Research Paper Management

Importance of Customer Cost Element of 4C Based Marketing Mix

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KEYWORDS :

Marketing is all about satisfying Customer's needs profitably in a socially responsible manner. Marketing has evolved through traversing three major eras of: Production Orientation, Selling Orientation and Marketing Orientation. Marketing concept is a management philosophy where the Customer is the pivotal point.

The concept of Customer Cost was developed by Lauterborn (1990) while developing the customer oriented Marketing Mix- the 4C concept. 4C model replaces the earlier 4Ps of Marketing Mix, here the focus is on customer and the current paper is all about the second C of this model i.e. Customer Cost or Price in earlier 4P model. The Customer Cost concept is based on the fact that customers are more concerned with the total cost of acquiring a solution of their problem (Product or Service) rather than the price being charged for the Solution (Product or Service) offered by the Company (Moller, 2006), Customer Cost is a assumed to be a better approach as customers are interested in it. Customer Cost concept not only includes the price of the product but also includes other associated costs in addition to the Price of the product or service (Goi, 2009). Customer Cost means the total expenditure a customer is going to spent for purchasing a Customer Solution[1]. Thus Price represents only a part of total cost or Customer's Cost (Kotler, Armstrong, & haque, 2012).

In the context of Life Insurance, the price of a ULIP is determined by the offer price or NAV (Net Asset Value), in case of Traditional product price is determined by actuary. Price or Customer Cost is the yardstick and acts as most influential factor in a buying decision. Specially in the context of Life Insurance Price or Premium or Customer Cost plays a vital role both from the point of view of business firm as well as customer. (Yogakshema, Jan, 09) Rangachary, ex- Chairman of IRDA, in his article states that ―the principle of differential pricing is necessary to sell products in rural areas.

Objective:
To ascertain the gap between the degree of 'Customer Cost Dimension Expected' and the degree of 'Customer Cost Dimension Experienced' of 4C based Marketing Mix with respect to Life Insurance.

Hypothesis
There is no significant difference between the 'Degree of Customer Cost Dimension Expected' and the 'Degree of Customer Cost Dimension Experienced' of 4C based Marketing Mix with respect to Life Insurance in Silchar.

Description of items for measuring Gap Analysis on Customer Cost Dimension:
A list of 27 items was identified to measure the degree of Customer Cost Dimension Expected and the degree of Customer Cost Dimension Experienced of 4C based Marketing Mix.

Respondents were requested to respond to item number 1 to 27 under Questionnaire III in a 5 point scale in respect to their expectations as well as their experiences, to what extent they are agree or disagree with respect to items selected for the study under five categories i.e., Strongly Agree (SA), Agree (A), Neither Agree Nor Disagree (NAND), Disagree (DA), Strongly Disagree (SDA), using tick marks only. Then these categories were assigned scores as Strongly Agree (SA) equals to 2, Agree (A) equals to 1, Neither Agree Nor Disagree (NAND) equals to 0, Disagree (DA) equals to -1, Strongly Disagree (SDA) equals to -2, the data so generated were subjected statistical treatment using SPSS. The scores of individual items by a single respondent were totaled. This total represented the 'Degree of Customer Cost Dimension Expected' of that single respondent. Similarly, the total of the 'Degree of Customer Cost Dimension Experience' was derived.

Reliability statistics of Expectation and Experience on Customer Cost Dimension
Reliability denotes the consistency and stability of an instrument. Cronbach's Alpha test was used to measure the reliability of the scales used for measuring the 'Degree of Customer Cost Dimension Expected' and the 'Degree of Customer Cost Dimension Experienced'. The test (Cronbach's Alpha) was calculated using SPSS 20.0 and the results are shown below in Table No. 1. The Cronbach's Alpha coefficient values were found to be above 0.70. Therefore, the scales used in this study to measure the 'Degree of Customer Cost Dimension Expected' and the 'Degree of Customer Cost Dimension Experienced' were considered as reliably and internally consistent (Nunnaly, 1978; Zikmund, 2008).

Table 1: Reliability statistics of Customer Cost Dimension Expected and Experienced

District Headquarter		Silchar	Decision
A		b	
Cronbach's Alpha	Degree of Customer Cost Dimension Expected	.978	Acceptable
	Degree of Customer Cost Dimension Experienced	.992	Acceptable

Source: Compiled from survey data (Using SPSS 20.0) N= 27.

Normality Test of data of Expectation and Experience on Customer Cost Dimension
One Sample KS test was used to test the Normality of Distribution of the data relating to the 'Degree of Customer Cost Dimension Expected' and the 'Degree of Customer Cost Dimension Experienced' in respect to each of the areas as well as the overall data. The results of one sample KS Test are shown in Table 2. The test revealed that the data distribution does not follow the Normality of sample Distribution. This is because the Asymp. Sig. (2-tailed) values of both the Customer Cost Expected and Customer Cost Experienced were found to be less than 0.05 (at 5% level of significance). From the above analysis it is observed that only non-parametric tests are suitable for studying test of significance of the main hypothesis.

Table 2: One sample KS Test of Customer Cost Dimension Expected and Experienced

		Total of Customer Cost Expected	Total of Customer Cost Experienced
N		384	384
Normal Parameters[a,b]	Mean	6.2057	4.3724
	Std. Deviation	27.67523	33.23309

Most Extreme Differences	Absolute	0.125	0.174
	Positive	0.086	0.153
	Negative	-0.125	-0.174
Kolmogorov-Smirnov Z		2.456	3.408
Asymp. Sig. (2-tailed)		0	0
Monte Carlo Sig. (2-tailed) 0 0		.000c	.000c
		0	
		0	

Source: Compiled from survey data (Using SPSS 20.0) N= 27.

Computation of Test Statistics & Decision of Customer Cost Dimension

Since the data in consideration do not follow normality of distribution, Wilcoxon Sign-rank Test was applied to test the hypothesis considered – "There is no significant difference between the 'Degree of Customer Cost Dimension Expected' and the 'Degree of Customer Cost Dimension Experienced' of 4C based Marketing Mix with respect to Life Insurance in Silchar".

Wilcoxon Signed-rank test revealed that the null hypothesis i.e., "There is no significant difference between the 'Degree of Customer Cost Dimension Expected' and the 'Degree of Customer Cost Dimension Experienced' of Marketing Mix with respect to Life Insurance in Silchar" is rejected (with Sig. Value of .001- calculating using SPSS 20.0), Stating differently there is a significant difference in the population between the 'Degree of Customer Cost Dimension Expected' and the 'Degree of Customer Cost Dimension Experienced'.

Conclusion

Given the Objectives, Hypothesis, and Methodology considered in this paper, it may concluded that there is significant difference between the 'Degree of Customer Cost Expected' and the 'Degree of Customer Cost Experienced' of 4C based Marketing Mix with respect to Life Insurance in Silchar.

Wilcoxon Signed-rank test revealed that the null hypothesis i.e., "There is no significant difference between the 'Degree of Customer Cost Dimension Expected' and the 'Degree of Customer Cost Dimension Experienced' of Marketing Mix with respect to Life Insurance in Silchar" is rejected. Stating differently there is a significant difference in the population between the 'Degree of Customer Cost Dimension Expected' and the 'Degree of Customer Cost Dimension Experienced'.

The findings if the current chapter suggests that for Customer focused product development, the Customer Cost (Price) is an important factor and must be factored into. The Actuary must develop the pricing based on the Gaps (Positive/ Neutral/ Negative) of investors, and the price must be simple, easy and affordable for the individual investors.

References:

1. Allen, R Derek and Tanniru R. Rao,(2010), " Analysis of Customer Satisfaction Data", New Age Publications, New Delhi.
2. Ansari, H. (2006), "Insurance Reforms", IRDA Journal,Vol.IV,No.3, published by C.S.Rao on behalf of Insurance Regulatory and Development Authority.
3. Babakus, E., Pedrick, D.L. and Inhofe, M. (1993), "Empirical examination of a direct measure of perceived service quality using SERVQUAL items", unpublished manuscript, Memphis State University.
4. Bolton, R.N. and Drew, J.H. (1991), "A Longitudinal analysis of the impact of service changes on customer attitudes", *Journal of Marketing,* Vol. 55 No. 1, pp. 1-9.
5. Bajpai G.N. (2005) "Insurance Industry India's Quest for cover", The Journal of Insurance Institute of India,Vol.No.XXXII, July- December, S.J.Gidwani Publication.
6. Banerjee, T.K (2004) "Insurance Regulations in India and Future Directions", The Journal of Insurance Institute of India, Vol. No.XXX, July- December, S.J.Gidwani Publication.
7. Bhat, Ramesh (2005), "Insurance Industry in India: Structure, Performance, and Future Challenges", Insurance Industry in India, Vikalpa, Volume 30 , No 3, July – September 2005.
8. Chopra, P.N(2009), "Managerial Economics", Kalyani Publishers, New Delhi.
9. Das, S.C (2007), "Cost Management Practices in Non-Life Insurance Companies: A Comparative Study", www.insurance.com, dated 04-09-2007,January-June 2007.
10. Dhanam(2008), "Insurance", Business Magazine, June, Reg.no. KL/EKM/ 032/2006-08 RN 44620/87.
11. Economic and Political Weekly (1971), "General Insurance Room for More Efficiency — and Honesty", 15 May 1971, Vol.VI, No.20.
12. Economic and Political Weekly (1994), "Letters to Editor- Privatisation of Insurance Industry", 9 July1994,Vol.XXIX,No.28.
13. Kumar, Dinesh (2004), "Role Model of Branch Manager in the Emerging Scenario", Market Trends, Niseema Publishers, April–June, Vol.VI, No.2.
14. Kumar, Jagendra (2004), "Changing Scenario of Insurance Industry", The Journal of Insurance Institute of India,Vol.No.XXX, January- June, S.J.Gidwani Publication.
15. Kumar,P S, Mohana (1998), " A Hand Book on Research Methodology", Right Publishers, Kudavechoor.
16. Lautherborn, B. (1990). New Marketing: 4ps passes: C takes over. Advertising Age, 61(41), 26.
17. Zhao, X., Bai, C. and Hui, Y.V. (2002), "An empirical assessment and application of SERVQUAL in a mainland Chinese department store", Total *Quality Management*, Vol. 13 No. 2, pp. 241-54.
18. Zhou, L., Zhang, Ye, Xu, Jia (2002), "A critical assessment of SERVQUAL~~–s~~ applicability in the banking context of China", *Asia Pacific Advances in Consumer Research,* Vol. 5, pp. 14-21.
19. Zeithaml, Valerie A., Parasuraman, A. and Berry, Leonard L. (1990), *Delivering Quality Service*, The Free Press, New York, N.Y
20. www.indistat.com
21. www.inflibnet.com
22. www.insurance.keralagov.in
23. www.insurancetimes.com
24. www.economicandpoliticalweekl.com
25. www.irda.gov.in
26. www.keralamonitor.com.
27. www.newindiaassurance.com
28. www.nicl.com
29. www.orientalinsurance.com
30. www.unitedindiainsurance.com

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Review of Arbitrage Pricing Theory

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Introduction to Pricing of Assets

Pricing of Assets refers to valuing the assets at their present values. According to financial Management, every investment that is made by an investor has an element of time of value which states that the value of money decreases as the time goes on. That is a rupee invested today is more valuable than a rupee invested later. Any investment made by an investor has to be valued in terms of present value by discounting it at a discount factor. A discount factor is one which equates the future value of an asset to its present value of investment where the asset is said to be as fairly priced. All assets need not be fairly priced, some may be underpriced and some assets may be over priced. Assets are considered as underpriced when the discounted future value of an asset value is more than the present value of investment on an asset. It is also said to be as overpriced where the discounted future value of an asset value is less than the present value of investment on an asset.

Capital Asset pricing is one of the methods of pricing the securities, which derives the anticipated rate of return on assets based on the assets' risk levels. The CAPM says that the expected return of a security or a portfolio equals the rate on a risk-free security plus a risk premium. If this expected return does not meet or beat the required return, then the investment should not be undertaken. It is a model that describes the relationship between risk and expected return; it is used to price securities. The general idea behind CAPM is that investors need to be compensated for investing their cash in two ways: (1) Time value of money and (2) Risk. (1) The time value of money is represented by the risk-free (rf) rate in the formula and compensates investors for placing money in any investment over period of time. (2) Risk calculates the amount of compensation the investor needs for taking an additional risk. This is calculated by taking a risk measure (beta) that compares the returns of the asset to the market over a period of time and to the market premium (Rm-rf).

Arbitrage pricing theory (APT) is a theory which is investigated by economist Stephen Ross in 1976. This theory is an asset pricing theory and it would bring affect to the pricing of stocks. APT explains that there is a linear relationship between required return and macro economic factors; the sensitivity to changes in each factor is represented by a factor-specific beta coefficient. The asset price should be equal to the expected end of period price discounted at the rate which is called as a beta coefficient according to the model. If the price diverges, arbitrage should bring it back into line**.**

Factors Identified Through Literature Review

Tangjitprom (2012) in his study revealed that macroeconomic variables are less important to predict future stock return whereas stock return can be used to predict macroeconomic variables more. Tunalı (2010) in his research used Granger causality test results which indicate that there is a bidirectional causality between stock returns and Dow Jones Industrial Average; and stock returns and Industrial Production Index; there is a unidirectional causality from US Dollar, International Crude Oil Prices, Money Supply, Import, Total Credit Volume to stock returns; and there is a unidirectional causality from stock returns to Producer Price Index. Iqbal (2012) in his research paper ‘Testing the Arbitrage Pricing Theory on Karachi Stock Exchange’ examined that there is no significant difference between predicted stock returns and actual returns. Sabunwala (2012) with the help of linear regression model examined that domestic inflation (WPI) and exchange rate are the two most prominent factors influencing stock prices. There is no significant causal linkage between the stock prices and IIP, PLR (interest rate) while the fiscal deficit and FII leads the stock price slightly. Gul and Khan (2013) in their research proved that APT does not prove to be effective in predicting stock prices in Pakistan.

Quadir (2012) in his research found out that there is a positive insignificant relationship between treasury bill interest rate and industrial production with market stock returns. Kuwornu (2011) in his empirical research found out that Consumer price index had a positive significant effect, while exchange rate and Treasury bill rate had negative significant influence on stock market returns. On the other hand, crude oil prices do not appear to have any significant effect on stock returns. Khalid (2012) examined that no co-movement exists between variables and Karachi Stock Exchange return. Naik & Padhi (2012) in their research observed that macroeconomic variables and the stock market index are co-integrated and, hence, a long-run equilibrium relationship exists between them. Isenmila and OseErah (2012) revealed that APT macro economic variables can explain stock returns, but not all the variables are significant both in the long run and in the short run.

Mohammad, et al., (2009) explored in their research that after the reforms in 1991, the influence of foreign exchange rate and foreign exchange reserve significantly affect the stock prices, while other variables like IPI and GFCF insignificantly affect stock prices. Acikalin, et al., (2008) proved that changes in GDP, foreign exchange rate and current account balance have an effect on Istanbul Stock

Exchange index. Srivastava (2010) in his work proved that the main domestic macro economic factors affecting the stock market in long run are industrial production; wholesale price index and interest rate. Sharkas (2004) proved that money supply and industrial production showed a positive relation with share price where as interest rates and inflation rates showed a negative relationship with the stock prices.

Wang (2011) investigated that there is a bilateral relationship between inflation and stock prices, while a unidirectional relationship exists between the interest rate and stock prices, with the direction from stock prices to the interest rate. Wang (2010) stated that there is a positive significant relationship between the exchange rates and market return.

Trivedi and Behera (2012) demonstrated that an equity price is significantly related to all the macro economic variables and confirmed the existence of long-run stable equilibrium among the variables. Altın and Sahin (2011) in their research found a wide range of coefficients and signs of macroeconomic variables over stock exchanges. Rosy (2012) examined that forex rate, inflation rate and gold prices are the most significant variables that help in forming models for forecasting the Sensex. Aurangzeb (2012) results indicated that foreign direct investment and exchange rate have significant positive impact on performance of stock market in South Asian countries while, interest rate has negative and significant impact on performance of stock market in South Asia.

From the literature reviewed from various sources, it is evident that arbitrage pricing theory can be used as a model to determine the impact of macroeconomic variables on the market price basing on coefficients derived by the model.

The APT Model

$$E(R_i)=\lambda_0+ \lambda_1 b_{i1}+ \lambda_2 b_{i2}+\ldots+ \lambda_k b_{ik}$$

Where:

λ_j=the return generated by the Macro Economic Factors

b_{ij}=the pricing relationship between the risk premium and the asset; that is, how responsive asset i is to the j th common factor(Expressed as Beta)

The beta coefficients explain the sensitivity in the Market return due to change in Macro economic variables. Thereby it is easy to determine the impact of macroeconomic variables on the Market Price of a share.

Conclusion

Arbitrage Pricing Theory explains the linear relationship between required return and macroeconomic factors; the sensitivity to changes in each factor is represented by a factor-specific beta coefficient. Such a study helps the investor to identify the macro factors that influence the market price of a share and analyze those factors that are relevant and make a wise investment decision.

References

Aurangzeb. (2012). Factors Affecting Performance of Stock Market: Evidence from South Asian Countries. International Journal of Academic Research in Business and Social Sciences, 2(9), 1-15.

Aman Srivastava. (2010). Relevance of Macro Economic factors for the Indian Stock Market. Decision, 37(3), 69-89.

Al-Sharkas. (2004).The Dynamic relationship between macroeconomic factors and the Jordanian stock market. International Journal of Applied Econometrics and Quantitative Studies, 1(1), 97-114.

Anam Gul & Naeemullah Khan. (2013).An application of Arbitrage Pricing Theory on KSE-100 Index; A study from Pakistan (2000-2005). IOSR Journal of Business and Management (IOSR-JBM), 7(6), 78-84.

Gaoxiang Wang. (2010). Effects of macroeconomic factors on share prices. Journal of Chinese Economics and Finance, 10(2), 13-123.

HalilTunalı. (2010).The Analysis of Relationships between Macroeconomic Factors and Stock Returns: Evidence from Turkey Using VAR Model. International Research Journal of Finance and Economics, 57, 169-182

Hakan Altın & Mehmet Şahin. (2011). Macroeconomic Affects on Stock Markets: An Empirical Analysis for Developed, Emerging and Financial Suffering Countries. Middle Eastern Finance and Economics, 13,71-89

John K. M. Kuwornu.(2011).Macroeconomic Variables and Stock Market Returns: Full Information Maximum Likelihood Estimation. Research Journal of Finance and Accounting, 2(4), 49-63.

Karla, Rosy. (2012).Impact of Macroeconomic Variables on Indian Stock Market. The IUP Journal of Financial Risk Management, IX (1), 43-54.

Muhammad Khalid. (2012). Long-Run Relationship between Macroeconomic Variables and Stock Return: Evidence from Karachi Stock Exchange. School of Doctoral Studies (European Union) Journal,95-105

Muhammed Monjurul Quadir. (2012).The Effect of Macroeconomic Variables on Stock Returns on Dhaka Stock Exchange. International Journal of Economics and Financial Issues, 2(4), 480-487.

Nopphon Tangjitprom, Martin de Tours. (2012). Macro economic Factors of Emerging Stock Market: The Evidence from Thailand. International Journal of Financial Research, 3(2), 33 – 37.

NadeemIqbal, Muhammad Arif Khattak and Inayat Ullah. (2012) .Testing the Arbitrage Pricing Theory on Karachi Stock Exchange. Journal of Contemporary Research in Business, 4(8), 839-853.

Pramod Kumar Naik & Puja Padhi. (2012). The Impact of Macroeconomic Fundamentals on Stock Prices Revisited: Evidence from Indian Data. Eurasian Journal of Business and Economics, 5(10), 25-44.

P.A. Isenmila, Dominic OseErah. (2012). Share prices and macroeconomic factors: A Test of the arbitrage pricing theory (APT) in the Nigerian stock market. European Journal of Business and Management, 4(15), 66-76.

Petros Jecheche. An Empirical Investigation of Arbitrage Pricing Theory: A case Zimbabwe. Research in Business and Economics Journal, 1-14.

Pushpa Trivedi and Samir Ranjan Behera. (2012). Macroeconomic Fundamentals as Determinants of Equity Prices: An Empirical Analysis for India. The IUP Journal of Applied Finance, 18(3), 5-30.

Sulaiman D. Mohammad, Adnan Hussain, M. Anwar Jalil & Adnan Ali. (2009).Empirical Evidence in Case of KSE (Karachi Stock Exchange). European Journal of Scientific Research, 38(1), 96-103.

Sezgin Acikalin, Rafet Aktas &Seyfettin Unal. (2008). An Empirical analysis of the Istanbul Stock Exchange. Investment Management and Financial Innovations, 5(1), 8-16**.**

Xiufang Wang. (2011).The Relationship between Stock Market Volatility and Macroeconomic Volatility: Evidence from China. Journal of Chinese Economics and Finance, 2, 67-77

Zohra zabeen sabunwala. (2012).A Study of the Impact of Macroeconomic Variables on Stock Price Movements for the Period 1993- 2010.International Journal of Research in Commerce, Economics & Management, 2(6), 107-110.

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An Approach Towards Optimal Portfolio Management

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Abstract

The portfolio building technique is analyzed using Statistical Analysis. The technical ratios and risk analysis of different securities are analyzed with respect to other securities. After analyzing the result, the securities giving the maximum return with respect to the risk associated with that security are analyzed further for building the portfolio. The Sharpe's single index model and Markowitz model of risk-return optimization are used for the portfolio building. The equity's used for this analysis are those which are traded in National Stock Exchange. The sector analysis of some sectors is done to compare the particular stock belonging to that sector. The mutual funds that are top performing since last year are taken into consideration. The gold as a commodity is taken for investment. The study concludes by saying that there is a relationship between different risk levels and returns associated with the particular asset class. Investors can diversify their risk by having securities of different sector to get the best returns.

Keyword: Portfolio optimization, Sharpe's single index model, Markowitz model of risk-return optimization.

Introduction

There are various financial advisory firms which are working towards the wealth management of their investors. This paper focuses on one of the techniques used by advisory firms. After deep analysis of such techniques investment in the market is made as per the client's requirement i.e. investment goal. The combination of such investment is grouped together and termed as portfolio. Portfolio contains many securities. The key reason behind making the portfolio is the diversification of risk which is contributed by each security. To minimize the risk and maximize the returns investing at the right time is required. Knowing the condition of the market one has to be bullish or bearish.

Not all the clients have perfect knowledge about the market i.e. because of knowledge asymmetry each client interprets the market information in a different way and accordingly react to it as per his requirements. For this very reason of information asymmetry their investment in the market has some risk. In reward for this risk they expect a certain target of returns from it. Now the main task of the security and portfolio management team is to formulate such a strategy for each investor which can give the best possible i.e. optimal returns to the investors as well as the firm. But for investing each firm has different investment policy. It's the investor's onus to know the investment policy of the firm through which he is investing his wealth. Now, as the cycle of the Stock market turns from Bullish to Bearish and vice-versa, the investment and the returns from the investment varies to a great extent.

Literature Review

In the 1930s, people had portfolios even before the advent of portfolio theory. However because of the primary method of building portfolio, their perception of the portfolio was very different. In 1938, John Burr Williams wrote a book called "The Theory of Investment Value": the dividend discount model. Since then different theories came for the portfolio management. Some of the research paper based on theories of portfolio management are "Sharpe's Single Index Model and Its Application to Construct Optimal Portfolio: An Empirical study" by Niranjan Mandal which is presented under the initiative of Yale-Great Lakes Center for Management Research, Great Lakes Institute of Management, Chennai March 2013 (Vol. 7, Issue 1). This paper talked about the Sharpe's single index model and its application. The other one is "Explain Stock Returns: A Literature Survey" by James L. Davis, December 2001. This paper provides an overview of the financial theory that underlies the behavior of stock returns. The remainder of the paper is concerned with the results of numerous empirical studies that have been published during the past quarter-century. Throughout this discussion of empirical results, the link back to financial theory is maintained. Interesting recent studies are included in the discussion, even though they have not yet received the level of attention that has been given to many of the older studies.

Objective

- ✓ To understand the risk return relationship for different types of securities like shares, mutual funds and commodities.
- ✓ To understand Sharpe's single index model and simple Markowitz portfolio optimization technique for portfolio management.

Methodology

The data related to various securities have been collected from NSE and other websites. Ratio analysis of securities has been done to select the securities for optimal portfolio. The portfolio analysis is done through single index model and optimal portfolio is selected through Simple Markowitz portfolio optimization technique.

Gold

The reason why people invest is gold is that gold retains its purchasing power. People add gold in their portfolio as the risk factors affecting the gold price are different from those of other assets and can be used to counter the inflation effects and currency fluctuations. Gold is less volatile and robust thus help to reduce overall risk in your portfolio.

From table 1 we can see the price of the gold since 1990 till date. For obtaining the return of commodities like Gold on portfolio, we have calculated the 1 year, 2 year, 3 year and 5 year returns from the gold prices and calculated the average returns of last 15 years which is to be used in portfolio building.

Mutual Funds

A Mutual Fund as a company pools the savings of a group of investors and invest in capital market instruments such stocks, bonds and other securities. Each investor owns share which represents the portion of holdings of the fund. The income is earned from interest on bonds and from dividends from stock. Income can also be earned through captain gains after selling the increased price of the fund. Thus by investing in mutual funds one can diversify his risk by having mutual fund in the portfolio.

There are numerous mutual fund schemes available in the market but to have the optimal portfolio we have considered the mutual funds schemes of companies with different market capitalization, long term debt, Short term debt, Diversified equity and ELSS. The NAV is the price per share a mutual fund pays when you redeem, or sell back, your shares. It is calculated by subtracting the liabilities from the assets and dividing the result by the outstanding shares. Mutual funds pay out virtually all of their income and capital gains. Therefore, mutual fund performance cannot be measured on the basis of changes in NAV. Hence the mutual fund performance are best measured by annual total return.

Different Mutual Fund Schemes

Large Cap

From table 2, the three top performing mutual fund schemes in large cap mutual funds are BNP Paribas Equity Fund (G), UTI Opportunities Fund (G) and Quantum Long-Term Equity Fund (G). All of them have more or less the same standard deviation. All of them have the same coefficient of determination. The Sharpe ratio of UTI Opportunities Fund (G) and Quantum Long-Term Equity Fund (G) is same but that of BNP Paribas Equity Fund (G) is less than both the above. Thus we can conclude that the UTI Opportunities Fund (G) and Quantum Long-Term Equity Fund (G) has the better risk adjusted performance. The beta of all the schemes are close to each other means the funds will be effected as per the market.

From table 3, based on the absolute annual return we have calculated the average return of each scheme and the scheme which is giving the maximum average return has been selected for the portfolio building. In the large cap fund the Quantum Long-Term Equity Fund (G) is giving the maximum average return so we have selected that for different portfolio building.

Small & Mid Cap

From table 4, the three top performing mutual fund schemes in Small and Mid-Cap mutual funds are Birla Sun Life MNC Fund (G), SBI Emerging Businesses Fund (G) and HDFC Mid-Cap Opportunities Fund (G). All of them have the standard deviation on the same line. All of them have the almost the same coefficient of determination. The Sharpe ratio of SBI Emerging Businesses Fund (G) and Birla Sun Life MNC Fund (G) is almost the same but that of HDFC Mid-Cap Opportunities Fund (G) is less than both the above. Thus we can conclude that the SBI Emerging Businesses Fund (G) and Birla Sun Life MNC Fund (G) has the better risk adjusted performance. The beta of all the schemes are close to each other, means the funds will be effected as per the market.

From table 5, based on the absolute annual return we have calculated the average return of each scheme and the scheme which is giving the maximum average return has been selected for the portfolio building. In the Small and Mid-Cap fund the SBI Emerging Businesses Fund (G) is giving the maximum average return so we have selected that for different portfolio building.

Diversified Equity

From table 6, the three top performing mutual fund schemes in Diversified equity funds Birla Sun Life India GenNext Fund (G), Reliance Equity Opportunities Fund - Retail Plan (G) and UTI MNC Fund (G). Reliance Equity Opportunities Fund - Retail Plan (G) has the maximum standard deviation thereafter Birla Sun Life India GenNext Fund (G). Reliance Equity Opportunities Fund - Retail Plan (G) have the highest coefficient of determination. The other two have almost the same coefficient of determination. The Sharpe ratio of UTI MNC Fund (G) is highest and that of funds Birla Sun Life India GenNext Fund (G) and Reliance Equity Opportunities Fund - Retail Plan (G) is almost the same. Thus we can conclude that the UTI MNC Fund (G) has the better risk adjusted performance than the other two. The beta of Reliance Equity Opportunities Fund - Retail Plan (G) is highest and is close to the market beta. It will be effected highly as per the market.

From table 7, based on the absolute annual return we have calculated the average return of each scheme and the scheme which is giving the maximum average return has been selected for the portfolio building. In the Diversified equity fund the Reliance Equity Opportunities Fund - Retail Plan (G) is giving the maximum average return so we have selected that for different portfolio building.

Equity Linked Saving Scheme (ElSS)

From table 8, the top two performing mutual fund schemes in Equity Linked Saving Scheme (ELSS) mutual funds BNP Paribas Tax Advantage Plan (ELSS) (G) and HDFC Long Term Advantage Fund (G).

HDFC Long Term Advantage Fund (G) has the maximum standard deviation thereafter BNP Paribas Tax Advantage Plan (ELSS) (G). BNP Paribas Tax Advantage Plan (ELSS) (G) and HDFC Long Term Advantage Fund (G) have the same coefficient of determination. The other two have almost the same coefficient of determination. The Sharpe ratio of BNP Paribas Tax Advantage Plan (ELSS) (G) is more than that of HDFC Long Term Advantage Fund (G). Thus we can conclude that the BNP Paribas Tax Advantage Plan (ELSS) (G) has the better risk adjusted performance. The beta of HDFC Long Term Advantage Fund (G) is close to the market beta. It will be effected highly as per the market.

From table 9, based on the absolute annual return we have calculated the average return of each scheme and the scheme which is giving the maximum average return has been selected for the portfolio building. In the Equity Linked Saving Scheme (ELSS) the HDFC Long Term Advantage Fund (G) is giving the maximum average return so we have selected that for different portfolio building.

Debt Long Term

From table 10, the three top performing mutual fund schemes in Debt long term funds IDFC Dynamic Bond Fund- Regular Plan (G), HSBC Flexi Debt Fund - Institutional plus (G) and SBI Dynamic Bond Fund (G). SBI Dynamic Bond Fund (G) has the maximum standard deviation funds IDFC Dynamic Bond Fund - Regular Plan (G), HSBC Flexi Debt Fund-Institutional plus (G). HSBC Flexi Debt Fund-Institutional plus (G) have the highest coefficient of determination. The other two have the same Coefficient of determination. The Sharpe ratio of IDFC Dynamic Bond Fund - Regular Plan (G), HSBC Flexi Debt Fund - Institutional plus (G) is almost same. Thus we can conclude that the IDFC Dynamic Bond Fund - Regular Plan (G), HSBC Flexi Debt Fund- Institutional plus (G) has the better risk adjusted performance. The beta of IDFC Dynamic Bond Fund- Regular Plan (G), HSBC Flexi Debt Fund - Institutional plus (G) is same and is very less than the market beta.

From table 11, based on the absolute annual return we have calculated the average return of each scheme and the scheme which is giving the maximum average return has been selected for the portfolio building. In the Debt long term fund the SBI Dynamic Bond Fund (G) is giving the maximum average return so we have selected that for different portfolio building.

Debt Short Term

From table 12, the three top performing mutual fund schemes in Birla Sun Life Short Term Fund (G), HDFC Short Term Opportunities Fund (G) and HSBC Income Fund - Short Term Plan (G). Birla Sun Life Short Term Fund (G) has the maximum standard deviation then HSBC Income Fund - Short Term Plan (G). Birla Sun Life Short Term Fund (G) have the highest coefficient of determination. The other two have the same coefficient of determination. The Sharpe ratio of HDFC Short Term Opportunities Fund (G) is marginally high than the other two schemes. The beta of Birla Sun Life Short Term Fund (G) and HSBC Income Fund - Short Term Plan (G) is same and is very less than the market beta.

From table 13, based on the absolute annual return we have calculated the average return of each scheme and the scheme which is giving the maximum average return has been selected for the portfolio building.

In the Debt long term fund and HSBC Income Fund - Short Term Plan (G) is giving the maximum average return so we have selected that for different portfolio building.

Stocks

Technical Analysis of Companies in Different Sectors

IT Companies

From table 14, we can see that out of the stocks of IT Industry the weightage of Infosys on the index is highest, TCS also has the significant weightage. Wipro Ltd. & HCL has low weightage in comparison to other stocks in the same industry but in comparison to other stocks in the index they have significant weightage. If we talk about beta, the beta of Infosys and that of HCL is close to 1 and it will behave somewhat as like that of market means it will be affected more as compared to the effect on the market. Beta of TCS is less than 0.5. The R square of all the stocks are close to each other except that of TCS means the more the coefficient of determination the more is the strength of relationship between the stock and the market. The monthly return of HCL is highest and that of Infosys is negative. Volatility is the standard deviation of the stocks with respect to index. HCL technology is having the highest volatility in the lot thereafter Wipro is having next rank in volatility.

1) WIPRO ltd.: - From table 15 if we talk about P/E ratio, Wipro has the minimum P/E ratio, a plus point from other companies. It is giving the second highest EPS, a good point for its shareholders but declined from last 3 years. It is giving a constant and stable dividend of Rs. 6 per share. Dividend yield is also good in comparison than other companies. It has a declining ROE from last years. Net sales growth is constantly improving from last 5 years. Overall a good company to invest in.

2) TCS ltd: - From table 15, P/E ratio is high in comparison to other companies in the same sector. It has good EPS from other companies which is continuously improving from last 5 years. It has improving DPS in comparison to last 5 years. Dividend yield is lowest from other companies. It has the highest ROE from other companies. Sales growth is improving from last years. Growth is good for this company.

3) INFOSYS ltd: - From table 15, P/E ratio is lowest from other companies, a good point for its shareholders. It has the highest EPS in comparison from other companies but the EPS in fluctuating in last 5 years. It has the highest DPS form other companies. It is offering a good dividend yield to its shareholder. ROE is also good and stable. Net sales growth is declining from last years. Overall the company is good for investing.

4) HCL Technologies: - From table 15, P/E ratio is second highest in the lot. EPS is second lowest from other companies but it is continuously improving from last years. It has continuous growth in DPS from last years. It is providing a good dividend yield. ROE is also improving from last years with a good increase in percentage. Net sales growth has also increased in last 5 years.

As per the above analysis of the IT sector all the companies are performing well. So, we will be selecting two companies from the above. We have selected TCS and HCL for portfolio building as the growth opportunities of this companies is more in comparison to others.

Steel Industry

From table 16, we can see that out of the stocks of STEEL Industry the weightage of Tata Steel on the index is highest than Jindal Steel but Jindal steel also have significant weightage. The beta of Jindal Steel & Tata Steel is more than 1, so they will have higher effect on them in comparison to market changes. The R square of all the stocks are close to each other means the more the coefficient of determination the more is the strength of relationship between the stock and the market. Volatility is the standard deviation of the stocks with respect to index. Jindal Steel more volatile than that of Tata Steel.

1) Tata Steel Ltd.:- From table 17, the P/E ratio is low, that is good for the investors. The EPS is improving in comparison to last 5 years. It is providing a constant and improving DPS from last 3 years. The dividend yield is high from other companies in the industry. ROE is declining from last 5 years. Sales growth is quite fluctuating from last 5 years. Overall the performance is good from other companies.

2) Jindal Steel & Power Ltd.:- From table 17, the P/E ratio is quite high in comparison to other company. EPS is low and has fallen sharply from last 5 years. The dividend per share is constantly declining from last 5 years. ROE is also declining from last 5 years. The sale growth has improved from last 5 years, but is very fluctuating.

As per the above analysis of the STEEL Industry, the Tata Steel is performing well in comparison to other companies in previous years. We have selected Tata Steel from this industry for portfolio building.

Refinery Industry

From table 18, we can see that out of the stocks of Refinery Industries the weightage of Reliance Industry on the index is higher than BPCL. The beta of Refinery Industries is close to 1, so they will have higher effect on it in comparison to market changes. The R square of Refinery Industries is more than BPCL means the more the coefficient of determination the more is the strength of relationship between the stock and the market. Volatility is the standard deviation of the stocks with respect to index. BPCL is more volatile than that of Refinery Industry. BPCL ha more monthly return than of Refinery Industries.

1) BPCL: - From table 19, the P/E ratio is slightly high in comparison to other company. EPS is low and has fallen from last year. The dividend per share is more or less from last 5 years. Dividend yield is good as compared to other company. ROE is low and is declining from last 3 years. The sale growth has improved from last 3 years, but is very fluctuating.

2) Reliance Industries Ltd.:- From table 19, P/E ratio, it has the minimum P/E ratio, a plus point from other companies. It is giving the highest EPS, which is improving from last 5 years. It is giving an improving dividend from last 4 years. Dividend yield is almost same as other companies. It has a declining ROE from last years but the whole industry have the same condition. Net sales growth is constantly declining from last 5 years.

As per the above analysis of the Refinery sector all the companies are performing average We have selected Reliance for portfolio building as the growth opportunities based on the above parameters of this company is more in comparison to others.

Automobile Industry

From table 20, we can see that out of the stocks of Automobile Industry the weightage of Tata motors on the index is highest, M&M and Bajaj Auto also has the significant weightage. Maruti Suzuki India Ltd. & Hero MotoCorp ltd. has low weightage in comparison to other stocks in the same industry. If we talk about beta, the beta of Tata motors is greater than 1 means it will be affected more as compared to the effect on the market and that of M&M & Maruti Suzuki India Ltd. is close to 1 and it will behave somewhat as like that of market. The R square Tata motors and M&M are greater than that of other stocks and for that of Bajaj Auto, Maruti Suzuki India Ltd and Hero MotoCorp ltd are close to each other. The more the coefficient of determination the more is the strength of relationship between the stock and the market. The monthly return of the industry is negative. Volatility is the standard deviation of the stocks with respect to index. Hero MotoCorp, Bajaj Auto, Maruti Suzuki India Ltd and Tata motors are having more or less the same volatility in the lot.

1) Tata Motors: - From table 21, P/E ratio is highest in comparison to other companies in the same sector. It has very low EPS from other companies which is sharply declining from last 3 years. It has sharply declining DPS in comparison to last 4 years. Dividend yield is lowest from other companies. It has the fluctuating and declining ROE from last 5 years. Sales growth has also declined from 3 years. Overall the company is under performing.

2) Mahindra & Mahindra Ltd.:- From table 21, P/E ratio, is below average than the industry, which is good. It is giving the average EPS, which is constantly improving from last 5 years. It is giving a constantly improving dividend. Dividend yield is average with respect to other companies. It has a declining ROE from last 3 years. Net sales growth is fluctuating but improving from last 5 years. Overall a good company to invest in.

3) Bajaj Auto Ltd.**:-** From table 21, P/E ratio is on the average of the lot. EPS is second highest in comparison to other companies and it is continuously improving from last 4 years. It has second highest DPS and is improving from last 5 years. It is providing a good dividend yield. ROE is also declining from last 3 years. Net sales growth is declining and fluctuating.

4) Maruti Suzuki India Ltd.:- From table 21, the P/E ratio is quite high in comparison to other company. EPS is high but declining from last 3 years. The dividend per share more or less constant from last 5 years. ROE is declining from last 3 years. The sale growth has sharply declined from last 3 years.

5) Hero MotoCorp. Ltd.:- From table 21, P/E ratio is close to industry average. It has highest EPS from other companies which is more or less constant from last 4 years. It has declining DPS in comparison to last 5 years and has fallen sharply from last year. Dividend yield is quite high from other companies. It has more or less same ROE from last 3 years. Sales growth is declining from last 3 years.

As per the above analysis of the Automobile sector all the companies are performing average. We will be selecting three companies from the above. We have selected Mahindra & Mahindra Ltd., Bajaj Auto ltd and Hero MotoCorp. Ltd for portfolio building as the companies are performing above average of the industry.

FMCG industry

From table 22, The HUL has significant weightage on index. Beta of it is less than 0.5 means it will be affected less as compared to the market. The coefficient of determination is very less. Volatility of it is more, the monthly return of it is quite impressive.

HUL: - From table 23, P/E ratio is quite high. It has the highest EPS is declining & fluctuating in last 5 years. DPS is more or less same from last years. It is offering a good dividend yield to its shareholder. ROE is very high in terms of percentage. Net sales growth is sharply improved from last 3 years. Overall the company is good for investing.

The FMCG companies are good for portfolio building. The HUL is constantly growing from past years. We will include this in our portfolio.

Cement Industry

From table 24, we can see that out of the stocks of Cement Industry the weightage of UltraTech Cement ltd. and Grasim Industries Ltd. on the index is highest. ACC ltd. has low weightage in comparison to other stocks in the same industry. The beta of Ambuja Cement and Grasim industries ltd. is close to 1 means it will be affected more as compared to the effect on the market and that of UltraTech Cement ltd. is less than 0.5. The R square of Grasim Industries Ltd are greater than that of other stocks and for that of Ambuja Cement and ACC ltd are close to each other. The more the coefficient of determination the more is the strength of relationship between the stock and the market. The monthly return of the industry is negative. Volatility is the standard deviation of the stocks with respect to index. Ambuja Cement and ACC ltd. is highly volatile in the index and UltraTech Cement ltd. and Grasim Industries Ltd. are having more or less the same volatility in the lot.

1) Ambuja Cements Ltd.:- From table 25, P/E ratio is close to average of the industry. It is giving good EPS, which is improving from last 5 years. It is giving an improving dividend from last 4 years. Dividend yield is more than other companies. It has a declining ROE from last 4 years. Net sales growth is declined in 2010 but more or less the average is same.

***2) Ultratech Cement Ltd:* -** From table 25, P/E ratio is close to average of the industry. It is giving the second highest EPS, which is improving from last year. It is giving an improved dividend from last 4 years. Dividend yield is less than other companies. It has a declining ROE from last 4 years but the whole industry have the same condition. Net sales growth is improving from last 5 years.

***3) ACC Ltd.*:-** From table 25, P/E ratio, it has the average of the industry. It is giving the highest EPS, which is improving from last 4 years. It is giving an improving dividend from last 4 years. Dividend yield is highest in the industry. It has a fluctuating ROE from last years but the whole industry have the same condition. Net sales growth has improved from last 5 years.

***4) Grasim Industries Ltd:* -** From table 25, P/E ratio is above industry average. It has highest EPS from other companies which has declined from last 3 years. It has declining DPS in comparison to last 5 years. Dividend yield is quite low from other companies. As the whole industry has the declining ROE, the same is with the Grasim Industries ltd. Sales growth is declining from last 3 years.

As per the above analysis of the cement industry all the companies are performing average. We have selected Ultratech Cement ltd. and ACC ltd for portfolio building as the companies are performing above average of the industry.

Portfolio Analysis

The securities which are identified for investment are combined to form a suitable portfolio. Each portfolio has specific risk and return characteristics. The risk and return of each portfolio can be calculated by the risk returns relation of individual securities and the correlation among them. From the chosen set of securities numerous feasible portfolios can be constructed by varying the investable resources allocated to them.

List of Stocks Selected for Equity Portfolio

1. HCL Technologies

2. TCS ltd.

3. Tata steel ltd.

4. Reliance industries ltd.

5. HUL

6. Mahindra & Mahindra

7. Hero MotoCorp ltd.

8. Bajaj Auto Ltd.

9. Ultratech

10. ACC Ltd.

Sharpe's Single Index Model

The securities which are identified for investment are combined to form a suitable portfolio. Each portfolio has specific risk and return characteristics. The risk and return of each portfolio can be calculated by the risk returns relation of individual securities and the correlation among them. From the chosen set of securities numerous feasible portfolios can be constructed by varying the investable resources allocated to them.

The excess return to beta is calculated first. The calculation result is given in table 26. The cut off rate is calculated after calculating the excess return to beta. The calculation and result is given in table 27. Now ranking is done according to the excess return to beta to calculate the optimal cut off point (table 28). The security below the cut off rate are left out of portfolio and percentage to be invested in each security is calculated (table 29). Return, variance, beta, systematic risk, unsystematic risk can be figured out out of this caluclation (table 29).

Markowitz Model of Risk-Return Optimization

This model assumes that diversifying the investments in the portfolio leads to the reduction in the variance of return, even for the same level of expected return. The assumptions of this model is that there is not efficient portfolio if there is lower risk and higher expected value of return, same risk but higher value of expected value of return, low risk but same expected value. The portfolio would not be efficient if the investor can improve the value of expected return without increasing the risk or without decreasing the expected return if he can improve the expected value of return.

Now the efficient combination of return and risk depends on the utility function of the investor. It includes the risk tolerance acceptable to the investor to obtain the desired return thereby proving the maximum return for the bearable risk level. The investor may select the portfolio giving the efficient frontier.

Return and Variance of Various Securities

Table 31 displays the returns and variance of various securities that is used for optimal portfolio building. The results are like this

Return on portfolio= 0.594114

Yearly return on portfolio= 7.1293665

Beta of portfolio = 0.6343831

Unsystematic risk= 0.340979058

Systematic risk = 0.000716347

Total risk= 0.341695405

Various combination of securities has been done for the investors willing to take high risk and maximum return (table 32), investors willing to take moderate risk and maximum return for that level of risk (table 34) and investors willing to take low risk and maximum return for that level of risk (table 36). the portfolio parameters for investors willing to take high risk and maximum return (table 33), portfolio parameters- investors willing to take moderate risk and maximum return for that level of risk (table 35) and portfolio parameters investors willing to take low risk and maximum return for that level of risk (table 36) is calculated.

Conclusion

The returns are different for different investors willing to take different risk. One should keep on changing the security which are giving low returns and replace them with securities giving high returns. Different optimal mix of portfolios can be created for better returns.

References

Books

- EDWIN J.ELTON, MARTIN J.GRUBER, STEPHEN J.BROWN, WILLIAM N, GOETZMANN2010. Modern Portfolio Theory and Investment Analysis, Eighth Edition, Wiley.
- PORTFOLIO THEORY PDF version- The Institute of Charted Accountants Of India, January 2013.

Websites

- http://www.qfinance.com/asset-management-calculations/alpha-and-beta-values-of-a-security
- http://investexcel.net/214/calculating-the-sharpe-ratio-with-excel/
- http://schwabpt.com/downloads/docs/pdflibrary/spt010543.pdf
- http://schwabpt.com/downloads/docs/pdflibrary/spt010480.pdf
- http://www.indexmundi.com/commodities/?commodity=GOLD&months=350&currency=inr
- http://www.nseindia.com/live_market/dynaContent/live_watch/equities_stock_watch.htm?cat=N
- http://economictimes.indiatimes.com/

- http://www.moneycontrol.com/fixed-income/
- http://smallbusiness.chron.com/
- https://www.sbi.co.in/user.htm?action=viewsection&id=0,16,384,385
- http://www.aaii.com/journal/article/how-to-calculate-the-return-on-your-portfolio
- https://www.pwlcapital.com/pwl/media/pwl-media/PDF-files/Justin%20Bender%20Assets/How-to-Calculate-your-Portfolio-s-Rate-of-Return_v03linked.pdf
- http://www.investopedia.com/articles/fundamental-analysis/11/calculating-required-rate-of-return.asp
- http://money.livemint.com/
- http://www.macroaxis.com/

Appendices

1. Expected return on security

$$R_i = \alpha_i + \beta_i R_m + \epsilon_i$$

Where, R_i = expected return on security i

α_i = alpha co-efficient

β_i = beta co-efficient

R_m = rate of return on market index

ϵ_i = error term

2. The variance of the security return is given by

$$\sigma^2 = \beta_i^2 \sigma_m^2 + \sigma_{ei}^2$$

3. Systematic risk can be calculated by

$$Systematic\,Risk = \beta_i^2 \sigma_m^2$$

Where, σ_m^2 = Variance of market.

$$Unsystematic\,risk = Total\,Risk - Systematic\,Risk$$

$$\epsilon_i^2 = \sigma_m^2 - \beta_i^2 \sigma_m^2$$

4. Excess return to beta is calculated by

$$\frac{Ri - Rf}{B}$$

Where, R_i = expected return on stock i

R_f = risk free rate of return

σ_i = standard deviation for the rates of return for ith security

β_i = expected change in the return of the stock i when there is unit change in the market.

