducted by choosing both Nifty and Non nifty Index Companies (small and medium scale) to reveal their perception and execution of different CSR activists in the country using field work and literature review methodology and it concludes that the local business houses should comprehend their obligation towards giving back to the society.

Introduction

In India, the ethical and moral model initiated by Mahatma Gandhi during 1930s is well known which affirmed the responsibility of family-run-businesses conducting social and economic activities. Corporate social responsibility has no standard definition. However, we can generally define that it is a type of contribution/s from the corporate houses out of their hug profit to the various aspect of social development of the society. Whatsoever business houses functions in the domestic and global economy. They have to respond the local social needs in which they are working. On other hand they have

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to also address the needs of the share holders demands on time. Corporate houses are basically aimed to make maximum profit out of their business. They are not the charitable institutes. However, sometime they may need to fulfill corporate accountability, responsibility and stewardship. In a most philosophical meaning we can say since corporate are working in the society they must (?) address the social problems by sharing their small portion of their total profit. Hence, through their social interventions corporate not only get social reorganizations but also good branding. Because it is widely found that any general decision of corporate will impact upon society & environment in one way or other. Good CSR increases reputation & branding of any business house.

The world business council for sustainable development in its publication defines "CSR means Making Good Business Sense", Next Holme and Richard Watts, used the following definition. "Corporate Social Responsibility is the long-lasting obligation by business to behave ethically and donate to economic development while improving quality of life of the workforce and their families as well as of the local community and society at large". CSR activities in today's India may classified under two headings

1. CSR activities normally taken by the corporate giants &
2. CSR activities taken by the small and medium scale enterprises.

This classification will be based on commitment and transparency is maintained inside the companies. Recently Central Government has issued a notification to spend 2 to 5% of the company's net profits on CSR activities to all big corporate giants. This had mixed reactions from many corporate people across the country. Some of them have welcomed the decision while other has criticized the move. They opined Government should not make CSR as a mandatory. Even through Government intension is good, before finalizing the bill Government would require to consult the business people to seek their opinion. There should be no hurry to bring such bill in the country. Also small and medium scale industry should be a part of the CSR. Even under global economic recession India's economy is fast growing at the rate of 8.3%. Indian market is an attractive center for many global companies for huge investment. India's recent economic reforms has attracted in increasing the foreign direct investments to the country. It is an opportunity for more companies to enter into India thereby we can expect more CSR in the days to come. In this globalization period CSR is getting a new concept. CSR has given a new brand image to the companies for their market. But is generally felt that association with social relevant causes should not be just for tax exemption exercise of the companies. Some study reports have revealed that CSR activities has increased consumer loyalty, company image, marketing . In a country of having severe poverty, illiteracy and other serious problem, government alone can't solve these problems, corporate also joint hands with the government. Whatever rules Government can bring. The obligation must beyond the statutory. Companies must voluntary involved with strong social commitment. It is also found that majority of the Indian customers would prefer the companies involving in social issues. Also consumers are ready to pay more for such products of companies involved in social causes (Gupta. S. & Sharma. 2009).Companies' social involvement also helps for inclusive growth and eradicates social exclusion in the country. Companies' social presence will help the company in increasing stronger financial performance, social accountability, reputation and branding etc. This is the time to think to involve small and medium scale industries to enter into CSR also. They can take-up small projects at local level using their business presence and network. Also they can share their human and technical skills with the local NGO's. Even they can train the NGO's also. Still it is a dearth need of CSR in some untouched sectors including human rights, poverty eradication, rehabilitation, training, tribal development, etc which need more money and time.

As per India concerned CSR is not a new issue. Some of the big corporate like TATA group, ITC, Bharat Petroleum are involved in various social issues in India. It is found that in some sector corporate are more involved in CSR activities than Government. In a recent survey Bharath Petroleum and Maruthi Udyog came on top with 134 points each in CSR activities, Also Recent report found that a sum of Rs. 30,000/- crore have spent by the various corporate on social expenditure, while only Steel Authority of India has spent 20 million US dollar in various CSR activities. Tata Steel has spent 30 Million US dollar on various social issue, However there is no official statistics on exact expenditure by the various medium level companies on CSR.