5. cut off by the following formula

$$C_i = \frac{\sigma_m^2 \sum_{j=1}^{i} \frac{(Rj - R_F)\beta_j}{\sigma_{ej}^2}}{1 + \sigma_m^2 \sum_{j=1}^{i} (\frac{\beta_j^2}{\sigma_{ej}^2})}$$

Where,

$\boldsymbol{\sigma_m^2}$ = variance in the market index

$\boldsymbol{\sigma_{ei}^2}$ = variance of stock's movement i.e. unsystematic risk

5. percent to be invested in each security

$$X_i = \frac{Z_i}{\sum Z_i}$$

Where

$$Z_i = 1 + \frac{\beta_i}{\sigma_{ei}^2} (\frac{(Ri - R_F)}{\beta_i} - C^*)$$

6. Risk Utility = Expected Return of the portfolio - Risk Penalty

Risk Penalty = Risk Squared/Risk Tolerance

RISK Squared: Risk squared is the variance of return of the portfolio.

RISK Tolerance: Risk tolerance is a number from 0 to 100. The risk tolerance number reflects the investor's willingness to bear more risk for more return. Risk penalty is less as tolerance is increased.

TABLE- 1

year	Rate(In INR)	1 year return	2 year return	3 year return	5 year return
1990	3200				
1991	3466	0.083125			
1992	4334	0.250432776	0.354375		
1993	4140	-0.044762344	0.194460473	0.29375	
1994	4598	0.110628019	0.060913706	0.326601269	
1995	4680	0.017833841	0.130434783	0.079833872	0.4625
1996	5160	0.102564103	0.122227055	0.246376812	0.488747836
1997	4725	-0.084302326	0.009615385	0.027620705	0.09021689
1998	4045	-0.143915344	-0.216085271	-0.135683761	-0.02294686
1999	4234	0.046724351	-0.103915344	-0.179457364	-0.079164854
2000	4400	0.039206424	0.08776267	-0.068783069	-0.05982906
2001	4300	-0.022727273	0.015588096	0.063040791	-0.166666667
2002	5000	0.162790698	0.136363636	0.180916391	0.058201058
2003	5700	0.14	0.325581395	0.295454545	0.409147095
2004	5800	0.01754386	0.16	0.348837209	0.369863014
2005	7000	0.206896552	0.228070175	0.4	0.590909091
2006	9000	0.285714286	0.551724138	0.578947368	1.093023256
2007	10800	0.2	0.542857143	0.862068966	1.16
2008	12500	0.157407407	0.388888889	0.785714286	1.192982456
2009	14500	0.16	0.342592593	0.611111111	1.5
2010	18000	0.24137931	0.44	0.666666667	1.571428571
2011	25000	0.388888889	0.724137931	1	1.777777778
2012	32000	0.28	0.777777778	1.206896552	1.962962963
2013	29000	-0.09375	0.16	0.611111111	1.32
	Average return of last 15 year	0.154525011	0.34866746	0.538712995	0.912842825
	Average return of last 15 year %age	15.45250109	34.86674603	53.87129949	91.28428254

Large cap	BNP Paribas Equity Fund (G)	UTI Opportunities Fund (G)	Quantum Long-Term Equity Fund (G)
Std. Deviation	16.47	15.29	16.63
Rsquared	0.94	0.89	0.94
Sharp Ratio	0.24	0.48	0.48
Beta	0.81	0.73	0.82

TABLE 2

Large cap	year	BNP Paribas Equity Fund (G)	UTI Opportunities Fund (G)	Quantum Long-Term Equity Fund (G)
NAV (Rs)	2009	19.76	12.79	9.31
	2010	30.96	23.89	19.02
	2011	34.73	27.29	22.64
	2012	34.56	26.7	2.6
	2013	38.33	29.931	24.13
Absolute Annual Return(%)	2009	54.5	94.6	100
	2010	16.9	17.9	28.3
	2011	-18.1	-12.6	-20.4
	2012	30.3	27.4	31.8
	2013(1st qtr)	-4.8	-7.3	-3.9
Avg. Return		20.9	31.825	34.925

TABLE 3

Large cap	Birla Sun Life MNC Fund (G)	SBI Emerging Businesses Fund (G)	HDFC Mid-Cap Opportunities Fund (G)
Std. Deviation	15.96	18.57	17.73
Rsquared	0.74	0.62	0.76
Sharp Ratio	0.81	0.96	0.67
Beta	0.7	0.74	0.79

TABLE 4

Small & Mid cap	year	Birla Sun Life MNC Fund (G)	SBI Emerging Businesses Fund (G)	HDFC Mid-Cap Opportunities Fund (G)
NAV (Rs)	2009	87.38	13.8	5.876
	2010	174.78	34.87	13.074
	2011	201.86	39.63	15.095
	2012	230.29	44.54	16.041
	2013	240.68	53.75	17.234
Absolute Annual Return(%)	2009	90.3	103.3	91
	2010	31.7	31.3	31.4
	2011	-13.5	-10.1	-18.7
	2012	42.6	54.9	40
	2013(1st qtr)	-9.7	-12.5	-8.3
Avg. Return		37.775	44.85	35.925

TABLE 5

Diversified Equity	Birla Sun Life India GenNext Fund (G)	Reliance Equity Opportunities Fund - Retail Plan (G)	UTI MNC Fund (G)
Std. Deviation	16.75	19.84	14.2
Rsquared	0.75	0.88	0.7
Sharp Ratio	0.72	0.7	0.83
Beta	0.74	0.95	0.6

TABLE 6

Diversified Equity	year	Birla Sun Life India GenNext Fund (G)	Reliance Equity Opportunities Fund - Retail Plan (G)	UTI MNC Fund (G)
NAV (Rs)	2009	11.94	13.526	27.53
	2010	20.54	31.089	50.05
	2011	23.63	35.789	58.13
	2012	25.07	36.415	67.48
	2013	29.4	41.349	68.049
Absolute Annual Return(%)	2009	57.4	103.8	80.2
	2010	27.7	30.2	25
	2011	-15.1	-21.9	-7.1
	2012	47.2	47.5	31.8
	2013(1st qtr)	-8.6	-7.9	-8.8
Avg. Return		29.3	39.9	32.475

TABLE 7

Equity Linked Saving Scheme	BNP Paribas Tax Advantage Plan (ELSS) (G)	HDFC Long Term Advantage Fund (G)
Std. Deviation	16.07	18.95
Rsquared	0.88	0.89
Sharp Ratio	0.33	0.2
Beta	0.77	0.91

TABLE 8

Equity Linked Saving Scheme	year	BNP Paribas Tax Advantage Plan (ELSS) (G)	HDFC Long Term Advantage Fund (G)
NAV (Rs)	2009	7.41	59.029
	2010	12.968	119.064
	2011	13.799	139.014
	2012	14.115	133.807
	2013	15.752	144.982
Absolute Annual Return(%)	2009	67.1	85.6
	2010	13.8	27.6
	2011	-15.6	-23.6
	2012	34.4	28.5
	2013(1st qtr)	-6.8	-3.3
Avg. Return		24.925	29.525

TABLE 9

Debt Long term	IDFC Dynamic Bond Fund - Regular Plan (G)	HSBC Flexi Debt Fund - Institutional Plus (G)	SBI Dynamic Bond Fund (G)
Std. Deviation	1.36	1	1.83
Rsquared	0.13	0.29	0.13
Sharp Ratio	3.24	3.34	2.65
Beta	0.22	0.24	0.3

TABLE 10

Debt Long term	year	IDFC Dynamic Bond Fund - Regular Plan (G)	HSBC Flexi Debt Fund - Institutional Plus (G)	SBI Dynamic Bond Fund (G)
NAV (Rs)	2009	10.173	11.709	10.556
	2010	10.563	12.555	11.004
	2011	11.183	13.332	11.711
	2012	12.448	14.602	13.19
	2013	14.076	16.231	14.74
Absolute Annual Return(%)	2009	-6.9	-0.2	1.8
	2010	3.9	4.9	7.5
	2011	-0.6	9.6	11.7
	2012	11	10	10.1
	2013(1st qtr)	2.7	2.4	2.6
Avg. Return		1.85	6.075	7.775

TABLE 11

Debt Short Term	Birla Sun Life Short Term Fund (G)	HDFC Short Term Opportunities Fund (G)	HSBC Income Fund - Short Term Plan (G)
Std. Deviation	0.63	0.28	0.59
Rsquared	0.11	0.01	0.02
Sharp Ratio	5.17	10.26	4.23
Beta	0.09	0.03	0.09

TABLE 12

Debt Short Term	year	Birla Sun Life Short Term Fund (G)	HDFC Short Term Opportunities Fund (G)	HSBC Income Fund - Short Term Plan (G)
NAV (Rs)	2009	32.405	10	14.871
	2010	33.964	10	15.63
	2011	33.806	10.558	16.542
	2012	39.266	11.58	17.95
	2013	43.403	12.71	19.585
Absolute Annual Return(%)	2009	-5.6	------	6.7
	2010	3.8	3.4	4.3
	2011	9.5	9.2	8.8
	2012	10.4	10	9.1
	2013(1st qtr)	2.1	2.1	1.8
Avg. Return		4.525	7.533333333	7.225

TABLE 13

Security Name	Weightage	Beta	R square	Volatility	Monthly Return
Wipro Ltd.	1.25	0.66	0.12	1.24	4.98
Infosys Ltd.	7.64	0.77	0.11	0.84	-0.61
Tata Consultancy Services Ltd.	4.41	0.48	0.06	0.97	3.87
HCL Technologies Ltd.	1.15	0.78	0.18	1.51	9.9

TABLE 14

Wipro Ltd.	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	2.02	Earnings Per Share (Rs)	19.06	19.74	33.37	20.30	20.96
Market Cap (Rs Mn)	852290.11	DPS(Rs)	6.00	6.00	6.00	4.00	6.00
P/E	15.08	ROE(%)	20.57	24.96	32.87	25.15	29.75
EPS (Rs.)	22.94	Net Sales Growth(%)	20.47	14.74	6.58	22.95	27.83

Infosys Ltd.	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	1.78	Earnings Per Share (Rs)	158.82	147.56	112.25	100.26	101.73
Market Cap (Rs Mn)	1355312.2	DPS(Rs)	42.00	47.00	60.00	25.00	23.50
P/E	14.87	ROE(%)	27.70	31.22	27.69	28.89	37.18
EPS (Rs.)	158.75	Net Sales Growth(%)	17.63	23.12	20.08	4.32	29.50

Tata Consultancy Services Ltd	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	1.5	Earnings Per Share (Rs)	65.23	55.97	38.62	28.62	47.92
Market Cap (Rs Mn)	2875647	DPS(Rs)	22.00	25.00	14.00	20.00	14.00
P/E	22.49	ROE(%)	44.69	49.62	43.89	39.62	38.73
EPS (Rs.)	65.33	Net Sales Growth(%)	27.09	30.16	27.04	2.86	22.49

HCL Technologies Ltd.	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	1.61	Earnings Per Share (Rs)	28.13	17.40	15.57	14.88	11.72
Market Cap (Rs Mn)	519515.75	DPS(Rs)	12.00	7.50	4.00	7.00	9.00
P/E	17.81	ROE(%)	33.06	23.26	26.39	31.83	24.87
EPS (Rs.)	41.87	Net Sales Growth(%)	31.09	33.78	8.63	1.29	22.47

TABLE 15

Security Name	Weightage	Beta	R2	Volatility	Monthly Return
Tata Steel Ltd.	1.14	1.46	0.5	1.78	-8.39
Jindal Steel & Power Ltd.	0.73	1.71	0.37	2.5	-0.33

TABLE 16

Tata Steel Ltd.	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	3.89	Earnings Per Share (Rs)	68.95	71.58	56.37	69.70	63.85
Market Cap (Rs Mn)	299668.46	DPS(Rs)	12.00	12.00	8.00	16.00	16.00
P/E	5.64	ROE(%)	13.53	16.40	16.40	22.48	26.47
EPS (Rs.)	54.72	Net Sales Growth(%)	15.43	17.48	2.90	23.49	12.19

Jindal Steel & Power Ltd.	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	0.51	Earnings Per Share (Rs)	22.58	22.09	15.89	99.32	80.32
Market Cap (Rs Mn)	292135.57	DPS(Rs)	1.60	1.50	1.25	5.50	4.00
P/E	18.34	ROE(%)	21.61	26.79	24.45	33.75	39.93
EPS (Rs.)	17.04	Net Sales Growth(%)	39.27	29.95	-4.03	41.88	53.72

TABLE 17

Security Name	Weightage	Beta	R2	Volatility	Monthly Return
Reliance Industries Ltd.	6.96	0.95	0.34	1.26	-5.03
Bharat Petroleum Corporation Ltd.	0.54	0.67	0.1	1.83	1.55

TABLE 18

Reliance Industries Ltd	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	1.1	Earnings Per Share (Rs)	65.04	61.27	61.98	49.64	97.29
Market Cap (Rs Mn)	2644173.85	DPS(Rs)	9.00	8.50	8.00	7.00	13.00
P/E	12.59	ROE(%)	12.29	12.97	14.78	13.37	15.83
EPS (Rs.)	65.04	Net Sales Growth(%)	9.21	32.93	28.95	35.68	6.3

Bharat Petroleum Corpn. Ltd	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	1.32	Earnings Per Share (Rs)	36.27	42.78	42.53	20.35	43.72
Market Cap (Rs Mn)	300766.89	DPS(Rs)	11.00	14.00	14.00	7.00	4.00
P/E	16.63	ROE(%)	9.05	11.40	12.20	6.18	13.43
EPS (Rs.)	25.01	Net Sales Growth(%)	39.79	24.01	-9.58	22.34	12.32

TABLE 19

Security Name	Weightage	Beta	R2	Volatility	Monthly Return
Tata Motors Ltd.	2.61	1.58	0.31	1.95	-6.4
Mahindra & Mahindra Ltd.	2.17	0.85	0.26	1.41	-1.42
Bajaj Auto Ltd.	1.33	0.63	0.12	1.93	-8.79
Maruti Suzuki India Ltd.	0.93	0.9	0.16	2.1	-5.4
Hero MotoCorp Ltd.	0.81	0.73	0.16	1.79	-7.52

TABLE 20

TATA MOTORS	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	1.33	Earnings Per Share (Rs)	3.91	28.55	39.26	19.48	52.63
Market Cap (Rs Mn)	813800.92	DPS(Rs)	4.00	20.00	15.00	6.00	15.00
P/E	69.01	ROE(%)	6.32	10.37	16.51	10.01	27.71
EPS (Rs.)	4.35	Net Sales Growth(%)	15.33	32.30	38.87	-9.89	4.58
Mahindra & Mahindra Ltd.	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	1.32	Earnings Per Share (Rs)	48.87	45.33	36.89	30.69	46.15
Market Cap (Rs Mn)	583558.01	DPS(Rs)	12.50	11.50	9.50	10.00	11.50
P/E	17.48	ROE(%)	25.80	29.46	32.07	17.56	28.15
EPS (Rs.)	54.37	Net Sales Growth(%)	35.78	26.12	42.07	13.45	16.63
Bajaj Auto Ltd	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	2.52	Earnings Per Share (Rs)	103.81	115.41	117.75	45.37	52.25
Market Cap (Rs Mn)	516143.95	DPS(Rs)	45.00	40.00	40.00	22.00	20.00
P/E	16.92	ROE(%)	54.86	85.21	73.83	40.10	47.62
EPS (Rs.)	105.4	Net Sales Growth(%)	19.09	42.49	36.41	-2.61	0
Maruti Suzuki India Ltd.	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	0.47	Earnings Per Share (Rs)	56.58	79.19	86.42	42.17	59.89
Market Cap (Rs Mn)	514653.8	DPS(Rs)	7.50	7.50	6.00	3.50	5.00
P/E	21.51	ROE(%)	11.26	17.81	23.58	13.72	22.67
EPS (Rs.)	79.19	Net Sales Growth(%)	-2.82	25.84	42.27	14.04	22.4
Hero MotoCorp Ltd.	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	3.59	Earnings Per Share (Rs)	119.09	96.54	111.76	64.18	48.47
Market Cap (Rs Mn)	333917.44	DPS(Rs)	45.00	105.00	110.00	20.00	19.00
P/E	15.76	ROE(%)	65.64	60.05	61.43	37.77	35.48
EPS (Rs.)	106.07	Net Sales Growth(%)	21.55	23.10	27.92	19.23	4.36

TABLE 21

Security Name	Weightage	Beta	R2	Volatility	Monthly Return
Hindustan Unilever Ltd.	2.63	0.41	0.06	1.73	5.39

TABLE 22

Hindustan Unilever Ltd.	Mar. 13			Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	3.16		Earnings Per Share (Rs)	12.45	10.68	9.64	11.47	8.01
Market Cap (Rs Mn)	1267425		DPS(Rs)	7.50	6.50	6.50	7.50	9.00
P/E	33.38		ROE(%)	88.14	88.52	90.70	143.31	84
EPS (Rs.)	17.56		Net Sales Growth(%)	12.06	12.62	-13.42	48.00	12.99

TABLE 23

Security Name	Weightage	Beta	R2	Volatility	Monthly Return
Ambuja Cements Ltd.	0.73	0.94	0.17	2.29	-9.06
UltraTech Cement Ltd.	1.04	0.4	0.06	1.17	0.05
ACC Ltd.	0.59	0.78	0.18	1.83	-8.91
Grasim Industries Ltd.	0.98	0.9	0.32	1.09	-4.82

TABLE 24

Ambuja Cements Ltd.	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	1.93	Earnings Per Share (Rs)	8.41	8.01	8.26	8.00	9.21
Market Cap (Rs Mn)	287636.58	DPS(Rs)	3.60	3.20	2.60	2.40	2.20
P/E	19.53	ROE(%)	15.42	15.99	18.32	20.08	27.17
EPS (Rs.)	9.54	Net Sales Growth(%)	13.92	15.72	4.40	14.06	10.18

Ultratech Cement Ltd.	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	0.46	Earnings Per Share (Rs)	89.25	51.24	87.82	78.48	80.94
Market Cap (Rs Mn)	540481.21	DPS(Rs)	8.00	6.00	6.00	5.00	5.00
P/E	20.35	ROE(%)	20.80	18.39	26.64	31.03	45.18
EPS (Rs.)	96.85	Net Sales Growth(%)	37.56	88.84	10.44	15.87	12.18

ACC Ltd	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	2.44	Earnings Per Share (Rs)	56.52	70.59	59.65	85.58	64.62
Market Cap (Rs Mn)	230861.08	DPS(Rs)	30.00	28.00	30.50	23.00	20.00
P/E	17.18	ROE(%)	14.56	19.40	17.94	29.36	26.71
EPS (Rs.)	71.56	Net Sales Growth(%)	17.57	25.18	-3.86	10.22	4.18

Grasim Industries Ltd	Mar. 13		Mar 12	Mar 11	Mar 10	Mar 09	Mar 08
Dividend Yield (%)	0.74	Earnings Per Share (Rs)	128.34	128.87	228.20	179.77	223.36
Market Cap (Rs Mn)	278712.18	DPS(Rs)	22.50	20.00	30.00	30.00	30.00
P/E	22.73	ROE(%)	13.68	15.49	25.21	18.73	28.52
EPS (Rs.)	133.58	Net Sales Growth(%)	7.10	-43.22	-24.53	6.01	19.17

TABLE 25

Security	Alpha	Beta	monthly market return (Rm)	Expected return (Ri)	(Ri-Rf)	Excess return to beta (Ri-Rf)/B
HCL	0.8178	0.78	0.0096	0.825288	0.819388	1.050497436
TCS	0.4637	0.48	0.0096	0.468308	0.462408	0.96335
Tata steel	-0.69	1.46	0.0096	-0.675984	-0.681884	-0.467043836
Reliance industries ltd .	-0.07	0.95	0.0096	-0.06088	-0.06678	-0.070294737
HUL	0.152	0.41	0.0096	0.155936	0.150036	0.365941463
Mahindra & mahindra	0.8832	0.85	0.0096	0.89136	0.88546	1.041717647
Hero moto corp.	-0.42	0.73	0.0096	-0.412992	-0.418892	-0.573824658
Bajaj Auto Ltd.	0.12	0.63	0.0096	0.126048	0.120148	0.190711111
Ultratech	0.4575	0.4	0.0096	0.46134	0.45544	1.1386
Acc Ltd.	0.3462	0.78	0.0096	0.353688	0.347788	0.445882051

TABLE 26

security	Ri-Rf	(Ri-Rf)/B	(Ri-Rf)*B/Vei	B^2/Vei	Cumulative Sum of (Ri-Rf)*B/Vei	Cumulative Sum of B^2/Vei	C
HCL	0.8194	1.050497436	0.163503761	0.155644132	0.163503761	0.155644132	0.000568083
TCS	0.4624	0.96335	0.283653301	0.2944447	0.447157063	0.450088831	0.001597098
Tata steel	-0.682	-0.467043836	-0.229062013	0.49045078	0.218095049	0.940539611	0.00206237
reliance industries ltd	-0.067	-0.070294737	-0.030524055	0.4342296	0.187570994	1.374769211	0.002780966
HUL	0.15	0.365941463	0.029721572	0.08121947	0.217292565	1.455988681	0.002978441
Mahindra & mahindra	0.8855	1.041717647	0.398493906	0.382535428	0.615786472	1.838524109	0.004368673
Hero moto corp.	-0.419	-0.573824658	-0.489225592	0.852569833	0.126560879	2.691093942	0.005015426
Bajaj Auto	0.1201	0.190711111	0.03016516	0.15817201	0.156726039	2.849265952	0.005350666
Ultratech	0.4554	1.1386	0.076876749	0.067518662	0.233602788	2.916784614	0.00560769
Acc Ltd.	0.3478	0.445882051	0.113082126	0.253614438	0.346684914	3.170399053	0.006260409
			0.346684914	3.170399053			

TABLE 27

Securities	(Ri-Rf)/B	C
HCL	1.050497436	0.000568083
TCS	0.96335	0.001597098
Ultratech	1.1386	0.00560769
Mahindra & mahindra	1.041717647	0.004368673
Acc Ltd.	0.445882051	0.006260409
HUL	0.365941463	0.002978441
Bajaj Auto Ltd.	0.190711111	0.005350666
reliance industries ltd .	-0.070294737	0.002780966
Tata steel	-0.467043836	0.00206237
Hero moto corp.	-0.573824658	0.005015426
C Optimal (C*)	0.005350666	

TABLE 28

security	[(Ri-Rf)/B] - c optimal	B/Vei	[(B/Vei)*{(Ri-Rf)/B}] - c optimal	Weightage	Percentage	Rp	Bp	Veip
hcl	1.0451468	0.1995438	0.208552515	0.12159656	12.15965599	0.1003522	0.0948453	0.0577962
TCS	0.9579993	0.6134265	0.587662138	0.34263645	34.26364549	0.1604594	0.1644655	0.0918641
Ultratech	1.1332493	0.1687967	0.191288697	0.11153089	11.15308898	0.0514537	0.0446124	0.0294772
Mahindra & mahindra	1.036367	0.4500417	0.466408338	0.27193942	27.19394175	0.2423959	0.2311485	0.1396724
Acc Ltd.	0.4405314	0.3251467	0.143237333	0.08351454	8.351453824	0.0295381	0.0651413	0.0167317
HUL	0.3605908	0.1980963	0.071431691	0.04164825	4.164825305	0.0064945	0.0170758	0.0035901
Bajaj Auto Ltd.	0.1853604	0.2510667	0.046537832	0.02713389	2.713388664	0.0034202	0.0170943	0.0018475
			1.715118545	1	100	0.5941139	0.6343831	0.3409791

TABLE 29

Risk Type	Risk Tolerance %
High	90 %
Average	50%
Low	20%

TABLE 30

Securities	Return	variance
Equity	7.1293665	0.3416954
Mutual fund large cap	34.92	0.94
Mutual fund small cap	37.75	0.74
Diversified Equity	39.9	0.88
Elss	29.52	0.89
Long term debt	6.075	0.29
Short term debt funds	7.53	0.01
Gold	15.45	0.016
gold		
2 year	3 year	5 year
34.86	53.87	91.28

TABLE 31

			Portfolios				
Security	return	variance	A	B	C	D	E
Equity	7.1293665	0.3416954	0.33	0.6	0.4	0.2	0.1
Mutual fund large cap	34.92	0.94	0.33	0.4	0.3	0.4	0.3
Short term debt funds	7.53	0.01			0.2	0.4	0.5
Gold	15.45	0.016	0.33		0.1		0.1
			0.99	1	1	1	1

TABLE 32

Portfolio Parameters	A	B	C	D	E
Expected return	18.974791	18.24562	16.378747	18.405873	16.498937
Epected variance	0.4282395	0.5810172	0.4222782	0.4483391	0.3227695
risk tolerance	90	90	90	90	90
risk penalty	0.0047582	0.0064557	0.004692	0.0049815	0.0035863
Utility	18.970033	18.239164	16.374055	18.400892	16.49535

TABLE 33

			Portfolios				
Securities	Return	variance	A	B	C	D	E
Equity	7.1293665	0.3416954	0.3	0.25	0.4	0.4	0.3
Elss	29.52	0.89	0.2	0.25	0.3	0.2	0.2
Short term debt funds	7.53	0.01	0.3	0.25		0.3	0.4
Gold	15.45	0.016	0.2	0.25	0.3	0.1	0.1
			1	1	1	1	1

TABLE 34

Portfolio Parameters	A	B	C	D	E
Expected return	13.39181	14.907342	16.342747	12.559747	12.59981
Epected variance	0.2867086	0.3144239	0.4084782	0.3192782	0.2861086
risk tolerance	50	50	50	50	50
risk penalty	0.0057342	0.0062885	0.0081696	0.0063856	0.0057222
Utility	13.386076	14.901053	16.334577	12.553361	12.594088

TABLE 35

			Portfolios				
Securities	Return	variance	A	B	C	D	E
Equity	7.1293665	0.3416954	0.15	0.33	0.4	0.2	0.1
Mutual fund small cap	37.75	0.74	0.15		0.2	0.1	
Long term debt	6.075	0.29	0.35	0.33	0.1	0.3	0.4
Gold	15.45	0.016	0.35	0.33	0.1	0.4	0.5
			1	0.99	0.8	1	1

TABLE 36

Portfolio Parameters	A	B	C	D	E
Expected return	14.265655	9.455941	12.554247	13.203373	10.867937
Epected variance	0.2693543	0.2137395	0.3152782	0.2357391	0.1581695
risk tolerance	20	20	20	20	20
risk penalty	0.0134677	0.010687	0.0157639	0.011787	0.0079085
Utility	14.252187	9.445254	12.538483	13.191586	10.860028

TABLE 37

Monthly return and variance of market.

NIFTY Closing value		
Date	Closing value	monthly return
1 Mar, 2012	5295.55	
2 Apr, 2012	5248.15	-0.008950912
1 May, 2012	4924.25	-0.061716986
1 Jun, 2012	5278.9	0.07202112
2 Jul, 2012	5229	-0.009452727
1 Aug, 2012	5258.5	0.005641614
3 Sep, 2012	5703.3	0.084586859
1 Oct, 2012	5619.7	-0.01465818
1 Nov, 2012	5879.85	0.046292507
3 Dec, 2012	5905.1	0.004294327
2 Jan, 2013	6034.75	0.021955598
1 Feb, 2013	5693.05	-0.056622064
1 Mar, 2013	5682.55	-0.001844354
1 Apr, 2013	5930.2	0.043580787
monthly return		0.009625199
Variance		0.001778075

TABLE 38

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Tourism Sustainable Supply Chain Management in Zimbabwe: Tour Operators' Contribution

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Abstract

The paper assesses the extent to which tour operators are contributing to tourism sustainable supply chain management in Zimbabwe using the qualitative methodology. Tour operators were found to have mixed attitudes towards tourism sustainable supply chain management which range from being negative to being positive. Many tour operators were still reactive and defended their own interests while some were however calculating, negotiating for best compromise and making a cost-benefit analysis. Very few tour operators were proactive, innovative and embracive. The paper concludes that tour operators in Zimbabwe face many difficulties in integrating sustainability in their supply chain and have not yet taken much action to implement a sustainable supply chain. The paper recommends that tour operators form or join trade associations to assist them develop the knowledge and expertise to implement sustainability initiatives, and that marketing and promotion of tourism sustainable supply chain management be implemented at a national level.

Keywords: Tourism, Sustainability, Sustainable supply chain management, Tour operators, Attitudes.

1. Introduction

Tourism is an important driver for global, regional and national development (Costa and Carvalho, 2011). Tourism is a rapidly growing phenomenon and it has become one of the largest industries in the world (Tapper and Font, 2005). Although tourism contributes to employment and economic development it has also led to negative environmental and social impacts such as: resource consumption, pollution, waste generation and destruction of local cultures (Sigala, 2008). The role of tourism in today's society has to be reassessed and sustainability must be a central issue in this process (Karmar, 2011).

Tourism Sustainable Supply Chain Management (TSSCM) attempts to overtly consider all three dimensions (environmental, social and economical dimensions) of sustainability in designing and optimizing the supply chain (Sethi, 2002). TSSCM also seeks to ensure that tourism services and products are sustainable, as well as ascertaining that every component of a product or service that tour operators buy from their suppliers is sustainable (Font et al., 2006). Therefore tour operators are the link between the suppliers, destination and the tourists and as a result have a great influence in achieving a TSSCM (Khairat and Maher, 2012).

Cochrane (2006) advocates that in the past, tour operators neglected their sustainability responsibilities as they argued that they were simply intermediaries and that destination impacts were the responsibility of the sub-contracted suppliers or the local authorities. While stakeholders clearly share the responsibility, most tour operators now understand that it was precisely their responsibility because they are working closely with both tourists and service suppliers in the destination (Budeanu, 2005; Font and Cochrane, 2005). Tourists now expect sustainability consideration to be integrated into their holidays; meaning that tour operators must operate sustainably to remain competitive (Font and Cochrane, 2005).

2. Literature Review

2.1 Integration of Sustainability in Supply Chain Management

The general concept of sustainability as espoused by the World Commission on Environment and Development (1987) encourages stewardship of all natural resources. Tour Operators Initiative, (2004) notes that as intermediaries between tourists and tourism service providers, tour operators can influence the choice(s) of consumers, the practices of suppliers and the development patterns of destinations.

The supply chain comprises of suppliers of all the goods and services that go into the delivery of tourism products to consumers (Font and Harris, 2004). Firms are increasingly integrating sustainability into their supply chain management practices (Wolf, 2011). Tour operators hold a unique position influencing the integration of sustainability into their supply chain as they generally work with many organizations to assemble (Tepelus, 2005).

While there is no universally accepted definition of TSSCM, many authors seem to give an indication of TSSCM as a system that integrates sustainable practices into the supply chain to achieve sustainability in environmental, social, and economic dimensions (Carter and Rogers, 2008; Font et al., 2006; The Tour

Operator Initiative, 2004). TSCM plays an important role in achieving sustainability because it has a strong impact on the natural environment since it deals with the resources needed for the production of a good or service (Mentzer et al., 2001). Thus, TSCM impacts the exploitation of resources (Srivastava, 2007), thus incorporating sustainability in internal TSCM practices. Also, buying practices can impact suppliers' ability to improve their sustainability. Firms can use their purchasing power to help inculcate good environmental and social practices in companies across the supply chain (Hart, 1995); hence integrating sustainability into external TSCM practices with supply chain partners.

2.2 Tour Operator Attitudes and Actions Towards Tsscm

Buegen (2005) notes that attitudes influence the way things are perceived, experienced, thought about and attitudes do predict the future behaviour. George (2010) argues that measuring tour operators' attitudes towards sustainable supply chain management does not only predict future behaviour but also predicts how performances will develop. Tour operators are moving towards a tourism sustainable supply chain management by committing themselves to the concepts of sustainable development as the core of their business activity and by working with suppliers through common activities to promote and disseminate methods and practices compatible with sustainable development (Tour Operator Initiative, 2005; Mason, 2003; Klemm and Parkinson, 2001).

For tour operators to effectively integrate sustainability into their supply chain they have established logical company policies with accompanying management systems that set out clear targets and actions on economic, environmental and social performance (Tour Operator Initiatives, 2004). Tour operators have adopted several strategies in ensuring that sustainable tourism development practices are well integrated into their supply chain and these include SSCM policy creation (Tour Operator Initiatives, 2004; Annen, 2003), assessing supply chain systems (Schwartz et al., 2008; Prahinski and Benton, 2004; Tapper, 2001), raising awareness of suppliers on TSSCM (Tour operator initiative, 2007; Paquette, 2005), having separate management system for contracting with suppliers (Spasiac, 2012; Friedman et al., 2000), tour operators supply and procurement contracts (TOI, 2004), reporting and monitoring TSSC systems' implementation (Van der Duim and Van Marwijk, 2006; Tepelus, 2005; TOI, 2004; Hall, 2000).

2.3 Challenges Faced by Tour Operators in Contributing towards TSSCM

The major challenge that tour operators face is that sustainable supply chain systems are very expensive to apply though in the long run costs will reduce (Bohadanowicz et al., 2011; Dodds, 2010). Schwartz and Font (2009) and Schwartz et al. (2008) postulate that the implementation of TSSCM is challenged by financial, operational and human resource capacity.

Tour operators do not control the largest number of services and products involved in the tourism value chain. Even when it comes to components which are an integral part of the package deal itself, a tour operator is faced with difficulties in trying to provide the required level of service quality and the implementation of sustainable development principles (Spasiac, 2012).

Baddeley and Font (2009) highlight lack of demand on sustainable products as another challenge that has been common to tour operators. Baddeley and Font (2009) further advance that a green gap exists between the results from surveys claiming customers want sustainable products and their actual purchasing behaviour.

Carter and Rogers (2008) state other challenges that tour operators encounter when implementing TSSCM, which are organizational structure, commitment of top level management, employee's and governmental regulations. Dong and Wilkinson (2007) advocate more barriers that are encountered by tour operators such as resistance to change by employees of tour operators and suppliers, lack of qualified staff, lack of understanding and inability to plan TSSCM practices to be coordinated into the supply chain by both the operators and suppliers.

Khairat and Maher, (2012) postulate that some of the challenges encountered by tour operators as they integrate sustainable practices into their supply chain systems include: cost of staff development, lack of demand on sustainable packages, complexity due to numerous partners, difficulty in co-operation with suppliers to apply sustainable practices in their policies, weakness of shareholders' support, difficulty in gathering reports and necessary information, long time for making performance evaluation, lack of reliable ways to measure performance, facing different regulatory systems in the destination's countries, and setting aside funds for environmental or social activities.

2.4 Benefits of Implementing Sustainable Supply Chain Management in Tourism

Sustainable practices may lead to increased revenue and shareholder value by generating more repeat business and attracting new business from customers that value good environmental and social performance (Tour Operator Initiative, 2002). Tour operators may gain a strong positive reputation as they will be concerned about sustainability issues as well as implementing sustainability into their business practices, coupled with improvements to quality of the tourism experience provided to clients. This can result to increased customer satisfaction and loyalty, strengthened brand value, enhanced publicity and marketing opportunities, and better acceptance by local communities in destinations (Kusters, 2009; Thompson, 2008; Tour Operator Initiative, 2007; Font and Cochrane, 2005).

Tour Operator Initiative (2007) asserts that good performance and a high-quality of a sustainable product may help tour operators to reduce the risk of conflict or problems with suppliers, governments, staff and local communities, and improve its status as a respected partner in destinations. This may mean enhanced access to key business resources such as capital, the ability to develop products to meet growing market demand, improved relationships with governments, and a motivated and loyal staff.

Font et al. (2006) highlight other benefits that may be achieved when a sustainable supply chain is implemented which include: revenue growth, cost saving, access to capital, brand value reputation, risk management and license to operate, and pre-empting government regulations.

3. Methodology

The paper employed the qualitative methodology. A questionnaire survey with structured questions was used. Questionnaires were distributed to tour operator managers. The variables for assessing attitudes towards the sustainability of supply chain were borrowed and moderated from a sustainability research model for Dutch tour operators by (Beugen, 2005).

The population of the study comprised managers of all the thirty tour operators in Harare (according to Zimbabwe Tourism Authority (ZTA)'s 2013 database). The research sample consisted of 22 tour operators which were conveniently located in the Central Business District (CBD) and a few located in the nearest residential suburbs of Belvedere and Eastlea. Data were analysed using the thematic approach.

Data were collected between April and June 2013. 22 questionnaires were issued to tour operator managers and 15 were returned, giving a response rate of 68.2%. All the interviewed managers were above 26 years of age, had either a college diploma or a university degree and had more than 3 years of managing in the tour operations business and this enhances reliability of the results.

4. Findings and Discussion

4.1 Attitudes and Actions Towards Implementation of TSSCM

4.1.1 SSCM Policy

None of the tour operators had a written SSCM policy document indicating that they do not have created policies or standard operating procedure that incorporates their vision. Having no official policies is a sign of unsustainability (Beugen, 2005). These tour operators therefore have negative attitudes towards supply chain sustainability. Since no tour operator a written SSCM policy document, it explains the fact that all of them had not done anything to implement the company's SSCM policy nor had an action plan with clearly identified priorities for implementation of the company's SSCM policy.

4.1.2 Integration of Sustainability into Organisational Structure

Only 27% the tour operators had identified how SSCM procedures can be integrated into their company job roles and only 33% had reviewed their company's job specification, role profiles and working procedure. 47% acknowledged that they had a sustainable supply chain representative and 40% added that they had trained employees on TSSCM issues. According to Liburd (2004) assigning responsibilities for sustainability issues reflects integration of sustainability in the organizational structure. As the organization develops to higher levels, the sustainability issues become responsibilities. Majority of these tour operators acknowledged that for them sustainability was only a public relations issue. According to Beugen (2005), tour operators that engage in sustainability for public relations only, have a negative attitude towards supply chain sustainability implying that the majority of tour operators in Harare are unsustainable. A few of the tour operators had a person responsible for sustainability activities and follow research done by others. Beugen (2005) advances that such tour operators are said to be almost sustainable and have positive sustainability attitudes. Few tour operators also had a sustainable tourism department and sustainable development in higher level management which indicates that they are highly sustainable.

4.1.3 Transparency and Accessibility of Activities, Policy and Standards

67% of the tour operators indicated that they communicated business benefits to employees. About 11% of these tour operators had no official publications. Beugen (2005) concedes that such kinds of tour operators are considered to be very unsustainable and their attitudes towards sustainability are negative. 53% disbursed information on activities which according to Beugen (2005) is a sign of unsustainability and negative attitudes. Only about 9% openly inform about their situation and according to Beugen (2005), tour operators that openly inform about their situation are almost sustainable and their attitudes towards environmental sustainability. 27% produced quarterly or annual reports (revenues, ratios) which shows that they are sustainable and they have a positive attitude.

4.1.4 Investment Policy

47% of the tour operators indicated that they had invested in a sustainable management activities. Kong et al. (2002) advocate that changing the way a person invests in a sense is changing individual behaviour. Applied to tour operators, this means that changing their organizational behaviour into more sustainable behaviour will change the way they invest in sustainable chain supply. Of these tour operators, 20% acknowledged that they had basic screening activities on investment options. However, according to Beugen (2005), tour operators that basically screen activities on investment options are unsustainable and also their attitudes towards sustainability are negative. 27% followed industry standards on investment. These tour operators are considered to be almost sustainable and therefore their sustainability attitudes are positive. 33% developed own standards and invested in sustainable projects while 20% were involved in development of nationwide standards which shows that they are sustainable and therefore they have a positive attitude towards sustainability (Beugen, 2005).

4.1.5 Assessing Supply Chain Systems

About 73% of the tour operators focused on economies of scale, vertical integration and had cost-based contracts with suppliers. Majority of them admitted that they used other assessment systems (including informal systems) for suppliers. According to Beugen (2005) such tour operators are considered to be unsustainable and they have a negative attitude towards sustainability. 27% had a win-win strategic partnership with suppliers and systematic quality control which means that they are considered to be sustainable and also they have a positive attitude towards sustainability (Beugen, 2005). Most of these tour operators acknowledged that they had a formal system (checklist) for their suppliers.

4.1.5.1 Priority Considered When Choosing Accommodation Suppliers

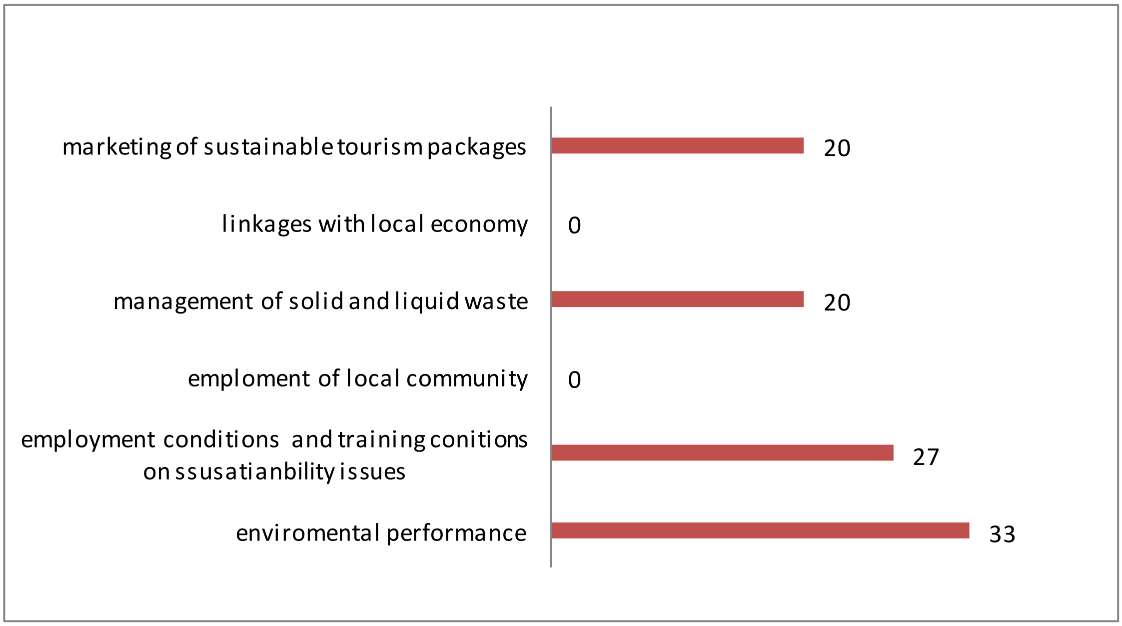

Figure 4.1 Priority Considered When Choosing Accommodation Suppliers

The findings in Fig 4.1 indicate that most of the tour operators did not take into cognizance sustainability issues when they selected accommodation suppliers which show that they are unsustainable and have a negative attitude towards sustainability. Most tour operators acknowledged that they are more worried about prices and the percentage of commission they get from the accommodation suppliers. This shows that tour operators in Harare are still lagging behind compared to other tour operators from other countries. According to World Travel and Tourism Council (2011), as consumer preferences evolve to demand better environmental performances by the companies from which they buy their travel, sustainable tour operators are buying tourism products from sustainable accommodation providers. Most importantly, travel and tourism's close relationship with the natural environment is causing more and more of its companies to embrace the concept of optimal, rather, than maximum, profitability (World Travel and Tourism Council, 2011) which contradicts with what tour operators in Zimbabwe are doing.

4.1.5.2 Priority Areas When Selecting Transport Suppliers

82% of the tour operators prioritized environmental performance of ground transport. Mason (2003) states that tour operators are an example of a sector that has a reputation for causing negative impacts and creating problems. This is because tour operators often claim that they do not have direct impacts outside their office and brochure production, and it is their suppliers who are responsible for their impacts. However, in this case it is easier for the tour operators because most of them own their own vehicles (ground transport) so they are more in control than when they contract suppliers elsewhere. Only 12% of the tour operators considered airlines which used airline communication to passengers on sustainability issue. This according to Font et al. (2008) is because tour operators do not have the ability to influence sustainability of air transport as most of them do not own their own airlines.

4.1.5.3 Priority Areas for Selecting Ground Handlers, Excursions and Activities

Table 4.1 Priority Areas for Selecting Ground Handlers, Excursions and Activities

Priority areas for selecting ground handlers, excursions and activities	**Absolute frequency**	**Relative frequency %**
Environmental performance	3	20
Employment opportunities for local residents	6	40
Training local communities on product development and guiding	5	33
Marketing of socially and environmentally sustainable tourism packages	3	20

The findings indicate that very few tour operators considered sustainability issues when they selected ground handlers, excursions and activities. Khairat and Maher (2012) postulate that tour operators are the link between the suppliers, destination and the tourists and as a result they have a great influence in achieving a tourism sustainable supply chain (TSSCM). This is however not the case with tour operators in Harare as only very few of them are concerned the sustainability of their suppliers.

4.1.5.4 Priority areas when selecting food and crafts suppliers

Table 4.2 Bars and restaurants

Bars and Restaurants	**Absolute frequency**	**Relative frequency%**
Environmental performance	7	47
Environmental infrastructure in the destination (for solid and liquid waste)	3	20

Table 4.3 Local Foods and Craft Producers and Suppliers

Local foods and craft producers and suppliers	**Absolute frequency**	**Relative frequency%**
Sustainable production methods including production and training	3	20
Quality, reliability and distribution	7	47
Access to markets	0	0

Only a few tour operators prioritized sustainability issues when selecting food and crafts suppliers. The findings support Font et al. (2008) who argue that few operators have supply chain initiatives on the production and distribution of local sustainable food and crafts. Tapper and Font (2005) are however of the view that the key issues for local sourcing of food and crafts supplies by tour operators are quality, reliability and quantity of supply. This shows tour operators in Harare are not yet ready to embrace sustainability issues in their business.

4.2 Challenges of Implementing TSSCM System

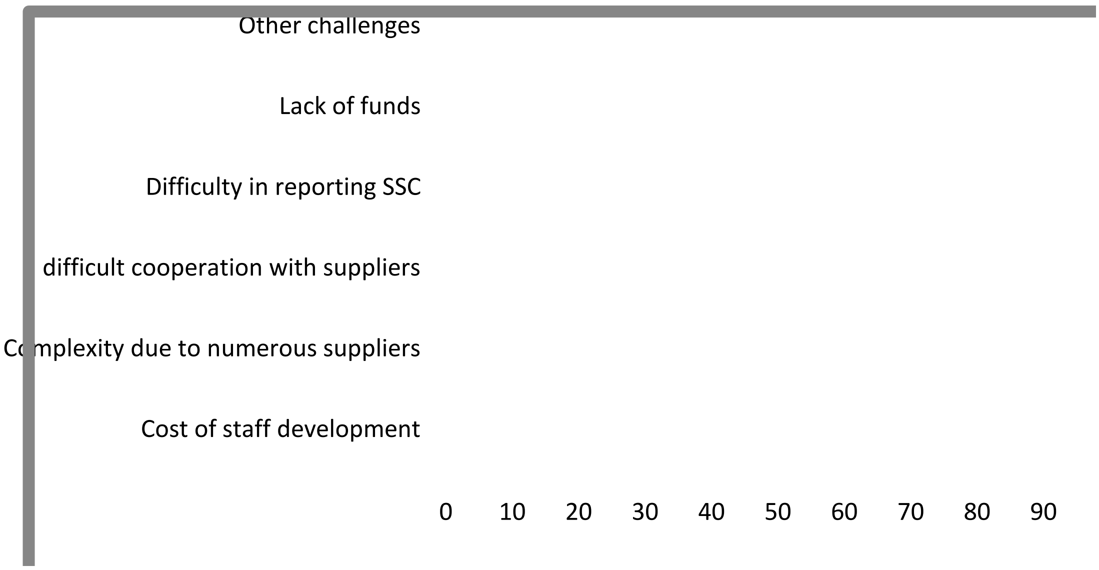

Figure 4.2 Challenges of Implementing TSSCM

As much as tour operators may try to implement sustainability in to their supply chain and business practices they face challenges that hinder their progress in adopting a sustainable supply chain. Majority of the tour operators faced challenges like lack of funds, difficulty in reporting information on implementation of TSSCM, complexity due to numerous suppliers, cost of development and other challenges which are resources (time, lack of human capital), lack of demand on sustainable products, organizational culture amongst others. These findings concur with Zsisdsin and Siferd (2001) who also highlight these challenges. The challenge of financial resources supports Bohadanowiicz et al. (2011) and Dodds (2010) who purport that sustainability is an expensive concept to integrate into supply chains systems of various businesses and sectors. About 60% of the tour operators had difficulty in reporting information on implementation of TSSC. This may be because none of the tour operators belong to any association that represents sustainable tourism for tour operators like Tour Operator Initiative or Travelife (Budeneau, 2005). Having tour operators face many challenges in implementing TSSCM is however not unusual. Khairat and Maher (2012) also report that tour operators face many challenges in the implementing stage of TSSCM.

4.3 Perceived Benefits of Successful TSSCM

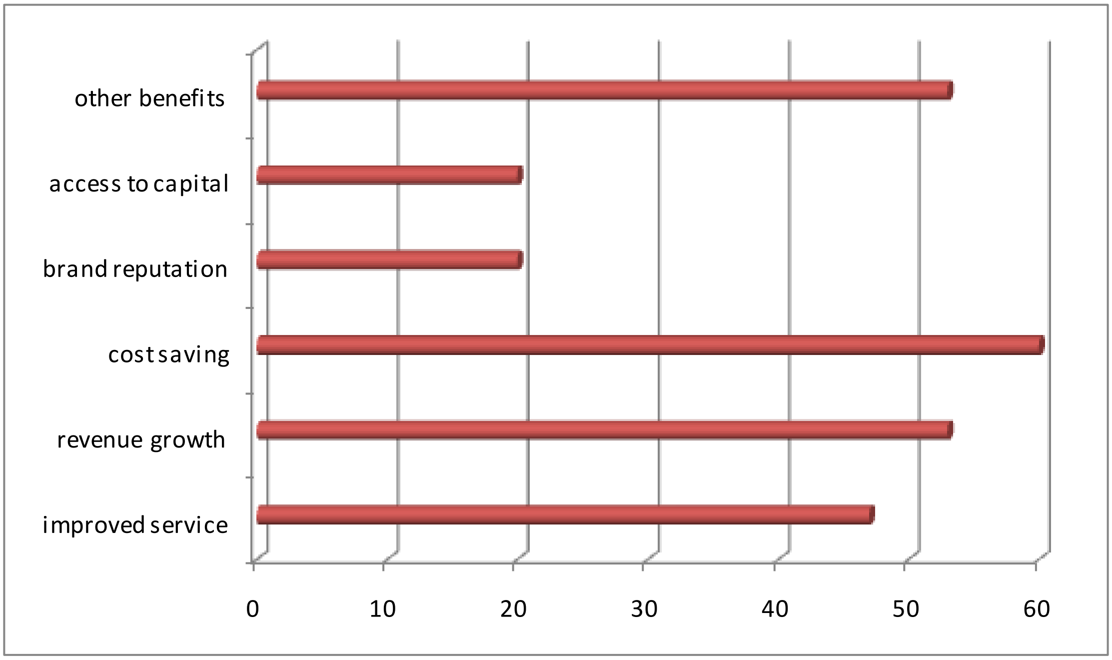

Figure 4.3 Perceived Benefits Enjoyed from Implementing TSSC

Although tour operators face challenges in implementing TSSC, A number of them perceive some benefits from the implementation of TSSCM which include access to capital, brand reputation, cost saving, revenue growth, improved service as a benefit from implementing a TSSC and other benefits which include repeat business and long-term business relationships with suppliers. Font et al. (2006) highlight almost the same benefits of implementing TSSC. The findings also support the Tour Operator Initiative (2002) which posits that sustainable practices may lead to increased revenue and shareholder value. Also a number of authors agree that tour operators may gain a strong positive reputation, coupled with improvements to quality of the tourism experience provided to clients which may result in increased customer satisfaction and loyalty, strengthened brand value, enhanced publicity and marketing opportunities, and better acceptance by local communities in destinations (Kusters, 2009; Thompson, 2008; Tour Operator Initiative, 2007; Font and Cochrane, 2005).

5. Conclusions

5.1 Tour Operators' Attitudes and Actions towards TSSCM

Tour operators had mixed attitudes towards TSSCM which range from being negative to being positive. The conclusion is premised on the following actions of the tour operators:

- No tour operator had a written SSCM policy document.
- A number the tour operators had identified how SSCM procedures can be integrated into their company job roles, and/or had reviewed their company's job specification, role profiles and working procedure.
- For majority of tour operators, sustainability was only a public relations issue with only a few having a person responsible for sustainability activities.
- Majority of the tour operators had no official publications or disbursed information on activities with only a few tour operators openly informing about their situation or produced quarterly or annual reports.
- A number of the tour operators had invested in unsustainable management activities while only a few followed industry standards on investment, and invested in sustainable projects.
- Majority of the tour operators focused on economies of scale, vertical integration and had cost-based contracts with suppliers with only a few having a win-win strategic partnership with suppliers and systematic quality control, or integrating supply chains and joint initiatives to improve environmental conditions.
- Majority of the tour operators did not take into cognizance sustainability issues when they selected accommodation, transport, and ground handlers, excursions and activities suppliers.

In general, many tour operators were still reactive and defended their own interests while some were however calculating, negotiating for best compromise and making a cost-benefit analysis. Very few tour operators who were compassioned and sustainable were proactive, innovative and embracive.

5.2 Challenges of Implementing TSSCM

Majority of the tour operators faced challenges like lack of funds, difficulty in reporting information on implementation of TSSM, complexity due to numerous suppliers, cost of development and other challenges which are resources (time, lack of human capital), lack of demand on sustainable products, organizational culture amongst others.

However, despite these challenges a number of tour operators perceived some benefits from the implementation of TSSCM which include access to capital, brand reputation, cost saving, revenue growth, improved service as a benefit from implementing a TSSC and other benefits which are repeat business, long-term business relationships with suppliers. The positive perceptions of benefits show that there is potential of implementation of TSSC by Zimbabwean tour operators.

6. Recommendations

From the discussion and conclusions made, the paper makes the following recommendations:

- Tour operators in Zimbabwe may form trade associations or join trade associations such as the Tour Operator Initiative which assists all our operators worldwide in achieving sustainability in their supply chains (adopting a sustainable supply chain in their business practices).

- Provisions of incentives for suppliers who implement effective sustainability actions can also be an important part of TSSCM programmes. Tour operators may implement strategies that encompass rewards/incentives to suppliers incorporating sustainability in their services or products.

- Tour operators may also coordinate training programmes/ tourism sustainable supply chain workshops so as to increase awareness and commitment at all levels within the organization and externally (suppliers).

- Marketing and promotion of the TSSCM need to be implemented at a national level by a designated government body to bring about a better awareness of the benefits of TSSC.

- Finally, prominent stakeholders or shareholders could monitor and evaluate tour operator performance in TSSCM.

References

Annen, K. (2003). Social capital, inclusive networks, and economic performances. Journal of Economic Behaviour and Organisation 50 (4): 449-463.

Baddely, E., & Font, X. (2011). Barriers to Tour Operator Sustainable Supply Chain Management. Tourism Recreation Research 36 (3).

Beugen, M. C. A. (2005). Sustainability of Dutch Tour Operators. Doctoral Thesis. Tilburg University, Netherlands, Department of Leisure Sciences

Budeanu, A. (2005). Impacts and responsibilities for sustainable tourism: a tour operator's perspective. Journal of Cleaner Production 13(2): 89-97.

Carter, C.R., & Rogers, D.S. (2008). A framework of sustainable supply chain management: Moving toward new theory. International Journal of Physical Distribution & Logistics Management 38 (5): 360-87.

Cochrane, J. (2006). How can tour operators contribute to sustainable development? Communicating Development Research. UNEP

Dodds, R., & Butler, R. (2010). Barriers to implementing sustainable tourism policy in mass tourism destinations. Tourismos 5(1): 35-54.

Dong, B., & Wilkinson, S.J. (2007). Practitioner Perceptions of Sustainability in the Building Code of Australia**.** Paper presented at the AIBS, Transitions International Conference. Adelaide. Australia.

Font, X., Tapper, R., & Cochrane, J. (2006). Competitive Strategy in a Global Industry: Tourism. Handbook of Business Strategy 7(1): 51–55.

Font, X., & Harris, C. (2004). Rethinking standards from green to sustainable. Annals of Tourism Research 31(4): 996–1007.

Font, X., & Cochrane, J. (2005). Integrating sustainability into business, a management guide for responsible tour operations. Paris. UNEP, WTO.

Frey, N., & George, R. (2010). Responsible tourism management: The missing link between business owners' attitudes and behavior in the Cape Town tourism industry. Tourism Management (31): 621–628.

Friedman, A.L., Miles, S., & Adams, C. (2000). Small and medium-sized enterprises and the environment: Evaluation of a specific initiative aimed at all small and medium sized enterprises. Journal of Small Business and Enterprise Development 7 (4): 325–342.

Hall, J. (2000). Environmental supply chain dynamics. Journal of Cleaner Production 8: 455–471.

Hart, S.L. (1995). A natural-resource-based view of the firm. Academy of Management Review 20(4): 986-1014

Karmakar, M. (2011). Ecotourism and its impact on the regional economy - a study of North Bengal (India). Tourismos 6(1): 251-270.

Khairat, G., & Maher, A. (2012). Integrating Sustainability into Operator Business: An innovative Approach in Sustainable Tourism. Tourismos: An International Multidisciplinary Journal of Tourism 7(1): 213-233

Klemm, M., & Parkinson, L. (2001). UK Tour Operator Strategies: Causes and Consequences. International Journal of Tourism Research 3: 367–375.

Kong, N., Salzmann, O., Steger, U., & Ionescu-Somers, A. (2002). Moving business/ industry towards sustainable consumption: The role of NGOs. European Management Journal 20 (2): 109-127.

Kusters, N. (2009). International Tour Operator and CBT Training Workshop. Cambodia.

Liburd, J.J. (2004). NGOs in tourism and preservation democratic accountability and sustainability in question. Tourism Recreation Research 29 (2): 105.

Mason, P. (2003). Tourism Impacts, Planning and Management. Butterworth-Heinemann. UK.

Mentzer, J.T., Dewitt., W., Keebler, J.S., Min, S., Nix, N.W., Smith, C.D., & Zacharia, Z.G. (2001). Defining supply chain management. Journal of Business Logistics 22(2): 1-25.

Paquette, J. (2005). The Supply Chain Response to Environmental Pressures. MIT Center for Transportation and Logistics (CTL). Discussion paper, Cambridge.

Prahinski, C., & Benton, W.C. (2004). Supplier Evaluations: Communication Strategies to Improve Supplier Performance. Journal of Operations Management 22: 39–62.

Schwartz, K., & Font, X. (2009). Sustainable Supply Chain Management: UK Outbound Tour Operator Practices. Occasional Paper No. 15. Leeds. International Centre for Responsible Tourism. Leeds Metropolitan University.

Schwartz, K., Tapper, R., & Font, X. (2008). A Sustainable Supply Chain Management Framework for Tour Operators. Journal of Sustainable Tourism 16(3): 298–314.

Sethi, S.P. (2002). Standards for corporate conduct in the international arena: Challenges and opportunities for multinational corporations. Business and Society Review 107(1): 20–40.

Sigala, M. (2008). A study chain management approach for investigating the role of tour operators on sustainable tourism: The case of TUI. Journal of Cleaner Products 16(15): 1589-1599.

Spasiac, V. (2012). Integrating Sustainable Tourism in Tour Operators' Supply Chain. Singidunum Journal of applied Sciences.

Srivastava, S. K. (2007). Green Supply-Chain Management: A State of the Art Literature Review. International Journal of Management Reviews 9(1): 53–80.

Tapper, R. (2001). Tourism and Socio-economic Development: UK tour operators' business Approaches in the context of the New International Agenda. International Journal of Tourism Research 3: 351–366.

Tapper, R., & Font, X. (2005). Tourism supply chain, Report of desk research project for the travel foundation. Leeds Metropolitan University, Environmental Business and Development Group.

Tepelus, C.M. (2005). Aiming for sustainability in the tour operating business. Journal of Cleaner Production 13: 99–107.

Tour Operators Initiative. (2002). Sustainable reporting guideline. Paris. Tour Operators' Initiative for Sustainable Tourism Development. UNESCO, UNEP.

Tour Operator Initiatives. (2004). Supply Chain Engagement for Tour Operators. Paris: Tour Operators' Initiative for Sustainable Development.

Tour Operators Intiaitive. (2005). Integrating sustainability into business management guide for responsible tour operators.

Tour Operator Initiatives. (2007). Integrating sustainability into tour operators supply chain.

Van der Duim, R.V., & Van Marwijk, R. (2006). The Implementation of an Environmental Management System for Dutch Tour Operators: An Actor-Network Perspective. Journal of Sustainable Tourism 14(5): 449–472.

World Commission on Environment and Development. (1987). Our Common Future. Oxford.

World Travel and Tourism Council. (2011). Annual Review

Wolf, J. (2011). Sustainable Supply Chain Management: A qualitative Analysis of German Manufacturing Industry. Journal of Business Ethics. Springer, Germany.

Zsidisin, G., & Siferd, S. (2001). Environmental purchasing: A framework for theory development. European Journal of Purchasing and Supply Management 7: 61-73.

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Determinants of Bank Offices

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Abstract

Today banks play a vital role in the economy of any Country. By opening branches at various unbanked and under banked regions of the economy, banks provide opportunity to save to the public. The higher the number of the bank branches in the economy, the higher will be the amount of deposit mobilization ceteris paribus. Rapid economic development pre suppose rapid expansion of commercial banks. Initially, the banks were conservative and opened offices (branches) mainly in Metro Politan cities and other major cities. But after nationalization of banks, the expansion of bank offices gained momentum. Using the relation between population size, per capita income and other important variables, an attempt has been made to fit the model for bank offices for Gujarat, some other selected states and India at national level using the data for the period 2000 to 2008. For majority of the states and India, log reciprocal model is found to be appropriate with X_2 = per capita NSDP at current price and / or $X_3 =$ Population Density per square km as explanatory variables. It can be inferred from the fitted models that initially in every state / national level, number of bank offices increases at an increasing rate and then it increases at a decreasing rate. Looking to the R^2, VIF and DW statistic as well as the standard errors of the models, it can be said that further improvement of the models is needed / possible, which can be considered as further study.

Keywords: Bank offices, per capita NSDP, population density, log reciprocal model.

1. Introduction

The chief General Manager of RBI, Mumbai, Dr. A. S. Ramasastri, who was the keynote speaker of 13th Annual conference of the society of Statistics, Computer and Application during 24-26 February, 2011, at NAARM, Hyderabad, commented that "The bulk of Indian Banking data are available on the RBI website but the information hidden in this data is not known to us therefore academic analytical work has to be done on the data available, so that information can be used for future planning purpose." This comment of a person from RBI itself establishes the importance of the study we have done and many other have contributed.

2. Model for Bank Offices for States and India at National Level

In this paper we have fitted models for bank offices for each state individually and also for India. Rapid economic developments pre-suppose rapid expansion of commercial banks. Initially, the banks were conservative and opened offices (branches) mainly in Metro Politan cities and other major cities. But after nationalization of banks the expansion of bank offices gained momentum.

Luckeet (1976) has suggested that bank offices for any town depend on the size of the town and per capita income.

Beggs and Klemperer (1992) focus on the issue of switching cost. They found that switching costs make the market more attractive to a new entrant, even though an entrant must overcome the disadvantage that a large fraction of the market is already committed to the incumbent's product.

Avery, et.al. (1999) and Damar (2007), focus on the issue of how mergers are associated with subsequent changes in the number of branches in a market. In the case of Avery, et al. (1999) examines the association between consolidation and changes in levels of bank branching as measured by changes in the number of bank branches per capita. They found that merges where merging institutions have branch networks which overlap within a ZIP code (within - ZIP merger) are strongly associated with a reduction in offices per capita in that ZIP code. This result is robust across time and holds in both rural and urban areas. The findings also suggest that, contrary to popularly held views, consolidation is not unambiguously negatively associated with changes in the number of banking offices per capita. Neither within-market-but-not-within-ZIP mergers nor out-of-market mergers consistently show such a relationship. They also found that the relationships between within-ZIP and within-market-but-not-within-ZIP mergers and changes in the number of bank offices per capita are more negative in low-income neighborhoods than in other neighborhoods.

Damar (2007) examines the relationship between post-crisis bank consolidation and the number of bank branches per population in Turkey. Using the data set from 2001 to 2003, the analysis addresses several issues related to the impact of market characteristics on branching behavior. His findings suggest that sales of failed institutions by the central authority frequently lead to branch closures in small and uncompetitive markets where the buyer does not have a prior presence. Contrary to popular belief, mergers between healthy institutions do not always cause a decrease in the number of branches; rather, they are shown to increase the availability of banking services in concentrated markets.

Kim and Vale (2001) found that banks act strategically in their branching decisions, taking into consideration the future response from rival banks. The analysis is applied to a unique data set which covers the entire banking sector during both pre- and post-banking crisis periods, where very different types of conduct are found in each of these periods both for banks and borrowers. He also said that bank specific branch-network does not confer externality on other banks. As a result branch network affects only market shares but not market size.

According to Pineda Ortega (2009) many studies have suggested that the banking system has recently become more efficient and more competitive, due in part to the entrance of foreign banks

Hassan and Sanchez (2007) studied about the determinants of efficiency and its dynamics on the banking industry in Latin America. Their results indicate that the degree of capitalization, profitability ratios, the interest rate spread and GDP growth are positively related to greater bank efficiency. On the other hand, loan loss reserves, the value of stock traded, and the inflation rate have an inverse relationship with bank efficiency.

Cohen and Mazzeo(2007) has found that the relationship between branch networks and competition in a cross-section of rural banking markets, distinguishing among single market (or community) banks, thrift institutions, and multi market banks. Certain features of this application make for an especially useful setting to analyze potential interactions between investment and market structure. First, there is evidence to suggest that a bank's investments in branches are largely sunk. Analysts have suggested that larger branch networks may also serve an advertising function, as branches are thought to represent the "face" of the bank to customers.

Rice and Davis (2007) focus on the history of branching in Illinois. Among other things, their study points to at least two factors that may influence the extent of branching. First, deregulation of previously existing branch restrictions, such as those that existed in Illinois, can result in a dramatic expansion in the number of branches. Second, in comparing growth in the number of branches in the largest 15 cities during the period 1995- 2005, they report evidence of a negative relationship between market concentration and branch growth.

Hannan and Hanweck (2008) investigate the role of both of these factors in this study and also investigated the extent and potential determinants of both of these phenomenon—the proliferation of bank branches and the reduction in branch size as measured by employment—using an extensive data set that covers over 2,000 local markets for the period from 1988 to 2004. Employing panel data estimation with both market and year fixed effects; they reported evidence consistent with several hypotheses regarding the determinants of these phenomena. In the case of the number of branches in a defined local market, They find that market population, market per capita income, state-specific bank deregulation, market concentration, the return obtainable from deposit funds, and (in the case of urban markets) traffic congestion are all associated with the extent of branching in plausible ways. These same market characteristics, however, are not found to explain much of the change in branch size, probably because the change in branch size over time reflects predominantly the impact of technical innovations that are not easily measured. They do find, however, that markets experiencing above average growth in the number of branches experienced greater than average declines in the average employment size of their branches and offer possible explanations.

On the basis of these literature reviews we considered Per capita NSDP at current price, Population Density per square km, Per capita credit utilisation and per capita deposit as explanatory variables. But in all the states considered for the study, Per capita credit utilisation and per capita deposit were found to be statistically insignificant. Thereafter we tried to fit the model for bank offices using Per capita NSDP at current price and Population Density per square km as explanatory variables. We found Population density to be statistically insignificant for majority of states so for those states using per capita income only suitable models are fitted. Log reciprocal model was found to be suitable for all the states.

Log Reciprocal Model $\ln Y = \beta_1 + \beta_2 \left(\frac{1}{X_2} \right) + \varepsilon$

Simplifying this model we get: $Y = e^{\beta_1 + \beta_2 \left(\frac{1}{X_2} \right)} . \varepsilon'$

This model says that initially in any state bank offices increases at an increasing rate and then it increases at a decreasing rate. Looking to the R^2, VIF and DW statistic as well as the standard errors of the models given as appendix I and II, it can be said that further improvement of the models is needed / possible, which can be considered as further study.

References

Avery, Robert B., Raphael W. Bostic, Paul S. Calem, and Glenn B. Canner (1999): "Consolidation and bank branching patterns," Journal of Banking and Finance, vol – 23, Issues: (2-4), pp.497-532.

Beggs, Allen, and Paul Klemperer(1992): "Multi-Period Competition with Switching Costs," Econometrica 60 (3), pp. 651-666.

Cohen, Andrew, and Michael Mazzeo(2007): "Investment Strategies and Market Structure: An Empirical Analysis of Bank Branching Decisions," Working Paper, Federal Reserve Board, Washington, D.C.

Damar, H. Evren (2007): "Does Post-Crisis Restructuring Decrease the Availability of Banking Services? The Case of Turkey," Journal of Banking and Finance, Vol.-31 pp. 2886-2905

Hannan T. H. and Hanweck G. A. (2008): "Recent Trends in the Number and Size of Bank Branches: An Examination of Likely Determinants"; Working Paper, Finance and Economics Discussion Series Divisions of Research & Statistics and Monetary Affairs Federal Reserve Board, Washington, D.C.

Hassan, K. and Sanchez, B. (2007): "Efficiency determinants and dynamic efficiency changes in Latin American banking industries", Networks Financial Institute, Working Paper No. 32, Indiana University.

Kim. M. and B. Vale (2000): "Non-price Strategic Behavior: The Case of Bank Branches." International Journal of Industrial Organization, 19(10), pp. 1583-1602.

Luckeet D. G. (1976): "Money and Banking", New York: McGraw-Hill Education.

Pineda Ortega, P.A. (2009), "La competencia bancaria en México: propuestas analíticas para su comprensión", Revista de Administración, Finanzas y Economía, 3, 63-83.

Rice Tara and Davis Erin (2007) : "The Branch Banking Boom in Illinois : A byproduct of restrictive branching laws", The Federal Reserve Bank of Chicago, May 2007, Number 238.

State	Linear model	Original model	Fitted Model	R square	DW statistic	VIF
AP	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)}.\varepsilon'$	$\ln Y = 8.806 - 4157.948\left(\frac{1}{X_2}\right) + \varepsilon$	0.821	0.999	
BH	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \beta_3\left(\frac{1}{X_3}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)+\beta_3\left(\frac{1}{X_3}\right)}.\varepsilon'$	$\ln Y = 7.722 - 1590.199\left(\frac{1}{X_2}\right) + 648.579\left(\frac{1}{X_3}\right)$	0.993	2.643	1.726
GJ	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)}.\varepsilon'$	$\ln Y = 8.353 - 2552.451\left(\frac{1}{X_2}\right) + \varepsilon$	0.624	0.853	
INDIA	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)}.\varepsilon'$	$\ln Y = 11.333 - 3725.976\left(\frac{1}{X_2}\right) + \varepsilon$	0.831	0.863	
KT	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)}.\varepsilon'$	$\ln Y = 8.734 - 4481.234\left(\frac{1}{X_2}\right) + \varepsilon$	0.906	1.078	
MP	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \beta_3\left(\frac{1}{X_3}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)+\beta_3\left(\frac{1}{X_3}\right)}.\varepsilon'$	$\ln Y = 7.061 - 9803.216\left(\frac{1}{X_2}\right) + 379.283\left(\frac{1}{X_3}\right) + \varepsilon$	0.924	2.811	2.765
MH	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)}.\varepsilon'$	$\ln Y = 8.967 - 4620.415\left(\frac{1}{X_2}\right) + \varepsilon$	0.834	0.983	
RJ	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)}.\varepsilon'$	$\ln Y = 8.365 - 3305.795\left(\frac{1}{X_2}\right) + \varepsilon$	0.82	1.62	
TN	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)}.\varepsilon'$	$\ln Y = 8.708 - 4508.182\left(\frac{1}{X_2}\right) + \varepsilon$	0.734	0.94	

UP	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \beta_3\left(\frac{1}{X_3}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)+\beta_3\left(\frac{1}{X_3}\right)}.\varepsilon'$	$\ln Y = 8.991 - 3782.556\left(\frac{1}{X_2}\right) + 280.04\left(\frac{1}{X_3}\right) + \varepsilon$	0.858	1.226	2.041
WB	$\ln Y = \beta_1 + \beta_2\left(\frac{1}{X_2}\right) + \varepsilon$	$Y = e^{\beta_1+\beta_2\left(\frac{1}{X_2}\right)}.\varepsilon'$	$\ln Y = 8.588 - 2943.186\left(\frac{1}{X_2}\right) + \varepsilon$	0.834	0.766	

Annexture - I

Where, $Y =$ **Bank Offices,** X_2 **= Per capita NSDP at current price,** $X_3 =$ **Population Density per square km**

Annexture -II

State	Explanatory variable	S.E.	P value of F	P value of t
AP	Per capita NSDP at current price	0.025	0.001	0.001
BH	Per capita NSDP at current price	0.1091	0.000	0.000
	Population Density per square km			0.000
GJ	Per capita NSDP at current price	0.026	0.011	0.011
INDIA	Per capita NSDP at current price	0.021	0.001	0.001
KT	Per capita NSDP at current price	0.017	0.000	0.000
MP	Per capita NSDP at current price	0.02708	0.000	0.001
	Population Density per square km			0.000
MH	Per capita NSDP at current price	0.019	0.001	0.001
RJ	Per capita NSDP at current price	0.021	0.001	0.001
TN	Per capita NSDP at current price	0.029	0.003	0.003
UP	Per capita NSDP at current price	0.01884	0.003	0.001
	Population Density per square km			0.003
WB	Per capita NSDP at current price	0.015	0.001	0.001

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Corporate Strategic Management: A Competitive Analysis

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Abstract

Strategic Marketing Management is an intensive and comprehensive program designed for executives who want to develop a more strategic and disciplined approach to the marketing process. The program drives you through each of the critical steps of a strategic market planning process. Through its integrated curriculum and action-oriented approach, you will learn to master all the aspects of building a strong strategic marketing plan, from generating genuine market insights to strategy development and marketing program design. Marketing management constantly have to assess which customers they are trying to reach and how they can design products and services that provide better value (competitive advantage). Strategic Market Management helps managers identify, implement, prioritize, and adapt market-driven business strategies that will enjoy sustainable advantage in dynamic markets that are increasingly complex and cluttered. The intent is to provide decision makers with concepts, methods, and procedures by which they can improve the quality of their strategic decision making and developing growth strategies.

1. Introduction

The Strategic Management and Marketing prides itself on the quality and real world application of our programmes, together with the support and employment opportunities we provide to our students. Strategic marketing and technological expertise are paramount to retaining customers and enhancing profitability. You will evaluate new business models and identify shifts in industry regulations and trends, while developing integrated marketing strategies focused on value creation, brand equity and consumer sustainability. Competitive analysis in marketing and strategic management is an assessment of the strengths and weaknesses of current and potential competitors. This analysis provides both an offensive and defensive strategic context to identify opportunities and threats.Organizations do not exist in vacuum.

They operate within a competitive industry environment. Analyzing its competitors not only enables an organization to identify its own strengths and weaknesses but also helps to identify opportunities for and threats to the organization from its industry environment. The third level of external analysis is likely to consider competitors both individually and in groups. Although, this is often an important piece of analysis, it is difficult to describe general as the information available, and hence the analysis, which is possible, varies markedly from one industry to another. In some industries very detailed information IS made available by an industry association or independent monitoring agencies. For these industries there is likely to be value in analyzing the available data in some detail both of the industry as a whole and for individual competitors. Obviously there are some types of important information that are not recorded in industry databases. In other industries, there is much less systematic and public collection of information. In these cases it may be valuable carefully to aggregate competitive information from the diverse pieces of information collected from multiple sources. In some industries and particularly in emerging markets, all information is scarce. Here competitive intelligence has become a specialized skill with its own professional body of practitioners and with at least some parallels to military espionage.

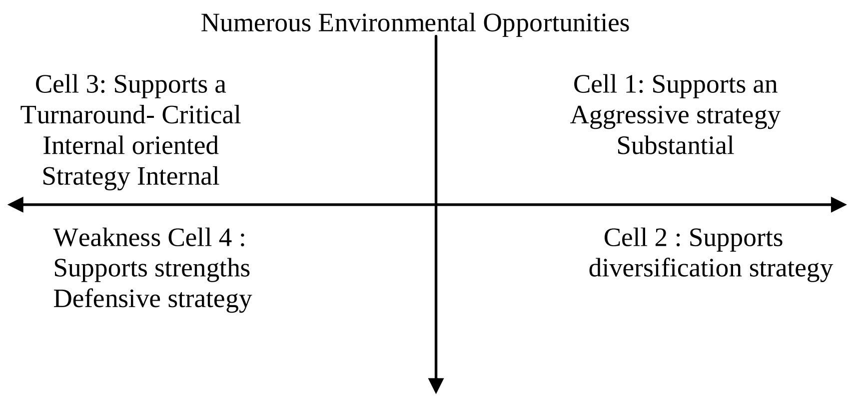
2. Competitive Environment: Analyzing Strengths & Weaknesses of Organizational Structure

While the organization is affected by trends in the broad environment, those trends, are often, felt by the organization's competitors also. In the competitive environment, however, events often have unequal impact. Because of this unequal impact, it is the competitive environment in which strategy can be most useful. A major focus in determining a firm's strengths and weaknesses is comparison with existing (and potential) competitors. Firms in the same industry often have different marketing skills, financial resources, operating facilities and locations, technical know-how, brand image, levels of integration, managerial talent, and so on. These different internal capabilities can become relative strengths (or weaknesses) depending on the strategy the firm chooses. In choosing strategy, a manager should compare the company's key internal capabilities with those of its rivals, thereby isolating key strengths or weaknesses. Electric is major rivals. Sear's major strength is its retail network. For GE, distribution through independent franchised dealers has traditionally been a relative weakness. With the financial resources to support modernized mass production, GE has maintained both cost and technological advantages over its rivals, particularly Sears. This major strength for GE is a relative weakness for Scars, which depends solely on subcontracting to produce its Kenmore brand appliances. On the other hand, maintenance and repair service are important in the appliance industry. Historically, Sears has strength in this area, because it maintains a fully staffed service component and spreads the costs over numerous departments at each retail location. GE, on the other hand, has had to depend on regional service centers and local contracting with independent service firms by its local, independent dealers.

3. SWOT Analysis

SWOT is an acronym for the internal Strengths and Weaknesses of a business and environmental Opportunities and Threats facing that business. SWOT analysis is a systematic identification of these factors and the strategy that reflects the best match between them. It is based on the logic that an effective strategy maximizes a business's strengths and opportunities but at the same time minimizes its weaknesses and threats. This simple assumption, if accurately applied has powerful implications for successfully choosing and designing an effective strategy. Strength is a resource, skill, or other advantage relative to competitors and the needs of markets a firm serves or anticipates serving. Strength is a distinctive competence that gives the firm a comparative advantage in the market place. Financial resources, image, market leadership, and buyer supplier relations are examples. A weakness is a limitation or deficiency in resources, skills and capabilities that seriously impede effective performance. Facilities, financial resources, management capabilities, marketing skills, and brand image could be sources of weaknesses.

A second application of SWOT analysis is illustrated in figure. Key external opportunities and threats are systematically compared to internal strengths and weaknesses in a structured approach. The objective is identification of one of four distinct patterns in the match between the firm's Internal and external situations. The four cells in figure represent these patterns. Cell 1 is the most favorable situation; the firm faces several environmental opportunities and has numerous strengths that encourage pursuit of such opportunities. This condition suggests growth-oriented strategies to exploit the favorable match. IBM's intensive market development strategy in the personal computer market was the result of a favorable match between strengths in reputation and resources and the opportunity for impressive market growth. Cell 4 is the least favorable situation, with the firm facing major environmental threats from a position of relative weakness. This condition clearly calls for strategies that reduce or redirect involvement in the products/markets examined using SWOT analysis.



(SWOT Analysis Diagram)

In cell 2, a firm with key strengths faces an unfavorable environment, in this situation, strategies would use current strengths to build long-term opportunities in other products/markets, possessing much strength in intercity bus transportation, still faces an environment predominated by fundamental, long-term threats, such as airline competition and labor costs. The result was product development into non passenger services, followed by diversification into other businesses. A business in Cell 3 faces impressive market opportunity but is constrained by several internal weaknesses. The focus of strategy for such firms is eliminating internal weaknesses to more effectively pursue market opportunity. A major challenge in using SWOT analysis lies in identifying the position the business is actually in. a business that, faces major opportunities may likewise face some key threats in its environment. It may have numerous internal weaknesses but also have one or two major strengths relative to key competitors. Fortunately, the value of SWOT analysis does not rest solely on careful placement of a firm in one particular cell. Rather, it lets the strategist visualize the overall position of the firm in terms of the product/market conditions for which a strategy is being considered.

4. Customer Analysis: The piece of a Business Plan

Customer analysis is the process of determining customer segmentation, value, purchasing behaviour and motivation in order to better target marketing and increase sales. It is common to seem to place the customer first by saying something like, "only through serving customers can a company exist and prosper in the long run". If "exist and prosper" means provide a high return to shareholders in future years, then serving the shareholder is the primary goal and the customer is merely a means to that end. If the customers are the primary constituency, there are only two things the organization strategist can offer a lower price for a given quality and quantity of good or service, and a higher quality or quantity of good or service for a given price. Simply offering low price and quality high price and quality is not performing a service to the customer, who undoubtedly has other ways to obtain such average value. Quality means the degree of excellence of the entire bundle of goods and services offered the customer. It can be thought of as the degree to which purchase of the company's products and services improves the customer's quality of life. For example, a company, which sells an item with a very low failure rate but has no service organization, may be offering lower quality than a company with an excellent service organization but twice the failure rate. A company with a service-oriented sales force which ensures that the customer's product selection matches actual customer needs is offering higher quality than a company which sells an identical product line but to whoever will buy it.

5. Customer Segmentation: The Most Powerful Marketing Tool

A detailed knowledge of customer requirements is vital for business success, and lays the groundwork for optimized customer segmentation as well as for product innovation. Segmentation is based on the precept that not all customers are equal. Some can't live without your produ ct; Others couldn't care less. Some customers are highly profitable; Others are only marginally profitable or even cost you money. Market segmentation allows you to focus your scarce marketing resources and a ppeal to potential customers in ways that are most likely to get them to become loyal customers. Segmen tation is also called as divestment strategy or divestiture strategy involves selling off or shedding business units or product divisions, or segments of business operations to redeploy the resources so released for other purposes. While selling off a business segment or product division is one of the common forms of divestment, it may also include selling off or giving up the control over a subsidiary, or a demerger whereby the wholly owned subsidiaries may be floated off as independently quoted companies.

Historically divestment is known to be a rather infrequent event as compared with acquisitions and mergers. Possibly this is due to the fact that divestment is an irreversible decision so far as the divesting firm is concerned. No firm having divested any of its units generally looks forward to acquiring it again.

Divestment to be effective should be carried out in a manner and at a time so as to realize the maximum value from divestment as well as to ensure that replacement Investment is worthwhile. This requires a combined study of the implications of divesting particular units or segments of business, and the potential returns from alternative investment opportunities, even though the immediate concern may be to reduce the burden of fixed-interest bearing loans. A possible implication of divestment, which may be overlooked by management, is the existence of interdependencies between the loss-making activity likely to be divested and the remaining activates of the firm. For instance, divestiture of a product market may result in fixed overheads being spread over a smaller volume of output or economies of scale in purchasing, and other operations may involve higher costs, and customers demand may suffer if the divested product is one item in a complete line of products. However, it does not imply that a firm can never drop an unprofitable product from the range of products. What is important is to recognize the possibility of interdependencies.

6. Customer Motivation: Leads to Goal-Directed Behavior

The level of motivation demonstrated by employees in an organization is complimentary. In most instances, the degree of motivation exhibited by employees is influenced by leader effectiveness. Furthermore, a highly motivated management team in combination with highly motivated employees can bring about substantial increases in performance and can significantly increase the likelihood that organizational objectives will be achieved. Many variables influence the level of motivation of employees in an organization. However, the main variable explored in this section is the organizational reward system. In most cases, the organizational reward system is one of the most effective motivational tools available to organization. The design and sue of the organizational reward system reflects management's attitude about performance and significantly influences the entire organizational climate. Organizational rewards include both intrinsic and extrinsic, that is received as a result of employment of the organization. Intrinsic rewards are internal to an individual and are generally derived from involvement in certain activities or tasks. The feelings of satisfaction and accomplishment that are derived from doing a job well are examples of intrinsic rewards. Extrinsic rewards are tangible rewards that are directly controlled and distributed by the organization. An employee's pay and hospitalization, insurance are examples of extrinsic rewards.

7. Market Analysis: A Study of the attractiveness and the dynamics

Marketing consists of those activities intended to move products or services from the producer to the consumer or market. The basic role of marketing in an organization is to have the right products or services in the right quantity at the right place at the right time. When this role is performed effectively, profits are earned and customers are served efficiently. Marketing strategy is concerned with matching existing or potential products or services with the needs of customers, informing customers that the products or services exist, having the products or services at the right time and place to facilitate exchange, and assigning a price to the products or services. The marketing strategy selected by an organization is dependent on whether the organization is attempting to reach new or existing customers and whether the organization's products or services are new or already exist. With a marketing penetration strategy, the organization attempts to gain greater control in a market in which it already has a product or service. Management must carefully consider several factors in using a market penetration strategy. The reaction of competitors; the capacity of the market to increase usage or consumption and/or the availability of new customers; the costs involved in gaining customers from competition, stimulating more usage or consumption, or attracting new customers.

An organization using a product development strategy creates a new product or service for existing customers. Considerations in a product development strategy include the competitive response; the impact of the new product or service on existing products or services; the ability of the organization to deliver the product or service; with a diversification marketing strategy, an organization offers a new products or service to new customers. Considerations in using this strategy include developing a considerable knowledge of the new customer's needs; Making certain that the new product or service meets those needs; Knowing that the organization has the human talent to serve the new customers. Product positioning enables managers to decide whether they want to leave their present product and marketing mix alone or whether they want to reposition the product. Production positioning allows an organization to develop marketing strategies oriented towards target customers. Developing strategies of this type is frequently called target marketing. For example, an organization might develop a combining strategy that involves combining relatively homogenous submarkets into a larger target market.

8. Profitability Analysis

Profitability analysis can anticipate sales and profit potential specific to aspects of the market such as customer age groups, geographic regions, or product types. Profitability is the net result of a large number of policies and decisions chosen by an organization's management. Profitability ratios indicate how effectively the total firm is being managed. The profit margin for a firm is calculated by dividing net earnings by sales. This ratio is often called return on sales (ROS). A second useful ratio for evaluating profitability is the return on investment or ROI, as it is frequently called found by dividing net earnings by total assets. The ratio of net earnings to net worth is a measure of the rate of return or profitability of the stockholder's investment. It is calculated by dividing net earnings by net worth, the common stock equity and retained earnings account. Managerial attitude toward risk vary from comfort if not exhilaration with high risk to strong risk aversion. The risk averters probably view the firm as very weak and will accept only defensive strategies with very low risks. Three polar conditions with regard to risk can be conceived. Risk attitudes can change, and vary by industry volatility and environmental uncertainty. In very volatile industries, executives must be capable of absorbing greater amounts of risk; otherwise, they cannot function. Exhibit below provides an interesting example of how risk attitudes can change and are important to strategic thinking in volatile conditions. Risk attitudes can also vary on the basis of the internal conditions. Thus, assessing the manager's perception of risk will help you to understand the potential acceptability of a given strategic option.

8. Summary

This research discussed about the identification of the competitors. After identifying the competitors, the SWOT analysis has been explained in this context, in business the first and foremost factor is the customer followed by market and particularly the profit. Hence the analysis on customers market and profit has also been discussed. All mistakes is competing to be the best, going down the same path as everybody else and thinking that somehow you can achieve better results. This is a hard race to win. So many managers confuse operational effectiveness with strategy. Another common mistake is confusing marketing with strategy. Strategy has always been important for a business to know and understand how it fits in and interacts with the surrounding environment on both an internal (office/factory/shop environment) and external view (how your business operates with the outside world). Researching your environment will benefit you and/or your management team by putting you in a position to develop a strategy for both the long and short term. Each term of management is a heading for a separate analysis of their business but they can be related with inbuilt factors of the research. Through this paper we are trying to explain how a SWOT analysis of the company is a common phrase used to abbreviate Strengths, Weaknesses, Opportunities and Threats.

References

Nag, R.; Hambrick, D. C.; Chen, M.-J (2007). "What is strategic management, really? Inductive derivation of a consensus definition of the field" (PDF). Strategic Management Journal 28 (9): 935–955. Retrieved October 22, 2012.

Johnson, G, Scholes, K, Whittington, R Exploring Corporate Strategy, 8th Edition, FT Prentice Hall, Essex, 2008, ISBN 978-0-273-71192-6

Blaxill, Mark & Eckardt, Ralph, "The Invisible Edge: Taking your Strategy to the Next Level Using Intellectual property(Portfolio, March 2009.

Mulcaster, W.R. "Three Strategic Frameworks," Business Strategy Series, Vol 10, No 1, pp 68 - 75, 2009.

"Taking Care of Business, 1995-2005". Science Watch. Thomson Scientific. November/December 2005. Retrieved 2012-01-26.

Mulcaster, W.R. "Three Strategic Frameworks," Business Strategy Series, Vol 10, No1, pp68 – 75, 2009.

Mckeown, Max, The Strategy Book, FT Prentice Hall, 2012.

IBM, Capitalizing on Complexity: Insights from the Global Chief Executive Office Study, July 2010.

Laermer, Richard; Simmons, Mark, Punk Marketing, New York : Harper Collins, 2007 ISBN 978-0-06-115110-1 (Review of the book by Marilyn Scrizzi, in Journal of Consumer Marketing 24(7), 2007

Strategic Market Management, David A. Aaker (Author) Publication Date: December 30, 2009 | ISBN-10: 0470317248 | ISBN-13: 978-0470317242 | Edition: 9

Humphrey, Albert (December 2005). "SWOT Analysis for Management Consulting". SRI Alumni, Newsletter

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Impact of Financial Sector Reforms on Savings and Capital Formation in India

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Abstract

In the beginning of 1990's India was faced with serious fiscal and financial problems and it was against this backdrop, that financial sector reforms were initiated. The basic function of the financial sector is to tap the surplus funds available in the economy and channel them to the productive investments. The rate for savings and capital formation has been obtained for the two sub periods (break taken in the year 1992-1993) and for the entire time period from 1950-51 to 2010-2011. Subsequently chow test for structural break has been performed to test for the impact of financial sector reforms. From the analysis it can be inferred that on the whole a substantial increase in the rate of growth of both savings and capital formation has occurred after the reforms.

Keywords: Financial sector reforms, financial development, Gross domestic savings and capital formation.

Introduction

At the time of independence in 1947, India was backward, primarily agrarian, stagnant and low income economy. Institutional set up and infrastructure was terribly weak. The period immediately after independence posed a major challenge to the country. Due to centuries of exploitation at the hands of foreign powers, there were very high levels of deprivation in the economy—both social as well as economic. To take up the Herculean task of rapid growth with socio-economic justice, the country adopted the system of planned economic development after independence. Due to paucity of economic resources and limitations of availability of capital for investment, the government also came up with the policy of setting up public enterprises in almost every field (Jham and Kumar, 2012). In the beginning of 1990's India was faced with serious fiscal and financial problems. It had to approach the World Bank and other international financial institutions for financial assistance. It was against this backdrop, that wide ranging reforms, encompassing all sectors of the economy were initiated.

Need for Reforms

The Indian financial sector of pre reform period essentially catered to the needs of the planned development in a mixed economy framework, where the government had a pre-dominant role in economic activities. In order to facilitate the large borrowings requirements of government, SLR was frequently revised upwards and maintained at high levels. Interest rates on government securities were artificially too low, unrelated to the market conditions. The government securities market could not develop. The provision of fiscal accommodation through ad hoc treasury bills (at 4.6%) led to high levels of monetisation of fiscal deficit. To check the monetary effects, CRR was frequently revised upward. The CRR and SLR on the eve of reforms were quite high and the associated interest rates low. The CRR in 1991 was 15% with an additional incremental requirement of 10%. The SLR in 1991 was 38.5%. The government therefore moped up 63.5% of banking deposits in 1991. The environment in the financial sector in those years was characterised by segmented and underdeveloped financial markets with paucity of instruments.

The existence of a complex structure of interest rates arising from the economic and social concerns of providing concessional credit to certain sectors had resulted in cross subsidisation. This implied that higher rates were charged to non-concessional borrowers. The regulation of the lending rates led to the regulation of deposit rates to keep the cost of funds to banks at reasonable rates/levels. The system of administered rates had led to multiplicity and complexity of interest rates. On the whole the directed and concessional availability of banks credit with respect to certain sectors resulted in distorting the interest rate mechanism and adversely affected the viability and profitability of the banks. Lack of recognition of the importance of transparency, accountability, and prudential norms in the operations of banking system led to a rising burden of NPAs.

Indian economy was in deep crisis in July 1991, when foreign currency reserves had plummeted to almost $1 billion; Inflation had roared to an annual rate of 17 percent; fiscal deficit was very high and had become unsustainable; foreign investors and NRIs had lost confidence in Indian Economy. Capital was flying out of the country and we were close to defaulting on loans. Along with these bottlenecks at home, many unforeseeable changes swept the economies of nations in Western and Eastern Europe, South East Asia, Latin America and elsewhere, around the same time. These were the economic compulsions at home and abroad that called for a complete overhauling of our economic policies and programs.

Objectives of Financial Sector Reforms Introduced in 1991

For a long time, an alarming increase of sickness in the Indian financial system had required urgent remedial measures or reforms which were introduced in 1991. Following are the main objectives of financial sector reforms:

1. To develop a market-oriented, competitive, world-integrated, diversified, autonomous, transparent financial system.

2. To increase the allocative efficiency of available savings and to promote accelerated growth of the real sector.

3. To increase or bring about the effectiveness, accountability, profitability, viability, vibrancy, balanced growth, operational economy and flexibility, professionalism and de-politicization in the financial sector.

4. To increase the rate of return on real investment.

5. To promote competition by creating level-playing fields and facilitating free entry and exit for institutions and market players.

6. To ensure that the rationalization of interest rates structure occurs, that interest rates are flexible, market-determined or market-related, and that the system offers to its users a reasonable level of positive real interest rates. In other words, the goal has been to dismantle the administered system of interest rates.

7. To reduce the levels of resource pre-emption and to improve the effectiveness of directed credit programs.

8. To build a financial infrastructure relating to supervision, audit, technology, and legal matters.

9. To modernize the instruments of monetary control so as to make them more suitable for the conduct of monetary policy in a market economy i.e. to increase the reliance on indirect or market-incentives based instruments rather than direct or physical instruments of monetary control.

The main thrust of financial sector reforms was on the creation of efficient and stable financial institutions and markets, introduction of new players and instruments, relaxation of quantitative restrictions, improvement in trading, clearing and settlement practices, promotion of institutional infrastructure, refinement of market micro-structure, creation of liquidity, depth, and the efficient price discovery process, and ensuring technological up gradation.

Financial Development

A financial system operates through financial institutions and markets. The development of financial system involves significant changes of quantitative and qualitative nature in the financial institutions and markets. Financial development help the financial sector to serve its basic function of increasing savings and investments in the economy and allocating available funds in the best possible manner.

Financial development is a very broad concept, as the financial sector develops various kinds of financial institutions, markets and instruments increase substantially in the economy (Bhole, 2004). The institutions become geographically widespread and more of the population is able to access the services of the financial system. The new strong, active, large banking and non-banking financial institutions, markets are emerged and developed with the financial development. The surplus funds are more greatly encouraged to move to the productive uses via the financial sector.

Financial development involves the emergence and development of many private sector banks (including foreign banks) and other financial institutions. The competition and efficiency improved with the private sector banks coming in the financial sector. The new methods and improved ways of functioning e.g. computerisation becomes important and with this time, energy and cost of transaction reduced. The institutions and markets become more efficient in their functioning and rate of interest becomes market determined. There is strong and effective system of supervision, inspection, auditing and regulations of financial organisations maintaining international standards with respect to non-performing assets, capital adequacy etc. With all these the financial system is able to increase savings and investments in the economy and allocate the available funds to the productive uses.

The Indian financial sector has shown a remarkable progress, both in the qualitative and quantitative terms over the period of more than 65 years. The number and density of banking and non-banking financial institutions has greatly increased. The entry of the private and foreign banks have increased the competition and made the financial sector more efficient in its functioning. Non-performing assets are now lower and the capital adequacy ratio is much higher. computerisation and e -transactions has become widespread, saving and investments in the economy, bank deposits and credit have all increased very tremendously, only a part of the increase is being explained by the inflation.