Aim and Objective of the Study

Broader Objective

The broader aim of the current study is to reveal the perception and execution of CSR activities and, why and how companies spends on CSR and their problem thereof ;

Specific Objectives

1. To find out the organizational behavior of the companies towards philanthropy.
2. To reveal the various philanthropic activities of the studied companies

Research design: A total of 10 Nifty Index Companies and 10 Non nifty Index Companies (small and medium scale)were selected for the current study. Next, 25 Managers and other high-level officials for the studied companies were also surveyed using questionnaire. Both primary and secondary data were collected through different questionnaires. Secondary data was collected through company's website and other resources, Data were analyzed using SPSS software.

Result and Discussion:-

TABLE-1-Companies and CSR Activities

Response	Nifty Index Companies		Non nifty Index Companies		Total	
	f	%	f	%	f	%
Social Accountability	30	30	19	19	49	19.02
Humanitarian ground	29	29	40	40	69	35.78
For good image and branding	21	21	20	20	41	23.2
For Exempting from Tax	20	20	21	21	41	23.3
Total	100	100.0%	100	100.0%	100	100.0%
X^2=1.206; P<.168			X^2=14.19; P<.000*		X^2=21.03; P<.000*	

*Non nifty Index Companies (Small and Medium Enterprises)

TABLE-2-Common Social Sector/s Companies Involved

Response	Nifty Index Companies		Non nifty Index Companies		Total	
	f	%	f	%	f	%
Rural education	39	39	49	49	88	57.5
Health	19	19	13	13	32	11.4
Livelihood	11	11	10	10	21	9.4
Infrastructure	20	20	21	21	41	13.5
Skill training	11	11	7	7	18	10.3
Total	100	100.0%	100	100.0%	100	100.0%
X^2=2.226; P<.068			X^2=24.09; P<.000*		X^2=22.53; P<.000*	

TABLE-3-Obstacles Involved for Companies for CSR Activities

Response	Nifty Index Companies		Non nifty Index Companies		Total	
	f	%	f	%	f	%
Noncooperation by the share holders	22	22	38	38	60	31.4
Not having enough fund	31	31	26	26	57	30.3
Delayed Procedures	34	34	24	24	58	29.4
Non Interested	13	13	12	12	25	10.5
Total	100	100.0%	100	100.0%	100	100.0%
X^2=3.66; P<.198			X^2=29.09; P<.000*		X^2=10.63; P<.000*	

TABLE-4-Reasons for not Choosing NGOs as Partners

Response	Nifty Index Companies		Non nifty Index Companies		Total	
	f	%	f	%	f	%
Fake NGOs are more	53	53	38	38	91	46.5
Mishandling money	31	31	26	26	57	29.3
Not well trained	11	11	24	24	35	19.5
Other	5	5	12	12	17	11.2
Total	100	100.0%	100	100.0%	100	100.0%
X^2=2.601; P<.108			X^2=27.159; P<.000*		X^2=21.173; P<.000*	

TABLE-5-Companies' Different Approaches for CSR Activities

Response	Nifty Index Companies		Non nifty Index Companies		Total	
	f	%	f	%	f	%
Having internal project of our own	46	46	38	38	68	41.5
Collaborating with the Government agencies	31	31	26	26	57	34.2
Direct funding to the NGOs	18	18	24	24	8	14.0.
Other	5	5	12	12	3	11.5
Total	100	100.0%	100	100.0%	100	100.0%
X^2=0.616; P<.198			X^2=19.07; P<.000*		X^2=3.573; P<.000*	

TABLE-6-Public Demand for Socially Responsible Behavior fromIndustries

Response	Nifty Index Companies		Non nifty Index Companies		Total	
YES	57	57	37	37	94	54.6
NO	43	43	63	63	106	46.4
Total	100	100.0%	100	100.0%	100	100.0%
X^2=1.666; P<.0.98			X^2=1.099; P<.000*		X^2=20.103; P<.000*	