Gross Domestic Savings and Investments

The basic function of the financial system is to tap the surplus funds available in the economy and channel them to the productive investments. The extent of development of the financial system best manifests itself in the success of its basic function.

Savings

Savings are done by government, households and the private corporate sector (businesses). The dominant saver out of the various savers in India is the household sector followed by the private corporate sector. The contribution of the public sector to total domestic savings is small and lately becomes negative (see table no. 1). Both public sector and the private corporate sector are net deficit spenders who draw upon the savings of the household sector. The household sector also draws from the other sectors (banks and other lending institutions) but its savings far exceed the borrowings. So household is the only surplus sector in the economy. It is very important for the financial system to increase this surplus and make more and more of it available for the investment in the economy.

Household savers require store of value so that they get motivated to hold their savings. The financial sector promote savings by providing numerous services of financial markets and financial intermediaries together with wide variety of financial assets. Lots of combinations of risk and return have become available to the savers and scope of portfolio choice has greatly improved with the financial progress and innovations in technology so that savers tend to save more. Financial progress generally induces larger savings out of the same level of income. More of these savings are in the forms of financial assets as deposits, currency, insurance policies, bonds etc. Rather than physical assets like gold or real estate. These assets are less risky, more liquid and easy to store and manage than most tangible assets. Thus out of given savings , the proportion of financial assets(excluding currency) increased. This is financialisation of household savings.

Mobilisation of savings takes place when people buy financial assets. The act of saving and the act of investment is separated by the financial assets. People buy assets like bank deposits, insurance policies etc. from financial institutions (these are secondary securities as against primary securities issued by ultimate borrowers like bonds, company deposits etc.). These financial institutions allocate their savings further among competing borrowers. This represents the financial intermediation or institutionalisation of savings i.e., going to borrowers through institutions rather than directly via primary securities.

The magnitude of household sector in total savings in India is very large and magnitude of the private corporate sector and the government sector is very small. So it is only the savings of the household sector whose magnitude is affected by the changes in the financial sector. In order to measure the financial development, it is very much important to look at the savings of the household sector, their financialisation and the institutionalisation of the savings. The development of the financial sector provide much more facilities and opportunities for utilisation of the surplus funds. So people save more and more of the savings are in the forms of financial assets rather than physical assets. These financial assets are held with institutions rather than privately or as currency with individuals or in primary securities.

Investment

The term investment means the act of purchasing tangible or real assets for utilising them in productive activities. Besides investment in the tangible assets ,change is stock is also a part of the investment. Stock may be of raw material, semi finished goods or finished goods. Investment can be either gross investment or net investment. The difference between the two being consumption of fixed capital or depreciation. Net values give the true measure of addition to the productive capacity of the economy even then it is common to use gross values for various analytical purposes due to arbitrariness in calculation of depreciation. Investment is done by the government sector and the private sector. Only the private sector investment is responsible for the development of the financial system and economic development. The financial system should effectively mobilise the available funds to various productive uses.

Review of literature

Loayza and Shankar (1998) found a robust positive impact of real interest rate and financial depth, on long-run private savings in India. Kraay (1998) concluded that reforming the financial sector encouraged households to shift their savings from unproductive physical commodities such as grain, and deposit them in the banking system, and that the 1988 inflation-indexed saving deposits policy made the real returns of savings very attractive and increased saving deposits in China.Oscan (2000) found a positive significant coefficient of financial depth indicator (M2/GNP) ratio on private savings, and a negative significant impact of the ratio of private credit to gross national disposable income, suggesting that the relaxation of credit constraints decreases private savings.Bandiera et al (2000) conducted empirical tests on the impact of the financial liberalisation on private savings in eight developing countries by using time series data over 25 years. Their findings indicated that financial liberalisation might be associated with a negative impact on savings. Mavrotas and Kelly (2001) used time-series data for Sir Lanka over the period 1970-1997 to assess the cointgration of financial sector development and private savings. The results of their estimations suggested that developing the financial sector positively and strongly, affected the private saving rate in Sir Lanka over the examined period. Chijorigal and Robert (2004) Using the Mann Whitney test to assess the impact of the three variables (domestic savings, bank investments and cost of intermediation) the results revealed both positive and negative impact and it is concluded that financial reforms will not always bring positive results if the right environment is not created when instituting the reforms.

Ahmed (2007) using a carefully constructed composite index and a considerable list of controlling variables, they observe a positive and significant link between private savings and the financial liberalization index. Asamoahand Nkrumah (2008) found out that financial services stimulate savings, investment and growth of GDP and for that matter economic growth by increasing the rate of capital accumulation and by improving the efficiency with which the economies use that capital. Ang (2010) suggest that financial deepening and increased banking density tend to encourage private savings. Development of insurance markets and liberalization of the financial system, however, tend to exert a dampening effect on private savings.Fowowe (2011) The results of econometric estimations show that financial sector reforms (measured by the index) have had a positive effect on private investment in the selected countries, thus offering support to the financial liberalization hypothesis.

Data and Methodology

In order to see the impact of the financial sector reforms on savings and capital formation, it is required to make a comparative study of the development prior to reforms and after the reforms. The two (Savings and capital formation) indicators of financial development have been examined with respect to any structural break corresponding to the reforms in the financial sector. Time period for the study is from 1950-51 to 2010-2011.

Data Sources

The analysis is based on secondary data obtained from the following resources:

- Report on Trends & Progress of Banking in India (Different issues), RBI.
- Hand Book of Statistics on Indian Economy (2011-2012), RBI.
- Economic survey of Govt. of India (2011-2012) issued by ministry of finance, Government of India.
- Statistical tables relating to banks in India (1979-2009).
- Flow of funds accounts of the Indian economy, RBI.

Hypothesis

The following hypotheses are tested in relation to the period prior and after the financial sector reforms of 1991:

1) Gross domestic savings (total and household) have increased at same rates.
2) Gross domestic capital formation (total and private sector) have grown at same rate.

Research Methodology

First of all the data is plotted against the time series of all the indicators. This give very clear picture of the trend. If a jump or a change of slope occurs at any particular time period it will indicate a structural change with respect to the concerned variables. A more regrous approach is to obtain the rate of growth using the regression analysis and then examine for a structural break corresponding to the reforms using standard tests available. This is possible only if adequate data is available and it does not show wide fluctuations.

Adequate and consistent data is available for both pre and post reform periods for the indicators, so regression analysis has been used.

The average annual rate of growth for the indicators has been obtained using regression equation of the form

$$y = a + bT + e$$

Where, the variable is represented by y; T denotes the time period; and b i.e., the coefficient of T represents the average annual rate of growth of the variable y. e is the error term.

The rate has been obtained for the two sub periods (break taken in the year 1992-1993) and for the entire time period for which data is available. Subsequently chow test (Gujrati, 2007) for structural break has been performed to test for the impact of reforms on savings and capital formation.

$$F = \frac{(RSS_R - RSS_{UR})/K}{RSS_{UR}/(N_1 + N_2 - 2K)}$$

Where, RSS_R = Restricted Residual sum of squares for combined regression.

$RSS_{UR} = RSS_1 + RSS_2$

RSS_1 = Residual sum of squares for pre reform period regression.

RSS_2 = Residual sum of squares for post reform period regression.

K= No. Of parameters to be estimated (=2)

N_1 = observations in the pre-reform period.

N_2 = observations in the post-reform period.

Decision rule: if the value of calculate F using the above statistics is greater than the value of F obtained from the table i.e., $F_{cal} > F_{critical,}$ it implies the rejection of null hypothesis of various growth rates being same in the pre-post reform periods. In other words a value of calculated F greater than the Critical Value of F implies that the growth rates in the post reforms sub periods have been higher.

This section gives the empirical results of the comparative study of pre and post reforms period with respect to the indicators of financial development as discussed above. Data on gross domestic Savings and Gross Capital Formation (Investment) is presented in table no.4.1 below:

Table 1. Gross Domestic Savings and Gross Domestic Capital Formation

As % of GDP at current market prices

	Gross Domestic Savings				**Gross Domestic Capital Formation**					
Year	**House-hold Sector**	**Private Corporate Sector**	**Public Sector**	**Total (2+3+4)**	**Public Sector**	**Private Sector**	**Valuables**	**Total (6+7+8)**	**Errors & Omissions**	**Adjusted Total (9+10)**
1	2	3	4	5	6	7	8	9	10	11
1950-51	6.5	0.9	2.1	9.5	2.8	8.1	….	10.9	-1.6	9.3
1951-52	5.7	1.2	2.8	9.8	3.0	8.0	….	11.0	0.4	11.4
1952-53	6.4	0.6	1.8	8.8	2.8	6.5	….	9.3	-0.9	8.5
1953-54	5.7	0.8	1.5	8.0	3.0	4.6	….	7.6	0.2	7.9
1954-55	6.9	1.1	1.9	9.9	4.5	5.8	….	10.3	-0.2	10.0
1955-56	9.2	1.2	2.2	12.5	5.2	7.4	….	12.6	0.2	12.8
1956-57	9.0	1.1	2.4	12.5	5.6	9.2	….	14.8	0.4	15.2
1957-58	7.4	0.9	2.4	10.6	6.4	8.3	….	14.7	-0.6	14.0
1958-59	6.3	0.9	2.1	9.3	5.8	5.7	….	11.5	0.3	11.7
1959-60	7.7	1.1	2.1	11.0	6.4	7.1	….	13.5	-1.1	12.4
1960-61	6.8	1.6	3.2	11.6	7.1	7.5	….	14.6	-0.3	14.3
1961-62	6.5	1.7	3.4	11.6	6.8	8.1	….	14.9	-1.4	13.4
1962-63	7.4	1.7	3.7	12.8	7.9	7.8	….	15.7	-0.7	14.9
1963-64	6.8	1.7	4.0	12.4	8.0	7.5	….	15.6	-1.3	14.3
1964-65	6.9	1.4	3.9	12.3	8.0	7.8	….	15.8	-1.4	14.5
1965-66	9.0	1.4	3.8	14.2	8.6	7.8	….	16.4	-0.2	16.2
1966-67	9.7	1.3	2.9	13.9	7.4	9.0	….	16.5	0.2	16.7
1967-68	8.6	1.1	2.5	12.1	6.7	8.6	….	15.2	-0.9	14.3
1968-69	8.1	1.1	2.9	12.0	6.1	8.1	….	14.2	-1.2	13.1
1969-70	9.8	1.2	3.1	14.1	5.8	9.4	….	15.1	-0.5	14.6
1970-71	9.5	1.4	3.4	14.3	6.4	8.9	….	15.3	-0.2	15.1
1971-72	10.3	1.5	3.3	15.1	7.1	9.7	….	16.8	-0.7	16.0
1972-73	9.5	1.4	3.2	14.1	7.6	8.2	….	15.8	-1.1	14.7
1973-74	11.7	1.6	3.5	16.8	7.6	9.0	….	16.5	0.8	17.3
1974-75	10.7	1.8	4.1	16.7	7.3	11.3	….	18.6	-1.1	17.5
1975-76	11.3	1.2	4.8	17.4	9.1	9.4	….	18.5	-1.2	17.2
1976-77	12.0	1.3	5.6	18.8	9.8	8.3	….	18.1	-0.7	17.4
1977-78	12.9	1.3	5.0	19.2	8.4	9.8	….	18.2	-0.3	17.8
1978-79	14.4	1.4	5.2	21.0	9.4	10.6	….	20.0	1.1	21.1
1979-80	13.0	1.9	5.0	19.9	10.2	10.7	….	21.0	-0.6	20.4
1980-81	12.1	1.6	4.1	17.8	9.2	8.9	….	18.0	1.1	19.2
1981-82	10.8	1.5	5.2	17.5	11.0	10.8	….	21.8	-2.9	18.9
1982-83	11.2	1.5	5.1	17.8	11.9	10.1	….	22.0	-3.0	19.1
1983-84	11.8	1.4	3.9	17.1	10.7	9.3	….	20.0	-1.8	18.2
1984-85	12.8	1.6	3.5	17.8	11.5	10.0	….	21.5	-2.4	19.1
1985-86	12.7	1.9	3.9	18.4	11.9	11.5	….	23.5	-2.9	20.6
1986-87	13.0	1.6	3.5	18.1	12.5	10.9	….	23.5	-3.4	20.1
1987-88	15.6	1.6	2.8	20.0	10.8	11.8	….	22.6	-0.7	21.9
1988-89	15.3	1.9	2.7	20.0	10.8	13.1	….	23.8	-1.0	22.8
1989-90	16.5	2.4	2.4	21.3	10.8	13.1	….	23.9	-0.2	23.7
1990-91	18.5	2.6	1.8	22.9	10.6	14.3	….	24.9	1.1	26.0
1991-92	15.7	3.0	2.6	21.3	10.2	12.3	….	22.5	-0.7	21.8
1992-93	16.5	2.6	2.2	21.3	9.5	14.7	….	24.2	-1.2	23.0
1993-94	17.0	3.4	1.3	21.7	9.1	12.2	….	21.3	0.9	22.2
1994-95	17.9	3.4	2.3	23.6	9.7	13.5	….	23.2	1.5	24.7
1995-96	16.2	4.8	2.6	23.6	8.6	17.5	….	26.1	-0.8	25.3
1996-97	15.8	4.4	2.2	22.4	7.8	14.3	….	22.1	1.6	23.7

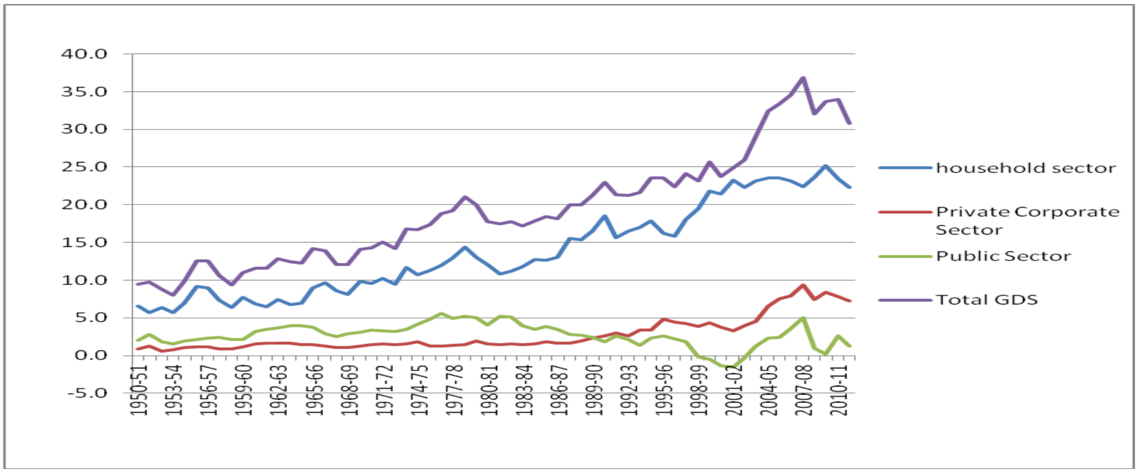
1997-98	18.1	4.2	1.9	24.2	7.4	17.1	….	24.5	1.1	25.6
1998-99	19.5	3.8	-0.2	23.2	7.3	16.3	….	23.5	0.7	24.2
1999-2000	21.8	4.3	-0.5	25.7	7.7	18.5	0.8	27.0	-0.2	26.8
2000-01	21.4	3.7	-1.3	23.8	7.2	16.4	0.7	24.2	0.1	24.4
2001-02	23.2	3.3	-1.6	24.9	7.2	17.8	0.6	25.7	-1.3	24.3
2002-03	22.3	3.9	-0.3	25.9	6.5	18.0	0.6	25.0	-0.2	24.8
2003-04	23.2	4.6	1.3	29.0	6.6	18.7	0.9	26.2	0.7	26.9
2004-05	23.6	6.6	2.3	32.4	7.4	23.8	1.3	32.5	0.4	32.8
2005-06	23.5	7.5	2.4	33.4	7.9	25.2	1.1	34.3	0.4	34.7
2006-07	23.2	7.9	3.6	34.6	8.3	26.4	1.2	35.9	-0.2	35.7
2007-08	22.4	9.4	5.0	36.8	8.9	28.1	1.1	38.0	0.1	38.1
2008-09	23.6	7.4	1.0	32.0	9.4	24.8	1.3	35.5	-1.2	34.3
2009-10	25.2	8.4	0.2	33.7	9.2	25.4	1.8	36.3	0.2	36.5
2010-11	23.5	7.9	2.6	34.0	8.4	26.5	2.1	37.0	-0.1	36.8

Note: base year 2004-2005

The above table shows data related to Gross Domestic Savings and Gross Domestic Capital Formation from 1950-51 to 2010-11. The magnitudes are shown as percentages to Gross Domestic Product at current market prices (2004-2005). The data has been obtained from the economic survey and the handbook of statistics on Indian economy 2011-12.the table shows separate contribution made by the household sector, private corporate sector and the public sector to the total savings in India. It can be seen from the table that the dominant saver in India is the household sector followed by the private corporate sector and public sector contribution is very small (lately negative) in the total Domestic savings of India.

Figure 1 below illustrate the trend in the household sector savings, private corporate sector savings, public sector savings and Gross domestic savings as percentage of GDP at current market prices.

Figure 1: Savings as Percentage to GDP at Current Market Prices



It can be seen from the figure 4.1 that there is noticeable up trend in the household savings somewhat in a line with the total savings.

The results of regression analysis for structural break corresponding to the reforms suggest that the rate of growth of both household sector and the total savings have significantly increased after the reforms. The relevant regression equations are:

GDS (Pre-reform period) = 15.20 + 0.308T ; r^2 = 0.895 ; df = 41 ; $t_{calculated}$ = 18.67 ; t_{41} = 2.7 1

GDS (Post -reform period) = 28.05 + 0.870T ; r^2 = 0.836 ; df = 16 ; $t_{calculated}$ = 9.017 ; t_{16} = 2.9 2

GDS (Total period) = 18.99 + 0.393T ; r^2 = 0.903 ; df = 59 ; $t_{calculated}$ = 23.459 ; t_{59} = 2.6

$F_{calculated}$ = 32.607 > $F_{critical}$ = 4.98 (at 1% level of significance)

Regression equations for household savings are as given below:

Household savings (Pre-reform period) = 10.4233 + 0.248T ; r^2 = 0.853 ; df = 41 ; $t_{calculated}$ = 15.445 ; t_{41} = 2.7

Household savings (Post-reform period) = 21.1889 + 0.491T ; r^2 = 0.789 ; df = 16 ; $t_{calculated}$ = 7.731 ; t_{16} = 2.9

Household savings (total period) = 13.6 + 0.320T ; r^2 = 0.922 ; df = 59 ; $t_{calculated}$ = 26.461 ; t_{59} = 2.6

$F_{calculated}$ = 17.366 > $F_{critical}$ = 4.98 (at 1% level of significance)

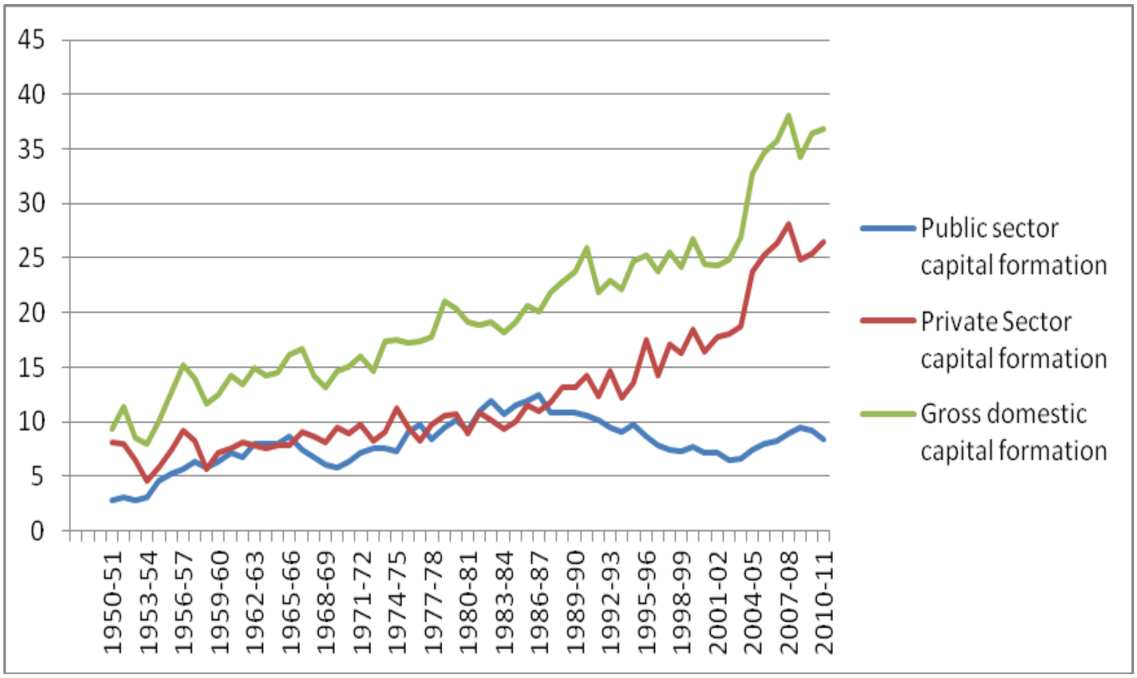
This is clearly shown by the above equations that the average annual rate of growth , given by the estimated value of the parameter b, has more than doubled in the post reform period both for total domestic savings and the household savings. The calculated t values are greater than the critical values obtained from the tables in all cases (at 1% level of significance). This implies that the estimated growth rates are statistically significant in all the cases. The F test is also rejected as the calculated F values are greater than the critical values obtained from the tables in both cases (at 1% level of significance). This indicates a structural break corresponding to the reforms. This implies that in the period after 1992-1993 the average annual rate of growth of both total domestic savings and the household savings have substantially increased and this increase is statistically significant. The observed increase in growth rates in the period after 1992-1993 would also contain the effect of a number of other changes going on in the economy after the economic reforms of 1991. However ,one can reasonable expect that in case of financial variables the predominant effect would be of those changes taking place in the financial sector.

In any case the magnitude of change is substantial in both cases so that even after allowing for some impact of other factors a huge margin remains that can be attributed to the financial sector reforms.

Table 1 give the contribution of the public and private sector separately for the capital formation in the economy. It is clear from the table that the contribution of the private sector is more than the public sector even before the financial sector reforms. After the reform the differential has substantially increased. Private capital formation has increased much faster than the total capital formation in the economy.

Figure 2 shows the trend of Gross Domestic Capital Formation and the contribution of public and private sector separately.

Figure 2 : Capital Formation as Percentage of GDP at Current Market Prices



Both the curves (for Private sector and gross capital formation) in the figure are steeper after the early 1990's than before period. This indicate an increase in the rate of growth after the reforms. The gap between the two curves representing capital formation by the public sector. The contribution of the public sector in the gross domestic capital formation have been declined consistently since 1991.

The regression equations for the trend in capital formation are as follows:

GDCF (Pre-reform period) = 16.4744 + 0.316T ; r^2 = 0.878 ; df = 41 ; $t_{calculated}$ = 17.196 ; t_{41} = 2.7 1

GDCF (Post -reform period) = 28.9889 + 0.932T ; r^2 = 0.792 ; df = 16 ; $t_{calculated}$ = 7.812 ; t_{16} = 2.9 2

GDCF (Total period) = 20.1672 + 0.391T ; r^2 = 0.882 ; df = 59 ; $t_{calculated}$ = 21.016 ; t_{59} = 2.6

$F_{calculated}$ = 51.789 > $F_{critical}(2.57)$ = 4.98 (at 1% level of significance)

GDCF pvt. (Pre-reform period) = 9.2791 + 0.152T; r^2 = 0.745; df = 41 ; $t_{calculated}$ = 10.935 ; t_{41} = 2.7 1

GDCF pvt. (Post -reform period) = 20.0278 + 0.875T ; r^2 = 0.858 ; df = 16 ; $t_{calculated}$ = 9.849 ; t_{16} = 2.9 2

GDCF pvt. (Total period) = 12.4508 + 0.295T ; r^2 = 0.785 ; df = 59 ; $t_{calculated}$ = 14.686 ; t_{59} = 2.6

$F_{calculated}$ = 85.06 > $F_{critical(2.57)}$ = 4.98 (at 1% level of significance)

The above analysis brings out that for GDCF the rate of growth is nearly trebled in the post reform period while the GDCF (private sector) it has increased five times. The associated t values are greater than the critical values obtained from the tables in all the cases. This implies that the estimated growth rates are statistically significant in all cases. The F test is rejected in both the cases thus indicating a structural break corresponding to the reforms. This implies that in the period after 1992-1993, the average annual rate of growth of both Gross domestic capital formation and private sector capital formation have substantially increased and that this increase is statistically significant. In this case also, it needs to be taken into account that the observed increase in the growth rates in the period 1992-1993 would also include the effect of a number of other changes going on in the economy after the economic reforms of 1991. The effect of other changes could be more important but in any case the magnitude of change is substantial here too so that even after allowing for some impact of other factors a huge margin remains that can be attributed to the financial sector reforms.

Conclusion

The policies pursued for financial sector reforms did have many benefits. The post nationalisation phase witnessed significant branch expansion to mobilise savings. From the above analysis on the savings and capital formation rates, one can infer that on the whole a substantial increase in the rate of growth of both savings and capital formation has occurred after the reforms. The maximum change has been analysed in the case of capital formation by the private sector. As earlier noted that the savings and investment by the public sector are not directly related to the changes in the financial sector and are determined by a numbers of other factors and fiscal priorities of the government. The household savings and capital formation by the private sector are the variables which are of the greater relevance in the context of development in the financial sector.

References

Ahmed, A.D. (2007). Potential Impact of Financial Reforms on Savings in Botswana: an Empirical Analysis Using a VECM Approach. The Journal of Developing Areas: 41(1): 203-219.

Ang, J. (2010). Savings Mobilization, Financial Development and Liberalization: The Case of Malaysia. Monash University, MPRA Paper No. 21718

Asamoahand,G.N. (2008). The Impact of the Financial Sector Reforms on Savings, Investments and Growth of Gross Domestic Product (GDP) in Ghana. International Business & Economics Research Journal: 7(10):73-84.

Bandiera, O. C., Honhan, G.P. & Svhinaarelli, F. (2000). Does financial reform raise or reduce savings?. Review of Economic and Statistics: 82(2), 239-265.

Bartlett, J.W. (1999). Fundamentals of venture capital. Madison book, U.K.

Bhole, L.M. (2004). Financial institutions and Markets: Structure, Growth and innovations. Tata Mc Graw Hill.

Cameron , R. E. (1967). Banking in the early stages of industrialization: a study in comparative economic history, New York, Oxford University Press.

Chijorigal, M.M., Robert, R. (2004). Impact of Financial Sector Reforms on Domestic Savings, Investment and Cost of Intermediation in Tanzania. African Journal of Finance and Management: 12(2): 15-31.

Fowowe, B. (2011). Financial Sector Reforms and Private Investment in Sub-Saharan African Countries. University of Ibadan, Nigeria. Journal of Economic Development:36(3).79-97.

Goldsmith, R. (1969). Financial Structure and Development. New Haven and London: Yale University Press.

Gujarati,D. (2007). Basic econometrics. 4th editions. Mc-graw Hill.

Gupta,S.B. (1999). Monetary economics; institutions theory and policy.S. Chand India.

Jham,P. , Kumar, R. (2012). Banking Sector Reforms and Its Impact on Banking Industry. International Journal of Research in Finance & Marketing:2(4):56-67.

Kraay, A. (1998). Household Savings in China, the World Bank Research Project, Saving Across the World, Puzzles and Policies.

Loayza, N, and Shankar, (1998). "Private Saving in India, " a paper presented to the World Bank conference entitled, Saving in the World: Puzzles and Policies, September 16-18

Mavrotas, G. & Kelly, R. (2000). Financial sector development: futile or fruitful? An examination of the determinants of saving in Sri Lanka. Paper presented at the international conference on finance for growth and poverty reduction.University of Manchester.

Oscan, M. (2000). Determinants of private savings in the Middle East and North Africa. Paper presented to the Third Mediterranean Development Forum in Cairo.

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Factors Influencing Job Satisfaction: A Study of Employees of Hotel Industry in India

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Abstract

Purpose – The present study aims at investigating the various factors influencing job satisfaction of operational level employees working in back of the house areas in Indian Hotel Industry.

Design/Methodology/Approach – Apart from the review of literature and discussions with experts from Industry and Academia the primary data is collected with the help of a structured schedule, developed on 5 point Likert scale. To collect data the schedule is administered to the employees working in the back of the house areas of hotels situated in Delhi and NCR region of India. Further, to analyse the collected data factor analysis is used.

Findings – Respondents have considered monetary related benefits as the most important followed by job characteristics, Human Resource Policy and inter-personal relationship within the organization.

Research Limitations – Though the study is very useful for the employees as well as management of the sampled hotels in designing their human resource policies, but still the study has its own constraints regarding universe and sample size which can be taken up by future researchers.

Originality/Value – Though lot of researches are conducted on job satisfaction all over the world but there is a dearth of same in the area of Indian Hotel Industry and amongst them very few studies have touched this important issue. The present paper will give a platform to the future researchers to carry out more studies on this highly important issue.

Keyword(s): Hotel, Food and Beverage, Job Satisfaction.

Introduction

Job Satisfaction has always been a burgeoning issue amongst researchers, academia and industry practitioners. Job Satisfaction not only affects individual employee but overall operations of the organization. The issue becomes very critical in case of Hospitality industry because of its high labour intensive nature. Many researchers have reported that low level of employees' satisfaction and high level of labour turnover like problems are prevalent in hospitality industry. Therefore it becomes imperative for these organizations to look after this important issue as Job satisfaction will increase productivity, leads to employee commitment, improves service quality and lowers down the absenteeism, turnover intentions, cost of recruitment, selection and training and stress. Keeping in mind its benefits the present study is designed to analyse the factors influencing job satisfaction.

Review of Literature

A number of studies have been carried out by scholars on job satisfaction few of them have been incorporated in present study to supplement theoretical background.

According to Clark, Oswald and Warr (1996) and Kalleberg & Mastekaasa (2001) tenure of service and level of satisfaction are positively related, as employees have more opportunities for promotion whereas, Clark et. al (1996) also of the opinion that longer tenure can lead to lower satisfaction level and boredom.

Kutanis and Bayraktrog lu (2002) observed type of management and communication possibilities contribute in job satisfaction to a great extent.

Tanke (1990) in his study described that a lot of factors like salary, job type, interpersonal relations, security, opportunities for promotion, empowerment, management policy, security, training programmes etc. affect job satisfaction and according to him the main reason of leaving the establishment is dissatisfaction with salary, H.R. policies and mobbing.

Working condition and factors affecting working conditions like lighting, heating, air circulation and noise are found to be the important factors by Aksu (1995) and he stated that these must be as per the needs, expectations and aspirations of the personnel.

Selek in 1997 conducted a survey on touristic establishments and found that Fair handed promotion policy, possibilities for the future and status of the personnel working in these organization have a great importance in job satisfaction.

Reward is extracted as one of the major contributors of satisfaction level by Kutanis et al. (2002). It can be monetary or non monetary like appreciation, thanks and promotion to boost employees' morale.

I'ncir (1993) established that it gives a sense of happiness if one gets the support of his/her superiors and subordinates whereas physiological and psychological stress may emerge in case of poor relations amongst colleagues.

As per Bingo 'l, (1998) job security and trade unions play a significant role in job satisfaction which ultimately is going to affect the productivity of personnel.

In a study of nurses Hackett, Lane and McCarthy (1998) instituted a positive relationship between Affective commitment and normative commitment.

Hoffman and Ingram (1992) are of the opinion that job satisfaction is a precedent of customer satisfaction. Further, Roger, Clow & Kash (1994) and Karl and Peluchette (2006) supported them by pointing out that it is not possible for front line employees to satisfy their customers unless and until they themselves are not satisfied with their job.

Nordheimer (1994) conducted a study on casino employees and found that due to constantly changing work shifts, repetitive work and all time under the surveillance of cameras causes job stress which leads to job dissatisfaction.

In a survey of society for Human Resource Management (SHRM) it was reported that compensation and benefits are the most important elements of job satisfaction and satisfied employees are more loyal to the organisation. Lee, Park & Lee (2006), Jones (1986) and Dwyer, Schurr & Oh (1987) considered service reward and pay as most significant contributor towards job satisfaction and organizational commitment.

Lot of factors like nature of employment, tenure, type of work, establishment's location, working hours, wages, promotion policies, environment in the establishment, job security, work-life balance, employees empowerment, participation of employees, support of superiors and subordinates etc. Play an important role in job satisfaction (Tepeci and Bartlett, 2002)

Four factors of job satisfaction were established by Garcia-Bernal, Gargello-Castel, Marzo-Navarro & Rivera-Torres (2005) which are:

(i) economic aspects,

(ii) interpersonal relations,

(iii) working conditions,

(iv) and personal fulfilment.

They also revealed that male employees are more affected by interpersonal relations whereas female employees are more concerned for working conditions.

Based on the above literature it can be concluded that job satisfaction is a result of many factors like working conditions, monetary and non monetary benefits, human resource policies, job security, relations with peer groups etc. Though a number of studies are carried out by scholars/social scientists in the domain of hospitality management but still there is a scarcity of relevant studies in Indian context. Therefore, the present study is designed to examine the factors affecting job satisfaction level of employees working in hotel industry.

Objective of the Study

To identify the factors influencing job satisfaction of employees working in back of the house areas in Indian hotels.

Research Methodology

The present study is empirical in nature and for the purpose both primary and secondary data is used. Secondary data is collected from available literature review, articles in newspapers and magazines. To collect primary data a five point Likert type questionnaire is structured where '1' denotes strongly disagree and '5' denotes strongly agree whereas '3' represent neutrality about the item. In all 25 items were selected initially after consulting already published work on the same issue. This questionnaire then sent to experts from industry and academics. After deleting some of the items completely and modifying few of them a final questionnaire is prepared having 19 items. The universe of the population for the study is employees working in Indian hotel organizations whereas sample size consists of employees working in back of the house areas (Food & Beverage operations and Housekeeping) of 5 star hotels at Delhi and NCR region. A total of 500 questionnaires were administered and out of them 450 received back and 423 were usable. For analysing the responses factor analysis with varimax rotation is applied with the help of PSAW software 18.0 versions.

Analysis and Discussion

For Analysis Factor Analysis with varimax rotation is applied on 19 items. Two items were excluded having factor loading less than 0.5 and again factor analysis is applied. After excluding one more item finally factor analysis is applied on remaining 16 items. A good value of 0.713 (Table: 1) indicating that data is fit for applying factor analysis. Five important dimensions of job satisfaction emerged out from the analysis (Table: 2)

Table 1: Goodness of Fit for Factor Analysis of Job Satisfaction

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.713
Bartlett's Test of Sphericity	Approx. Chi-Square	2986.534
	Df	120
	Sig.	.000

Factor 1: The very first factor emerged out is related with Salary, other financial benefits and grievance handling mechanism in the organization. It contains six items like 'Salary as per industry norms', 'Payment of Allowances and bonus', 'Annual increments permissible', 'Annual Increments', Medical Facilities', 'Grievance handling mechanism' and benefits or perks other than salary. The said factor is explaining 26.548 percent of variance with an eigen value of 4.248.

Factor 2: With an eigen value of 2.239 and variance percent of 13.939, the second factor is associated with working conditions and job security in the organization. Items like 'Working hours in the shift', working conditions at work place' and job security are part of this factor.

Factor 3: This factor is about opportunity for improvement or upliftment policies in the organization. Having items like 'fair promotional policies of H.R. department', participation in decision making opportunity' and 'communication with management' the factor is explaining 13.251 percent of variance with an eigen value of 2.120.

Factor 4**:** 'Accessibility of top management', 'Attitude of top management' and 'relationship with peer group' items are there in fourth factor with variance percent of 7.295 and eigen value of 1.167.

Factor 5**:** The last factor is having only one item i.e 'Safe environment in the organization' with an eigen value of 1.115 and variance percent of 6.969.

Table 2: Important Dimensions of Job Satisfaction

	Factor Loading				
	1	2	3	4	5
Factor 1: Salary, Financial Benefits and Grievance Handling					
Payment of Salary as per Industry standards and on time	.789				
Payment of Allowances and Bonus	.781				
Annual Increments	.759				
Medical Facilities	.716				
Grievance Handling	.674				
Benefits other than Salary	.552				
Factor 2: Working Conditions and Job Security in the organization					
Working hours in the organization		.874			
Working conditions		.859			
Job Security		.581			
Factor 3: Opportunity for Improvement and Communication					
Fair Promotion policies of the organization			.810		
Participation in decision making			.802		
Communication with Management			.588		
Factor 4: Relationship with peer group and management					
Accessibility of management				.753	
Attitude of top management				-.749	
Relationship with other employees				.634	
Factor 5: Safety and Security in the Organization					
Safe Environment					.870
Variance Percent	**26.548**	**13.939**	**13.251**	**7.295**	**6.969**
Eigen Value	**4.248**	**2.239**	**2.120**	**1.167**	**1.115**

CONCLUSION

Job Satisfaction is the level of satisfaction one gets from the various aspects of his/her job and this level of satisfaction depends on a number of factors. These factors which affect job satisfaction vary from person to person and cannot be same for everyone. These factors may be related with monetary and non monetary benefits, working conditions, opportunity for improvement and demographic factors like age, marital status, education, gender and many more. Although lot of researches are undertaken in the area of job satisfaction to find out the factors affecting it but very few studies are carried out in the field of hospitality industry in Indian context particularly. Therefore, keeping in view the importance of the topic, the present study was carried out to find out the factors influencing job satisfaction of employees in Indian hotels. It was observed in the study that Indian hotel employees consider Salary and other financial benefits as most important in their satisfaction level. Apart from this working conditions, relationship with peer group, grievance handling, job security and opportunity for improvement are also important factors. Though the study has its own limitations regarding sample size and dimension but still the study would be helpful to the human resource department in improving the satisfaction level of their employees which in turn will positively affect the profitability of the hotel.

REFERENCES

Aksu, A.A. (1995), “Evaluating the relationship of labor turnover with productivity in hotels”, Master’s thesis, pp. 47-88

Bingo¨l, D. (1998), Human Resources Management, Beta Publishing House, I ˙ stanbul.

Clark, A., Oswald, A. and Warr, P. (1996), “Is job satisfaction U-shaped in age?”, Journal of Occupational and Organizational Psychology, Vol. 69, pp. 57-81.

Dwyer, F.R., Schurr, P.H. and Oh, S.J. (1987), “Developing buyer-seller relationships”, Journal of Marketing, Vol. 51, pp. 11-27.

Garcia-Bernal, J., Gargallo-Castel, A., Marzo-Navarro, M. and Rivera-Torres, P. (2005), “Job satisfaction: emprical evidence of gender differences”, Women in Management Review, Vol. 20 No. 4, pp. 279-88.

Hackett M, Lane M, McCarthy D. Upper gastrointestinal endoscopy:are preparatory interventions effective? Gastrointest Endosc 1998; 48:341–7.

Hoffman, K.D. and Ingram, T.N. (1992), “Service provider job satisfaction and customer-oriented performance”, Journal of Services Marketing, Vol. 6 No. 2, pp. 68-78.

Jones, G.R. (1986), “Socialization tactics, self-efficacy and newcomers’ adjustments to organizations”, Academy of Management Journal, Vol. 29, pp. 262-79.

Kalleberg, A.L. and Mastekaasa, A. (2001), “Satisfied movers, committed stayers: the impact of job mobility on work attitudes in Norway”, Work and Occupations, Vol. 28, pp. 183-209.

Karl, K. and Peluchette, J. (2006), “How does workplace fun impact employee perceptions of customer service quality?”, Journal of Leadership and Organizational Studies, Vol. 13 No. 2, pp. 2-13.

Kutanis¸, R. and Bayraktarog˘ lu, S. (2002), “Karayolu turizm tas¸imacilig˘inda is¸ tatmini unsurlari:bir uygulama (Job satisfaction elements in highway transportation: an application)”, Proceedings of the 1st Tourism Congress of Mediterranean Countries, Akdeniz University School of Tourism & Hotel Management, Antalya, 17-21 April, pp. 604-19.

Lee, Y.K., Nam, F.H., Park, D.H. and Lee, K.A. (2006), “What factors influence customer-oriented prosocial behavior of customer-contact employees?”, Journal of Services Marketing, Vol. 20 No. 4, pp. 251-64.

Nordheimer, J. (1994), “Behind the lights, casino burnout; Atlantic City dealers feel trapped in tense, dead-end jobs”, Flight Club, November 5, available at: http://query.nytimes.com/

Rogers, J.D., Clow, K.E. and Kash, T.J. (1994), “Increasing job satisfaction of service personnel”,Journal of Services Marketing, Vol. 8 No. 1, pp. 14-26.

Selek, I (1997), “Su¨permarketlerde c¸alıs¸an personelin motivasyonu (Motivation of working personnel in supermarkets)”, Master’s thesis, Organization Department, I ˙ stanbul University,I ˙ stanbul.

Tanke, M.L. (1990), Human Resources Management for the Hospitality Industry, Delmar Publishers, Albany, NY.

Tepeci, M. and Bartlett, A.L.B. (2002), “The hospitality industry culture profile: a measure of individual values, organizational culture, and person-organization fit as predictors of job satisfaction and behavioral intentions”, Hospitality Management, Vol. 21, pp. 151-70.

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Eat Healthy! Stay Healthy! Parent's Perception of Nutrition Fact Label towards Informed Purchase Decisions for their Children

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Abstract

Labeling is an important component on product packages. Busy life style and increasing self service has positioned packed food products as an important component of purchase attitudes and eating habits. Nutritional labeling of packed food products therefore becomes vital. This paper examines parent's perception towards nutritional labeling of packed food products when they planned to purchase those for their children. A descriptive research with judgmental sampling technique elicited data from 220 parents. Results revealed that nutritional labeling had profound influence on parent's perceptions and purchase patterns .Findings also revealed that there were no significant differences in most of the perceptions of males and females .However it was found that there was significant difference in the knowledge of nutritional information given on packed food products as far the gender of the consumers was considered. Females scored over males in this segment.

Keywords: Consumer, Label, Purchase, Nutrition.

Introduction

According to Federal Food, Drug and Cosmetic Act (FFDCA) of the United States of America, labeling is termed as a written, printed, or graphic matter (i) upon any article or any of its containers or wrappers or (ii) accompanying such article. Labeling is a division of product package. Manufacturers need to label their products. As per Kotler (2001), a label can be a simple tag attached to the product or a richly designed graphic that is a part of the product package. A label may contain only the brand name or a gamut of information. As per Food and Drug Administration (FDA) in the USA, a label is the prime point of contact between the manufacturer and the buyer .Hence label is regarded as an integral part of the manufacturer's marketing plan. A Label is not just a piece of paper sticking on the product package but an appearance of a number of important decisions that have been taken about marketing. As per the FDA (1998), a label must visibly and cleanly state the name of the product, the net weight, the nutritional label), the name and address of the manufacturer, and the brand name.

Nowadays the food labels have turned to be increasingly multifaceted, particularly when products moved from the status of basic commodities to highly processed, value-added products (APO, 2002).Nutritional labels shortened the whole notion of healthy eating. Nutrition labels keep track of the amount of fat and sugar, sodium and fiber, protein and carbohydrates contained in the food products. It allows the end users to make an informed decision of a product's overall value (APO, 2002).Hence the nutritional panel is a feed to a better diet and a healthier life (FDA, 1998). In USA, consumers use the nutritional label to make food choices according to the Dietary Guidelines developed by health experts who emphasize the importance of a well-balanced diet. As per the FDA (1998), nutrition information on packed food products allows consumers to eat a range of foods, retain a healthy weight, choose a diet with low saturated fat, cholesterol, choose a diet with wealth of vegetables, fruits, and grain products, use sugars only in control, use salt and sodium in control etc. End users can use health claims, which appear on the front of food packages, to identify foods with certain nutritional qualities related to risk factors and wellness. These are the claims about the association between a nutrient or a food and the danger of a disease or health-related condition (Brown & Schrader, 1990).Nutritional labeling is found to affect the consumer purchase behaviour extensively. Few researches reveal the provision of nutrition information allowing consumers to change consumption away from 'unhealthy' products in those food categories toward 'healthy' products in food categories more easily (Anderson & Zarkin, 1992). Consumers' capacity to choose their diets depends partly on the quantity and quality of information available through a variety of sources, including nutrition panel food labels (Caswell & Padberg, 1999).If the products are not labeled, the consumers may not be wholly aware of their nutrient content. Consumers form their own attitude about nutrient content based on advertising, health messages, and their general awareness of food science. However, this eventually leads to underestimation or overestimation of the content of particular nutrients in unlabeled food items (Anderson & Zarkin, 1992).

Nutritional labeling of food products is not compulsory in India at present and the Indian Government is on the threshold of introducing a code of conduct for it. Even though the Ministry of Consumers Affairs, Food and Public Distribution of Government of India has made ‘The Standards of Weights and Measures Rules 1977’ mandatory for labeling, they include only packaging, MRP, weight specifications and production details only. There is no mention of nutritional labeling. The suggested amendments are the incorporation of quantitative ingredient declaration, nutritional labelling and other details regarding production.

Today a large number of imported packed food products have nutritional labeling on their packages. This study focuses on parent’s perception towards nutrition and nutritional labeling on packed food products when they planned to purchase packed food products for their children. The present study identifies if adult consumers are really nutritional conscious? Do they actually look for a nutritional diet? The findings of the study may help the policy makers in getting better insights regarding consumers’ perception towards nutritional labeling.

1. Methodology

Descriptive research with judgmental sampling technique was undertaken for the study in Kannur District, Kerala, India. A total of 220 responses were elicited. Parents having children in the age group falling between 6 months to 5 years were the chosen target group. In a family, (particularly households) either of the parents was approached but not both.60% of the respondents was females. Responses were gathered from households, schools, colleges, offices etc. Primary data was used in the study and the data was collected by means of a questionnaire. Data obtained through the questionnaire were analyzed using SPSS software package (Version 16) in 95 percent confidence interval. Chi square tests were used to interpret the data.

Five hypotheses were laid for the study as shown below.

H1: There is no significant difference in the perception that ‘nutrition is important’ across gender of the respondents.

H2: There is no significant difference in reading the nutritional labels on food products as far as the gender of the consumers is considered.

H3: There is no significant difference in the buying decision of packed nutritional food products as far as the gender of the consumers is considered.

H4: There is no significant difference in consumers’ belief on the manufactures’ claim of the nutritional content on packed food products across gender of the respondents.

H5: There is no significant difference in the knowledge of nutritional information given on packed food products as far the gender of the consumers is considered.

2. Findings and Discussion

Table 1 Reliability Statistics

Cronbach's Alpha	N of Items
.781	5

Source: Survey data

Cronbach alpha was used to measure the reliability of the questionnaire. Malhotra (2008) mentioned that the coefficient varies from 0-1.Value of 0.6 or less generally signifies unsatisfactory internal consistency reliability. Alpha coefficients below 0.6 are weak in reliability, 0.6-0.8 is moderate strong and 0.8-1.0 is very strong in reliability. For the questionnaire used in the study, the amount of Cronbach alpha coefficient was obtained as 0.781.Hence it was concluded that the desired questionnaire enjoyed acceptable reliability level.

The hypotheses were tested using Chi square tests and are shown in Tables 2 to 11.

H1: There is no significant difference in the perception that 'nutrition is important' across gender of the respondents.

Table 2

		Nutrition is important					**Total**
		Strongly agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	
Sex	Male	23	41	17	7	0	88
	Female	45	48	30	5	4	132
Total		68	89	47	12	4	220

Source: Survey data

It was observed from Table 2 that only 3.2 % of the male respondents agreed nutrition as unimportant and only 4.1 % of the female respondents agreed nutrition as unimportant. This shows that consumers considered nutritious food as part of their eating habit.

Table 3 Chi-Square Tests

	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	7.081(a)	4	.132
Likelihood Ratio	8.462	4	.076
Linear-by-Linear Association	.084	1	.772
N of Valid Cases	220		

Source: Survey data

Table 3 indicated that Pearson Chi-Square value was insignificant (P>.05).Hence H1 is accepted. That is, there is no significant difference in the perception that 'nutrition is important' across gender of the respondents.

H2: There is no significant difference in reading the nutritional labels on food products as far as the gender of the consumers is considered.