Discussion

Regarding reasons for company's involvement in CSR work, 19% of them felt social accountability is the main reason where as 35% of companies felt it is because of humanitarian ground only. Furthermore, 23% of them have opined CSR activities may domestically increase their brand image of the company and same percentage of the companies admitted they donate fund just for tax exemption and whereas few companies felt they are involved in CSR activities not for any kind of tax exemption. From the above facts it is found that few companies felt CSR is a commitment towards society whereas remaining companies said CSR is a kind of social responsibility on -behalf of their employees and the share holders (**Tab-1).**

In the sector wise analysis majority of them are showing interest to donate for rural education sector. While 11% of them are working in health sector where as some of them have been involved in social infrastructure (13%). Big companies are showing interest towards the rapid development of the rural community. It is found that majority companies believed that education is the way for the sustainable and inclusive development (**Tab-2**). Further it is established that many companies have their own internal problems regarding spending money on CSR. In some cases share holders will not co-operate with the management for CSR activities. Some of the companies expressed their helplessness for not having enough fund. Certain CEO's felt delayed internal procedures hampers the CSR activities of their respective companies (**Tab-3).** It is revealed that 71% of companies have clear cut CSR policies. Still they are not spending even more than 0.5% of their total profit!. For probing reasons for not choosing NGOs as partners, it is revealed that majority companies not ready to believe NGOs. Because NGOs have already lost their reputations. Also they felt fake and unprofessional NGOs are more common in the society (46%). Some the CEO's felt NGOs normally mishandles money **(Tab-4).** This study also found that 38% of the companies would like to collaborate with the local NGO's, where as remaining companies are having their own channel to reach the needy. It is found that 43% of them showing interest to join with the Government agencies in implementing welfare projects. Remaining of them not having faith in the Government system because of unbridled corruption. 14% of them are directly funding to the NGOs. Next, 33% of the corporate have running their own foundation/s to help the local community (**Tab-5).**

Apart from these facts, our study has also found that only 67% of the companies believe that they should follow ethics in business and remaining companies have agreed that business means just making money. It is found that 21% of them have been involved in part time CSR work when they get more net profit though their usual business in given financial year. However 43% of the companies are sharing their technical resource with the established NGO's. Only 41% of companies welcomed the recent CSR bill moved by the Government. Next,35% of them said CSR should not be a statutory obligation. Subsequently, 49% of the companies felt contribution to a social cause is a kind of long term investment. It is also found that 63% of the companies are educating their employees about social responsibilities. Among the studied corporate around 17% of them are not ready to come to the limelight about their donations they better would like to remain ananimus.

Conclusion.

Even though certain Indian corporate sectors have involved in CSR activities it is not enough when compare to their financial capacity. Companies should voluntarily involved in a social cause rather than expecting exempting from the tax benefits of the government. Companies should try to avoid unnecessary expenditure for publicity and they can make their presence in the society through their social concern. Some of the big corporate like Infosys, VIPRO,TATA, have become a kind of role model in CSR activities in India. TATA group spending more than 40% of its profit for social service. They should be an example for other type of companies. Even though recent bill on CSR of the government is a good move we can't completely depend only on voluntary corporate interventions in various social issues. Also Govt cannot escape from its public responsibility. Public enterprises in India have already begun spending 5% of its profits for social causes. Corporate's can initiate their own social projects or they can join hands with reputed NGO's. The need of the hour however is to make the local business houses comprehend their obligation towards giving back to the society. The crack seems to lie in the understanding and positive reception of importance of CSR in the overall scheme of things.

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IMPACT OF SHARED VALUE CONCEPT ON THE SUSTAINABLE LIVELIHOOD OF COMMUNITIES – A CONCEPTUAL STUDY.