Table 4

		Reading the nutritional labels appearing on packed food products					Total
		Strongly agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	
Sex	Male	33	29	15	9	2	88
	Female	43	57	19	6	7	132
Total		76	86	34	15	9	220

Source: Survey data

It was observed from Table 4 that over 70% of the male respondents agreed reading the labels appearing on food packages and 45.4% of females respondents agreed reading the labels appearing on food packages. This goes well to show that both men and women consumers were nutritional conscious and interested in nutritional labeling.

Table 5 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.709(a)	4	.222
Likelihood Ratio	5.762	4	.218
Linear-by-Linear Association	.000	1	1.000
N of Valid Cases	220		

Source: Survey data

Table 5 indicated that Pearson Chi-Square value was insignificant (P>.05).Hence H2 is accepted. That is, there is no significant difference in reading the nutritional labels on food products as far as the gender of the consumers is considered.

H3: There is no significant difference in the buying decision of packed nutritional food products as far as the gender of the consumers is considered.

Table 6

		Buying decision of packed nutritional food products					Total
		Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	
Sex	Male	18	37	10	17	6	88
	Female	34	46	14	30	8	132
Total		52	83	24	47	14	220

Source: Survey data

Table 6 indicated that over 63 % of the male respondents agreed to buy packed nutritional food products and over 61 % of the female respondents agreed to buy packaged nutritional food products. This shows that packed food products were a part of their dietary habits.

Table 7 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.716(a)	4	.788
Likelihood Ratio	1.722	4	.787
Linear-by-Linear Association	.486	1	.486
N of Valid Cases	220		

Source: Survey data

Table 7 indicated that Pearson Chi-Square value is insignificant (P>.05).Hence H3 is accepted. That is there is no significant difference in the buying decision of packed nutritional food products as far as the gender of the consumers is considered.

H4: There is no significant difference in consumers' belief on the manufactures' claim of the nutritional content on packed food products across gender of the respondents.

Table 8

		Consumers belief on nutritional claim					Total
		Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	
Sex	Male	21	26	7	20	6	88
	Female	41	42	15	26	8	132
Total		10	68	22	46	14	220

Source: Survey data

53% of the male respondents had belief on the manufactures claim on the nutritional content on packed food products and 63 % of the female respondents had belief on the manufactures claim on the nutritional content on packed food products. This goes well to show the trust factor of consumers on manufactures' claim.

Table 9 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.041(a)	4	.904
Likelihood Ratio	1.056	4	.901
Linear-by-Linear Association	.855	1	.355
N of Valid Cases	220		

Source: Survey data

Table 9 indicated that Pearson Chi-Square value is insignificant (P>.05).Hence H4 is accepted. That is, there is no significant difference in consumers' belief on the manufactures' claim of the nutritional content on packed food products across gender of the respondents.

H5: There is no significant difference in the knowledge of nutritional information given on packed food products as far the gender of the consumers is considered.

Table 10

		Knowledge about nutritional information					Total
		Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	
Sex	Male	18	24	25	18	3	88
	Female	24	63	26	14	5	132
Total		42	87	51	32	8	220

Source: Survey data

It is observed from Table 10 that 42 % of male respondents had knowledge about nutritional information and 66% of the female respondents had knowledge on nutritional information.

Table 11 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.999(a)	4	.027
Likelihood Ratio	11.148	4	.025
Linear-by-Linear Association	2.888	1	.089
N of Valid Cases	220		

Source: Survey data

Table 11 indicated that Pearson Chi-Square value was significant (P<.05).Hence H5 is rejected. That there is significant difference in the knowledge of nutritional information given on packed food products as far the gender of the consumers is considered. Females scored over males as far as the knowledge regarding nutritional information was considered.

3. Conclusion

The gap between the consumers and the natural foods is fast increasing and this has given rise to diet related diseases. Consumers are becoming aware of the crucial relation between diet and healthy eating practices. This is particularly relevant when consumers are parents and make 'packed food' purchases for their children. They want detailed, accurate and reliable information regarding the foods they eat. Food labels provide this information to them. Therefore, reading and understanding of these nutritional labels is an important part of the consumption process. The paper examined parent's perception towards nutritional labeling in making planned purchase decisions for their children. The findings portrayed that nutritional labeling had profound influence on parent's purchase behaviour Results were in agreement to the findings of (Drewnowski et al. 2010; Prathiraja & Ariyawardana 2003; Kempen et al. 2011 & Vyth et al. 2010) mentioning nutritional labeling having positive influence on purchase patterns.

References

Anderson, D.W., & Zarkin, G.A. (1992). Consumer and Producer Responses to Nutritional Label Changes, American Journal of Agriculture Economics, 74:1202-1207.

Asian Productivity Organization. (2002). Food Standards and Labeling Systems in Asia and the Pacific. Tokyo: Asian Productivity Organization.

Brown, D.J., & Schrader, L.F. (1990). Cholesterol Information and Shell Egg Consumption, American Journal of Agricultural Economics, 72:548-555.

Caswell, J.A., & Padberg, D.I. (1999). Toward a More Comprehensive Theory of Food Labels, American Journal of Agricultural Economics, 74:460-468.

Drewnowski, A., Moskowitz, H., Reisner, M., & Krieger, B. (2010).Testing consumer perception of nutrient content claims using conjoint analysis, Public Health Nutrition,13(5):688.

FDA. (1998). An FDA Guide to Dietary Supplements, American Journal of Agricultural Economics, 32:28-35.

Kotler, P. (2001). Marketing Management. 2nd Ed. Boston, Irwin: McGraw-Hill.

Kempen, E., Bosman, M., Bouwer, C., Klein, R., & van der Merwe, D. (2011).An exploration of the influence of food labels on South African consumers' purchasing behaviour, International Journal of Consumer Studies, 35(1):69-78.

Malhotra, N. K. (2008).Marketing Research: An Applied Orientation.5/e, India: Pearson Education.

Prathiraja, P. H. K., & Ariyawardana, A. (2003).Impact of nutritional labeling on consumer buying behavior, Sri Lankan Journal of Agricultural Economics, 5:35-46.

Vyth, E. L., Steenhuis, I. H., Vlot, J. A., Wulp, A., Hogenes, M. G., Looije, D. H.,& Seidell, J. C. (2010).Actual use of a front-of-pack nutrition logo in the supermarket: consumers' motives in food choice, Public Health Nutrition,13(11):1882.

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Strategies to Attract Foreign Direct Investment in Vietnam

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Abstract

This study attempts to identify the main factors affecting foreign direct investment capital in a country and proposes the strategies to attract foreign direct investment in Vietnam. The questionnaires have been sent to foreign companies in Hanoi, Ho Chi Minh, Danang. The data are carried out by using multiple statistical analyses, including reliability analysis, correlation analysis, multiple linear regressions. The results found that technical infrastructure, the policy, cost advantage, potential market, human resource and natural resource have influenced the selection of investment locations in a country. In all of them, the technical infrastructure is considered as the most important factor. In addition, this study also shows the satisfaction level of each factor of foreign investors and provide useful implications for Vietnam's policies with the goal in terms of investors' satisfaction. Finally, this study has suggested some solutions to enhance the investors' satisfaction and to meet the investors' expectations.

Keywords: Foreign Direct Investment, Determinants of FDI, Vietnam.

1. Introduction

In recent years, policymakers, especially in the developing countries, have come to the conclusion that foreign direct investment (FDI) is needed to boost the growth in their economy. It is claimed that FDI can create employment, increase technological development in the host country and improve the economic condition of the country in general (S Adewumi, 2007). The expansion of the FDI along with the country's rapid economic growth in Vietnam increased openness to the rest of the world. The contribution of inward FDI to economic growth has been a consensus in Vietnam's society for the common people to policy makers (Nguyen & Nguyen, 2007). In order to keep the position as an attractive FDI host country, the Vietnam's government concern about how to consolidate the current strengths and to exploit the potential advantages. There are many factors that could attract FDI inflows in a host country as presented in previous studies:

According to Juan Du's master thesis (2011) for the program MSc Supply Chain Management of the department of Organization and Strategy within the School of Economics and Management of Tilburg University, nine determinants of FDI were identified. Those were host market, natural resource endowment, low labor cost, host inflation rate, exchange rate, exports and imports, political risk, openness to FDI and infrastructure development.

Campos and Kinoshita (2003) used panel data to analyze 25 transition economies between 1990 and 1998. They reached the conclusion that set of countries FDI is influenced by economic clusters, market size, lower cost of labor, and abundant natural resources.

Loree and Guisinger (1995) studying the determinants of foreign direct investment in the United States in 1977 and 1982 concluded that the variables related to the host country policy were significant in developed countries only when infrastructure was an important determinant in all regions.

James P. Walsh and Jiangyan Yu (2010) mentioned six determinants of FDI include: Market size and growth potential, openness, exchange rate valuation, clustering effects, political stability, and institutions.

In Thu Thi Hoang's master thesis, six determinants of FDI were found out as market size, market growth, human capital, infrastructure development, openness of the host country, and exchange rate.

Nguyen Manh Toan (Danang University, 2010) has figured out eight factors, namely potential market, cost advantage, human resource, natural resource, geographical location, Technical infrastructure, social infrastructure, policy.

This study is going to carry out under the similar theoretical structure along with the help of other studies to provide the insight into the characteristics of attracting FDI inflow in Vietnam. The purpose of this paper is to analyze the fact of attracting FDI in Vietnam during the period of 2000 – 2011 and to systematize the basic theoretical issues in attracting FDI to construct our hypotheses. Besides, the obtained results were used to determine the factors of attracting FDI and to propose some main solutions enhance FDI in Vietnam in the coming years.

This study also focuses on the people who have been investing in Vietnam. Questionnaires were distributed and collected from April 5, 2012 to May 25, 2012. The questionnaire was printed and delivered to general managers of foreign invested companies operating in Hanoi, Ho Chi Minh, Danang. Totally there were 150 questionnaires delivered; however, there were 129 responses accounting for 86 % of the total questionnaires. Of which, 9 pieces were invalid and rejected. As a result, there are 120 valid observations in this study.

In the empirical analysis section, the data from the questionnaire were used in our statistical analysis including descriptive statistics, reliability test of the measurement items in the questionnaire, correlation analysis and multiple regression analysis. The final section offers to the conclusion and implication of local government.

2. Hypothesis Development

Through some previous studies related to the determinant factors of FDI which contribute a foundation for the establishment of the research hypothesis. Research hypothesis follow as:

2.1. Potential Market

Some characteristics of host market have been recognized as the fundamental determinants of FDI inflow such as the host market size which GDP of a country is used most frequently to indicate the size of the local market. Numerous empirical studies confirm the positive relationship between market size and FDI inflow (Chakrabarti, 2001), since a growing market realizes the efficient utilization of resources and the benefits of scale and scope economies (UNCTAD, 1998). Consequently, the growth rate of host market is also introduced as a characteristic of the host market appealing FDI inflow. The faster market increases in size, the more opportunities present for generating profits in the markets grow at a low rate or even not at all (Lim, 1983). Holland and others (2000) reviewed several studies for Eastern and Central Europe, producing evidence of the importance of market size and growth potential as determinants of FDI. Moreover, when choosing a place to invest in a country, foreign investors would consider the densely populated areas of their market potential. Thus, hypothesis 1 is:

H1: Potential market has a positive effect on investors’ satisfaction.

2.2. Cost Advantage

Profit is considered as the motive and the ultimate goal of investors. Establishing enterprises in foreign countries is considered very effective of the Multi National Enterprises (MNEs) to maximize profits. This is done through the establishment of close links with customers and the market, providing support services, sharing of risks in business and avoiding trade barriers. The majority of MNEs invests in the countries is to declare potentials, cost advantage. In particular, the labor cost is often considered the most important element when making investment decisions. As labor costs rise in countries where production is currently taking place, firms will be motivated to invest in less developed countries to regain labor cost advantages (Makino et al., 2002). Besides, direct investment activities in foreign countries allow the companies to avoid or minimize the transportation costs and to enhance the competitiveness, to control the supply of cheap raw materials, to get the incentives about investment and tax, to use the cost of land. Thus, Hypothesis 2 is declared as:

H2: Cost advantage has a positive effect on investors' satisfaction.

2.3. Natural Resources and Human Resources

When deciding to invest in a developing country, the MNEs also aims to seek new resources including human resource and nature resource. Investment took place when resource-abundant countries either lacked the large amounts of capital typically required for resource-extraction or did not have the technical skills needed to extract or sell raw materials to the rest of the world. In addition, infrastructure facilities for getting the raw materials out of the host country and to its final destination had to be in place or needed to be created (UNCTAD, 1998). The abundance of cheap raw materials is one of the most positive factors to promote foreign investment. Common source of unskilled labor is always fully satisfied and can satisfy the requirements of the company. However, the foreign investors can only find good managers, and technical staff has qualifications and experience in the big city. Besides, the attitude of the employees is also an important element in considering the choice location for investment. Resource-seeking activities are promoted by the availability of natural resources, cheap unqualified or semi-skilled labor, creative assets and physical infrastructure. In the past, the availability of natural resources, such as minerals, raw materials and agricultural products have been the most important host country determinant of FDI (Selma, 2013). So , the hypothesis 3 and 4 are:

H3: Human resource has a positive effect on investors' satisfaction.

H4: Natural resource has a positive effect on investors' satisfaction.

2.4. Geographical Location

Li Xinzhong (2005) show that some location determinants have different magnitudes and relative importance in both long-run and short-run effects of attracting FDI inflows into China. Geographical location is an important factor. This means that the advantages of geographical position dramatically reduce transportation costs such as the nature harbors of coastal cities. It is easy to connect to other countries. On the one hand, these advantages contribute to involve resource endowment. On the other hand, it is intimately related to economic and social factors, such as trade barriers, costs of transport and information, economic scale and development level, culture custom and language, investment incentive and preferment, and stability of the political and institutional environment etc. Thus, the fifth hypothesis is:

H5: Geographical location has a positive effect on investors' satisfaction.

2.5. Technical Infrastructure and Social Infrastructure

The adequate physical and social infrastructure complements a good policy and regulatory framework to create the necessary environment for attracting FDI. These include the quantity and quality of roads and communication systems, skilled labor, as well as the efficiency with which public services are delivered. They are also important if the full potential benefits of FDI presence are to be realized (Xiao- Lun Sun, 2002).

2.6. Technical Infrastructure

The quality of the technical infrastructure and the level of industrialization has affected dramatically to foreign investment flows into a country. A complete system of technical infrastructure, including roads, rail, aviation, power supply network, country, telecommunications and other utility services, is wishes of all foreign investors. Technical infrastructure is not only roads, bridges...but also other support services such as banking, auditing firms, consultants... Lack of necessary support of these activities, the investment environment will be seriously affected. In addition, the performance of the local industrial base, the presence of industry support, the existence of a reliable partner for foreign companies in joint ventures are also important requirements which need to be considered. According the research of Kumar Nagesh (2002) show that the estimations corroborate that infrastructure availability does contribute to the relative attractiveness of a country towards FDI by MNEs, holding other factors constant. So the sixth hypothesis is expressed as:

H6: Technical infrastructure has a positive effect on investors' satisfaction.

2.7. Social Infrastructure

Besides the technical infrastructure, the investment environment is influenced of social infrastructure. Social infrastructure includes health systems, the system of education and training, entertainment and other services. In addition, the social values, customs, religion, culture ...also constitute the general picture of the social infrastructure of a country. The hypothesis 7 can thus be declared as:

H7: Social infrastructure has a positive effect on investors' satisfaction.

2.8. Policy

Foreign investment flowing into developing countries is not only determined by economic factors but also influenced by political factors. Demekas et al. (2007) argued that the host country's policy could explain part of its FDI inflow through exerting effects on trade barriers, labor costs, the foreign exchange rate, corporate tax burdens and so on. The stability of the macro economy combined with the political stability is very important. So, the eighth hypothesis as below:

H8: Policy has a positive effect on investors' satisfaction.

Building on many previous findings, this study identifies some factors of affecting FDI as follows: Potential market, cost advantage, human resource, natural resource, geographical location, technical infrastructure, social infrastructure, and policy.

3. Data Analysis Method

3.1. Descriptive Statistic

This study used percentage and frequency to present the demographic characteristic of the country, primary industry sector, type of business, type of investment, size of the investment of foreign investors.

3.2. Reliability Analysis

Because some studies in the same problem previously have found out the factors that affect the decision making of investors in Vietnam in selecting their investment location, this study uses it to analyze for their reliability of internal consistency.

3.3. Correlation Analysis

Correlation analysis is to find out the correlation between an independent variable with the dependent variable (the overall satisfaction variable).

3.4. Multiple Liner Regression

The important role of each factor in forming the overall satisfaction level of the investors is almost impossible to find out if under the comparison based on the summary statistics of reliability analysis. Vietnam cannot concentrate on any priority solutions when the role of each factor is unknown. To solve this problem, we applied regression analysis in this study.

4. Empirical Results

4.1. Descriptive Statistics of the Survey Objects

Descriptive statistics of the characteristic of samples are shown as table 1. This part covers the background of the survey firm including the information of the investor's country, primary industrial sector, type of business activities, type of investment and size of investment in Vietnam.

According to Table 1, Japan is the largest investing country in Vietnam (18.33%), it can be explained as Vietnam and Japan already signed an agreement on comprehensive strategic partnership. For the primary industrial sector, most of foreign investors active in electrical and electronics manufacturing (19.26%), textile (17.04%). This could be explained as Vietnam has a big land fund with the workshop premises on advantageous positions and convenient for production, and the cheap labor force. The largest number of types of business activities are production of goods (45.96%), and investors tend to production of goods and research- development (33.33%). For the type of investment, the survey data show that most of foreign companies investing in Vietnam are wholly foreign owned (53.33%). The large numbers of the size of investment is 5000-10000 million (USD) (24.17%). They are small and medium companies with the size of the investment is from 100 million (USD) to 10000 million (USD). This can be explained that although these companies are small and medium, they can take advantage of incentives of Vietnam government and exploit Vietnam market.

Table 1: Descriptive Statistics of the Characteristic of Samples

Variable	Frequency	Percent (%)
Country of Investor		
Japan	22	18.33
Hong Kong	20	16.67
Singapore	16	13.33
South Korea	15	12.50
China	13	10.83
Taiwan	12	10.00
USA	7	5.83
England	6	5.00
Italia	5	4.17
Germany	4	3.33
Primary industrial sector		
Automobile	15	11.11
Biotechnology	8	5.93
IT-Engineering services provide	7	5.19
IT-Software development	11	8.15
Electrical & electronic manufacturing	26	19.26
Energy	6	4.44
Chemicals	3	2.22
Textile	23	17.04
Pharmaceutical	8	5.93
Machinery and Machine Tool	20	14.81
Other	8	5.93
Type of business activities		
Production of goods	91	45.96
Marketing	8	4.04
Research and Development	66	33.33
Customer support/ After sale	25	12.63
Other	8	4.04
Type investment		
Joint venture	25	20.83
Merger	16	13.33

Equity	3	2.50
Acquisition	12	10.00
Wholly foreign – owned	64	53.33
Size of investment (million USD)		
100-500	17	14.17
500-1000	18	15.00
1000-5000	22	18.33
5000-10000	29	24.17
10000-50000	10	8.33
50000-100000	13	10.83
>100000	11	9.17

4.1. Reliability Analysis

By reliability test for eight factors, the result shown that the Cronbach's alpha coefficient of all of these factors is between 0.681 and 0.980 as presented in table 2. They thus are reliable for further analysis. Furthermore, the results is also claimed that the items have strongly high internal consistency and construct validity. Based on the values of the mean of the importance level, the eight factors are also ranked as in Table 2.

Table 2: Reliability Statistics and Rank The Importance of Eight Factors in The Decision-Making

Rank #	Factor	About	Mean	Min	Max	Cronbach's Alpha	N of Items
1	FAC6	Technical infrastructure	4.022	3.943	4.117	0.957	6
2	FAC8	Policy	3.985	3.725	4.175	0.758	4
3	FAC2	Cost advantage	3.856	3.717	3.908	0.733	4
4	FAC1	Potential market	3.819	3.600	4.083	0.732	4
5	FAC3	Human resource	3.725	3.650	3.867	0.681	3
6	FAC4	Natural resource	3.304	3.225	3.383	0.945	2
7	FAC5	Geographical location	3.242	3.158	3.342	0.899	3
8	FAC7	Social infrastructure	3.144	2.942	2.283	0.980	4

Based on the importance mean values, we can see that the factor six is the first determinant of decision making of foreign investors in selecting investment destination, the next one is factor eight and the last one, the seventh factor, is social infrastructure. We used the same method as the above the section, so we have "The calculated values of the factors in the satisfaction level"

Table 3: Satisfaction Level of Each Factor

Factor	About	Satisfaction Mean	Importance Mean	Satisfaction and Importance ratio (%)
FAC1	Potential market	3.133	3.819	81.700
FAC2	Cost advantage	3.340	3.856	80.654
FAC3	Human resource	3.111	3.725	83.517
FAC4	Natural resource	3.052	3.304	92.373
FAC5	Geographical location	3.828	3.242	118.075
FAC6	Technical infrastructure	3.112	4.022	77.374
FAC7	Social infrastructure	2.908	3.144	92.478
FAC8	Policy	3.128	3.985	78.494

The only factor 5 can meet with the investor's expectation among these eight factors. The other factors do not meet with satisfied investors.

4.2. *Correlation Analysis*

The bivariate correlation procedure has been subjected to two tailed test of statistical significance at highly significant. In this analysis, there are nine factors namely the overall satisfaction level, potential market, cost advantage, human resource, natural resource, geographical location, technical infrastructure, social infrastructure, and policy.

Table 4: Correlations Analysis

		FAC1	FAC2	FAC3	FAC4	FAC5	FAC6	FAC7	FAC8
D	Pearson Correlation	0.765**	0.570**	0.483**	0.242**	0.036	0.777**	0.001	0.596**
	Sig. (2-tailed)	0.000	0.000	0.000	0.008	0.699	0.000	0.994	0.000
	Hypothesis	H1	H2	H3	H4	H5	H6	H7	H8

**Mean that correlation is significant at the 0.01 level (two-tailed)

All of the coefficients are positive, in which FAC1 and FAC6 have strong positive. This means that they highly correlate with the overall satisfaction level of investors, while FAC4, FAC5 and FAC7 have small correlate with that of investors due to the small values of their coefficient. However, the statistics of FAC5 and FAC7 are not significant ($p>0.05$). Thus, we can conclude that hypotheses H1, H2, H3, H4, H6, H8 are supported and hypotheses H5, H7 are not supported.

4.3. *Multiple Regression Analysis*

The result of this regression shows that potential market, cost advantage, human resource, natural resource, technical infrastructure and policy are statistically significant (sig.<0.05).

Table 5: Coefficients for the Final Step

Model		Unstandardized Coefficients		Standardized Coefficients	Sig.	Collinearity Statistics	
		B	Std. Error	Beta		Tolerance	VIF
1	Potential market	0.055	0.024	0.289	0.023	0.595	1.681
	Cost advantage	0.051	0.033	0.296	0.045	0.568	1.764
	Human resource	0.023	0.031	0.260	0.037	0.537	1.528
	Natural resource	0.015	0.022	0.142	0.048	0.765	1.137
	Technical infrastructure	0.085	0.018	0.441	0.000	0.341	2.932
	Policy	0.108	0.035	0.307	0.002	0.293	3.417

Standardized coefficients of potential market, cost advantage, human resource, natural resource, technical infrastructure and policy are 0.289, 0.296, 0.260, 0.142, 0.441 and 0.307 respectively, which indicate that technical infrastructure in Vietnam model plays the most important role in making the satisfaction of the foreign investors. Besides, the factor policy, cost advantage, potential market, human resource and natural resource occupied the second to sixth important role in making their satisfaction, respectively.

5. Conclusion and Implication for Local Government

5.1. *Conclusion*

In this study, the fact of attracting FDI in Vietnam during the period of 2000 – 2011 and systematized the basic theoretical issues in attracting FDI are analyzed. Besides, the eight factors of affecting FDI have been identified. In addition, multiple regression analysis is used to find out six main factors, namely potential market, cost advantage, human resource, natural resource, technical infrastructure and policy, which affect the overall satisfaction level of investors. The government investment in the technical infrastructure is very important to attract the foreign investment.

5.2. *Implication for local government*

The findings in our research offer to some important implications for host governments to improve the investment environment.

The first, Vietnam should improve the domestic roadway systems the north-south route and the route of two economic corridors Vietnam – China to enhance the satisfaction level of technical infrastructure because these are the most important public assets in many countries.

The second, for the solutions to enhance the satisfaction level on policy, Vietnam policy makers need to review laws and policies of the investment and business to modify the asynchronous content, lack of consistency. Furthermore, it is necessary to add the missing content and eliminating the conditions applicable investment incentive unsuitable with Vietnam's commitments to the WTO.

The third, for the solutions to enrich the satisfaction level on cost advantage, low-cost labor has been considered as one of the best advantages that Vietnam has in attracting foreign direct investment (FDI). However, we have reached a stage when it is becoming a disadvantage, both for our workers and the economy that needs to become more competitive. Therefore, Vietnam Government needs to improve quality of workforce following: promoting and improving the quality of job training, and intellectualizing labor force step by step.

The forth, for the solutions to enhance the satisfaction level of potential market, Vietnam should establish the industrial parks in the whole country to develop market size.

The fifth, for the solutions to uplift the qualified staff, Vietnam needs concrete human resource training programs according to the social demand of the Government. Besides, the training of international quality at the university encourage and promote to serve the demand of high-tech training are also considered.

The sixth, for the solutions to achieve the satisfaction level of natural resource, in order to complete the procurement policy systems to suit Vietnam’s situation, there should be clear conditions for exploiting agreement relating to prices and the economic situation in the future.

The seventh, for the solutions to meet the investors’ expectation on geographical location. It is necessary to complete the industrial zones where have been established, especially parks in key areas as well as there is the incorporation between the planning of industrial development with urban planning and population distribution.

The eighth, for the suggested solutions to meet the investors’ expectation on social infrastructure, Vietnam should develop the health workforce in rural, mountainous and disadvantaged areas and improve the shortages and imbalances the health workforce in some specialties.

To improve education and training: it is necessary to increase the autonomy for the training establishments and to build training programs and tuition fees to suit the demand of the user and training capacity of the establishment. Besides, it is quite important to encourage competition between the universities to create motivation for the development of the university. Furthermore, the schools have to research the market to find out training demands in scale, structure and level. In addition, the employers have to some proposal as well as order directly with the training establishments of human resources according to the demand of the enterprises.

REFERENCES

Chakrabarti, A. (2001). The determinants of foreign direct investment: sensitivity analysis of cross-country regression. Kyklos. 54(1).89-114.

Demekas et al. (2007). Foreign direct investment in European transition economies- The role of policies. Journal of comparative economics. 35(2). 369-386.

Hoang, T. T. (2006). The determinants of foreign direct investment in Vietnam.

Holland, D. (2000). The determinants and impact of FDI in central and eastern Europe: a comparison of survey and econometric evidence. Transnational Corporations. Journal of United Nations 9 (3). 163-212.

James P. Walsh & Jiangyan.Yu (2010).Determinants of foreign direct investment: sectoral and institution al approach. IMF Working Paper 10/187 (Washington International Monetary Fund).

Juan Du (2011). What are the determinants of FDI in Vietnam?. Master thesis, Tilburg University.

Kinoshita, Y. & Campos, N. F. (2003). Why does FDI go where it goes? New Evidence from the transitional economies. (July 2003). CEPR Discussion Paper.

Kumar, N. (2002). Infrastructure availability- Foreign direct investment inflows and their export-orientation: A cross- country exploration. RIS Discussion Paper 26 /2002.

Kurtishi-Kastrati, Selma. (2013). Impact of FDI on economic growth: An overview of the main theories of FDI and empirical research". European Scientific Journal. 9(7). 1857-1881.

Lim, D. (1983). Fiscal incentives and direct investment in less developed countries. Journal of Development Studies. 19(2). 207-212.

Loree, D.W. & Guisinge, S.E. (1995). Policy and non-policy determinants of U.S. Equity foreign direct investment. Journal of International Business Studies. 26(2). 281-299

Makino, et al. (2002). Asset exploitation versus asset seeking: Implications for location choice of foreign direct investment from newly industrialized economies. Journal of International Business Studies. 33(3). 403-421.

Nguyen Manh Toan (2010). The factors affecting the infusion of foreign direct investment capital into a locality in Vietnam. Master thesis, Danang University.

Nguyen Ngoc Anh and Nguyen Thang (2007). Foreign direct investment in Vietnam: An overview and analysis the determinants of spatial distribution across provinces. Vietnam Development and Policies Research Center.

S Adewumi (2007). The impact of FDI on growth in developing countries: An African experience. Master Thesis, Jönköping University.

UNCTAD (1998a). World Investment Report 1998: Trends and determinants, United Nations, New York and Geneva.

Xiao-Lun, Sun. (2002). How to promote FDI? The regulatory and institutional environment for attracting FDI. FIAS Occasional Paper, Marrakech, Morocco.

Xin-Zhong, Li. (2005). Foreign direct investment inflows in China: Determinants at location. Lyon.

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Customer Care and Services Some Observations

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Abstract

Service organizations like banks, insurance, education, hospital where the product is intangible and are heterogeneity, have to face tough competition in the market to imprint their image in the hearts of their customers. We find some organizations acting like monopolies which have no care for customers. The present study is made on some observations which are facts and experiences of the author in those service organizations which are not ready to provide services at the will of the customers, do not have the needed infrastructure but also those who are enthusiastic in serving the customers. Conclusions are made on ethical grounds.

Keywords: service, ethics, customer, organization.

Introduction

Services are intangible and can be felt only by the customer. Just providing services as a part of business would not make one develop. One of the features of service is heterogeneity. Though it may not be possible to serve all the customers at their desired level but one should endeavour to ensure maximum efficiency and do his best to satisfy the customers. Positive attitude and motivation towards serving are highly needed in services marketing. People are organized. Fame and defame of the organization depends on the work culture and style of the people in the organization. The present study is based on the facts came to the knowledge and also experiences of the author in different service organizations and situations. It is about the service quality been maintained and also sufferings of the customers. Conclusions are made on some ethical dimensions which are felt highly necessary in service organizations.

Mahatma Gandhi says "A customer is the most respectful visitor of our premises. He is not dependent on us, we are dependent on him. He is not an interruption to our business. He is a part of it. We are not doing him a favour by serving him. He is doing us a favour by giving an opportunity to do so" Government of India brought in to force "Consumers Protection Act, 1986 but we still see customers being cheated by different ways and means, always. An illiterate customer having no knowledge about the acts gets cheated horribly. Literates are not left out; they too become prey many times.

Am I in Services Marketing

Temples of Education**:** A teacher may not explain same topic in the same way each time but he must have interest in teaching. Referring guides and other material may help in teaching in examination point of view but not in encouraging students to learn subject in depth and update their knowledge. How can a priestess without knowing mantra offer rituals (prayer), so also how a teacher who himself has disinterest in the subject transmit the knowledge to his students. Students' future is thrown into pitch dark

Public Servants: We can find at the door of an office a board displaying "office hours 10 am to 5 pm" but we do not find atleast one of the staff members at their seat at 10 am, but leaving promptly before 5 pm. My SB account and ATM were blocked by bank personnel saying that I had used an amount wrongly credited to my account belonging to others and deducted that amount from my account. Though I got it corrected previously when instead of crediting by the FD maturity amount of mine wrongly credited of someone's amount by the banker himself. The banker had not made any corrections in their ledger and got transferred. This repeated twice and the new officer made an apology for the inconvenience. If this happens to an illiterate he would lose faith in the bankers. Who should be held responsible, whether the previous officer who was careless in discharging duty or the new one who had blocked my account. Can these be called bankers in services marketing.

Jerks in Transportation Services**:** Cheating at booking centres/windows, selling away tickets to traveling agents for commission even security personnel indulging in such activities, untasty food (properly not cooked), boys selling water bottles filled near taps and with a gum tape seal as if they are bought from permitted (licensed) water companies can be found ubiquitously around India. An organization with largest employment carrying over lakhs of public every day, the Government has no social responsibility towards public health. Can these be called service organizations.

Unswalloable Medicine**:** A list of medicines will be prescribed to the patients and the patients carry them like monthly provisions. Doctors advice patients to stay in ICU for reasons unknown saying that the patient should be kept under observation to know actual cause of the disease and charge thousands of rupees. We find a board mentioning "24 hours services", but doctors do not attend the patients during night hours, sleep in rest rooms and send compounders and nurses to attend the services. In some hospitals a list of medicines will be prescribed and the unused medicines will be returned to the medical shop in back doors methods. They write for various tests otiose. Can we say such doctors are professionally ethical and are in medical services. People treat a doctor like a God. A mother's affectionate touch gives her child emotional strength. Just giving medicines do not save life, it is the doctor's warmth touch and precious smile on his face makes a patient recover early. Doctors going on strike (they may have their own reasons) throws many disadvantaged and unfortunate people coming from far villages for better treatment into troubles.

Why such problems arise and who are responsible to it. The main reasons are, though they appear monopolistic, act as monopolies, improper vigilance, blind eye audit and irresponsibility of higher authorities who are always worried about their pay and perks. Even in private organizations we find such filthy things. A person gets his vehicle insured in a branch, but in case of claim or complaint he has to contact divisional or zonal office or an invisible person on phone in a call centre.

On has to think over that the customers are the valuable reason for his organisation to survive as but unfortunately they are working in oblivion, forgetting the importance of customers in the premises of the organization and customer loyalty for the future development of business. Customers, who blame, in their turn, inflict their customers. GOD has given this life to serve humankind. Getting opportunity to serve humankind is serving GOD. "It is not enough for us to say, 'I love God, but I do not love my neighbor,'" since in dying on the Cross, God had "[made] himself the hungry one - the naked one- the homeless one." Jesus' hunger, is what "you and I must find" and alleviate. The good you do today may be forgotten tomorrow. Do good anyway, until the end of time.

Am I Providing Services at The Customers Behest (WILL)

Most of them do not respond once they sell the products. After school (college) hours students are sent for study hours instead to play ground. College administrators offer only those courses for which they can charge high fees saying there would be a better future and better job opportunities for those courses. Insurance agents make false promises of providing all the services like loans, collection of premium but disappear later. They make false statements about the policies and also sell only those policies on which they get more commission but not those which are needed by the policy holders. After completing M.Phil, I went to the University to obtain the certificate. I was staggered, the clerk did not know the fee amount and made me wait for a day as the section officer has not come to office on that day. Later I came to know that the clerk need some extra amount (bribe) to issue the certificate. Employees are public servants, unfortunately some of them don't work for public which they ought to do. They are crazy of bribes but not in serving. Is there any way to quench the thirst of these servants. A crowd waiting for the train on the quay, some were to go to work, some were on holidays and others to invite their relatives arriving or to give sendoff. In the meantime announcement in the mike "train is running late by (time), the inconvenience caused to the passenger is deeply regretted". The queue of passengers at the enquiry asking for the cause of delay and expected arrival time, and the staff replying in no tension because a note at the counter displays "trains running late may make up or loose time". It clearly reflects the inability of the railway authorities which besmirch good opinion about the organisation. It is the employees who have to take the responsibilities on their own shoulders in providing quality services to satisfy the customers.

One has to question oneself that how can he help an average to come out of his helplessness and apathy and accept that he is a custodian of ethical culture. Sacrifice is the only mantra in services which GOD always likes. One who has the pursuit of profit making and gives importance to material attainments becomes greedy causing detriment to others. One should have generosity and try to live for what is best.

Am I Having the Needed to Serve

As we are aware, A crocodile caught elephant legs with its jaws causing detriment and did not allow to escape. The war went on for years and at last the elephant wailing prayed for Lord Vishnu to save its life from the crocodile. Lord Vishnu comes out of his Vykuntam leaving all his knick-knacks, troop and weapons to release and save his devotee Gajaraja (elephant) from the Crocodile detention. The Almighty really do help his devotees, but now a time it is becoming real in case of many so called service organizations. These provide service without having the needed to serve.

Most of the schools do not have minimum facilities, infrastructure and required qualified staff but they advertise that their school offers quality education with utmost care on each student. How an unqualified teacher can teach without knowing the methodology of the subject. Above all these teachers abuse the students for not understanding the subject and use cane to maintain discipline, even some teachers use wire to beat the students and others give physical punishment. All those schools are not in educational services. It is the love and affection and not the cane needed to teach. Extricate the unwanted.

We do not find furniture, equipment and apparatus in the hospitals to provide treatment which clearly reflects the carelessness of the Government about public health care, it had to face public obloquy. Whenever I go to the bank for pass book updation, I get a reply shortage of staff, come again on other day. I remember a rhme “rain rain go away, come again an other day”. A hospital with five beds and only two caretakers (nurses) is named super specialty hospital How those two nurses can handle five patients at a time in case of emergency. Can we call it a super specialty hospital and the doctor a medical professional. He is a professional in doing business with patients’ lives. Then, how these organizations and people continue to exist when the customers face travails involving sufferings and are totally dissatisfied, the reason is no choice for alternative.

Give the world the best you have and it may never be enough. Give your best anyway. For you see, in the end, it is between you and God. It was never between you and them anyway.” “Not all of us can do great things. But we can do small things with great love.”-Mother Teresa. We believe that GOD is omnipresent so it is the GOD served but not the humankind.

Am I Really A Service Brio

One should get motivated towards such thoughts of “Nishkama Karma” (nishkama-selfless and karma-deed/action) (without attachment to self) which our ancient saints (Rishi and Muni) have followed for the welfare of the society. They performed many “yagas and yagnas” and were praised for their selfless noble deeds by which they remained in history from time unknown.

A life insurance policy holder forgotten to get his mid-term benefits and got transferred. One of the officer traced him at an address in change and sent a letter to the new address, but regrettable, the policy holder expired. The officer took all the risk to pay the claim. The survivors of the policy holder felt happy for the service of that officer. A boy suffering from fits fell down in the compartment. His father pulled the chain, A passenger stopped the train in between two stations. The guard came and found the that a child was serving from 'fits' and his parents crying. Fortunate, he gave an onion and told to keep at the nose of the boy, and also called the nearby station master on wireless phone (provided by the department) to provide a doctor. The boy was provided medical aid in time.

Sun floods light by which all the living beings get activated and resume to normal work. Moon scatters light during night by which a navvy longs for oblivion of sleep. Rains give us water for drinking and irrigation.What they are benefited in return. Nature discharges its duties restlessly and selflessly performing its Nishkama Karma. Shirdi Sai, Mahatma Gandhi, Shirdi Sai now being treated as GOD by many people, had once lived as a "phakir" (beggar) in a dismantled mosque. Making it his shelter he served many of his unfortunate devotees. Mahatma Gandhi without attachment to self, but to the society, with the weapon "non-violence" led the nation in the freedom struggle. It was the "Nishkama Karma" principle which had an impact on him. All these are indelibly imprinted in the hearts of people.

Conclusions and Suggestions

What services one expects from others should be able to provide to others in his turn. What we think of doing to others negative/positive will certainly happen in our life one day or the other. "Satyameva Jayate Na Mritha….." one may get immediate benefits from their wrongs and cheating others, but certainly suffer and are answerable to GOD, the Almighty who note down the good and evil acts done. It is the responsibility of the organization (caveat vendor) to provide good product or service because it is the customers' hard earnings they get pay as consideration. Let the organizations know the punishments and negative results for wrong doings. Customer service should be made a part of the organizations' mission. It is the good management of customer relations that makes one improve his business but not his appearance or even the ambience of the office. Bolster the courage in employees to be social responsible. Motivate them towards keeping up to the values needed for their and organizational development, only then the organization achieves its visionary goals. Develop awareness among consumers about their rights. When one want to enter services marketing he has to ask hisself whether he is really interested in establishing a service oriented organization and want to serve his customers with utmost care.

People are nation builders. Business people and marketers have to develop a culture of service motto in their mindset Lord Sri Krishna in his Bhagavath Gita (2:47) says "Karmanyeva Adhikaraste Na Phaleshu Kadachana-----" means without awaiting (na) returns (phaleshu), it is the responsibility of an individual to shoulder and discharge his duties (karma). Only such people are extolled and rewarded by the society and remembered for ever who focus mentally and concentrate on the duties to be performed now and here with greatest care, utterly, and who gets inspired to serve without fail and expecting no fruits (returns). The best example is a tree which gives fresh air, fruits and shade irrespective of the goodness or evil nature of the person standing under it. Getting detached with the ends, good deeds made makes us noble. The Almighty has been given us a beautiful life not to enjoy the beauty and bounty of the nature but by serving the human kind. He has given two eyes to see the poor, two ears to listen without wavering, two hands to serve, one tongue to speak with love and affection. It is not important how many customers we received but how better we are serving them to retain their loyalty for imprinting brand/organisation image in their mind set. So service oriented organisaions should not abdicate from their responsibilities. Business people must have futuristic look. Service is the best ritual and karma that GOD likes. "Dharmo

Rakshati Rakshita" Have piety (deep respect) for Dharma, Dharma bestows piety on us. Following dharma stimulates us to act not for self, but protects and makes us to cherish for ever. We with rich cultural heritage have to embed the dimension of social responsibility in services marketing.

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Impact of Indian Capital Market on the Share Value of a Firm: A Case Study of Minerals and Metals Trading Corporation (MMTC) Ltd.

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Abstract

Capital Market plays very significant role in any economy. Stock exchanges are the pillars of capital market. Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) are the main stock exchange of Indian Capital Market where most of the companies are listed. The shares of public sector companies are traded in these stock exchanges. Minerals and Metals Trading Corporation (MMTC) Ltd is one of the major players of mineral sector of India and listed in Bombay Stock Exchange in BSE-PSU index. The present study is an attempt to elaborate the variation in Indian Capital Market has any relation to the share price of a firm or not. It also evaluates the impact of Indian Capital Market on the share value of a firm with special focus to Minerals and Metals Trading Corporation (MMTC) Ltd. The study covers the index value of Bombay Stock Exchange (PSU) and MMTC Ltd. from 2008 to 2012. The study concluded that there is a significant relation between the movements of the indices of S&P BSE PSU and MMTC Ltd. It is found that Indian Capital Market has significant impact on the performance of MMTC Ltd. and also there is a relation between the movements of Capital Market and MMTC Ltd.

Keywords: Indian Capital Market, MMTC Ltd., BSE.

Introduction

Indian capital markets have been receiving global attention, especially from sound investors, due to the improving macroeconomic fundamentals since last decade. The presence of a great pool of skilled labour and the rapid integration with the world economy increased India's global competitiveness. The Securities and Exchange Board of India (SEBI), the regulatory authority for Indian securities market, was established in 1992 to protect investors and improve the microstructure of capital markets. In the same year, Controller of Capital Issues (CCI) was abolished, removing its administrative controls over the pricing of new equity issues. In less than a decade later, the Indian financial markets acknowledged the use of technology (National Stock Exchange started online trading in 2000), increasing the trading volumes by many folds and leading to the emergence of new financial instruments. With this, market activity experienced a sharp surge and rapid progress was made in further strengthening and streamlining risk management, market regulation, and supervision. [1] The securities market is divided into two interdependent segments viz. the primary market provides the channel for creation of funds through issuance of new securities by companies, governments, or public institutions. In the case of new stock issue, the sale is known as Initial Public Offering (IPO). The secondary market is the financial market where previously issued securities and financial instruments such as stocks, bonds, options, and futures are traded.

Indian Capital Market: A Brief Review

The capital market is a place where the suppliers and users of capital meet to share their views, and where a balance is sought to be achieved among diverse market participants. It is a market for securities i.e. debt or equity, where business enterprises and governments can raise long-term funds. It is defined as a market in which money is provided for periods longer than a year as the raising of short-term funds takes place on other markets e.g. the money market. The capital market includes the stock market equity securities and the bond market debt. [2]

The history of the Indian capital markets and the stock market in particular can be traced back to 1875 when Bombay Stock Exchange (BSE) was established. It was an unincorporated body of stockbrokers, which started doing business in the city under a banyan tree. Business was essentially confined to company owners and brokers, with very little interest evinced by the general public. The securities decouple individual acts of saving and investment over time, space and entities and thus allow savings to occur without concomitant investment. Moreover, yield bearing securities makes present consumption more expensive relative to future consumption, inducing people to save. The composition of savings changes with less of it being held in the form of idle money or unproductive assets, primarily because more divisible and liquid assets are available. Given the significance of capital market and the need for the economy to grow at the projected over eight per cent per annum, the managers of the Indian economy have been assiduously promoting the capital market as an engine of growth to provide an alternative yet efficient means of resource mobilization and allocation. The global financial environment is undergoing unremitting transformation. The days of insulated and isolated financial markets are history. The success of any capital market largely depends on its ability to align itself with the global order. [3]

The markets have witnessed several golden times too. Retail investors began participating in the stock markets in a small way with the dilution of the FERA in 1978. Multinational companies with operations in India were forced to reduce foreign share holding to below a certain percentage, which led to a compulsory sale of shares or issuance of fresh stock. Indian investors, who applied for these shares, encountered a real lottery because those were the days when the CCI decided the price at which the shares could be issued. There was no free pricing and their formula was very conservative. The markets have recovered since then and we have witnessed a sustained rally that has taken the index over 13000. Several systemic changes have taken place during the short history of modern capital markets. The setting up of the Securities and Exchange Board (SEBI) in 1992 was a landmark development. It got its act together, obtained the requisite powers and became effective in early 2000. The setting up of the National Stock Exchange in 1984, the introduction of online trading in 1995, the establishment of the depository in 1996, trade guarantee funds and derivatives trading in 2000, have made the markets safer. The introduction of the Fraudulent Trade Practices Act, Prevention of Insider Trading Act, Takeover Code and Corporate Governance Norms, are major developments in the capital markets over the last few years that has made the markets attractive to foreign institutional investors.

This history shows us that retail investors are yet to play a substantial role in the market as long-term investors. Retail participation in India is very limited considering the overall savings of households. Investors who hold shares in limited companies and mutual fund units are about 20-30 million. Those who participated in secondary markets are 2-3 million. Capital markets will change completely if they grow beyond the cities and stock exchange centers reach the Indian villages. Both SEBI and retail participants should be active in spreading market wisdom and empowering investors in planning their finances and understanding the markets. Most of the companies either public or private are listed in stock exchanges i.e. BSE, NSE or both. Their shares are traded in these stock exchanges. Each and every event effect the share value of any company. There are various incidents occurs in global or national economy which affect the capital market as well as share value of the firm.

Role of Indian Capital Market in Indian Economy

The capital markets are relatively for long term financial instruments. The role of Indian Capital Market is as follows:

- The Capital Market is the indicator of the inherent strength of the economy.
- It is the largest source of funds with long and indefinite maturity for companies and thereby enhances the capital formation in the country.
- It offers a number of investment avenues to investors.
- It helps in channeling the savings pool in the economy towards optimal allocation of capital in the country.

The capital market is divided into two parts, namely primary and secondary stock market. The relationship between these parts of the markets provides an insight into its organization. A market where new securities are bought and sold for the first time is called new issue market or the IPO market. In other words the first public offering of equity shares or convertible securities by a company, which is followed by the listing of a company's shares on a stock exchange, is known as an initial public offering (IPO). The Primary market also includes issue of further capital by companies whose shares are already listed on the stock exchange. There are different types of intermediaries operating in the capital market. They play a crucial role in the development of capital market by providing a variety of services. These intermediaries' viz. merchant bankers, brokers, bankers to issues, debenture trustees, portfolio managers, registrars to issues and share transfer agents etc. are regulated by SEBI. A market in which an investor purchases a security from another investor rather than the issuer subsequent to the original issuance in the primary market is called secondary market. Secondary markets are the stock exchanges and the over the counter market. Securities are first issued as a primary offering to the public. When the securities are traded from that first holder to another, the issues trade in these secondary markets.