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Abstract:

The concept of shared value is polices and operating practices that would enhance the competitiveness of a company, while simultaneously advancing the economic and social conditions in the communities in which it operates. In simple words, the concept of shared value brings about a win-win situation for both the company and the communities in which the company operates. Hence the research proposal aims to analysis the concept of shared value in a descriptive form. It is based on data collected in Madhalli, Mandya District of Karnataka, India. By analyzing the concept of shared value, one will understand the various shared value strategies that are practiced by businesses and its impact on the communities where they operate. Since the concept of shared value also highlights or rather tends to brings about the concept of sustainable livelihood, the study would also analysis the same.

Introduction:

A business needs a successful community, not only to create demand for its products but also to provide critical public assets and a supportive environment, and a community needs successful business to provide jobs and wealth creation opportunities for its citizens (Michael E. Porter and Mark R. Kramer, 2011). Sanjeev Saxena in his book, "Politics, Ethics and Social Responsibility of Business" points out that business enterprises work within a society, affect and get affected by society. No business enterprise can survive in isolation to society. Society and business both are related to each other in multiple and complex ways. Business being a creation of society, uses and employs resources to attain its economic objectives on one hand and provides goods and services, employment, investment avenues to society on other hand. Similarly society provides the resources, manpower for enterprises and in turn expects business to be responsible for its actions and operations (Sanjeev Saxena, 2004, pp. 17). Saxena also argues that business therefore, owes a responsibility towards society to carry on its operation in a manner, which is not contradictory to the interest of society (Sanjeev Saxena, 2004, pp. 29). Hence the question of how socially responsible a business is, keeps recurring. Kenneth R. Andrews in his book, "The Concept of Corporate Strategy"

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points out that by social responsibility we mean the intelligent and objective concern for the welfare of society that restrains individual and corporate behaviour from ultimately destructive activities, no matter how immediately profitable, and leads in the direction of positive contributions to human betterment, variously as the latter may be defined (Kenneth R. Andrews, 1994, pp. 29).

Magazine, September 13, 1970). Porter and Kramer also argue that in recent years businesses are increasingly viewed as a major cause of social, environmental and economic problems,

However, Milton Friedman in The New York Times Magazine, points out that the social responsibility of business is to increase its profits (Milton Friedman, The New York Times and companies are widely perceived to be prospering at the expense of the broader community. Even worse, the more business has begun to embrace corporate responsibility, the more it has been blamed for society's failure and hence the legitimacy of business has fallen to levels not seen in recent years (Michael E. Porter and Mark R. Kramer, 2011). There are varied criticisms regarding the fact that corporations or rather companies or rather business organisations are prospering at the greater expense of the communities where they operate. There are many criticisms regarding the legitimacy of companies exploiting unassuming public to attain their corporate goals of profitability. Societies everywhere are found to be ripped off their natural wealth, which results in creating economic and social imbalances. Hence, the current trend of globalization has brought a realization among the firms, that in order to compete effectively in a competitive environment; they need clearly defined business practices with a sound focus on the public interest in the markets (Gray, 2001).It is with this regards that Porter and Kramer argue that the solution lies in the principle of shared value.

Hence, this study aims to understand the concept of shared value in enhancing corporate competitiveness and their impact on communities where they operate. The proposal presents the literature reviewed, formulated case-study, the methods to be employed and data collection, its significance and limitations.

Review of Literature:

Understanding the concept of shared value:

The concept of shared value was first introduced in the Harvard Business Review article "Strategy & Society: The Link between Competitive Advantage and Corporate Social Responsibility" by Michael E. Porter and Mark R. Kramer in 2006. The authors define the concept of shared value as "polices and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates (Michael E. Porter and Mark R. Kramer, 2011). The concept of shared value brings about some kind of an economic value in a way that also creates value for society by addressing its needs and challenges. Porter et al contend that shared value is not social responsibility, philanthropy, or even sustainability, but a new way to achieve economic success. The authors also opine that the concept rests on the premise that both economic and social progress must be addressed using value principles, where value is defined as benefits relative to costs, not just benefits alone. Porter et al also opine that shared value is not about personal value or “sharing” the value created by firms which is a redistribution approach but instead, it is expanding the total pool of economic and social value.

Porter et al are of the opinion that companies or rather corporations can create shared value opportunities in three key ways, firstly by reconceiving products and markets, secondly by redefining productivity in the value chain, and thirdly by enabling local cluster development (Michael E. Porter and Mark R. Kramer, 2011).

The authors in their December 2006 Harvard Business Review article “Strategy & Society: The Link between Competitive Advantage and Corporate Social Responsibility”, give the example of Nestle which worked closely with farmers of the Moga Milk District in India, investing in local infrastructure and transferring world-class technology to build a competitive milk supply chain that simultaneously generated social benefits through improved health care, better education, and economic development. Porter and Kramer in their January-February 2011 Harvard Business Review article “Creating Shared Value: How to reinvent capitalism-and unleash a wave of innovation and growth”, further clarify the concept of shared value by giving the example of fair trade movement in purchasing, where shared value perspective focuses on improving growing techniques and strengthening the local cluster or supporting suppliers and other institutions in order to increase farmers’ efficiency, yields, product quality which leads to a bigger amount of revenue and profits that benefits both farmers and the companies that buy from them.

Hence, it is with this regards that the concept of creating shared value can bring about or rather highlights the concept of sustainable livelihoods. However, to further understanding whether the concept of shared value brings about the concept of sustainable livelihood, it is also important to understand the meaning of sustainable livelihoods. The following section of this chapter will deal with understanding sustainable livelihood.

Understanding Sustainable Livelihood:

According to Chambers and Conway (1991) sustainable livelihoods can be understood as “that which comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain and enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to the other livelihoods at the local and global levels in the long and short term”.

Others like Titi and Singh (1999) place people at the centre of focus. They define livelihoods as: “people’s capacity to generate and maintain their means of living, enhance their wellbeing and that of future generations. These capacities are contingent upon the availability and accessibility of options which are ecological, economic and political and which are predicted on equity, ownership of resources and participatory decision making”. An analysis into this definition highlights the importance of building people’s capacities for sustaining livelihoods.

According to the Sustainable Livelihood framework, which also places people, particularly rural poor people at the centre of a web of inter-related influences that affect how these people create a livelihood for themselves and their households, livelihood is determined by, “the possession of these forms of capital (natural, physical, social, human and financial) and access to these capitals. Natural capital includes land, water, and other natural resources, Physical is the ownership of assets, availability of infrastructure, and technology; Social capital forms the networks between people that influence their livelihoods, Human capital includes skills (occupational and non-occupational), education, health and Financial capital is the availability of credit systems and financial resources”.

Case-study on the concept of shared value in The Karnataka Co-operative Milk Producers Federation Limited:

In order to have a first-hand in-depth knowledge of the subject understudy, the researcher conducted a primary survey and a case study was formulated.

The Karnataka Co-Operative Milk Producers’ Federation Limited (KCMF) is the largest cooperative dairy Federation in South India, owned and managed by milk producers of Karnataka State. KCMF has over 2.13 million milk producers in over 11443 Dairy

Cooperative Societies at village level, functioning under 13 District Cooperative Milk Unions in Karnataka State which procure milk from Primary Dairy Cooperative Societies (DCS). The mission of the Federation is to usher rural prosperity through dairy development.

KCMF keeping in mind rural prosperity setup a dairy cooperative society at Madhalli. Prior to the establishment of a dairy cooperative union by The Karnataka Co-Operative Milk Producers' Federation Limited (KCMF) in Madhalli, the farming community had with them the possession of agricultural land, and cattle. Agriculture was their main livelihood. With these they were content, but however the farmers whose main livelihood was agriculture could not save money adequately, their children were not sent to sophisticated schools, and poverty was a common feature. Their income was very irregular, as they depended on the monsoons for better agricultural produce. Rajanna a local farmer said he hardly made thousand five hundred Indian rupees a week.