Minerals and Metals Trading Corporation (MMTC) Ltd.: An Overview

Minerals and Metals Trading Corporation (MMTC) Ltd. was established in 1963 with the basic purpose to increase the trade of minerals and metals at international as well as national level. The principal activities of the company are export of Minerals and import of Precious Metals, Non-ferrous metals, Fertilizers, Agro Products, general trade, coal and hydrocarbon. It is the first Public Sector Enterprise to be accorded the status of five star export house by the Indian Government for long standing contribution in exports. Trade activities of MMTC encompass third country trade, joint ventures, and link deals in all modern day tools of international trading. Its international trade network spans in all countries of Asia, Europe, Africa, Oceania and America. It is the largest importer of gold and silver in the Indian sub continent and the largest non–oil importer for India. MMTC Ltd. is the single largest exporter of minerals, the major fertilizer marketing company and the leading exporter and importer of agro products in India. It has a comprehensive infrastructural expertise to handle minerals that provide full logistic support from procurement, quality control to guaranteed timely deliveries of minerals from different ports, through a wide network of regional and port offices in India, as well as international subsidiary. It retains the position of single largest trader in the country for product lines like Minerals, Metals and Precious Metals. MMTC Ltd. provides support services to the medium and small scale sectors. The company is doing a project, namely, Neelachal Ispat Nigam Ltd. (NINL) jointly with the Government of Odisha. MMTC has a wholly owned subsidiary in Singapore i.e. MMTC Transnational Pte. Ltd. Singapore (MTPL).The trading network of the company spans all over the world. MMTC has been manufacturing its own brand of gold and silver medallions since the year 1996. MMTC has retail jewellery and its own branded Sterling Silverware showrooms in all the major cities of India. The total turnover of MMTC Ltd. was Rs. 45124 crore in 2009-10 which reached at a level of Rs. 65929 crore in 2011-12. The export, import and domestic trade of MMTC Ltd. was stood at Rs. 3222, 39969 and 1932 crore respectively in 2009-10 which reached on Rs. 2045, 61042 and 2842 crore respectively. The earning per share of MMTC Ltd. was Rs. 43.25 in 2010 and in 2011-12, it was Rs. 0.71. The business performance of MMTC Ltd. was quite satisfactory as it has stated its outlets and other activities across the nation.

Statement of Problem

Indian Capital Market is one of the largest capital markets in the world. It is the major contributor in the economic development of the country. MMTC is a leading international trading company of India. There is an important issue of great concern and observation of the impact of Capital Market on the performance of a corporation. The future development programme of the company can be designed according to the expenses and investment level. Consequently, the analysis of the profitability of the MMTC gets importance in the present day context.

For measuring the financial performance of MMTC, profitability and liquidity measures are to be considered. The basic aim of this study is to analyze the impact of Indian Capital Market on the performance of MMTC Ltd. It has been observed that the import of minerals and metals by MMTC Ltd. exceeds its exports which mean that the Balance of Payment is going to be negative on a continuous basis. Moreover, MMTC Ltd. is engaged in domestic trade on a very small scale. Since, it is an international company; its performance should be good enough to contribute in the economic development of the country. This paper examines the role and impact of Indian capital market on the performance of MMTC Ltd. The study findings will be beneficial for investors to take investment decision, market makers, academicians, exchanges and regulators etc.

Review of Literature

The capital market has been identified as an institution that contributes to the socio-economic growth and development of emerging and developed countries (economies). This is made possible through it vital role in intermediation process in those economies. Capital market is defined as the market where medium and long terms finance can be raised (Akingbohungbe, 1996). Capital market offers a variety of financial instruments that enable economic agents to pool, price and exchange risk. Through assets with attractive yields, liquidity and risk characteristics, it encourages saving in financial form. This is very essential for government and other institutions in need of long term funds (Nwankwo, 1999). According to Al-Faki (2006), the capital market is a network of specialized financial institutions, series of mechanism, processes and infrastructure that, in various ways facilitate the bringing together of suppliers and users of medium to long term capital for investment in economic developmental project. Pedro and Erwan (2004), [4] asserted that financial market development raises output by increasing the capital used in production and by ensuring that capital is put into best uses. The World Bank (1994), [5] found that stock market development does not merely follow economic development, but provides the means to predict future rates of growth in capital, productivity and per capital GDP. Adam and Sanni (2005), [6] also stressed the importance of capital market in economic development in Nigeria. Agarwal (2001), [7] argued that financial sector development facilitates capital market development, and in turn raises real growth of the economy. In Belgium, Nieuwer et al (2005), [8] investigated the long term relationship between economic growth and financial market development. The authors used a new set of stock market development indicators to argue that financial market development substantially affects economic growth. They found strong evidence that stock market development leads to economic growth in Belgium, especially in the period between (1973) and (1993). Ewah et al (2009), [9] appraise the impact of the capital market efficiency on economic growth of Nigeria using time series data from 1963 to 2004. They found that the capital market in Nigeria has the potential of growth inducing but it has not contributed meaningfully to the economic growth of Nigeria because of low market capitalization, low absorptive capitalization, illiquidity, misappropriation of funds among others. Harris (1997) did not find hard evidence that stock market activity affects the level of economic growth.

Research Gap

After reviews of available literature it is being observed that there are many studies are being carried out on Indian Capital Market and its various aspects. Indian Capital Market and its impact still is the area of research because it is not highlighted till now. This study basically design to evaluate the impact of Indian Capital Market on the share value of a company listed in the capital market. So, after reviewing the literature, it is observe that there is a need to measure the impact of Capital Market. This study attempts to check the impact of Indian Capital Market on the value of share of a company.

Scope of the Study

The present study is conduct for testing the impact of Indian Capital Market on the value of the firm i.e. MMTC Ltd. The index of BSE PSU has been taken so as to represent the Indian Capital Market and the index of MMTC Ltd. and return of both the indices have been calculated taking both the closing and opening prices of the indices for the analysis purpose. In this study Researchers assess the performance of MMTC Ltd. and also its impact on Indian bourses. The study covers the period of 5 years from 1st April 2008 to 31st March 2012. Index of MMTC Ltd. and BSE PSU have been taken for this purpose.

Objectives of the Study

The present study aims to identify the impact of Indian Capital Market on the value of firm and here the firm which is taken for this purpose is MMTC Ltd. In the light of aforesaid the following objectives have pursued for the purpose of analysis.

- To develop an understanding about the concept and role of Indian Capital Market.
- To study the historical development and business practices of MMTC Ltd.
- To assess the trend of the financial performance of MMTC Ltd.
- To study the relationship between Indian Capital Market and MMTC Ltd.
- To examine the performance of MMTC Ltd. in the Indian Capital Market.

Hypotheses of the Study

1. Testing the impact of Indian Capital Market on MMTC Ltd.

    H0: Indian Capital Market has no significant impact on the performance of MMTC Ltd.

    H1: Indian Capital Market has significant impact on the performance of MMTC Ltd.

2. Testing the relationship between Indian Capital Market and MMTC Ltd.

    H0: There is no relation between the movements of Capital Market and MMTC Ltd.

    H1: There is a relation between the movements of Capital Market and MMTC Ltd.

Research Methodology

Data Collection Method

The present study is primarily based on secondary data which have been procured and extracted from the website of Bombay Stock Exchange (BSE) and other relevant sources. The sample data consists of daily returns of the indices of MMTC Ltd. and S&P BSE PSU for the analysis purpose and daily averages of returns of both of these indices have been taken for the purpose of graphical interpretation which covers the period of five years from 1st April 2008 to 31st March 2012. For the purpose of analysis and performance evaluation the collected data is then compiled in the form of tables and graphs and scrutinized through statistical tools and graphical interpretation.

Hypotheses Testing Methodology

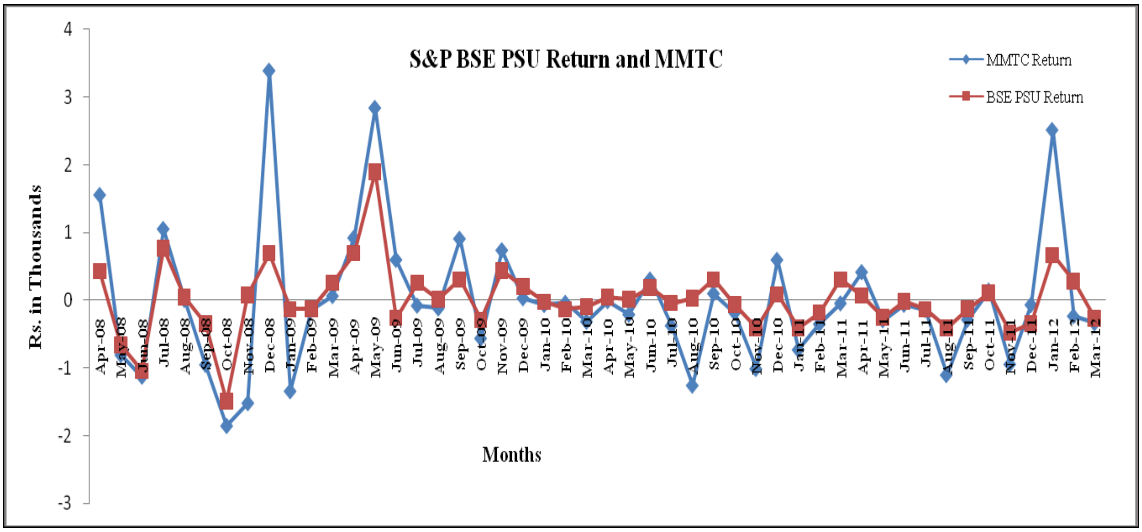
The present study assesses the concept and the financial performance of MMTC Ltd. in Indian Capital Market and also tests its impact on MMTC Ltd. The index of S&P BSE PSU Index which consists of major Public Sector Undertakings listed on BSE representing the Indian Bourses and the index of MMTC Ltd. has been taken for the analysis purpose. The concept of Correlation and Regression is being used with the help of SPSS in this study. The sample data consists of the daily returns of the indices of MMTC Ltd. and S&P BSE PSU. The total numbers of observations of both the variables are 990 starting from 1st April 2008 to 31st March 2012. Here the index of S&P BSE PSU has been taken as an independent variable whereas the index of MMTC Ltd. has been taken as dependent variable. This is an empirical study in which the influence of S&P BSE PSU has been analyzed through correlation and regression.

Analysis and Interpretation

The trend of S&P BSE PSU and MMTC Ltd is shown in Graph 1. From the graph an interesting correlation can be observed between S&P BSE PSU return and the return of MMTC Ltd. It can be examined from the graph that with the increase and decrease of the index of S&P BSE PSU, the index of the MMTC Ltd. also rises and falls. Also, the gap between the indices of S&P BSE PSU and MMTC Ltd.

is very low expect for some time period like from April 2008 to March 2009, from November 2008 to January 2009, from April 2009 to June 2009, from July 2010 to September 2010, and from December 2011 to February 2011, indicating the huge impact of index S&P BSE PSU on the index of MMTC Ltd. affecting the performance of MMTC Ltd.

Graph 1



Source: Appendix 1

A. Descriptive Statistics

Descriptive statistics are used to describe the basic features of the data in a study. It gives numerical and graphic procedures to summarize the data in a clear and understandable way. It helps us to simplify large amounts of data in a sensible way. Each descriptive statistics reduces lots of data into a simpler summary. [10] It is very important to find out the normality of data before employing any test, which can be found out by statistical description of the data. Table given below presents statistical description of two indices i.e., S&P BSE PSU and MMTC Ltd. Under this mean, standard deviation, sample variance, minimum, maximum, skewness and kurtosis have been calculated. Statistical description is made in order to find out whether the data shows normality or not. The reason to find out normality is that until and unless the data is normal, the test will not gives perfect result. Statistical description is being calculated on the basis of the daily closing prices of S&P BSE PSU and MMTC Ltd. The mean of MMTC Ltd. is -0.000780517 and of S&P BSE PSU is 0.011008493. It is observed by the Researchers that the mean return of MMTC Ltd. is lower as compared to S&P BSE PSU. The variance of S&P BSE PSU is 2.865416951 which is lower than that of MMTC Ltd. which is 11.0227817, showing that the index of MMTC Ltd. is highly volatile and risky in nature in comparison to S&P BSE PSU. The values of skewness and kurtosis determine the normality of the data. The critical values for skewness and kurtosis are 0 and 3 which represents that the observed data is perfectly normally distributed. The calculated values of skewness for S&P BSE PSU and

MMTC Ltd. are at 0.794514395 and 2.618000969 and values of kurtosis for S&P BSE PSU and MMTC Ltd. are at 10.73051682 and 11.95717678 respectively. The values from the table show that neither the skewness nor the kurtosis of both the indices shows normality of the data. The skewness of S&P BSE PSU and MMTC Ltd. is greater than 0 and kurtosis of S&P BSE PSU and MMTC Ltd. is greater than 3 which imply that data does not show normality. In this case it is better to employ appropriate tests which ignore the assumptions of normal distribution.

TABLE – 1 Descriptive Statistics

(From 1st April 2008 to 31st March 2012)

Descriptive Statistics	MMTC Ltd.	S&P BSE PSU
Mean	-0.000780517	0.011008493
Standard Deviation	3.320057485	1.69275425
Sample Variance	11.0227817	2.865416951
Kurtosis	11.95717678	10.73051682
Skewness	2.618000969	0.794514395
Minimum	-9.706641315	-10.29399237
Maximum	20.86386925	16.41504559
No. of Observations	990	990
Confidence Level (95.0%)	0.207065575	0.105573814

Source: Appendix 2 (through SPSS)

B. Correlation, Coefficient of Determination and Z-value

Correlation and regression is being calculated in this study in order to analyze the result and z-test is being employed here in order to test the statistical significance of the results calculated which is depicted in Table 2 and Table 3.

In Table- 3 Karl-Pearsons' Product Moment Correlation is being calculated which is a simple correlation and shows the relationship between one dependent variable and one independent variable. Here, S&P BSE PSU is taken as an independent variable and the index of MMTC Ltd. is being taken as dependent variable. It highlights the coefficient of correlation, coefficient of determination and significance level between the indices of S&P BSE PSU and MMTC Ltd.

According to the results depicted in Table 2 during the years from 2008 to 2012 it is found that the correlation between S&P BSE PSU and MMTC Ltd. is 0.561 that indicates a perfect positive correlation. The coefficient of determination is at 0.314 that signifies that 31.4 per cent of the variance in the variables is explained by this relationship.

The value at 5 per cent significance level is calculated as 1, which lies within the critical values of z at ± 1.96. Hence the value is neither less nor more than the critical value, which leads to acceptance of the Null Hypothesis and rejection of the Alternative Hypothesis. Hence there is a perfect relation between

S&P BSE PSU and MMTC Ltd. and Indian Capital Market has significant impact on the performance of MMTC Ltd.

Table 2 Karl-Pearsons' Product Moment Correlation Coefficient

(From 1st April 2008 to 31st March 2012)

Indices	No. Of observations	Coefficient of Correlation (r)	Coefficient of Determination (r^2)	Z-Value (Significance at 5% level)
S&P BSE PSU & MMTC Ltd.	990	.561	.314	1

Source: Calculated and Compiled based on Appendix 2

Table 3 highlights that there is no linear relationship between the variables analyzed. It is observed that the value of S&P BSE PSU is 1.100 which means that for every unit change in S&P BSE PSU the value of MMTC Ltd. is moved by 1.100 that is extremely low. The sig. value is calculated at 0.000 which is less than the critical value of 0.005. So, it shows that there is significant impact of S&P BSE PSU on the movement of MMTC Ltd.

Table – 3 Regression Analysis of MMTC Ltd on S&P BSE PSU

(From 1st April 2008 to 31st March 2012)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.013	.087		-.147	.883
S&P BSE_PSU	1.100	.052	.561	21.296	.000

Dependent Variable: MMTC Ltd

Source: Calculated and Compiled based on Appendix 2

Conclusion

Capital Market play very significant role in any economy. There is a number of public and private companies have been listed in the capital market. The share value of a company depends on the related information and other significant events occurred at that time in economic scenario. The share value of a company determine through the incidents and other features. For check the impact of capital market on the share value five years data have been taken from the website of Bombay Stock Exchange for making a meaningful inference. On the basis of the data analyzed, it is observed that there is a significant relation between the movement of the indices of S&P BSE PSU and MMTC Ltd. MMTC Ltd. is an international trading company of India. Exports and Imports of minerals and metals are the main business practices of this company. International events affect the share value of the company. The analysis of the available data based on correlation and regression techniques leads to the conclusion that the Null Hypotheses in both the cases cannot be accepted which leads to the conclusion that Indian Capital Market has significant impact on the performance of MMTC Ltd. and also there is a relation between the movements of Capital Market and MMTC Ltd.

References

Indian Capital Markets. (n.d.) Retrieved from: http://www.ftkmc.com/equities.html on 21.03.2013

Ahuja J. (2012). Indian Capital Market: An Overview with its Growth. VSRD, International Journal of Business & Management Research. Vol. 2 (7). pp. 387-399

Asit C. Mehta Investment Interrmediates Ltd. (n.d.). History of Indian Capital Market. Lesson No.25 From The House Of Asit C. Mehta Investments

Pedro S. Amaral & Erwan Quintin (2004). The implications of capital-skill complementarity in economies with large informal sectors. Center for Latin America Working Papers. 0404, Federal Reserve Bank of Dallas.

World Bank (1994). Adjustment in Africa: Lessons from Country Case Studies, Washington D.C. The World Bank.

Adamu, J.A. & Sanni, I. (2005). Stock market development and Nigerian economic growth. Journal of Economic and Allied Fields. 2(2), 116-132

Agarwal S. (2001). Stock market development and economic growth: Preliminary evidence from African countries. Retrieved, Aril, 2, 2012 from http://www.jsd-%20Stock% ARC%2020Market%20Development%20and%20Economic%20Growth.pdf

Nieuwerbugh, S, Buelens, F & Cuyvers L. (2005). Stock market development and economic growth in Belgium", NYU working Paper 05 -024.

Ewah, S.O.E., Esang, A.E.and Bassey, J.U. (2009). Appraisal of Capital Market Efficiency on Economic Growth in Nigeria. International Journal of Business and Management, December, 219-225

Retrieved From: http://www.infobarrel.com/Understand_and_Interpret_Descriptive_ Statistics#bVCe6Ymv4tZwQUCb.99

Appendices

Appendix – 1

Average Monthly Return of the indices of S&P BSE PSU and MMTC Ltd.

(From 1st April 2008 to 31st March 2012)

Months	MMTC Return	BSE PSU Return
Apr-08	1.557849909	0.431242131
May-08	-0.802787803	-0.653296082
Jun-08	-1.122047888	-1.037439816
Jul-08	1.055660043	0.768043737
Aug-08	0.010797895	0.0475793
Sep-08	-0.948806566	-0.34589051
Oct-08	-1.849542596	-1.487526169
Nov-08	-1.51418459	0.081978773
Dec-08	3.390506856	0.696869879
Jan-09	-1.338080888	-0.131697505
Feb-09	-0.136508629	-0.125736681
Mar-09	0.066986118	0.257203044
Apr-09	0.92332537	0.698288061
May-09	2.841335182	1.896975653
Jun-09	0.601057824	-0.258639833
Jul-09	-0.074856093	0.259249055
Aug-09	-0.115562716	0.019185712
Sep-09	0.9110306	0.308294198
Oct-09	-0.558908167	-0.288568912
Nov-09	0.741878085	0.435309579
Dec-09	0.034093003	0.204234983
Jan-10	-0.064177873	-0.021108066
Feb-10	-0.03437851	-0.131988712
Mar-10	-0.31153226	-0.088683688
Apr-10	-0.007668236	0.043980858
May-10	-0.207149178	0.018951481
Jun-10	0.30963433	0.187277539
Jul-10	-0.37164238	-0.039176098
Aug-10	-1.254291765	0.03229528
Sep-10	0.103261502	0.307712007
Oct-10	-0.179548168	-0.061211278
Nov-10	-1.007855747	-0.406443274
Dec-10	0.599882662	0.089121348
Jan-11	-0.726865235	-0.409405885
Feb-11	-0.347556324	-0.181123599
Mar-11	-0.042390962	0.308865083

Apr-11	0.418305521	0.070897907
May-11	-0.289855266	-0.244674004
Jun-11	-0.061971225	-0.016431475
Jul-11	-0.139357099	-0.129509285
Aug-11	-1.099408882	-0.40828179
Sep-11	-0.281663847	-0.126600524
Oct-11	0.14777141	0.112950009
Nov-11	-0.941305788	-0.473719155
Dec-11	-0.063880905	-0.344910634
Jan-12	2.515804735	0.667326479
Feb-12	-0.230428067	0.278782192
Mar-12	-0.334212413	-0.262622074

Appendix – 2

Daily Return of the indices of S&P BSE PSU and MMTC Ltd.

(From 1st April 2008 to 31st March 2012)

Date	Stock Price Return of MMTC	Stock Price Return of BSE
01-Apr-08	-0.3001	-0.4216
02-Apr-08	-1.5972	-0.1068
03-Apr-08	-2.9107	-0.5393
04-Apr-08	-3.1118	-2.3372
07-Apr-08	-0.4248	1.2972
08-Apr-08	1.5451	-0.3978
09-Apr-08	1.6086	1.0511
10-Apr-08	7.3737	0.1415
11-Apr-08	9.9999	1.6070
15-Apr-08	10.0000	2.3244
16-Apr-08	4.9999	-0.0780
17-Apr-08	4.2123	1.6986
21-Apr-08	3.2605	2.0458
22-Apr-08	-2.8880	0.8659
23-Apr-08	-4.9495	-1.5539
24-Apr-08	-4.7425	-1.5298
25-Apr-08	0.9982	1.4712
28-Apr-08	0.4883	0.5281
29-Apr-08	5.0000	1.6527
30-Apr-08	2.5953	0.9057
02-May-08	-3.9926	1.1320
05-May-08	1.1394	0.3107
06-May-08	-2.3820	-1.3307
07-May-08	-1.5610	-1.6538
08-May-08	-1.3371	-0.6285

09-May-08	-1.9915	-2.0285
12-May-08	-4.1636	-0.0855
13-May-08	4.7738	-0.3232
14-May-08	-1.3204	-0.9463
15-May-08	4.9998	1.5978
16-May-08	-1.6268	0.4024
20-May-08	-0.4317	-1.8235
21-May-08	1.2305	0.9798
22-May-08	-1.5762	-0.9434
23-May-08	-1.4083	-1.6904
26-May-08	-3.4433	-2.4852
27-May-08	-1.2399	-1.7153
28-May-08	-0.6509	0.0865
29-May-08	0.3599	-1.4589
30-May-08	-1.4337	-0.4620
02-Jun-08	-2.2443	-3.8396
03-Jun-08	-3.0944	-1.1698
04-Jun-08	-0.6930	-1.9286
05-Jun-08	-0.6158	1.8354
06-Jun-08	0.1878	-0.7880
09-Jun-08	-3.4821	-2.9516
10-Jun-08	-1.9008	-1.2294
11-Jun-08	1.7099	1.7672
12-Jun-08	1.6807	0.2842
13-Jun-08	-0.8169	0.1112
16-Jun-08	0.5228	1.0227
17-Jun-08	0.3850	2.1699
18-Jun-08	-1.8554	-0.8421
19-Jun-08	0.7430	-2.3566
20-Jun-08	-1.2240	-2.3591
23-Jun-08	-2.9783	-2.4578
24-Jun-08	-3.3513	-2.8006
25-Jun-08	0.1422	0.2488
26-Jun-08	0.8700	0.4558
27-Jun-08	-3.0249	-4.2923
30-Jun-08	-4.5231	-2.6659
01-Jul-08	-4.9677	-3.6081
02-Jul-08	1.4828	3.7845
03-Jul-08	-2.3581	-2.2028
04-Jul-08	0.6768	1.1712
07-Jul-08	4.4973	1.2190
08-Jul-08	-2.5265	0.8212
09-Jul-08	9.9999	4.2474
10-Jul-08	9.9998	1.7929
11-Jul-08	9.2495	-1.7470
14-Jul-08	4.9999	2.0155

15-Jul-08	-4.9923	-4.3698
16-Jul-08	-4.9999	-1.1896
17-Jul-08	-3.3236	1.9812
18-Jul-08	1.9621	4.3377
21-Jul-08	-1.0049	1.4522
22-Jul-08	1.0376	2.5032
23-Jul-08	4.9999	5.6908
24-Jul-08	0.3190	0.0070
25-Jul-08	-3.0329	-0.7972
28-Jul-08	1.6036	0.7469
29-Jul-08	-2.9269	-3.1174
30-Jul-08	5.0000	2.4885
31-Jul-08	-1.4152	0.4378
01-Aug-08	4.4436	3.2713
04-Aug-08	1.0908	0.7872
05-Aug-08	0.5885	2.2712
06-Aug-08	-1.9540	-1.2271
07-Aug-08	-1.0424	-0.3590
08-Aug-08	-0.1700	1.0305
11-Aug-08	0.9948	2.6051
12-Aug-08	-0.5753	-0.9974
13-Aug-08	-0.8433	-0.3652
14-Aug-08	-1.6810	-2.7508
18-Aug-08	0.3007	-0.6309
19-Aug-08	0.2698	-0.7140
20-Aug-08	2.3311	1.2032
21-Aug-08	-1.6407	-3.7067
22-Aug-08	-0.2658	-0.0986
25-Aug-08	-0.6987	-0.3487
26-Aug-08	-0.9546	0.1358
27-Aug-08	0.0816	-0.9390
28-Aug-08	-1.8241	-1.8861
29-Aug-08	1.7651	3.6709
01-Sep-08	-0.2098	0.3129
02-Sep-08	0.4390	3.7613
04-Sep-08	-0.5597	-0.7308
05-Sep-08	-0.7952	-1.1658
08-Sep-08	-0.0149	2.1777
09-Sep-08	-0.2722	-0.6229
10-Sep-08	-0.8505	-1.5429
11-Sep-08	-0.2615	-2.1494
12-Sep-08	-3.0582	-0.7233
15-Sep-08	-1.5478	-3.8236
16-Sep-08	-0.5016	0.3864
17-Sep-08	-4.1382	-1.8404
18-Sep-08	-3.9315	0.1056

19-Sep-08	5.6709	4.5597
22-Sep-08	-1.0822	-0.7401
23-Sep-08	-0.8391	-0.8965
24-Sep-08	-0.0466	0.5925
25-Sep-08	-0.5068	-0.4948
26-Sep-08	-1.3119	-3.1621
29-Sep-08	-6.5293	-2.8849
30-Sep-08	0.4221	1.6175
01-Oct-08	1.2396	1.1111
03-Oct-08	-5.1202	-2.2790
06-Oct-08	-5.8306	-3.8953
07-Oct-08	-0.0180	0.8400
08-Oct-08	-6.2355	-3.1049
10-Oct-08	-5.4005	-4.4732
13-Oct-08	3.7071	5.0497
14-Oct-08	1.0995	-0.9748
15-Oct-08	-6.4501	-3.5313
16-Oct-08	-0.9300	-1.1014
17-Oct-08	-2.5610	-4.7107
20-Oct-08	-5.7918	-0.3982
21-Oct-08	0.7688	1.0363
22-Oct-08	-1.8861	-4.2200
23-Oct-08	0.9185	-2.3041
24-Oct-08	-7.0387	-10.2940
27-Oct-08	-7.1216	-5.4342
28-Oct-08	8.4635	5.3338
29-Oct-08	-0.2519	0.8637
31-Oct-08	1.4482	2.7360
03-Nov-08	5.7766	6.1410
04-Nov-08	0.1010	4.8171
05-Nov-08	1.1621	-2.8183
06-Nov-08	-3.0042	-2.3266
07-Nov-08	-1.1478	3.0101
10-Nov-08	-0.5818	5.6158
11-Nov-08	-0.3156	-5.2390
12-Nov-08	-1.7531	-2.3322
14-Nov-08	-0.8450	-1.5670
17-Nov-08	-2.2953	-0.7587
18-Nov-08	-3.5402	-4.4204
19-Nov-08	-0.1235	-1.7237
20-Nov-08	-7.4851	-1.9089
21-Nov-08	-0.1598	5.0445
24-Nov-08	-0.9963	0.1680
25-Nov-08	-2.6745	-0.9289
26-Nov-08	-9.7066	1.4716
28-Nov-08	0.3339	-0.7688

01-Dec-08	-0.4662	-1.9972
02-Dec-08	-5.4809	-0.9830
03-Dec-08	1.3508	1.1339
04-Dec-08	1.3249	3.7118
05-Dec-08	0.6093	-2.2789
08-Dec-08	0.5213	1.6406
10-Dec-08	-1.1553	2.4152
11-Dec-08	0.8812	-0.5701
12-Dec-08	-1.1176	-0.0513
15-Dec-08	14.1193	3.4907
16-Dec-08	19.9996	5.0286
17-Dec-08	19.9999	-0.7869
18-Dec-08	9.9997	5.1112
19-Dec-08	10.0000	0.8528
22-Dec-08	10.0000	0.1427
23-Dec-08	3.3473	-1.6985
24-Dec-08	-0.6404	-0.6650
26-Dec-08	-3.8219	-2.3897
29-Dec-08	-4.8401	1.3749
30-Dec-08	-3.4388	1.2024
31-Dec-08	0.0086	-0.0500
01-Jan-09	4.9999	3.2319
02-Jan-09	0.2700	0.5899
05-Jan-09	0.8905	1.7837
06-Jan-09	-0.9800	-0.6204
07-Jan-09	-4.9999	-5.2790
09-Jan-09	-4.9999	-1.3058
12-Jan-09	-4.9999	-3.5027
13-Jan-09	-2.7390	-0.7306
14-Jan-09	1.4693	1.7340
15-Jan-09	-1.5617	-2.6064
16-Jan-09	-0.2729	3.3551
19-Jan-09	-1.7245	0.7922
20-Jan-09	0.1628	0.3350
21-Jan-09	-2.0739	-2.6578
22-Jan-09	-4.9998	-0.5595
23-Jan-09	-4.9998	-1.9589
27-Jan-09	-4.1178	1.2549
28-Jan-09	4.9999	3.1201
29-Jan-09	-1.6414	-0.8810
30-Jan-09	0.5565	1.2713
02-Feb-09	-0.2821	-2.5123
03-Feb-09	0.2926	-0.0441
04-Feb-09	-1.6487	0.6028
05-Feb-09	-0.9245	-0.4014
06-Feb-09	2.5267	1.8281

09-Feb-09	1.9468	2.7699
10-Feb-09	-0.0590	-0.0226
11-Feb-09	-0.0373	-0.0840
12-Feb-09	4.6053	-0.0850
13-Feb-09	0.9853	1.5106
16-Feb-09	-2.9326	-2.9990
17-Feb-09	-3.1784	-2.4674
18-Feb-09	1.3153	0.3886
19-Feb-09	0.4358	0.3117
20-Feb-09	-2.1587	-1.5638
24-Feb-09	-3.1129	-0.7132
25-Feb-09	1.2857	0.8627
26-Feb-09	-0.8702	0.3237
27-Feb-09	-0.7826	-0.0944
02-Mar-09	-2.0673	-2.6054
03-Mar-09	-2.2159	-1.4212
04-Mar-09	0.7524	0.5930
05-Mar-09	-0.0708	-1.9988
06-Mar-09	-2.8594	0.8832
09-Mar-09	-0.6539	-1.7731
12-Mar-09	-0.2423	1.0623
13-Mar-09	1.3632	1.7434
16-Mar-09	10.0000	2.8426
17-Mar-09	3.7905	-0.2761
18-Mar-09	-2.4380	0.8141
19-Mar-09	-0.5555	0.1219
20-Mar-09	-2.9197	0.0275
23-Mar-09	0.9224	4.2068
24-Mar-09	1.5927	-0.8116
25-Mar-09	-0.7100	-0.0089
26-Mar-09	0.8128	2.7427
27-Mar-09	-0.2332	1.4682
30-Mar-09	-3.0193	-3.2067
31-Mar-09	0.0910	0.7402
01-Apr-09	4.9153	0.7497
02-Apr-09	0.8886	4.4487
06-Apr-09	-2.1097	0.6499
08-Apr-09	8.7992	3.5440
09-Apr-09	-2.1380	-0.6866
13-Apr-09	9.4363	3.1560
15-Apr-09	0.2771	3.6125
16-Apr-09	-3.9002	-3.2441
17-Apr-09	-0.7451	0.8562
20-Apr-09	1.2992	-0.0424
21-Apr-09	-0.0441	-0.6073
22-Apr-09	0.3385	-1.6199

23-Apr-09	0.4579	2.0925
24-Apr-09	1.2852	0.8076
27-Apr-09	0.1751	-0.9614
28-Apr-09	-3.1592	-2.8467
29-Apr-09	-0.0794	1.9622
04-May-09	2.9433	2.9888
05-May-09	2.9919	0.7102
06-May-09	-2.9794	-0.3162
07-May-09	1.6416	1.2622
08-May-09	0.1234	-0.6597
11-May-09	-0.6745	-1.6334
12-May-09	-0.3222	1.7937
13-May-09	-0.4391	-1.4743
14-May-09	1.5003	0.2337
15-May-09	-1.9906	0.1272
18-May-09	19.7643	16.4150
19-May-09	-1.9357	2.6516
20-May-09	19.8017	2.9305
21-May-09	12.2513	2.7527
22-May-09	4.6844	0.5773
25-May-09	2.3860	1.7869
26-May-09	-4.5177	-2.5578
27-May-09	2.7553	4.7110
28-May-09	-0.0966	2.3420
29-May-09	-1.0611	3.2980
01-Jun-09	2.5381	1.5484
02-Jun-09	-1.0974	-1.1423
03-Jun-09	1.1226	-0.4701
04-Jun-09	9.9999	1.8777
05-Jun-09	9.9999	1.3273
08-Jun-09	-1.0623	-4.3209
09-Jun-09	10.0000	2.5410
10-Jun-09	-5.0000	0.9686
11-Jun-09	-2.8136	-1.8436
12-Jun-09	-1.2589	-1.2931
15-Jun-09	-1.0579	-0.6287
16-Jun-09	4.9999	2.2582
17-Jun-09	-4.9593	-4.2914
18-Jun-09	-5.0000	-3.4866
19-Jun-09	-0.2200	0.2046
22-Jun-09	-3.4405	-1.7273
23-Jun-09	4.9988	2.1132
24-Jun-09	-4.0010	0.5188
25-Jun-09	-3.0889	-1.7116
26-Jun-09	1.0178	1.8428
29-Jun-09	4.3793	1.7274

30-Jun-09	-2.8332	-1.7023
01-Jul-09	4.9222	0.9770
02-Jul-09	-0.7361	1.9508
03-Jul-09	-1.4346	0.8681
06-Jul-09	-4.9998	-5.5135
07-Jul-09	-5.9048	-1.7535
08-Jul-09	-1.3932	-2.3659
09-Jul-09	-0.4248	1.1667
10-Jul-09	-1.3825	-2.0316
13-Jul-09	-5.0882	-1.5467
14-Jul-09	3.1506	3.1135
15-Jul-09	9.2638	4.6585
16-Jul-09	-0.0954	0.1662
17-Jul-09	7.1729	3.3125
20-Jul-09	-0.3823	0.9489
21-Jul-09	-0.7512	-1.4020
22-Jul-09	-1.0161	-0.0821
23-Jul-09	0.4299	1.3714
24-Jul-09	-0.5476	0.4163
27-Jul-09	0.7969	0.3297
28-Jul-09	-0.2006	0.5184
29-Jul-09	-1.7834	-1.2219
30-Jul-09	-0.6591	0.8890
31-Jul-09	-0.6581	1.1930
03-Aug-09	1.0065	0.9776
04-Aug-09	-1.7024	-0.4988
05-Aug-09	1.2059	1.1056
06-Aug-09	-1.9877	-1.8687
07-Aug-09	-1.6551	-1.4730
10-Aug-09	-3.1786	-1.3340
11-Aug-09	-0.1135	-0.0237
12-Aug-09	-0.0721	-0.7002
13-Aug-09	3.0857	2.9759
14-Aug-09	-0.3966	0.4502
17-Aug-09	-3.7792	-3.2103
18-Aug-09	2.5046	1.7896
19-Aug-09	-1.8721	-1.8760
20-Aug-09	0.0917	1.3058
21-Aug-09	-0.4145	0.8318
24-Aug-09	1.3044	0.9749
25-Aug-09	-0.2144	-0.4048
26-Aug-09	3.9228	0.3326
27-Aug-09	-0.5877	0.4980
28-Aug-09	1.6073	0.5474
31-Aug-09	-1.1818	0.0031
01-Sep-09	-2.5939	-1.3805

02-Sep-09	-0.0530	-0.3527
03-Sep-09	-0.3311	-0.1560
04-Sep-09	-0.0226	1.0403
07-Sep-09	4.4338	2.1683
08-Sep-09	-1.3216	-0.0326
09-Sep-09	-1.0616	-0.4917
10-Sep-09	0.0234	0.0174
11-Sep-09	18.5319	1.5150
14-Sep-09	6.6160	0.9335
15-Sep-09	-3.4618	0.7304
16-Sep-09	-0.9536	0.7944
17-Sep-09	-1.5179	-0.3542
18-Sep-09	-2.0444	-0.1582
22-Sep-09	0.7855	0.6117
23-Sep-09	0.6156	-0.2584
24-Sep-09	1.7520	0.4450
25-Sep-09	-1.9683	-0.2134
29-Sep-09	-0.1621	0.3125
30-Sep-09	0.9543	0.9952
01-Oct-09	5.6622	0.2578
05-Oct-09	-2.9952	-1.4775
06-Oct-09	-2.3033	0.2249
07-Oct-09	5.0411	0.7456
08-Oct-09	-0.3783	0.8884
09-Oct-09	-2.2115	-0.8519
12-Oct-09	-0.0659	0.9451
14-Oct-09	1.6001	1.6509
15-Oct-09	-0.6611	0.4673
16-Oct-09	-0.1991	0.6074
17-Oct-09	0.0967	0.2205
20-Oct-09	-1.0803	-0.3560
21-Oct-09	-2.3291	-1.1664
22-Oct-09	-0.9307	-1.3685
23-Oct-09	0.2842	-0.0527
26-Oct-09	-2.9726	-1.2937
27-Oct-09	-3.7683	-2.2170
28-Oct-09	-3.1437	-1.1476
29-Oct-09	-2.5074	-1.4048
30-Oct-09	1.6840	-0.4431
03-Nov-09	-2.8406	-2.6796
04-Nov-09	2.2578	1.8269
05-Nov-09	0.2523	1.6735
06-Nov-09	19.9999	3.9111
09-Nov-09	0.5226	2.1293
10-Nov-09	4.6341	1.9655
11-Nov-09	-0.8671	1.9998

12-Nov-09	-4.1352	-1.9799
13-Nov-09	-0.2847	0.5891
16-Nov-09	0.5705	0.7021
17-Nov-09	-0.9646	-0.5107
18-Nov-09	-1.5692	-0.1989
19-Nov-09	-1.0230	-1.2480
20-Nov-09	-1.4538	0.7452
23-Nov-09	0.6444	0.6591
24-Nov-09	-2.1003	-0.5219
25-Nov-09	4.3885	0.6977
26-Nov-09	-0.9345	-1.3374
27-Nov-09	-3.1129	-1.2223
30-Nov-09	0.8532	1.5057
01-Dec-09	0.8147	1.1635
02-Dec-09	0.1433	0.1274
03-Dec-09	-0.6213	0.5607
04-Dec-09	-1.0497	-0.2935
07-Dec-09	-0.8799	-0.6779
08-Dec-09	0.6327	0.7322
09-Dec-09	0.9446	0.0038
10-Dec-09	0.0419	0.5532
11-Dec-09	-1.4985	-0.3381
14-Dec-09	5.8517	0.6307
15-Dec-09	-2.3059	-1.7921
16-Dec-09	-0.7577	-0.5422
17-Dec-09	0.4104	0.3171
18-Dec-09	-1.8569	-1.0210
21-Dec-09	-0.5541	-0.2237
22-Dec-09	2.8749	1.5933
23-Dec-09	-0.3136	2.3575
24-Dec-09	0.1795	0.3737
29-Dec-09	-0.7324	0.3208
30-Dec-09	-0.4810	-0.2660
31-Dec-09	-0.1266	0.7093
04-Jan-10	0.2986	1.0046
05-Jan-10	-0.2671	0.9093
06-Jan-10	1.5515	0.0877
07-Jan-10	-0.5528	-0.4277
08-Jan-10	1.4640	0.4618
11-Jan-10	-0.7426	0.8314
12-Jan-10	-0.8074	-1.7024
13-Jan-10	-0.7150	0.1612
14-Jan-10	0.7185	0.8279
15-Jan-10	6.0957	2.0032
18-Jan-10	1.6942	1.9099
19-Jan-10	-1.4912	0.3929

20-Jan-10	-1.7057	-1.2455
21-Jan-10	-3.4876	-2.9847
22-Jan-10	0.2411	0.3584
25-Jan-10	-0.7874	-0.5314
27-Jan-10	-4.0218	-3.8132
28-Jan-10	0.7625	0.3105
29-Jan-10	0.5332	1.0451
01-Feb-10	2.3680	0.6833
02-Feb-10	-2.9167	-1.7144
03-Feb-10	1.1747	1.4254
04-Feb-10	1.6806	-0.7168
05-Feb-10	-3.5443	-3.5169
06-Feb-10	0.8910	0.8658
08-Feb-10	1.5712	0.1544
09-Feb-10	1.2727	1.6692
10-Feb-10	-1.4507	-1.0695
11-Feb-10	-0.2710	0.3827
15-Feb-10	-0.2853	-0.7562
16-Feb-10	0.0505	1.0299
17-Feb-10	2.5065	0.4352
18-Feb-10	-0.7871	-0.6059
19-Feb-10	-1.5578	-0.8231
22-Feb-10	-0.6993	-0.4635
23-Feb-10	-0.4334	-0.3964
24-Feb-10	-0.3063	-0.1264
25-Feb-10	-0.1535	-0.1481
26-Feb-10	0.2026	1.0516
02-Mar-10	0.2996	0.5819
03-Mar-10	0.8226	0.8373
04-Mar-10	0.0751	0.3219
05-Mar-10	-0.5493	-0.5523
08-Mar-10	-0.2465	-0.0342
09-Mar-10	-0.1786	-1.4311
10-Mar-10	-0.6367	-0.2001
11-Mar-10	-1.3071	-0.5931
12-Mar-10	-1.9264	-0.4621
15-Mar-10	-0.9647	-1.3764
16-Mar-10	-1.2800	-0.0420
17-Mar-10	4.6079	2.0402
18-Mar-10	-0.1350	-0.3996
19-Mar-10	-0.1377	0.4595
22-Mar-10	-1.2724	-1.1234
23-Mar-10	-1.2228	-0.2761
25-Mar-10	-0.5909	-0.8205
26-Mar-10	-0.8042	0.2063
29-Mar-10	-0.7202	-0.0124

30-Mar-10	0.2262	0.8005
31-Mar-10	-0.6014	0.2134
01-Apr-10	0.5676	0.3285
05-Apr-10	0.7037	0.9706
06-Apr-10	-0.0988	0.4320
07-Apr-10	0.2112	0.4223
08-Apr-10	-0.2428	-1.4087
09-Apr-10	-0.0992	0.2720
12-Apr-10	-0.3791	-0.8242
13-Apr-10	-0.4582	-0.4479
15-Apr-10	0.1542	-0.6245
16-Apr-10	-1.1704	-0.6152
19-Apr-10	-1.8322	-1.1778
20-Apr-10	4.0691	1.4849
21-Apr-10	1.3800	0.3990
22-Apr-10	-2.6422	0.4076
23-Apr-10	-0.1037	0.3421
26-Apr-10	1.6568	0.5993
27-Apr-10	-0.6803	0.0997
28-Apr-10	-1.1633	-0.9387
29-Apr-10	0.9125	0.4305
30-Apr-10	-0.9384	0.7282
03-May-10	-0.1384	-0.1596
04-May-10	-1.3765	-1.0820
05-May-10	-1.2328	-0.2026
06-May-10	0.8750	0.6429
07-May-10	-2.2951	-1.4660
10-May-10	2.1072	1.5600
11-May-10	-0.8977	-0.9193
12-May-10	-0.6895	0.3786
13-May-10	0.5853	0.4026
14-May-10	-0.9155	-1.0939
17-May-10	-0.6890	-0.3090
18-May-10	-0.7486	0.3317
19-May-10	1.7224	-1.8416
20-May-10	-1.2882	1.8658
21-May-10	-0.0720	-1.0432
24-May-10	-0.2149	-0.3213
25-May-10	-2.5780	-2.3911
26-May-10	-0.5511	0.8445
27-May-10	0.3187	1.5101
28-May-10	-0.3404	0.9873
31-May-10	4.0691	2.7041
01-Jun-10	-1.1670	-1.6793
02-Jun-10	-0.4555	0.9464
03-Jun-10	0.8730	1.2486

04-Jun-10	-0.1500	-0.0794
07-Jun-10	-3.2005	-1.9543
08-Jun-10	-0.6775	-0.6593
09-Jun-10	0.6880	0.7041
10-Jun-10	0.0980	0.5789
11-Jun-10	-0.1120	-0.0206
14-Jun-10	-0.4962	0.8008
15-Jun-10	20.8639	1.6142
16-Jun-10	-4.0968	-0.6415
17-Jun-10	-0.7516	0.1474
18-Jun-10	-2.3349	-0.1677
21-Jun-10	-2.3506	0.5659
22-Jun-10	-2.5244	-0.3618
23-Jun-10	6.0817	0.3727
24-Jun-10	2.2457	-0.0972
25-Jun-10	-2.4538	1.1269
28-Jun-10	0.8066	1.7750
29-Jun-10	-1.8224	-0.6977
30-Jun-10	-2.2518	0.5981
01-Jul-10	-2.2476	-0.6650
02-Jul-10	-1.3796	-0.0029
05-Jul-10	-0.4035	-0.3731
06-Jul-10	-0.6241	0.4218
07-Jul-10	-1.9944	-0.7917
08-Jul-10	-1.4148	0.7096
09-Jul-10	-0.4744	0.2917
12-Jul-10	-0.1667	-0.1417
13-Jul-10	-1.0049	0.3975
14-Jul-10	-0.1243	-0.2809
15-Jul-10	-1.9276	-0.9629
16-Jul-10	-1.2571	0.1497
19-Jul-10	3.6184	0.7530
20-Jul-10	-0.4749	-0.3442
21-Jul-10	3.7575	0.6119
22-Jul-10	2.1212	0.7221
23-Jul-10	0.2981	-0.2830
26-Jul-10	1.1986	-0.7595
27-Jul-10	0.3210	0.2284
28-Jul-10	-0.6854	-0.1642
29-Jul-10	0.0000	0.0000
30-Jul-10	-5.3117	-0.3784
02-Aug-10	-5.2422	0.6518
03-Aug-10	-0.6544	0.3069
04-Aug-10	0.2531	-0.0291
05-Aug-10	-1.2959	-0.4888
06-Aug-10	-2.8476	-0.4677

09-Aug-10	1.7796	0.7630
10-Aug-10	-3.4003	-0.7549
11-Aug-10	-4.7880	-0.5436
12-Aug-10	-4.6764	0.9766
13-Aug-10	-0.7679	0.6309
16-Aug-10	1.0855	-0.0676
17-Aug-10	-2.0555	0.2165
18-Aug-10	-0.1737	0.4632
19-Aug-10	1.3266	-0.0528
20-Aug-10	-0.3470	-0.2295
23-Aug-10	-0.2477	1.1025
24-Aug-10	-0.7809	-0.7884
25-Aug-10	-0.2829	-0.6360
26-Aug-10	0.0691	0.5244
27-Aug-10	-1.5738	-0.3160
30-Aug-10	-1.0303	0.2312
31-Aug-10	-1.9440	-0.7820
01-Sep-10	4.5624	1.6439
02-Sep-10	-0.9971	-0.2862
03-Sep-10	-0.1911	0.3792
06-Sep-10	-0.2210	1.1190
07-Sep-10	3.3514	0.3668
08-Sep-10	0.1214	0.2454
09-Sep-10	0.0285	0.7392
13-Sep-10	-1.6082	1.5491
14-Sep-10	0.0109	0.3734
15-Sep-10	0.0580	0.3224
16-Sep-10	-1.2676	-0.5899
17-Sep-10	0.4585	0.2253
20-Sep-10	0.0146	0.5484
21-Sep-10	0.4783	-0.2611
22-Sep-10	-0.9120	-0.0621
23-Sep-10	0.1283	-0.0787
24-Sep-10	0.0916	0.5391
27-Sep-10	-0.5196	0.8157
28-Sep-10	-0.3457	0.2987
29-Sep-10	-0.3949	-0.9185
30-Sep-10	-0.6781	-0.5070
01-Oct-10	0.4589	1.8629
04-Oct-10	0.7985	0.5207
05-Oct-10	-0.5158	0.2293
06-Oct-10	0.4333	0.8432
07-Oct-10	-0.8739	-0.7658
08-Oct-10	-0.1190	-0.5530
11-Oct-10	0.5698	0.5187
12-Oct-10	-0.6073	-0.8125