However, after the establishment of the dairy cooperative union by KCMF, there was a drastic change that was noticed amongst the farming community of Madhalli. KCMF introduced a system where the farming community could sell milk in return for money from the union every week. The union offered twenty Indian rupees for one litre of milk. On an average a farmer who owns a cow can sell or rather can expect to produce approximately 140 litres of milk in a week, he in return would get approximately 2800 Indian rupees a week that is almost 11200 Indian rupees a month. (Each farmer has at least a minimum of three cows). This amount can vary in accordance to the amount of milk a farmer would give to the dairy cooperative union and would also depend on the number and the breed factor of his livestock.

While questioned what the money would be made use for, they said that it would be used to purchase better feed for cattle, used for their own family expenses, used to upgrade farming equipment, and so on. Above all, it ensures a means of regular income which has also increased the level of disposable income.

On asking how such an initiative benefited the dairy cooperative union authorities, they said firstly it has helped to create a huge network of milk supply chain within Karnataka state, and secondly has helped in the production of various dairy products for trade within the state of Karnataka, and has also brought about exports.

Hence, it is a clear indication that the concept of shared value has brought about mutual benefits for KCMF and the community (Farming community of Madhalli) where it operates.

Significance of the study:

With the changing business environment, corporate governance is also undergoing change. Of late, it is an accepted fact among corporations or rather business organisations that in order to grow, survive and compete successfully, effective tools must be developed and the accountability factor towards the stakeholders must be recognized. The concept of shared value is found to be a very effective tool in enhancing the competitiveness of a business organization.

Hence it is appropriate to ask;

How do corporations or business organizations practice the shared value concept to improve their competitiveness?

The study also proposes to analyze the impact of the shared value concept of corporations on business associates and on the communities where they operate. Since the concept also highlights or brings about sustainable livelihood, the study also aims to analysis the same. Hence the question to be asked with this regard is;

What is the effect of shared value practices on the communities where corporations operate?

The study will be of immense significance for government policy making, academicians, companies, Non-governmental organisations, and the media and so on. The study will also have national and international significance.

Research objectives:

Considering the wide significance of the undertaken research, the following are the objectives the study will help achieve:

1. To examine shared-value practices existing or rather prevailing in KCMF.

2. To study the effect of shared-value practices of KCMF on the communities in which they operate.

3. To examine the effect of shared-value concept in enhancing corporate competitiveness in communities where they operate.

Research methodology:

The proposed study will follow the qualitative research method.

Universe:

The universe consists of the farming community of Madhalli, The Karnataka Co-Operative Milk Producers' Federation Limited (KCMF), and their associates.

Data collection:

The data used was both primary and secondary sources.

The primary source of data collection was interviews conducted at Madhalli, in May 2012. The respondents include the farmers and officials of the dairy cooperative union in Madhalli.

The secondary source of data collection includes data from the organisation interviewed, reports, journals, blogs, and the World Wide Web.

Sampling strategy:

For identifying villages, purposive sampling was used.

The criteria for selecting the village primarily included the following:

1. Farming as an important livelihood.
2. The presence of other livelihoods.
3. The possession of cattle as an important source of livelihood.
4. The role and the extent of intervention by the organisation or rather the corporation (KCMF).

For identifying respondents, purposeful sampling was done. Respondents were identified based on their ability to contribute important information for the study.

Tools:

For the proposed study, the researcher collected data using interview methods, and focus group discussions in the community. For the officials semi-structured interviews were conducted.

Sample Size:

Sample:	Number of respondents:
Farming community (farmers)	20
Organisation (KCMF)	1
Officials of dairy cooperative union	5

Limitations of the study:

The research is contextual or rather circumstantial. The findings from the identified village may not be the same, when research conducted in other villages. The livelihoods of communities also may differ. The number of organisations may also vary, and may have different purposes themselves.

Findings, Conclusion and Suggestions:

The findings are based on the pilot research conducted by the researcher at a village called Madhalli, in Mandya district of Karnataka, India. Prior to the establishment the diary cooperative union by KCMF, the farming community could not save adequate money, as there was no additional income. The farmers' children were not sent to sophisticated schools, and there was poverty that was experienced by the families at Madhalli. Their income was also very irregular, as the farmers depended heavily on the monsoons for irrigation purposes.

However, after the setting up of a cooperative union, there was a steady and realistic change that was noticed. There was a means for regular income, which brought about disposable income. To be precise there was the multiplier effect that was observed. The farmers diversified their activities, where they started to invest in Sericulture or silk farming, and mulberry plantations. The farmers also recognised the importance of education and started sending their children to schools.

With regards to KCMF, firstly it helped to create a huge network of milk supply-chain within the state of Karnataka. Secondly, it helped KCMF in the production of various dairy products, for distribution in the state and also brought about export activity.

Hence it is could be concluded that the concept of shared value has brought about a win-win situation for both the company (KCMF) and the community (farming community of Madhalli) where the company operates.

Based on the findings and conclusions, a few suggestions are as follows:

1. KCMF could help in technological transfer, so that there could be proper mechanised collection of milk.

2. KCMF could also help farmers produce different milk products.

3. KCMF could also help in the promotion and distribution of these milk products locally and also bring about export.

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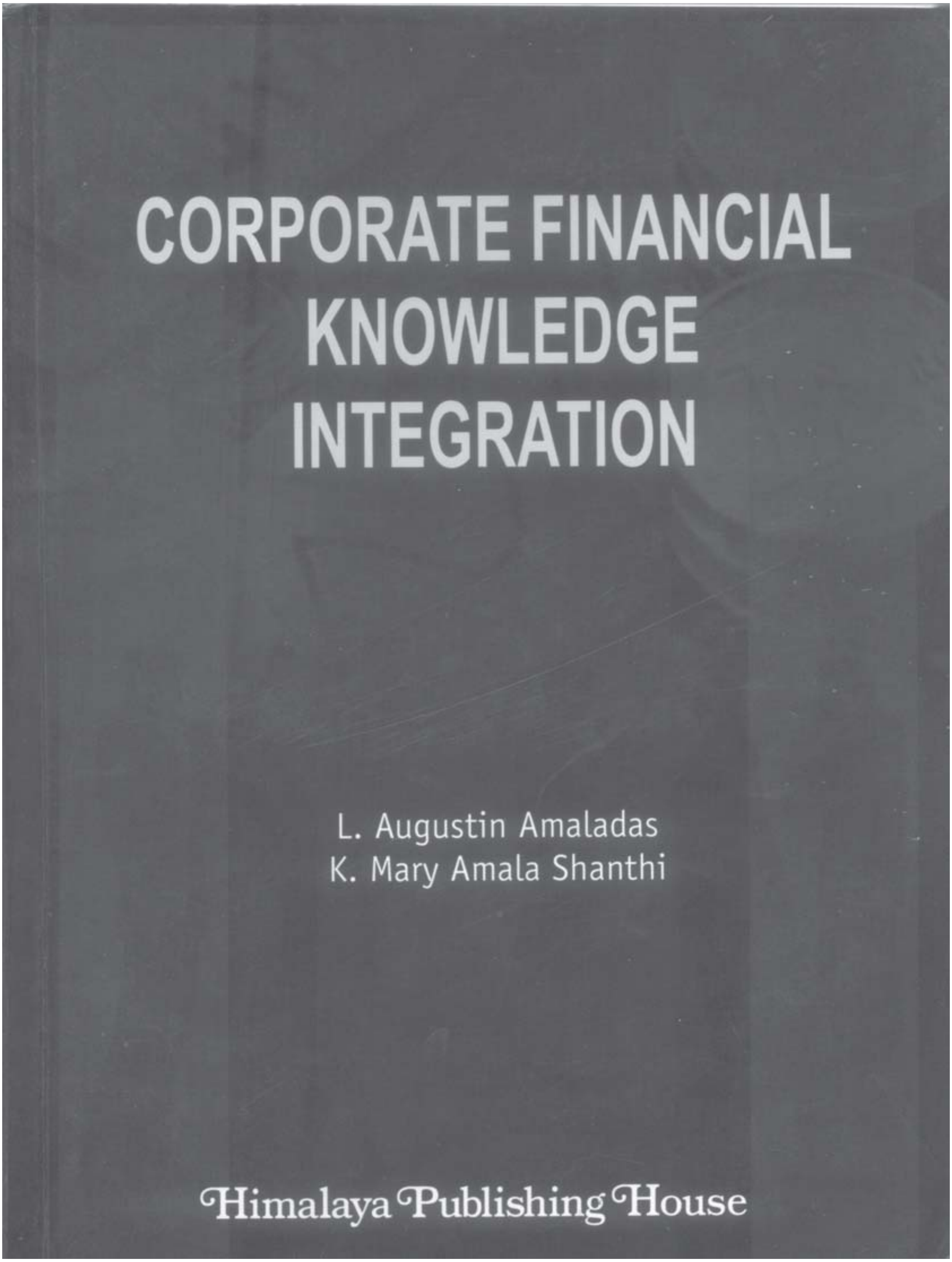
CORPORATE FINANCIAL
KNOWLEDGE
INTEGRATION
L. Augustin Amaladas
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Book Review