13-Oct-10	0.0820	1.1872
14-Oct-10	-0.1229	-1.1135
15-Oct-10	-1.2077	-1.3503
18-Oct-10	-0.4414	0.2978
19-Oct-10	-0.3145	-0.6412
20-Oct-10	-0.8402	-0.2953
21-Oct-10	0.0843	1.5148
22-Oct-10	-0.2911	0.1387
25-Oct-10	0.9336	0.3396
26-Oct-10	0.3654	-0.7722
27-Oct-10	-0.1896	-0.8625
28-Oct-10	-0.6041	-0.7453
29-Oct-10	-1.3686	-0.8265
01-Nov-10	0.5504	0.8037
02-Nov-10	-0.3469	0.3994
03-Nov-10	-0.1122	0.6647
04-Nov-10	1.0959	1.6618
05-Nov-10	1.1415	0.6872
08-Nov-10	-1.1513	-1.2317
09-Nov-10	-0.3870	-0.2340
10-Nov-10	-0.5231	-0.2835
11-Nov-10	-0.0773	-1.4263
12-Nov-10	-2.2326	-2.1278
15-Nov-10	-0.9182	0.6225
16-Nov-10	-2.8280	-2.1929
18-Nov-10	-2.6514	-0.3695
19-Nov-10	-1.6890	-1.8412
22-Nov-10	0.1332	1.1692
23-Nov-10	-1.0724	-1.8481
24-Nov-10	-0.6374	-1.8400
25-Nov-10	-1.9724	-2.6529
26-Nov-10	-5.6045	-1.0434
29-Nov-10	-1.5468	0.8190
30-Nov-10	-0.3353	1.7288
01-Dec-10	5.7336	3.1825
02-Dec-10	1.6364	0.5944
03-Dec-10	-2.4911	-0.5640
06-Dec-10	-0.7705	-0.9127
07-Dec-10	-1.2526	-0.6810
08-Dec-10	-2.3310	-1.1134
09-Dec-10	-3.0097	-2.5512
10-Dec-10	-0.0939	1.4163
13-Dec-10	2.0822	1.5950
14-Dec-10	-0.1017	0.9686
15-Dec-10	-1.1882	-1.2063
16-Dec-10	-0.3141	0.3901

20-Dec-10	-0.3053	-0.8048
21-Dec-10	0.2864	0.4020
22-Dec-10	-0.0591	0.2652
23-Dec-10	0.8673	-0.3058
24-Dec-10	0.3859	-0.1651
27-Dec-10	-0.5596	-0.5075
28-Dec-10	-0.6998	-0.4566
29-Dec-10	0.8329	0.8020
30-Dec-10	15.4301	0.9720
31-Dec-10	-0.8807	0.6408
03-Jan-11	-0.1196	0.5891
04-Jan-11	-1.2104	-0.5760
05-Jan-11	5.1563	-1.0534
06-Jan-11	0.4858	-1.0625
07-Jan-11	-3.9661	-1.6579
10-Jan-11	-3.9763	-2.4573
11-Jan-11	-0.3599	0.4945
12-Jan-11	-0.8918	0.5042
13-Jan-11	0.3194	-1.0137
14-Jan-11	-1.0540	-1.6553
17-Jan-11	-3.6987	-0.4352
18-Jan-11	0.3436	0.5711
19-Jan-11	0.1876	-0.0562
20-Jan-11	-0.7210	0.2705
21-Jan-11	0.5235	0.2931
24-Jan-11	-0.2862	1.2050
25-Jan-11	-0.9080	-0.1725
27-Jan-11	-1.3579	-1.4687
28-Jan-11	-2.9938	-1.3178
31-Jan-11	-0.0099	0.8111
01-Feb-11	-1.3894	-0.8706
02-Feb-11	-0.4479	-0.1350
03-Feb-11	4.1045	1.7074
04-Feb-11	-2.7677	-1.4053
07-Feb-11	-0.6492	0.0692
08-Feb-11	-1.1058	-1.8987
09-Feb-11	-3.3545	-2.3634
10-Feb-11	-2.2035	-0.7562
11-Feb-11	0.3227	1.5037
14-Feb-11	3.5806	2.3728
15-Feb-11	1.6715	1.1023
16-Feb-11	-0.1731	-0.2024
17-Feb-11	0.6679	0.3724
18-Feb-11	-0.8965	-1.5028
21-Feb-11	-0.6235	0.6017
22-Feb-11	-0.0566	-1.2401

23-Feb-11	-0.1595	-0.6885
24-Feb-11	-2.6800	-2.4294
25-Feb-11	-1.0803	0.1415
28-Feb-11	0.2891	1.9991
01-Mar-11	1.3772	2.9536
03-Mar-11	-0.4844	-0.4177
04-Mar-11	1.1747	-0.2513
07-Mar-11	-1.7415	-0.7492
08-Mar-11	3.2361	0.8908
09-Mar-11	-1.4694	0.0703
10-Mar-11	0.3349	-0.2040
11-Mar-11	-1.8253	-0.6408
14-Mar-11	0.0106	0.9305
15-Mar-11	-1.9228	-1.6862
16-Mar-11	0.9640	1.4689
17-Mar-11	-0.6329	-0.3999
18-Mar-11	0.3401	-0.6115
21-Mar-11	-0.3282	-0.1706
22-Mar-11	0.4750	1.0760
23-Mar-11	-0.1343	0.5058
24-Mar-11	-0.1614	0.5528
25-Mar-11	0.2856	1.2356
28-Mar-11	-1.1121	0.3576
29-Mar-11	0.1195	0.4093
30-Mar-11	1.2481	1.0506
31-Mar-11	-0.6860	0.4247
01-Apr-11	0.8958	0.2317
04-Apr-11	2.5193	1.4160
05-Apr-11	1.4608	0.5167
06-Apr-11	0.7816	0.5643
07-Apr-11	-0.1123	-0.3129
08-Apr-11	-1.4813	-1.3695
11-Apr-11	-0.8399	-0.7303
13-Apr-11	-0.0052	1.1927
15-Apr-11	0.5438	-0.2479
18-Apr-11	11.8629	-0.4086
19-Apr-11	-3.1661	-0.2692
20-Apr-11	-0.9074	1.4623
21-Apr-11	-1.5989	-0.0493
25-Apr-11	0.9208	0.3792
26-Apr-11	-0.3562	-0.0253
27-Apr-11	-0.5484	0.4892
28-Apr-11	-0.7336	-0.5213
29-Apr-11	-1.7062	-1.0416
02-May-11	-0.5147	-1.1507
03-May-11	-2.4346	-2.2757

04-May-11	-0.6498	0.7093
05-May-11	-1.0204	-1.0695
06-May-11	-0.5075	1.0128
09-May-11	0.9352	0.4229
10-May-11	-0.2369	0.0519
11-May-11	-0.0897	0.0446
12-May-11	-0.0264	-0.9188
13-May-11	0.2430	0.5398
16-May-11	-1.1489	-0.8334
17-May-11	-0.6611	-2.2372
18-May-11	-1.7496	-1.7686
19-May-11	1.0379	0.0440
20-May-11	-0.0757	-0.0113
23-May-11	-1.3255	-1.8958
24-May-11	-1.2172	-0.3729
25-May-11	0.2609	-0.2694
26-May-11	-0.3931	1.3214
27-May-11	0.8004	1.2372
30-May-11	0.3474	0.4658
31-May-11	2.0496	1.5707
01-Jun-11	-0.4415	0.9610
02-Jun-11	-0.4164	-0.7220
03-Jun-11	-0.8527	-1.0338
06-Jun-11	-0.6683	-0.2545
07-Jun-11	0.6617	0.6618
08-Jun-11	0.1698	-0.1175
09-Jun-11	-0.3391	-0.1233
10-Jun-11	-0.3183	-0.6709
13-Jun-11	-0.1266	0.0329
14-Jun-11	7.0444	0.5619
15-Jun-11	-2.7858	-1.0504
16-Jun-11	-2.1505	-0.3718
17-Jun-11	-1.2667	-0.3783
20-Jun-11	-3.1252	-1.8058
21-Jun-11	-0.0906	-0.5954
22-Jun-11	-0.1246	-0.0501
23-Jun-11	0.1248	0.0562
24-Jun-11	1.8410	2.8057
27-Jun-11	-0.2447	1.9212
28-Jun-11	0.0669	-0.2170
29-Jun-11	1.7720	0.0228
30-Jun-11	-0.0931	0.0057
01-Jul-11	-0.3233	0.3315
04-Jul-11	0.0000	0.8403
05-Jul-11	-0.2199	-0.1118
06-Jul-11	0.2480	-0.4406

07-Jul-11	3.9081	1.2844
08-Jul-11	-2.6397	-1.7235
11-Jul-11	-0.1195	-0.7030
12-Jul-11	-0.8595	-0.3188
13-Jul-11	0.4335	1.2173
14-Jul-11	-0.2349	0.1847
15-Jul-11	-0.1040	-0.5295
18-Jul-11	-0.0987	0.2405
19-Jul-11	0.0329	0.3722
20-Jul-11	-0.8228	-0.9073
21-Jul-11	1.9746	-0.3218
22-Jul-11	-0.8787	0.9058
25-Jul-11	-0.1696	0.4663
26-Jul-11	-0.4824	-1.4174
27-Jul-11	-0.4571	0.0157
28-Jul-11	-0.8466	-1.1291
29-Jul-11	-1.2667	-0.9754
01-Aug-11	-0.2317	0.1507
02-Aug-11	-0.7081	-0.3674
03-Aug-11	-1.7288	-0.0368
04-Aug-11	0.1393	-0.3868
05-Aug-11	-4.6382	-1.1498
08-Aug-11	-4.9854	-0.5341
09-Aug-11	-3.2762	-0.8416
10-Aug-11	2.6925	0.9515
11-Aug-11	-0.2126	-0.2373
12-Aug-11	-2.3951	-0.8653
16-Aug-11	-0.6283	-1.0129
17-Aug-11	-2.9087	-0.2819
18-Aug-11	-3.0232	-1.8622
19-Aug-11	-3.5628	-0.8513
22-Aug-11	1.4881	1.2340
23-Aug-11	2.6652	-0.0238
24-Aug-11	-1.4915	-1.4038
25-Aug-11	-0.4428	-0.6342
26-Aug-11	-3.1492	-2.5768
29-Aug-11	2.3109	2.0211
30-Aug-11	0.9991	0.1346
02-Sep-11	1.8852	0.6602
05-Sep-11	-2.2865	-0.5569
06-Sep-11	0.4464	0.1784
07-Sep-11	2.8958	1.8734
08-Sep-11	0.0557	-0.2819
09-Sep-11	0.1810	-1.1922
12-Sep-11	-2.2239	-1.5874
13-Sep-11	-1.1017	-0.3470

14-Sep-11	0.4672	0.7207
15-Sep-11	0.2575	0.8384
16-Sep-11	1.3771	1.6618
19-Sep-11	-0.4927	-1.0507
20-Sep-11	0.0212	0.5199
21-Sep-11	0.1768	0.5005
22-Sep-11	-1.9766	-2.6401
23-Sep-11	-2.5061	-0.9140
26-Sep-11	-2.1569	-1.7700
27-Sep-11	1.3665	2.1279
28-Sep-11	-0.3947	-0.1449
29-Sep-11	0.0224	0.3665
30-Sep-11	-1.9287	-1.6211
03-Oct-11	-2.7898	-0.8864
04-Oct-11	-0.1882	-1.7726
05-Oct-11	-0.9192	-0.6694
07-Oct-11	0.9118	2.0256
10-Oct-11	0.3693	1.4546
11-Oct-11	1.4483	0.5212
12-Oct-11	1.9755	1.1976
13-Oct-11	0.9156	-0.6771
14-Oct-11	-1.1698	-0.3681
17-Oct-11	2.2079	-0.6927
18-Oct-11	-2.5611	-0.7633
19-Oct-11	-0.1143	1.6682
20-Oct-11	-1.0907	-0.7176
21-Oct-11	-0.8328	-0.6111
24-Oct-11	-0.3110	0.0244
25-Oct-11	-0.3744	-0.0522
26-Oct-11	1.5581	0.8317
28-Oct-11	3.3922	2.4332
31-Oct-11	0.3803	-0.8000
01-Nov-11	-1.5748	-0.2041
02-Nov-11	-0.2189	-0.3344
03-Nov-11	-0.9606	0.5825
04-Nov-11	0.2749	0.3813
08-Nov-11	0.4113	0.0452
09-Nov-11	-1.3653	-2.0694
11-Nov-11	-1.1996	-1.3457
15-Nov-11	-1.5230	-1.7731
16-Nov-11	-3.8345	-0.7363
17-Nov-11	-1.6663	-2.1280
18-Nov-11	-1.4922	-1.0410
21-Nov-11	-2.3620	-2.3051
22-Nov-11	-0.8414	0.5807
23-Nov-11	-2.4927	-1.8917

24-Nov-11	-0.7434	0.9812
25-Nov-11	-1.3152	0.5943
28-Nov-11	3.4799	3.0626
29-Nov-11	-0.3667	-1.1576
30-Nov-11	-0.1795	0.6037
01-Dec-11	0.0180	1.0861
02-Dec-11	0.3327	2.0829
05-Dec-11	0.1255	0.2386
07-Dec-11	-1.0382	-0.3515
08-Dec-11	-0.8321	-2.4173
09-Dec-11	-3.0643	-0.7815
12-Dec-11	-2.9542	-2.7788
13-Dec-11	-0.7562	0.4403
14-Dec-11	0.2051	-1.6260
15-Dec-11	-2.8076	0.0544
16-Dec-11	-4.4233	-2.2698
19-Dec-11	-3.9144	-1.5874
20-Dec-11	-3.4076	-1.7287
21-Dec-11	1.4134	2.1909
22-Dec-11	10.9042	1.7307
23-Dec-11	-0.0302	-0.6493
26-Dec-11	-0.1609	0.6037
27-Dec-11	-1.2087	-1.1786
28-Dec-11	-2.5795	-0.7480
29-Dec-11	-1.6954	-0.5375
30-Dec-11	14.5321	0.9837
02-Jan-12	-3.5137	0.1709
03-Jan-12	19.4123	3.7774
04-Jan-12	17.7572	1.7293
05-Jan-12	6.7827	-0.3521
06-Jan-12	6.0824	-0.4689
07-Jan-12	8.3404	1.2308
09-Jan-12	8.0779	0.4759
10-Jan-12	1.4101	1.7153
11-Jan-12	-3.0714	0.2917
12-Jan-12	-0.4046	0.6960
13-Jan-12	0.5223	1.5454
16-Jan-12	-0.8661	-0.5664
17-Jan-12	-3.2615	1.7791
18-Jan-12	-4.9423	-1.3128
19-Jan-12	-0.1842	1.5086
20-Jan-12	-2.3362	0.6448
23-Jan-12	-2.0259	-0.1512
24-Jan-12	-1.2479	1.0073
25-Jan-12	1.6483	1.2426
27-Jan-12	0.0841	0.4030

30-Jan-12	4.4584	-1.8152
31-Jan-12	2.6252	1.1296
01-Feb-12	0.3191	-0.1452
02-Feb-12	-1.8023	0.8081
03-Feb-12	-2.1933	1.0858
06-Feb-12	0.2614	1.3735
07-Feb-12	4.7746	-0.3146
08-Feb-12	-1.0729	0.7226
09-Feb-12	-0.9280	0.7211
10-Feb-12	-1.0552	-0.0194
13-Feb-12	-2.1215	-0.0008
14-Feb-12	1.1362	0.3111
15-Feb-12	-0.2938	1.7388
16-Feb-12	0.0578	0.1208
17-Feb-12	-3.1356	0.8820
21-Feb-12	-0.1490	0.7572
22-Feb-12	1.2598	-2.7134
23-Feb-12	-0.8962	-0.2492
24-Feb-12	-3.8672	-1.2189
27-Feb-12	-4.8954	-2.7809
28-Feb-12	4.9977	2.9912
29-Feb-12	4.9954	1.5057
01-Mar-12	1.8358	-0.7280
02-Mar-12	-3.4141	-0.6621
03-Mar-12	4.9991	0.5470
05-Mar-12	-4.6982	-1.7463
06-Mar-12	-1.2235	-0.8170
07-Mar-12	0.9411	-0.9489
09-Mar-12	-0.2226	2.1355
12-Mar-12	0.4461	0.5979
13-Mar-12	0.1500	1.2665
14-Mar-12	0.0539	1.3802
15-Mar-12	-0.8864	-1.9699
16-Mar-12	-1.7585	-2.6318
19-Mar-12	-2.4543	-1.7373
20-Mar-12	0.7315	0.3632
21-Mar-12	0.4007	1.3192
22-Mar-12	1.3156	-1.4774
23-Mar-12	1.2247	0.2375
26-Mar-12	-1.7449	-2.0067
27-Mar-12	-0.1671	0.2552
28-Mar-12	-2.2127	-1.5821
29-Mar-12	-1.6290	-0.1467
30-Mar-12	0.9601	2.5744

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Effectiveness of Microcredit Program on the Poor Women: A Comparative Study of Grameen Bank, BRAC and ASA in South Western Region of Bangladesh

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Abstract

Microcredit in Bangladesh has developed a successful model of reaching credit to resource poor households that are generally bypassed by government financial institutions. The study is mainly conducted on effectiveness of the microcredit program on the poor women in South Western Region of Bangladesh. It is mainly conducted on among the Grameen Bank, BRAC and ASA in Bangladesh. The study is exploratory in nature. It includes the survey, observations, and general overview of microcredit in Bangladesh. The study is related to find out the features of major three microcredit programs (Grameen Bank, BRAC and ASA).It is also related to explore the reasons of receiving microcredit, interest rate, getting benefits from the loan, improvements of socioeconomic status of the respondents, conditions of taking loans and respondents opinion about microcredit program. This paper includes some recommendations for the improvement of microcredit programs in Bangladesh.

1. Introduction

Over the past two decades microcredit has become an important tool for poverty alleviation. A substantial proportion of low-income families from many developing countries are now served by microcredit institutions (MCIs). Coverage is particularly impressive in Bangladesh, where microcredit reached more than 60 per cent of its poor by 2005 (World Bank, 2007). At present, there are a large number of microcredit schemes in operation around the world, and each year international donors, lending agencies and national governments allocate tens of billions of dollars for microcredit programs. However, there is currently no evidence about the medium- and long-term benefits of participating in such programs, probably due to the difficulty in obtaining data. So far, the evaluation of microcredit has concentrated on short-term impacts, and these are mostly based on cross-sectional data. The worldwide scale of Microcredit, and the importance it has been given by donor agencies and international organizations, indicates that evaluating impacts over a longer-term horizon can be very useful for program design, the targeting of aid, and poverty alleviation. The returns from microcredit, which is mainly used for self-employment activities, are likely to vary with the length of participation. For example, Banerjee, D. et al (2009) argued that impact estimates from short-term evaluation might be completely different from those of long-term participation. In the short term, according to them, it is possible that some households cut back on consumption to enable greater investment that might make them significantly richer and increase consumption in the long run.

Most development practitioners and policy makers believe that microcredit can help the poor to break out of poverty. However, we don’t know whether microcredit actually reduces poverty. The findings from the existing impact evaluation studies indicate that the effects microcredit varies from place to place, and also depend on the particular settings and design of the program. Pitt and Khandker (1998), using instrumental variable method, and that microcredit significantly increases consumption expenditure, reduces poverty, and increases non-land assets. Microcredit has been considered as the most important device for the poor women to provide a considerable access of financial services which are not normally available through the mainstream banking system due to their poverty, illiteracy or residential location in remote areas. In recent years, government and non-government organizations in Bangladesh have introduced credit programs targeted at the poor women (Pit. et. al., 2003).

2. Rationale of the Study

In recent years, microcredits have become increasingly important strategy for poverty alleviation of poor women and women empowerment. Many literatures have been made concerning role of microcredit on rural women empowerment by focusing only on the particular dimension of women empowerment and poverty alleviation. In fact, many studies have become distinct not only in respect of their findings they reported but also the interpretations they gave to their findings, methodologies they used and the questions they asked. In this study, it is possible to examine the effective role of microcredit program of Grameen Bank, BRAC and ASA

3. Objectives of the Study

The broad objective of the study is to know the effectiveness of microcredit on poor women in South Western Region of Bangladesh. In view in mind the following specific objectives were considered to draw the comprehensive picture the study.

1. To know the feature of major three microcredit Programs (Grameen Bank, BRAC and ASA) in Bangladesh;

2. To identify the reasons of receiving microcredit of the respondents;

3. To explore the improvements of socioeconomic status of the respondents from the microcredit;

4. To find out the condition of taking loans of top three microcredit programs (Grameen Bank, BRAC and ASA);

5. To suggest the components that should be incorporated with the microcredit program.

4. Operational Definition of the Concepts

4.1 Microcredit: Below the amount of BDT. 30,000 (Thirty thousand) given by different Non Government Organizations (Grameen Bank, BRAC, and ASA) to poor women for the purpose of promoting self dependency was considered as microcredit in this study.

4.2 Poor Women: Women who had lower income and involved in recipients of microcredit were considered as poor women in this study.

4.3 Southwestern Region: In this study Sunadanga Thana under Khulna District was considered as southwestern region of Bangladesh.

4.4 Microfinance Institutions (MFIs): A microfinance institution is an organization, engaged in extending microcredit loans and other financial services to poor borrowers for income generating and self-employment activities. In this study ASA, BRAC and Grameen Bank were considered as major three microcredit institutions in Bangladesh.

5. Methodology of the Study

5.1 Nature and Method of the Study**:** The proposed study was exploratory in nature. The methods used for this study was survey method.

5.2 Study Area: The present study is based on data obtained from a survey on poor women in the Soshanghat road at Pujakhula of Sunadanga Thana under Khulna district. The study areas were selected randomly because of the availability of information from the respondents.

5.3 Unit of Analysis**:** Poor women (recipients of microcredit) in the areas of Sunadanga Thana under Khulna district.

5.4 Population of the Study**:** 455 recipients (women) of microcredit.

Name of the Area	**Population**
Sunadanga Thana	178,330
Beneficiaries of Microcredit in Sunadanga Thana	15100
Beneficiaries of Microcredit in Study area (Sosanghat Road in Boyra under Sunadanga Thana in Khulna)	455 (ASA-237, BRAC-104, Grameen Bank-114)

Source: Data were collected from local and zonal offices.

5.5 Sampling Procedure and Sample Size Determination

The total sample size was 100. Among them the beneficiaries of ASA were 52; BRAC 23 and Grameen Bank were 25. Purposive sampling method was used for this study. The specific population of ASA, BRAC and Grameen Bank were 237, 104 and 114. This was oral record given by official members of those organizations but there was no written record of that population. There was a gap between official record and real field data record. In this context the sample size was selected purposively on the basis of availability of the respondents at that area. On the perception of observation 52 respondents were selected purposively from ASA whereas 23 were BRAC and 25 beneficiaries from Grameen Bank. The study was conducted on areas on South Western Region which were selected by the use of purposive sampling method.

5.6 Sources of Data: Primary data were collected from poor women involved with microcredit. In order to better understand the problem under study, at the elementary stage of conceptualization of issues and variables, certain secondary sources were consulted. These sources were included relevant books, articles, and reports of international and national bodies, health surveys, and other similar sources.

5.7 Techniques of Data Collection: Data were collected through interview schedule. An interview schedule were developed and finalized through pre-test and used for data collection.

5.8 Development of Study Instruments: The pre-tested was conducted among small group of respondents in order to test the effectiveness or suitability of the research instrument. The questionnaire was slightly revised in the light of the experience gathered from these interviews considering how the respondents react to the questions.

5.9 Fieldwork: Necessary fieldworks for the study were done between June and November, 2011. Since the respondents were women, female interviewers were selected to collect information for this study. Data were collected from field by three interviewers and researcher and data were collected by them in their own way from their convenient areas.

5.10 Processing and Analysis of Data: The purpose of the study and the contents of the interview schedule were explained to the respondents. The interviews were taken individually and the interview schedules were served to individual respondents. Each of the respondents was go through it and answer individually. The entire filled in interview schedules were checked and edited. The data obtained were then placed to suitable table for processing and subsequent analysis. The collected entire information or data were analyzed and interpreted by using simple statistical table and method and in written form.

6. Literature Review

Microenterprises have long been associated with attempts aimed at providing poor persons with an opportunity for financial self-sufficiency and social empowerment (Mayoux, 2001; Sanyang & Huang, 2008). MFIs can be a financially viable and it is a viable economic tool for the poor (Yunus, 2008).One element of an effective strategy for poverty alleviation is to promote the productive use of the Poor's labor. This can be done by creating opportunities for wage employment, by raising agricultural productivity among small and marginal farmers, and by increasing opportunities for self-employment (Salehuddin, 2007). "Microcredit participants do better than non-participants in both 1991/92 and 1998/99 in per capita income, per capita expenditure, and household net worth (Khandker, 2001). Microcredit contributes to mitigating a number of factors that contribute to vulnerability whereas the impact on income-poverty is a function of borrowing beyond a certain loan threshold and to a certain extent contingent on how poor the household is to start with (Zaman, 2000). The existing evidence on the impact of microcredit on poverty in Bangladesh is not clear cut. There is work that suggests that access to credit has the potential to significantly reduce poverty (Khandker, 1998); on the other hand there is also research which argues that Microcredit has minimal impact on poverty alleviation (Morduch, 1998). In future there were more challenges for microcredit system as there was demand of widening the target group to reach to the poorest of the poor to achieve financial sustainability. (Ahmed, 2001). Women's access to credit has a positive role on economic contributions of women, increasing asset holdings in their own names, increasing their purchasing power and enhancing their political and legal awareness with respect to a composite empowerment index (Hashemi, Schuler, and Riley, 1996).

Microcredit is not a universal remedy for poverty alleviation and it is not able to reach to poorest of the poor. However, millions of poor people from developing countries have benefited from Microcredit services. (Kolbmüller, B. 2009). Access to loans had little influence respecting the management of cash within the household for either female or male loaners. Access to loans had done little to empower women (Montgomery, Bhattacharya, and Hulme, 1996). Most credit programs in Bangladesh operated as an implicit role model of the empowered woman (Ackerly, 1997). Rahman (1998) found a significant positive role of credit on higher income and consumption standards of loanee households regardless of the gender of the loaner. Although access to loans of women was more likely to benefit male consumption standards than male loans were to benefit female consumption standards, nevertheless women loaners did benefit from their direct access to loans. Households having access to credit were largely better-off than those having no access to credit. (Pitt and Khandker, 1998). Many women received loan by their own name and passed on the full amount of their loans directly to their husbands, sons or sons-in-law. In other cases, the women had limited control over loan management and family activities. The contextual factors, such as extreme poverty and landlessness were more strongly associated with increased mobility of the women beyond credit programs. (Hunt and Kasynathan, 2002). Access to loans of women benefits the consumption standards of male mostly than access to loan of male benefits the consumption standards of female. Moreover, women loanees benefit from their direct access to loans. (Rahman, 1986).

7. The Evolution of Microcredit Program in Bangladesh

Providing credit is one way of enabling the poor to acquire assets and become productive. Targeted credit programs for the poor were first tried in 1976, when Muhammad Yunus, a Bangladeshi economics professor, introduced an experimental project to test whether the poor were creditworthy and whether credit could be provided without physical collateral. With the help of some Bangladeshi banks, Yunus conducted an innovative experiment emphasizing group delivery of credit and exploring what constituted a manageable group size for effective financial intermediation. The central bank of Bangladesh later facilitated Yunus' work by arranging for funding from the International Fund for Agricultural Development (IFAD). In Yunus' experiment, group collateral was substituted for physical collateral. The group guarantee to repay individual loans became the hallmark of micro-lending. Using the mechanism, poor people with no physical collateral were able to form groups to gain access to institutional credit. The mechanism also allowed credit to reach the poor, especially poor women (Amin M. R. and Sheik M.R., 2011).

The central premise of this targeted credit approach is that lack of access to credit is the greatest constraint on the economic advancement of the rural poor. Yunus believes that with appropriate support, the poor can be productively employed in income-generating activities, including processing and manufacturing, transport, storage and marketing of agricultural products, and poultry and livestock rising. After almost seven years of experimentation with a variety of group-based mechanisms, his idea took shape as a bank with its own charter. With the government holding about 90 per cent of the shares in paid-up capital, Grameen Bank was established in 1983 to work exclusively with poor, defined as individuals owning less than half an acre of land. Where Grameen Bank believes that the most immediate need of the poor is credit to create and expand self-employment opportunities, the Bangladesh Rural Advancement committee (BRAC) believes that the poor need skills development and other organizational inputs. BRAC was established in 1972 as a charitable organization to help resettle households displaced during the 1971 Independence War. BRAC soon realized that relief simply maintained the status quo; it was inadequate to alleviate poverty. BRAC's relief experience helped it understand the causes of rural poverty and develop a framework for poverty alleviation (Amin M. R. and Sheik M.R., 2011).

Over the time BRAC and Grameen Bank have learned from one another. BRAC has learned that credit must be provided along with skills development training; Grameen Bank has realized that credit alone is not enough, that the poor need social development and organizational inputs to become more disciplined and productive. BRAC continues to provide skills training and other inputs before disbursing credit, however, while Grameen Bank continues to disburse credit before providing social development and organizational inputs.

Following the examples of Grameen Bank and BRAC, the government of Bangladesh introduced a group-based targeted credit approach based on the Comilla model of two-tier cooperatives. The Comilla model rural development was designed and implemented by Akhter Hamid Khan in the 1960s at the Academy for Rural Development in Comilla, Bangladesh. The idea involves organizing farmers into cooperative societies in order to distribute modern inputs, such as high-yielding crop varieties, fertilizer, pesticides, irrigation, and subsidized credit. The organizational approach, which established primary farmers' cooperative societies that were federated into central cooperative societies at the thana (a thana is the administrative center for a number of villages) level, was found to be effective in reaching farmers (Amin M. R. and Sheik M.R., 2011).

Following Bangladesh's independence in 1971, the government adopted the Comilla model as the basis for the national development. This strategy led to the creation of two-tier cooperative system. The Comilla model was adopted throughout the nation as part of the Integrated Rural Development Program (IRDP). The Bangladesh Rural Development Board (BRDB), a semi-autonomous government agency under the Ministry of Local Government, Rural Development and Cooperatives, (MLGRDC) was established in 1982 to replace the IRDP. Like the IRDP, it was based on two-tier cooperatives, but it employed credit as the main input and included a component that specifically targeted the rural poor. The BRDB experimented with a number of projects to increase income and employment opportunities for the rural poor by setting up a separate system of primary cooperatives. The eligible poor depend on manual labor as their main source of income. These cooperatives provided members with skills development, training in group leadership and management, and access to credit. Saving mobilization was also part of the program. With funds from Canadian International Development Agency, this program was strengthened in 1988 and renamed the Rural Development Project-12 (RD-12) (Amin M. R. and Sheik M.R., 2011).

9. Genesis, Organization, and Practice: An Overview of Grameen Bank, BRAC and ASA

The roots of Grameen Bank, BRAC and ASA are going back to the early 1970s, when, after the independence of Bangladesh from Pakistan, a huge influx of refugees caused a severe famine. It is in this context that Grameen Bank, BRAC and ASA started their programs.

9.1 BRAC Bangladesh

BRAC is the largest national NGO in Bangladesh. It is also the largest development organization in the private sector in this country. A brief sketch of BRAC's Microcredit activities is added here as its experiences have been used in this paper. In terms of membership enrollment (3.6 million), BRAC can be regarded as the largest Microcredit organization in Bangladesh. The organization has also been operating large programs in health, education and some other activities along with Microcredit. BRAC programs are targeted to the poor and focused on women. A total of 400 upazilas or sub-districts out of 464 of the country, are covered by BRAC programs (Amin M. R. and Sheik M.R., 2011).

9.1.1 Microcredit Programs of BRAC

One of the oldest initiatives of its kind in Bangladesh and BRAC's largest program, our Microcredit operations began in 1974 and covers all 64 districts. BRAC provides access to financial services to the poor, who are unable to obtain credit from mainstream banks due to lack of necessary assets and referrals. BRAC borrowers, most of whom are women, use these loans to engage in various income generating activities to improve their socio-economic status (Amin M. R. and Sheik M.R., 2011).

Table 1 Microcredit Programs of BRAC are given Bellows

Inception of Microcredit Program	1974
Program Coverage	District: 64, Thanas: 507
Total number of Branch Office	1381
Total number of Village Organizations	160, 197
Total number of members	4,837,099
Percentage of Women members	98%
Outstanding Borrowers	4,159,793
Cumulative Loan Distribution	165,794 million Tk.
Average loan Size	9,452 Tk.
Repayment Rate	99.49%

Figure: BRAC Annual Report (2005)

Microcredit activities of BRAC are operated through its Rural Development Program or RDP. The nucleus of RDP is the village organization (VO). A VO comprises 40-45 rural poor as members. As of June 2000, RDP had 3.6 million active VO members. Around 97% of the members are women. The members have accumulated Tk. 3,480 million (US $ 70 million). A total of Tk. 47,340 million (US $ 1050) has been disbursed to the borrowers as loan. RDP comprises two broad type of activities - economic development and social development. RDP lays importance on enterprise development of the borrowers which is supported by credit, training, input and extension support and often marketing assistance. The social development activities comprise elements of essential health care and awareness development on social issues including legal rights. The following table presents the package of BRAC's Microcredit interventions. The services are provided through each RDP Area Office which comprises around 6000 VO members (Amin M. R. and Sheik M.R., 2011).

Table 2 Services Provided by a Typical of BRAC

Savings and Credit	**Sector Programs**	**Social Development**
1. Compulsory savings **2.** Income generation and housing loans **3.** Life insurance	**1.** Poultry & livestock **2.** Fisheries **3.** Sericulture & silk development **4.** Social forestry **5.** Agriculture extension	**1.** Essential health care **2.** Education **3.** Environment awareness **4.** Formation of federation of VO members **5.** Group theatre **6.** Gram Shabha **7.** Human rights and legal services

Source: BRAC Annual Report (2007)

9.1.2 Approach to Microcredit

BRAC's approach to Microcredit involves providing collateral free credit and savings services at the doorsteps of its target population – the landless poor, marginal farmers and vulnerable small entrepreneurs. BRAC recognizes the heterogeneity among the poor and focus on careful targeting and development of customized financial products and services that best meet their varying needs. A distinctive aspect of BRAC's Microcredit program is the credit-plus approach – in addition to providing loans and training BRAC has developed an integrated set of services that work to strengthen the supply chains of the enterprises that its members invest in, giving them access to quality inputs and support in marketing their products. These services are provided by its social enterprises. BRAC's Microcredit members have access to all of its other development interventions. BRAC takes 15% service charge on micro loans which is generally treated as the interest rate. This interest is measured in flat way (Amin M. R. and Sheik M.R., 2011).

9.1.3 Village Organizations

Organizing the poor is at the heart of its work. BRAC Village Organizations (VOs) - each with 30-40 women - act as platforms for poor women to come together, access services such as Microcredit, exchange information and raise awareness on social, legal and other issues concerning their daily lives (Amin M. R. and Sheik M.R., 2011).

9.2 Grameen Bank

Grameen Bank, on the other hand, started from a rather "minimalist" philosophy in which Microcredit is considered to be the main tool for combating poverty. Through the years, Grameen Bank has added training and education to its program, but its approach is still not as comprehensive as that of BRAC. By a Bangladeshi government ordinance on October 2, 1983, the project was transformed into an independent bank. After this establishment, the bank started experiencing tremendous demand from foreigners around the world, who wanted to learn further about the operations of Grameen Bank, as well as meet with its staff and clientele. Due to overwhelming requests from abroad, Grameen Bank's Head Office created the "training program" for internationals. Initially, this training program was designed for foreigners interested in conducting research about the operations of the bank and the impact of micro-lending on the poor, as well for policy makers from around the world. In 1987, the Managing Director officially inaugurated the establishment of the Grameen Bank Training Program (Amin M. R. and Sheik M.R., 2011).

Table 3 Microcredit Programs of Grameen Bank is given below at a Glance

Number of members	8.35 million
Percentage of Women members	96.67%
Number of Village covered	81,379
Number of Branches	2,565
Loan recovery rate	96.67%

Figure: Grameen Bank Annual Report (2011)

The bank gets its funding from different sources, and the main contributors have shifted over time. In the initial years, donor agencies used to provide the bulk of capital at very cheap rates. In the mid-1990s, the bank started to get most of its funding from the central bank of Bangladesh. More recently, Grameen Bank has started bond sales as a source of finance. The bonds are implicitly subsidized as they are guaranteed by the Government of Bangladesh and still they are sold above the bank rate (Amin M. R. and Sheik M.R., 2011).

9.2.1 Basic Features of Microcredit Program of Grameen Bank

1. Existing rules of Grameen Bank do not apply to beggar members; they make up their own rules.
2. All loans are interest-free. Loans can be for very long term, to make repayment installments very small. For example, for a loan to buy a quilt or a mosquito-net, or an umbrella, many borrowers are paying Tk 2.00 (3.4 cents US) per week.
3. Beggar members are covered under life insurance and loan insurance programs without paying any cost.
4. Members are not required to give up begging, but are encouraged to take up an additional income-generating activity like selling popular consumer items door to door, or at the place of begging (Amin M. R. and Sheik M.R., 2011).

9.2.2 Credit Lending Models of Grameen Bank

Microcredit institutions are using various Credit Lending Models throughout the world. Some of the models are listed below.

9.2.2.1 Associations

This is where the target community forms an 'association' through which various Microcredit (and other) activities are initiated. Such activities may include savings. Associations or groups can be composed of youth, or women; they can form around political/religious/cultural issues; can create support structures for microenterprises and other work-based issues. In some countries, an 'association' can be a legal body that has certain advantages such as collection of fees, insurance, tax breaks and other protective measures. Distinction is made between associations, community groups, peoples organizations, etc. on one hand (which are mass, community based) and NGOs, etc. which are essentially external organizations (Amin M. R. and Sheik M.R., 2011).

9.2.2.2 Bank Guarantees

As the name suggests, a bank guarantee is used to obtain a loan from a commercial bank. This guarantee may be arranged externally (through a donor/donation, government agency etc.) or internally (using member savings). Loans obtained may be given directly to an individual, or they may be given to a self-formed group. Bank Guarantee is a form of capital guarantee scheme. Guaranteed funds may be used for various purposes, including loan recovery and insurance claims. Several international and UN organizations have been creating international guarantee funds that banks and NGOs can subscribe to, to on lend or start Microcredit programs (Amin M. R. and Sheik M.R., 2011).

9.2.2.3 Community Banking

The Community Banking model essentially treats the whole community as one unit, and establishes semi-formal or formal institutions through which Microcredit is dispensed. Such institutions are usually formed by extensive help from NGOs and other organizations, who also train the community members in various financial activities of the community bank. These institutions may have savings components and other income-generating projects included in their structure. In many cases, community banks are also part of larger community development programs which use finance as an inducement for action (Amin M. R. and Sheik M.R., 2011).

9.2.2.4 Cooperatives

A co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise. Some cooperatives include member-financing and savings activities in their mandate (Amin M. R. and Sheik M.R., 2011).

9.2.2.5 Credit Unions

A credit union is a unique member-driven, self-help financial institution. It is organized by and comprised of members of a particular group or organization, who agree to save their money together and to make loans to each other at reasonable rates of interest. The members are people of some common bond: working for the same employer; belonging to the same church, labor union, social fraternity, etc.; or living/working in the same community. A credit union's membership is open to all who belong to the group, regardless of race, religion, color or creed (Amin M. R. and Sheik M.R., 2011).

Table 4 Grameen Bank Historical Data Series : 1976-2009 (in million USD)

Performance Indicator	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Cumulative Disbursement (All Loans)	3060.44	3347.98	3620.50	3986.46	4416.82	5025.61	5954.02	6685.51	7591.32	8741.86
Disbursement During the Year (All Loans)	268.44	287.54	272.52	365.96	430.36	608.79	724.96	934.94	905.81	1150.54
Year-end Outstanding Amount	193.26	194.18	196.81	258.10	312.96	415.82	471.19	529.53	646.05	791.82
Housing Loan Disbursement During the Year	1.41	1.01	2.09	3.05	4.74	2.95	2.01	1.4	2.21	2.43
Number of Houses Built cum	533041	545121	558055	578532	607415	627058	641096	650839	665568	679577
Total Deposits (Balance)	126.78	137.92	162.77	227.66	343.52	481.22	633.31	756.61	933.89	1200.49
Deposits of GB Members (Balance)	100.54	68.58	126.17	170.61	228.70	306.10	390.48	430.39	508.20	648.68
GB Members' Deposit as % of Total Deposit	79	50	78	68	67	64	62	57	54	54
Number of Groups	503001	504651	513141	577886	685083	877142	1086744	1168840	1210343	1253160
Number of Members	2378356	2378601	2483006	3123802	4059632	5579399	6908704	7411229	7670203	7970616
Percentage of Female Members	95	95	95	95	96	96	97	97	97	97
Number of Villages covered	40225	40447	41636	43681	48472	59912	74462	80678	83566	83458
Number of Branches	1160	1173	1178	1195	1358	1735	2319	2481	2539	2562
Profit/Loss (For the Year)	0.21	1.05	1.03	6.15	7.00	15.21	20.00	1.56	18.99	5.38

Annual Report of Grameen Bank (2009

9.3 ASA Bangladesh

ASA has emerged as one of the largest and most efficient Microcredit Institution (MFI) in the world and has been working relentlessly to assist the poor since its inception in 1978. The major drive behind ASA is to gradually eradicate poverty from society. During its early years, ASA undertook various development programs like awareness building for social action, training local birth attendants, capacity building of journalists, etc. In the mid-80's it introduced new programs working in the sector of health and nutrition, education, sanitation, etc. It was at this stage that ASA introduced Microcredit as a pilot project (Amin M. R. and Sheik M.R., 2011).

From its hands on experience in the field, and by evaluating the impact of development assistance, ASA realized that financial solvency, to a great extent, is what the poor need to bringing positive changes in their lives. In 1992, this paradigm shift led ASA to focus solely on Microcredit as its tool in fighting poverty. ASA wanted to evolve its operations to become self-reliant and move away from depending on donor funding and grants - ASA's Microcredit Model gradually transformed itself to become the globally renowned "ASA Cost–effective and Sustainable Microcredit Model." (Amin M. R. and Sheik M.R., 2011).

Following this model, ASA became self-sustainable within a short span of time and the organization declared itself a "donor free MFI" in 2001. This model, that has been practiced and perfected in the field by ASA, has proved effective in making a branch self-reliant within 12 months. Any MFI that adopts this model for operations becomes sustainable within the shortest possible time. It has been adopted by many MFIs around the world to get result within the shortest possible time. As of December 2009, ASA has successfully extended its outreach in Bangladesh through 3,236 branches and its 24,021 staff works relentlessly to serve more than 5.50 million clients. (Amin M. R. and Sheik M.R., 2011).

Up to December 2005, ASA's Cumulative Loan Disbursement was Taka 148,197 million. Loans are outstanding Taka 19,379 million among 4.18 million borrowers. At the end of 2005 ASA's Operational Self Sufficiency (OSS) is 275.24%, Financial Self-sufficiency 169.73% and rate of loan recovery 99.88%. Up to 2005 ASA operation expanded over 2,291 branches under 64 administrative areas all over in Bangladesh. ASA continues to perfect the role of financial intermediation by developing a variety of savings products that are quite successful at generating the necessary funds from local sources. ASA now offers customers liquid, semi-liquid and high return savings options that have attracted around Taka 3,036 millions.

ASA plans for 2006 to reach 2.741 Branches, 6.01 million borrowers with loan disbursement of Tk 45,183 and 6.88 million savings accounts by the year 2006 in Bangladesh alone, but also committed to sharing its successes in other countries. ASA is currently involved in several countries world-wide providing ASA experts to develop financial sectors elsewhere that are inclusive of low income groups. It will surely not be long before skeptics are convinced that a financial sector providing high quality products to all is achievable (Amin M. R. and Sheik M.R., 2011).

Table 5 ASA at a Glance

No of Branches	3,324
Staff	22,458
No of village covered	72,204
Thana (Program coverage)	515
District (Program coverage)	64
No of members	7.1 million
No of total credit receipients	5.6 million
Total loan disbursement (accumulated)	284,686 million
Total no of workers	27,426
Recovery rate	99.80

Source: ASA Annual Report (2008)

9.3.1 The Main Microcredit Programs of ASA

The main microcredit program of ASA is divided in some categories which are given bellow:

9.3.1.1 Small Loan (Women)

Seventy one (71%) per cent of ASA's Microcredit clients are women, most of these members are landless. At the initial stage rural women are given credit amounting to 70-110 US dollar and urban women, 150-310 US dollar. The income generating projects where the women generally invest the credit money are; cattle and poultry rearing, paddy husking, handicrafts, pisciculture, small trading etc. The tenure of this credit is one year, repayable in weekly installment. Because of its being encumbrance free and easy availability women feel comfortable with this credit. Till June 2008, the number of ASA's microcredit (women) customers was 45 lakh (Amin M. R. and Sheik M.R., 2011).

9.3.1.2 Small Loan (Men)

To increase agro-production through helping marginal farmers ASA started male loan program in 2005. The installment system for this has been fixed according to the ability and convenience of poor men members. Many poor farmers in Bangladesh cannot purchase necessary agriculture implements for want of money. This credit was introduced with a view to helping farmers in purchasing necessary agriculture implements in time and cooperating in country's overall increase of agricultural produce. Amount of this credit is 30 to 50 US dollar (Amin M. R. and Sheik M.R., 2011).

9.3.1.3 Small Business Loan

Small Business Loan was introduced with two objectives in view. One creates employment opportunity for the hard core poor, two providing fund to small traders on necessity. ASA's Small Business Loan is provided to such women and men as having business but unable to extend it for want of necessary fund and who are capable of medium size capital management’s. The amount of this credit is 250-350 US dollar. Group guarantee is not necessary for this credit and one need not come to office to pay installments (Amin M. R. and Sheik M.R., 2011).

9.3.1.4 Small Entrepreneurs Lending (SEL)

ASA introduced medium size small Entrepreneurs loan (SEL) in 2003. This credit was introduced with a view to creating employment opportunities for the hard core poor at small manufacturing units. To extend this program successful microcredit receivers are brought under it and new members are included (Amin M. R. and Sheik M.R., 2011).

9.3.1.5 Supplementary Loan (BDS)

Because of seasonal poverty and sudden crisis many members cannot repay loan despite willingness. Specially, natural disasters like flood, drought, cyclone, river erosion etc. deter normal working of the members and their income being blocked they become unable to pay installments. With a view to bringing back such members again in the credit program the BDS was introduced. The member of BDS members till April 2008 was 6500.

9.3.1.6 Hardcore Poor Loan

ASA introduced hard core poor credit program for the extremely poor people. Installment system for this credit is flexible. Members can repay this loan on monthly, quarterly, half-yearly and at a time basis according to their convenience and ability. The rate of interest for hard core poor loan is 10% (Amin M. R. and Sheik M.R., 2011).

10. Analysis of Micro-Credit Programs in Bangladesh: A Comparative Study

10.1 Features of Major Microcredit Programs

The following table shows the features of Grameen Bank, BRAC and ASA. All of the microcredit programs under study have separate programs for men and women, in accordance with the socio cultural norm of Bangladesh. Experience shows that the spatial and social cohesiveness developed among individuals of the same gender, residing in the same community, and having similar economic backgrounds are important factors in the smooth functioning of these groups.

In all three programs, groups hold weekly meetings in the presence of a group organizer to review the group's performance and deposit their weekly savings. They also learn, practice, and discuss the rules of the program and other group activities. Weekly loan installments are also repaid at these meetings. Each group elects a leader, who is responsible for the discipline of the group members. All members have the chance to lead their groups. The leader of the group initiates loan proposals monthly at the center or community organization meeting. A community leader is elected to manage the centers, community organizations, or cooperative societies and is responsible for reviewing loan applications, monitoring loans, and performing other non-economic services.