"Corporate Financial Knowledge Integration" ISBN: 978-93-5051-688-1

Author: Prof. L.Augustin Amaladas and Prof. K.Mary Amaladas

Published By: Himalaya Publishing House, Mumbai.

Year of Publication: 2012

This is a review of the first edition of the book, published in 2012 and titled "Corporate Financial Knowledge Integration" written by Prof.L.AugustinAmaladas and Prof.K.Mary Amala Shanthi . The former is the Head of Department of Commerce at St Joseph's College of Commerce Bangalore (SJCC). Both are well established educationists and have covered the subject matter of the book in classrooms across several institutions across Bachelor Degree courses in Commerce.

The core principles of Corporate Finance are based on simple common sense and have evolved over time. Though the formal study of Corporate Finance is only a few decades old, businese have been in place for much longer. The book attempts to bring together the two main pillars for the study of this subject, namely Accounting and Finance. The authors have attempted to present to the student reader an overall approach that encompasses a "holistic" approach rather than the traditional presentation in a piece-meal manner of the components that govern how a business should be run from a financial point of view.

This book firmly belongs to the genre of college textbooks for students of Commerce and Business Administration and will also be useful to practitioners of corporate finance at the junior and middle levels. The simplicity of presentation of concepts and their illustration with examples and appropriate case studies is a compelling argument towards the novelty of this book, besides the unified approach that is sought to be presented. The analytical and numerical sections have been treated with a light-touch and the formulae and definitions have been listed. For more serious students, a detailed analysis may be required. For example, the inverse relationship between the price of bonds and interest rates and the logical framework for this would cement the understanding of the student on a lasting basis.

This textbook would be a basic and comprehensive primer for those undergraduate students who wish to specialize in Finance and pursue a Master's Degree to further their academic and professional interests. The Authors have included previous years question papers and have provided solutions. The Question Papers were those served at SJCC.For the serious student of the subject, the book would serve as a primer for a further detailed understanding and logical grounding of the concepts covered.

For future editions, a glossary of terms used as well as an index would be useful additions. Also, further elaboration of the concepts covered in the text would be an added embellishment. The crucial concept of WACC (Weighted Average Cost of Capital) can be supplemented with explanations of the importance of the concept and how this measure can be used to value and measure companies from an investment and or valuation viewpoint.

Overall, the book is a comprehensive primer which incorporates most concepts covered over the under-graduate courses of Accounting, Taxation and Corporate Finance into one single volume. In other words, the breadth of concepts of the above courses have been covered at the cost of depth of analysis, which can be supplemented either by further reading or perhaps a sister volume by the Authors for the next edition.

Reviewed By Prof. Ravi Asst.Professor

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