Table 6 Features of Three Major Microcredit Programs

Program features	Grameen Bank	BRAC	ASA
Membership Criteria	Minimum landholding of half an acre of land. Only one member allowed per household	Maximum landholding of half an acre of land. At least one household member must work for wages. One household member may earn daily wages. Since 1992 one allowed per thousand.	Maximum landholding of half an acre of land. At least one household member must work for wages. Only one member allowed per household
Group Features	Five members from a group. Five to eight groups constitute a center. Separate groups for men and women. Weekly meetings of groups.	30-40 members from community organizations. Community organizations are divided into solidarity groups for men and women Each men’s group has a counterpart women’s group. Weekly meeting of solidarity groups.	20 members from community organizations. Separate groups for men and women. Weekly meetings of groups.
Saving Mobilization	Taka 01 per week. 5% of each loan goes to group fund. 0.5% of each loan used for group insurance.	Taka 02 per week. 4% of each loan.	Taka 10 per week. 5% of each loan.
Credit Delivery Mechanism	No collateral but group liability. 50 week installment of loan. Interest at the end of loan cycle. 20% interest for general loan, 8% for housing loan. Maximum loan Tk. 10,000.	No collateral but group liability. 50 week installment of loan. Interest at the end of loan cycle. 20% interest rate of production loans. Maximum loan Tk. 10,000.	No collateral but group liability. 46 week installment of loan. Interest at the end of loan cycle. 15% interest for general loan. The range of loan Tk. 5,000-700,000. the duration of repayment of loan 01 year to 03 year.
Social Development	Training duration 15-30 days. Review of code of conduct at center meetings. Minimal skills based training.	Training duration 3-6 months. Review of code of conduct at center meetings. Substantial skills based training.	Minimal skills based training. Review of code of conduct at center meetings.

Source: Field survey-2011

10.2 Age Composition of the Respondents

The NGOs target people are mainly the energetic people and specially the women. The three NGOs prefer the women most because of the availability of them. The age range of 20-40 is the ideal age for giving the loans but in this age range only female members have the priority to get the loan because of their socio-economic condition. But in the old age, the scenario is totally different, the NGOs first priorities goes to the male members for their earning capabilities in lieu of the old women members. To identify the view of the beneficiaries some questions were placed to them. Each question holds different view. These data reflect the following view of the respondents (beneficiaries) according to the question.

Table 7 Age Composition of the Respondents

Age Limit	ASA	BRAC	Grameen Bank	Number of Respondents	Per cent
20-30	10	7	4	21	21
30-40	32	16	10	58	58
40-50	10	0	11	21	21
50-60	0	0	0	0	0
Total	52	23	25	100	100

Source: Field survey-2011

10.3 Marital Status of the Respondents

Marriage is a socially approved sexual relationship between two individuals. Marriage almost always involves two persons of opposite sexes, but in some cultures types of homosexual marriage are approved. Table 8 shows that about 88% of the women were married, followed by 3% were widow and less than 10% respondents were divorced. Almost all the respondents were married in this study.

Table 8 Distribution of the Respondents by their Marital Status

Marital status	ASA	BRAC	Grameen Bank	Number of Respondents	Per cent
Married	43	20	25	88	88
Divorced	8	1	0	9	9
Widow	1	2	0	3	3
Total	52	23	25	100	100

Source: Field survey-2011

10.4 Educational Status

Table 9 shows the data on the respondents' education level. It reveal that in this study area mostly 41% respondents are illiterate followed by 41% respondents completed class five. It shows that only 7% of the respondents have completed class 6-10 followed by 7% primary education and 4% respondents only can sign. It is seen that maximum women are uneducated in this study area.

Table 9 Distribution of the Respondents by Educational Status

Educational Status	ASA	BRAC	Grameen Bank	Number of Respondents	Per cent
Illiterate	25	11	5	41	41.0
Completed class five	24	11	6	41	41.0
Class 6-10	0	1	6	7	7.0
S.S.C	3	0	4	7	7.0
Others(Only can sign)	0	0	4	4	4.0
Total	52	23	25	100	100

Source: Field survey-2011

10.5 Occupational Status

Table 10 reveals that most of the respondents (72%) were housewife whereas only 7% involved in business sector followed by 12% day labour, 3% involved in teaching profession and same involved in rearing domestic animal and tailors.

Table 10 Distribution of the Respondents by Occupational Status

Occupational Status	ASA	BRAC	Grameen Bank	Number of Respondents	Per cent
Housewife	37	13	22	72	72.0
Businessman	2	5	0	7	7.0
Day labour	7	3	2	12	12.0
Teaching	2	0	1	3	3.0
Rearing domestic animal	3	0	0	3	3.0
Tailors	1	2	0	3	3.0
Total	52	23	25	100	100

Source: Field survey-2011

10.6 Sources of Paying Installment

Table 11 shows that Maximum (66%) respondent's sources of paying installment is their husbands income whereas 21% from business, 6% from own income and 7% paying installment comes from other sources.

Table 11 Sources of Paying Installment

Sources	ASA	BRAC	Grameen Bank	Number of Respondents	Per cent
Business	11	6	4	21	21.0
Husbands Income	35	15	16	66	66.0
Own Income	4	2	0	6	6.0
Others	2	0	5	7	7.0
Total	52	23	25	100	100

Source: Field survey-2011

10.7 Interest Rate

Most (60%) of the borrowers don't know how much they have to pay as interest which is breaking of right to information. It's a common picture of BRAC, GB and ASA. The actual rate of interest rate is 15%. The rate is measuring on flat way. It can be criticized because of not measuring in decline way. As a result of flat rate the borrower have to pay more than declining rate. The respondent's views are available in the following table.

Table 12 Interest Rate

Answer	**ASA**	**BRAC**	**Grameen Bank**	**Number of Respondents**	**Per cent**
Correctly Know	2	1	2	5	5
Incorrectly Know	13	10	12	35	35
Do not Know	37	12	11	60	60
Total	52	**23**	**25**	**100**	100

Source: Field survey-2011

10.8 Reasons of Receiving Microcredit

The poor people can get easy access of financial support to take initiative to come out from the poverty situation and empower them. The poor people took the loans for their financial solvency. Because of the poor economic situation maximum women member in the responding area's taken loans for buying domestic animals which can help their economic stability. Its very positive scenery that we find out, maximum members doesn't utilize their loans for their personal interest. Few of the respondents found that they were used the loans in family purposes. The NGOs official firstly give the advice how to utilize the money of the loans and then given the loans to the members. The NGOs gives the priorities to their women members because of the availabilities and awareness. Table 13 shows that Most (30%) of the respondents took loan to initiate a small business such as tea stall, cake shop, wood business, cloth business and to buy sewing machine whereas 29% respondents took loan to buy rickshaw and reaper auto-rickshaw for their husband. The respondent's views are available in the table 13.

Table 13 Reasons of Receiving Microcredit

Reasons	**ASA**	**BRAC**	**GB**	**Number of Respondents**	**Per cent**
To enhance the agricultural activities such as buying cow, goat, agricultural tools and initiate poultry firm.	8	4	0	12	12
To initiate a small business such as tea stall, cake shop, wood business, cloth business and to buy sewing machine.	16	4	10	30	30
To buy rickshaw and reaper auto-rickshaw for their husband.	16	2	11	29	29
To provide education facilities to their children	0	0	0	0	0
To get more financial sufficiency.	1	1		2	2
For going abroad of husband	2	2	0	4	4
For insurance	2	1	1	4	4
For the marriage of daughter	2	3	1	6	6
To build and repair home	3	4	0	7	7
To buy TV	2	2	2	6	6
Total	52	**23**	**25**	**100**	100

Source: Field survey-2011

10.9 Getting Benefits from the Loan

The micro-finance loan helps the poor people to eradicate their poverty and to empower them. This is very much effective for the poor people as they opined. Maximum respondents said that the loan helps them to improve their economic condition by various income generation activities. They can use the loans not only for income generation but also to educate their children by the education loan. The members of GB women utilize the loan in various income generating activities. BRAC gives the loans and with advice to the members how to gain economic solvency. On the other hand, ASA showed the ideal path to their members in which sector the members invest loans and how to get effective benefits. The respondent's views are available in the table 14.

Table 14 Getting Benefits from the Loan

Causes	**ASA**	**BRAC**	**GB**	**Number of Respondents**	**Per cent**
Cow, goat, have been bought which enhance their income level through agricultural activities.	30	16	13	59	59
Poultry firm has been made	3	4	10	17	17
Resident has been reappeared	10	0	1	11	11
Sending husband to increase family income	8	2	0	10	10
Children have been sent to school	1	1	1	3	3
Total	52	**23**	**25**	**100**	100

Source: Field survey-2011

10.10 Improvement of Socioeconomic Status of the Respondents

They narrated that they are meeting their daily needs minimally which was not before. The most remarkable improvement is that now they are saving in this program. All the members of BRAC, GB and ASA have some positive change by the micro-loans. By using of this loan maximum member improve their status by cultivating their land, buying domestic animals, started small scale business in their locality. The following are the area on which they have developed.

Table 15 Improvement of Socioeconomic Status of the Respondents

Conditions	**ASA**	**BRAC**	**GB**	**Number of Respondents**	**Per cent**
Economic sufficiency	2	1	0	3	3
Improvement in the feeding system	7	1	4	12	12
Increment of commodities in shop	11	3	7	21	21
Cultivation of land	12	8	3	23	23
Access to educational facilities of children	1	0	1	2	2
Purchasing cow, goat etc.	10	4	8	22	22
Repairing the resident	9	6	2	17	17
Total	52	23	25	100	100

Source: Field survey-2011

10.11 Conditions of Taking Loans

The main condition of getting loans is to be a member. Being a member and minimum level of saving are the preconditions by getting any loan. Group leader is the responsible person for getting and repay the loans. It is the common scenario in BRAC, GB and ASA. But there is a negative side also that they can not tackle familial financial shocks such unexpected illness which leads to irregularities in repayment. In this case the BRAC authority becomes cruel to the borrower which is a humiliation**.** All respondents said the following conditions of the loan in the percentage narrated in the table.

Table 16 Conditions of Taking Loans

Conditions	**ASA**	**BRAC**	**GB**	**Number of Respondents**	**Per cent**
To get loan every person must have a saving account to the NGOs	18	12	10	40	40
The loan must be used in the mentioned sector	18	8	10	36	36
The way of utilization of loan should be such that they can repay it and make profit.	16	3	5	24	24
Total	52	23	25	100	100

Source: Field survey-2011

10.12 Respondents Opinion about Microcredit Programs

From the following table, it is observed that the main recommendations are that the number of premium should be reduced as well as the rate of interest was reduced. On the other hand the amount of loan should also be increased. The respondent's views are available in the following table:

Table 17 Respondents Opinion about Microcredit Programs

Opinions	ASA	BRAC	Grameen Bank	No. of Respondents	Per cent
The amount of the loan should be increased	6	2	3	11	11
The number of premium should be 50 weeks	9	2	3	14	14
The number of premium should be 45 weeks	7	2	5	14	14
The rate of interest should be reduced	12	7	5	24	24
The premium system should be monthly	8	7	6	21	21
The premium should be once in two week	10	3	3	16	16
Total	52	23	25	100	100

Source: Field survey-2011

11. Key Findings

The five-member group is the central unit of Grameen Bank. The community organizations are the central pillar of BRAC. The community organizations, not the solidarity groups, are the principal functionaries, however. ASA follows a structure very similar to that of Grameen Bank, BRAC. ASA has found that the small group approach works better than the large group approach in monitoring group performance in loan utilization and repayment. The members of Grameen Bank women utilize the loan in various income generating activities. BRAC gives the loans and advise to the members how to gain economic solvency. On the other hand, ASA showed the ideal path to their members in which sector the members invest loans and how to get effective benefits. By using of this loan maximum member improve their status by cultivating their land, buying domestic animals, started small scale business in their locality. Maximum respondents said that the loan helps them to improve their economic condition by various income generation activities. They can use the loans not only for income generation but also to educate their children by the education loan. The members of GB women utilize the loan in various income generating activities. BRAC gives the loans and with advice to the members how to gain economic solvency. On the other hand, ASA showed the ideal path to their members in which sector the members invest loans and how to get effective benefits. All the members of BRAC, Grameen Bank and ASA have some positive change in spite of some negative change by the microloans. By using of this loan maximum member improve their status by cultivating their land, buying domestic animals, started small scale business in their locality. But there is a negative side also that they can not tackle familial financial shocks such unexpected illness which leads to irregularities in repayment. In this case the BRAC authority becomes cruel to the borrower which is a humiliation**.** Microcredit may reduce different socioeconomic problems. It is seen that economically women were developed but not much. Actually the borrowers can not earn money on reasonable amount in every week as a result sometimes can not handle the premium. The main recommendations are that the number of premium should be reduced as well as the rate of interest will be reduced. On the other hand the amount of loan should also be increased.

12. Recommendations

By analyzing the data and the gained experience it can be summarized that the microcredit program of BRAC, Grameen Bank and ASA are playing a significant role to alleviate poverty in the grass root level of poor society in Bangladesh. But in the operation of microcredit programs have some limitation also. To remove these limitations followings can be suggested.

a) The condition of required saving account to get the loans should be minimized.

b) The BRAC should make such an environment in where the poor can feel comfortable to get loan.

c) BRAC, Grameen Bank and ASA should reduce their service charge or they should measure the rate of service charge in decline method rather than flat method.

d) The amount of loan should be increased.

e) The rate of interest should be greater than before in saving.

f) Microcredit programs should be more alert towards transparency in operations and governance.

13. Conclusion

In developing countries, especially in Bangladesh, poor people are excluded from the formal financial sector credit services due to the collateral requirements needed to obtain a loan. Informal financial sector sources, especially moneylenders, are exploitative in nature. Therefore, poor people do not receive the minimum amount of capital, which is required to start any income generating activities, from either of the financial sector sources. In Bangladesh, Professor Muhammad Yunus initiated the Microcredit program in 1976 and established the Grameen Bank in 1986, to alleviate poverty of poor households by providing them with the minimum amount of capital as credit without collateral and exploitation. Following the success of the Grameen Bank, its model has been replicated in more than 100 countries all over the world. This paper has assessed the effectiveness of microcredit on the poverty level of borrowing households in Bangladesh. In the case of Bangladesh, the poverty alleviation capacity of microcredit declines after the membership duration of sixty months. Nonetheless, the overall results from Bangladesh indicate that participation in microcredit programs does, indeed, reduce the poverty of borrowing households. This study attempted to evaluate effectiveness of microcredit programs on the economic welfare and the empowerment of poor women. This study focused on mainly three most important microcredit programs in Bangladesh, namely Grameen Bank, Bangladesh Rural Advancement Committee (BRAC), and ASA. Using similar program evaluation technique as in the above study, it measured program effectiveness of poor people's economic condition. This result is interesting since Grameen Bank is known to be the premier microcredit programs. These results provide more insights why BRAC is more successful than other two microcredit programs. It is found that all the important factors of production are more productive in BRAC than in other programs. This finding helped us to conclude that the emphasis of BRAC on human capital development and skill training has resulted in their superior performance compared to other microcredit programs operating in Bangladesh.

References

Ackerly, B. 1997. "What's in a Design? The Effects of NGO Program Delivery Choices on Women's Empowerment in Bangladesh", in Goetz (ed). pp. 140-158.

Ahmed, Syed Masud. et. al., 2001. Microcredit and Emotional Well-Being: Experience of Poor Rural Women from Matlab, Bangladesh, World Development Vol. 29, No.11, pp. 1957.

Amin Md. Ruhul and Sheikh M.R. 2011. The impact of Micro-finance program on the poor: A Comparative study of Grameen Bank, BRAC and ASA in some selected areas in Bangladesh. European Journal of Business and Management Vol 3, No.4, (pp-346-356)

ASA, 2008. "ASA in Micro-Finance", Annual Report , ASA Dhaka, Bangladesh.

Banerjee, et al., 2009. .The Miracle of micro- credit? Evidence from a Randomized Evaluation,.Working Paper, MIT.

Grameen Bank Annual Report 2009. "Grameen Bank in Micro-Finance", Annual Report, Grameen Bank. www.grameen-info.org.

Grameen Bank Annual Report 2011. "Grameen Bank in Micro-Finance", Annual Report, Grameen Bank. www.grameen-info.org.

Hashemi S. S Schuler and I Riley. 1996. Rural Credit Programs and Women's Empowerment in Bangladesh. World Development. 24 (4) p. 635-653

Hunt, J & N. Kasynathan., 2002. 'Reflections on Microcredit and women's empowerment', Development Bulletin, no. 57, pp. 71-75.

Khandker, S. 2001. Does Microcredit Really Benefit the Poor? Evidence from Bangladesh. Paper delivered at Asia and Pacific Forum on Poverty: Reforming Policies and Institutions for Poverty Reduction held by the Asian Development Bank. Manila.

Khandker, S. R.1998. "Microcredit Programme Evaluation." IDS Bulletin Vol. 29, No.4.

Kolbmüller, B. 2009. Microcredits - Roots, Prospects and Status Quo in Western Europe. :GRIN Verlag.

Littlefield, E., J. Morduch and S. M. Hashemi 2003. "Is Microfinance an Effective Strategy to Reach the Millennium Development Goals?", Focus Note. No.24, CGAP: Washington, D.C. January.

Mayoux, L. 2001. Tackling the down side: Social capital, women's empowerment and micro-finance in Cameroon. Journal of Development and Change. Vol. 07, Issue1pp. 421–450.

Montgomery R. D Bhattacharya and D Hulme. 1996. "Credit For The Poor In Bangladesh: The BRAC Rural Development Programme and the Government Upazila Resource Development and Employment Programme". In Hulme D and P Mosely Finance against Poverty. Vols. 1 and 2, Routledge, London.

Morduch, J. 1998. .Does Microcredit really help the poor? New evidence from .agship programs in Bangladesh. Working Paper, New York University.

Pit, M. et al. 2003. Does Microcredit Empower Women? Evidence from Bangladesh. World Bank Policy Research Working Paper 2998.

Pitt, M. and S. Khandker. 1998. .The Impact of group-based credit programs on poor households in Bangladesh: Does the gender of participation matter? Journal of Political Economy, 106(5): 958-96.

Rahman, A. 1998. Microcredit Initiatives for Equitable and Sustainable Development: WhoPays? World Development. 27 (1) p. 67-82.

Rahman, R. I., 1986. Impact of Grameen Bank on the situation of poor rural women, BIDS Working Paper No. 1, Grameen Evaluation Project, Dhaka: Bangladesh Institute of Development Studies.

Sanyang, E. S. & Huang, W-C., (2008). Micro-financing: enhancing the role of women's group for poverty alleviation in rural Gambia. World Journal of Agricultural Sciences. pp. 665–673.

Salehuddin Ahmed. (2007). "Poverty and Micro Credit: New realities and strategic issues", Bangladesh Bank Publication.

World Bank. 2007. .Microcredit in South Asia: Toward .Financial inclusion for the poor. Washington D.C., December.

Yunus M. 2007. 'Creating a World Without Poverty: Social Business and the Future of Capitalism'

Yunus, M. 2008. Creating a World Without Poverty: How Social Business Can Transform Our Lives: Social Business and the Future of Capitalism. Dhaka: Public Affairs.

Zaman, H. 2000. Assessing the Poverty and Vulnerability Impact of Microcredit in Bangladesh: A case study of BRAC. World Bank.

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A Study on the New Product Introduction Process and Competitive Benchmarking with Special reference to Caterpillar 40/50T Off-Highway Trucks manufactured in India

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Abstract

Technological innovation is one of the principal determinants of business success. New product development is one of the most important components of product policy and product management. Product lines and products are appraised and are positioned effectively. For a higher level of growth, a firm has to look beyond its existing products. A progressive firm has to consider new product development as a cardinal element of its product policy. A business firm has to respond to these dynamic requirements of its clientele and these responses take the shape of new products and new services. Through such a response, the firm reaps a good deal of benefits. New Product Introduction is the process adopted by organizations worldwide to develop products and services for customers. Organization employees, suppliers, dealers and customers are involved throughout the process. Based on the Caterpillar New Product Introduction Framework and Competitive Benchmarking, the research objectives of the study are confined to evaluate the adherence of process steps in each of the phases of New Product Introduction framework ; to plan and build prototype and pilots of the new model of trucks and evaluate the performance of the truck(s); and to carry out Production Studies of the new model of trucks with the competitor machines and generate Production Study data to substantiate the advantages of the new trucks over the competitors. The results of this study determines how systematic adherence of New Product

Introduction process at Caterpillar for the introduction of 40/50 ton rear dump trucks has paved way for the successful production launch of its products and how Caterpillar 40/50T products were subjected to competitive benchmarking with similar class products of competitors and emerged superior over competitors with regard to product performance and reliability. This study is related to the adherence of the New Production Introduction process and the results of the production studies to place the new product in the market. It is based on predetermined objectives and methodology. In the process of study, the objectives are pre-determined. The methodology has been designed to fulfill the objectives for the study.

Keywords: Competitive Benchmarking, New Product Introduction, Production Study, Product Launch.

1. Introduction

Technological innovation is one of the principal determinants of business success. New product development is one of the most important components of product policy and product management. Product lines and products are appraise and are positioned effectively. Brand decisions are taken wisely. For a higher level of growth, a firm has to look beyond its existing products. A progressive firm has to consider new product development as a cardinal element of its product policy.

Innovation is the essence of all growth. This is especially true in marketing. In an age of technological advancements, change is a natural outcome – change in food habits, change in expectations and requirements. Any business has to be vigilant to these changes taking place in its environment. People always seek better products, greater convenience, newer fashion and more value for money.

A business firm has to respond to these dynamic requirements of its clientele and these responses take the shape of new products and new services. Through such a response, the firm reaps a good deal of benefits. New products become necessary from the profit angle too. Products that are already established often have their limitations in enhancing the profit level of the firm. Profits from products decline as they reach the maturity stage of their life cycle. Thus, it is necessary for business firms to bring in new products to replace old, declining and losing products.

New products become part and parcel of the growth requirements of the firm and in many cases, new profits come to the firm only through new products. New products can be broadly classified into two groups: new products arising out of technological innovations and new products arising out of marketing oriented modifications. The first group involves innovations leading to intrinsically new products with a new functional utility behind them. The second group involves mere marketing oriented innovations in existing products; it gives rise to new versions of the existing products.

The new-product introduction world has changed dramatically. No longer can brands wait for an annual convention to showcase their wares and impress supermarket buyers. With the competition for shelf space at an all-time high, brands must reach out to retailers proactively, rather than hoping they will stop by their booth — no matter how lavish.

2. Need for the Study

Products manufacturers are under increased pressure to grow revenues and improve operating efficiency. Challenges in meeting growth targets include changes in consumers' demographics, increased competition in mature markets, increased spending on services, the rise of private labels and the low success rate of new brands. We are definitely entering the era of innovation. It is pervasive. It is influencing the way in which companies think about virtually every aspect of research, marketing product development, supplier and materials management, manufacturing, distribution, warranty and defect management, maintenance repair and overhaul, and product end-of-life and disposal. Innovation is global. Innovation knows no boundaries. Its growth is being nurtured by active investments, grants and tax incentive policies of established, industrialized nations and emerging economies. Put in the context of the era of innovation, the "perfect product launch" and lifecycle management are now viewed in a different and expanded way.

3. Concerns in Introducing New Products

Why do so many new products fail? Usually for many reasons. Companies often are so enamored of their new product ideas that they fail to do their research, or they ignore what the research tells them. Sometimes the pricing or the distribution channels are wrong. Sometimes the advertising doesn't communicate. Successful product launches result from an integrated process that relies heavily on research and solving up-front issues. Let's review several of the critical issues that affect product introductions.

Market Research

Market research is the key. Without the necessary information, you're simply flying blind in a storm, headed for a crash landing. Market research does more than confirm your "gut feeling," it provides critical information and direction. It identifies market needs and wants, product features, pricing, decision makers, distribution channels, motivation to buy. They're all critical to the decision process.

Timing

Are all elements of the process coordinated? Is production on the same time schedule as the promotion? Will the product be ready when you announce it? Set a time frame for the rollout, and stick to it. Many products need to be timed to critical points in the business cycle. Miss it, and invite failure. There are marketing tales galore about companies making new product announcements and then having to re - announce when the product lags behind in manufacturing. The result is loss of credibility, loss of sales, and another failure.

Capacity

If the new product or service is successful, do you have the personnel and manufacturing capacity to cope with the success? Extended lead times for new products can be just as deadly as bad timing.

Testing

Test-market the new product. Be sure it has the features the customer wants. Be sure the customer will pay the price being asked. Be sure the distributor and sales organization are comfortable selling it. You may need to test your advertising and promotion as well.

Distribution

Who's going to sell the product? Can you use the same distribution channels you currently use? Can you use the same independent representatives or sales force? Is there sufficient sales potential in the new product to convince a distributor, retailer, or agent to take on the new line? There are significant up-front selling costs involved in introducing new products. Everyone in the channel wants some assurance that the investment of time and money will be recovered.

Training

Your sales organization, inside employees, and distribution channels will need to be trained about the new product. If the product is sufficiently complex, you may need to provide face-to-face training. Or perhaps some type of multimedia program will do the job. If the product is not that complex, literature may work. Again, timing is critical. Train before the product hits the shelves, not after.

Promotion

Finally, you need the promotional program to support the introduction: advertising, trade shows, promotional literature, technical literature, samples, incentives, Web site, seminars, public relations. Time it all with production, inventory, shipments, and training. The new product will simply sit in the warehouse without the right support materials.

These are some of the myriad issues you face in launching a new product or service. Research, timing, and planning can all help increase the probability of success.

4. Statement of the Problem

Caterpillar, Inc. USA, is the world largest and leading manufacturer of construction and mining machines, diesel and natural gas engines and industrial gas turbines. Caterpillar products and components are manufactured worldwide.

Caterpillar India Private Limited (CIPL) is a 100% subsidiary of Caterpillar, Inc. USA. CIPL manufactures Off-Highway dump trucks, front end loaders, hydraulic excavators and backhoe loaders. These products are used in open cast mining, quarrying, irrigation, steel plants, cement plants, power plants in the field of construction and material handling.

With the growing prospects in the Emerging market and to establish Caterpillar's Worldwide market leadership Off-Highway Truck group needs to launch a worldwide platform for the 40/50T to address both emerging market and developed market needs by providing our customers the best value proposition at a fair price. To address the pricing sensitivities in emerging markets it would be beneficial to leverage the lower cost of producing the emerging markets offering at the CIPL plant. The study scope addresses key customer, business, and regulatory requirements by delivering content that creates value, generating stockholder wealth.

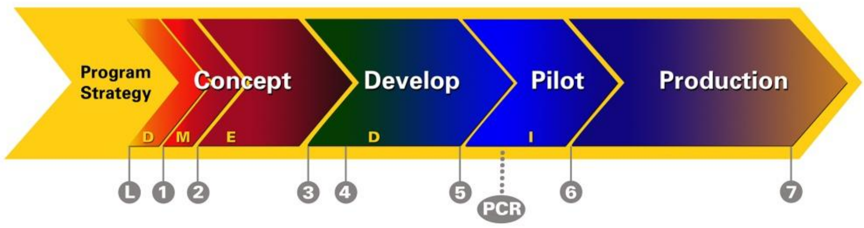
Product Description / Content

The primary machine changes that provide these deliverables are:

- One Worldwide Platform – One WW Design & one WW Process
- Lower O&O cost by providing best in class serviceability.
- Improved Shift Quality
- Improved Economy Mode
- Tire Protection
- Improved TCS & Lines Routing
- Improved Operator comfort
- Weight & Cost Reduction

New Product Introduction (NPI) Framework

Figure 4.1 – New Production Introduction Phases



As per Figure 4.1, NPI Framework consists of eight phases

a. **Program Strategy** → Launch Review

b. **Concept – Define** → Gateway 1

c. **Concept – Measure** → Gateway 2

d. **Concept - Explore**→ Gateway 3

e. **Develop - Design** → Gateway 4

f. **Develop - Verify** → Gateway 5

g. **Pilot** → Gateway 6

h. **Production** → Gateway 7

1.

Competitive Benchmarking

Competitive Benchmarking is the "Production Study" carried out by the OEM by comparing its class of its product to the similar class of product of the competitor. This will necessitate establishing the advantages and positive selling features with respect to performance over the competitor machines in the market. The 2 major factors of comparison are Fuel Consumption and Productivity. The positive selling features include lesser fuel consumption per hour and higher productivity measured in Fuel/Ton ratio.

5. Objectives of the Study

Based on the earlier mentioned New Product introduction Framework and Competitive Benchmarking, the research objectives of the study is confined to:

a) to evaluate the adherence of process steps in each of the phases of NPI framework;

b) to identify and verify metrics in each of the phase of the NPI framework;

c) to identify VOC and VOB characteristics and verify whether those are met in each of the phases;

d) to plan and build prototype of the new model of trucks and evaluate the performance of the truck(s);

e) to plan and build pilot machines of the new model of trucks and evaluate the performance of pilot validation in the customer mines sites;

f) to carry out Production Studies of the new model of trucks with the competitor machines and generate Production Study data to substantiate the advantages of the new trucks over the competitors;

g) to verify the readiness deliverables in all functions for the successful New Product Production Launch and

h) to document lessons learnt and create scope for further improvements in the future programs.

6. Research Methodology

Research Design

In the present study, descriptive design was followed. Singh (1980) defined descriptive research as a design to explain the characteristics of the variables as it is. In business research we quite often use the term Ex post facto research for descriptive research studies. The main characteristic of this method is that the researcher has no control over the variables; he can only report what has happened or what is happening. The methods of research utilized in descriptive research are survey or study methods of all kinds, including comparative and correlational methods. In the present study, it is related to the adherence of the New Production Introduction process and the results of the production studies to place the new product in the market. It is based on predetermined objectives and methodology. In the process of study, the objectives are pre-determined. The methodology has been designed to fulfill the objectives for the study.

Framework of Analysis

The following NPI tools were used to verify the NPI process discipline, analyze proto and pilot build data, setting and following the timeline, conduct production studies.

1) NPI Workflow
2) NPI Dashboard
3) Process Conformance Index
4) Requirements Management Index
5) APQP Conformance Index
6) Project Management
7) VET Analysis
8) Production Study
9) PPRD Analysis
10) Reflection Analysis

7. Summary of the Findings

The present study concludes on the successful introduction of 40/50T Off-Highway Trucks to the Growth Markets. The study provides benefits of following the rigorous NPI Process. The study details on the Voice of the Customer (VOC) and Voice of the Business (VOB) analysis carried out upfront before starting the NPI program, as mentioned in Figure 7.1

Figure 7.1 – VOC and VOB

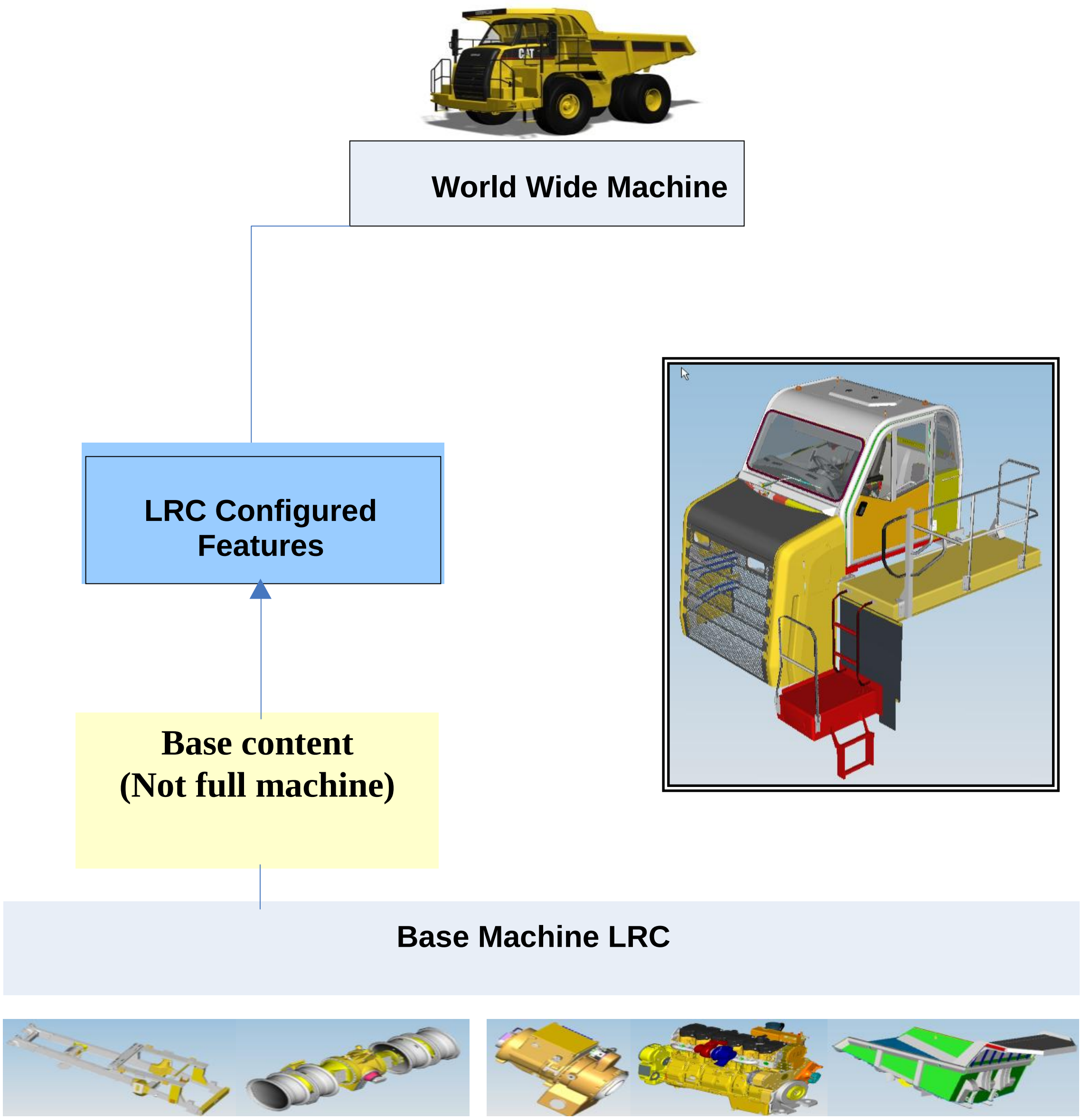
770 / 772 Titan "X" Series	Base (Tender)	EM (Private)	Dev. Mkt.	ATT
Information Systems / Electronics				
Product Link				X
Fluid Level Monitoring			X	
Economy Mode	X	X	X	
Autoidle/Autoshutdown		X	X	
Messenger Display			X	
Advisor/CMPD Display				X
Tire Pressure Monitoring			X	
TKPH				X
Guardian				X
Ground Level ET Port	X	X	X	
TPMS				X
Cab and Operator Environment				
Tilt Cab			X	
Heated Mirrors				X
Power Mirror				X
Foot rest		X	X	
Hinged & Sliding RH Window			X	
Power Left Window			X	
Trainer Seat, Lap belt	X	X	X	
Seatbelt Indicator				X
HID Lights				X
ISO 5006 Visibility Package				X
1 WAVS Package				X
3 WAVS Package				X
EU Arrangement (incl. suspension)				X
Heater				X
Autotemp				
Air Conditioning				X
Double Floor				X
Radio Mounting Bracket		X	X	
Map Light		X	X	
Cigarette Lighter		X	X	
Deluxe Instrument Cluster		X	X	
Fuel Level Indicator - Cab	X	X	X	

770 / 772 Titan "X" Series	Base (Tender)	EM (Private)	Dev. Mkt.	ATT
Body				
Dual Slope Body	X			
Flat Floor Body				
8mm Liner (must select one)				
12mm Liner (must select one)				
16mm Liner (must select one)				
20 mm Liner (must select one)				
25mm Liner (must select one)				
50mm Rubber (must select one)				
100mm Rubber (must select one)				
Various Sideboards				
Safety				
Retractable Ground Level Access System				X
Improved Brake Slope Holding Capabi	X			
Fire Supression Zone	X			
Self Adjusting Back-Up Alarm (audio/vi	X			
Performance				
ARC	X			
Extended Life Disc Brakes	X			
Cold Weather Starter				X
Engine Heater 120V				X
Engine Heater 240V				X
Diesel Fuel Heater				X
Compression Brake				X
Exhaust Body Heat Routing	X	X	X	
Exhaust Muffler				X
Exhaust Body Heat/Muffler Diverter				X
TCS				X
ECPC	X			
Advanced Shift Control		X	X	
Serviceability				
Ingress / Egress Lights		X	X	
Engine Compartment Lights			X	
Side Work Lights			X	
High Speed Oil Change		X	X	
Ground Level Grease Fittings		X	X	
Groeneveld Auto Lube Power Supply Ready		X	X	

The study rolls out the 8 phases of the Caterpillar New Product Introduction (NPI) Process and the Metrics that govern it. It also details about the elaborate tools used in the NPI Process and the benefits that arise due to following those tools.

The study unwinds the Strategy behind introducing 40/50T Off-Highway Trucks in Growth Markets and its impact on Indian Economy and Growth. Selection of features that suit Growth Markets as mentioned in Figure 7.2 and their effective utilization are clearly explained during defining the program goals.

Figure 7.2 – Design Feature Selection



The study details the prototype build and the validation carried out followed by design modifications and corrective action initiated. The study also reveals the pilot build as per the New Product Introduction Program Plan – refer Picture 7.3 and subsequent customer validation and the effectiveness of the Pre-Production Reliability Development (PPRD) tool as represented in Figure 7.4, in managing the issues and providing corrective actions.

Figure 7.3 – New Product Introduction Program Plan

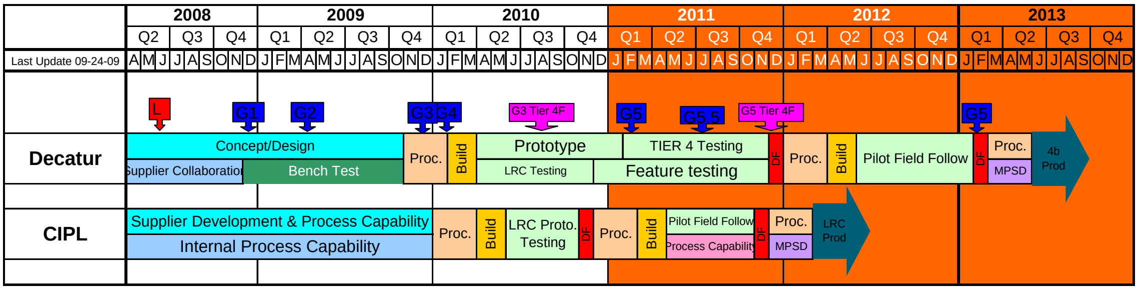
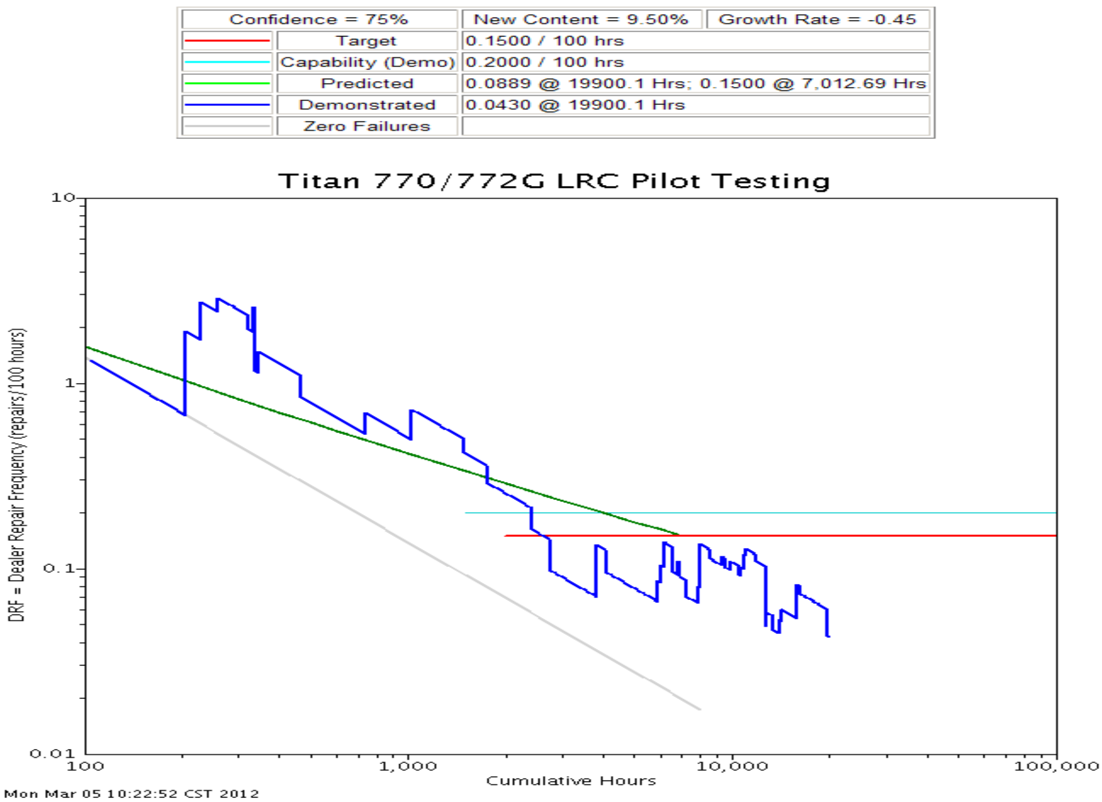
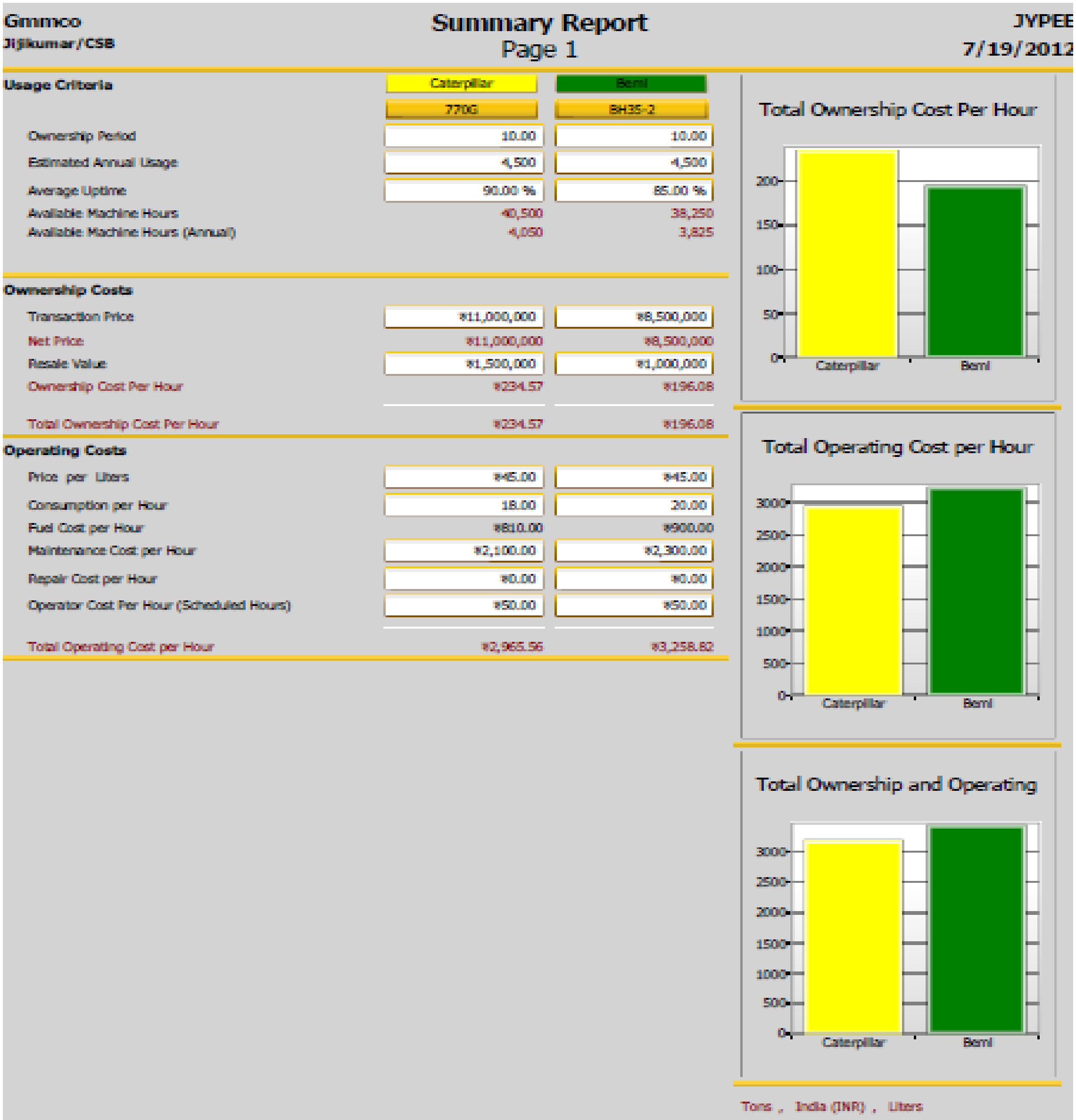


Figure 7.4 – Pilot Validation Result (Pre-production Reliability Development Tool)



The study reveals the Value Analysis (VET Analysis) of the features incorporated in the newly introduced 40/50T Off-Highway truck model. Production studies and competitive benchmarking of 40/50T Off-Highway truck model with competitor machines of similar class provided an opportunity to validate the performance of the newly introduced products in the market and provides a story for value selling and higher returns, as depicted in Figures 7.5 and 7.6

Figure 7.5 – Value Analysis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Usage Criteria	Caterpillar	Beml
	770G	BH35-2
Ownership Period	10.00	10.00
Estimated Annual Usage	4,500	4,500
Average Uptime	90.00 %	85.00 %
Available Machine Hours	40,500	38,250
Available Machine Hours (Annual)	4,050	3,825
Ownership Costs		
Transaction Price	₹11,000,000	₹8,500,000
Net Price	₹11,000,000	₹8,500,000
Resale Value	₹1,500,000	₹1,000,000
Ownership Cost Per Hour	₹234.57	₹196.08
Total Ownership Cost Per Hour	₹234.57	₹196.08
Operating Costs		
Price per Liters	₹45.00	₹45.00
Consumption per Hour	18.00	20.00
Fuel Cost per Hour	₹810.00	₹900.00
Maintenance Cost per Hour	₹2,100.00	₹2,300.00
Repair Cost per Hour	₹0.00	₹0.00
Operator Cost Per Hour (Scheduled Hours)	₹50.00	₹50.00
Total Operating Cost per Hour	₹2,965.56	₹3,258.82

Figure 7.6 – Competitive Benchmarking

CAT 770G (40T) vs Competitor machine A

- 21% higher productivity
  - 12% higher payload
  - 5% faster haul time
- 3% lower fuel consumption
- 24% metric ton/litre advantage

CAT 772G (50T) vs Competitor machine B

- 12% higher productivity
  - 12% higher payload
  - 6% faster haul time
- 20% lower fuel consumption
- 40% metric ton/litre advantage

8. Conclusion

The study reconciles the deliverables that are needed for effective product production launch and the Reflection Analysis provides insight on the positives happened in the NPI Program and improvements that are needed as lessons learned in future programs. The results of this study determines how systematic adherence of New Product Introduction process at Caterpillar for the introduction of 40/50 ton rear dump trucks has paved way for the successful production launch of its products and how Caterpillar 40/50T products were subjected to competitive benchmarking with similar class products of competitors and emerged superior over competitors with regard to product performance and reliability.

9. Scope for the Future

The present study is the base for many studies to follow. The Reflection Analysis opens door for many research works for young scholars. The lessons learned from the New Production Introduction Process provides opportunities to look for new avenues and methodologies to improve the effectiveness of the NPI process and reduce the lead time for NPI programs. The Production Studies provide base for further studies with other competitor models and improve value selling in the growth markets. The study also provides ample opportunities for future study in effective ways of handling and managing Engineering changes and implementation. The PPRD Analysis sets up new platform for young scholars to effectively capture analyze and manage customer issues.

Abbreviations and Acronyms

APQP	: Advanced Product Quality Planning
NPI	: New Product Introduction
OEM	: Original Equipment Manufacturer
O&O	: Owning and Operating
PPRD	: Pre Production Reliability Development
TCS	: Traction Control System
VET	: Value Evaluation Technique
WW	: World Wide

10. BIBLIOGRAPHY

New Product Development & Introduction – SAP AG

New Product Development Process – Food Marketing Economics Magazine Fall 2008

New Product Development – Managing and Forecasting for Strategic Success – Robert J. Thomas

New Product Development Solutions – Tata Consultancy Services

New Product Development – Product Development & Management Association of India

New Product Development Process – Steps to develop New Products and Services – more Business.com

New Product Development Research – B2B International

New Product Introduction – Caterpillar University

Road Map for New Product Development – Product Development Institute, Inc.

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Food Security through Public Distribution System in India – An Analysis

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Abstract

Public Distribution system is a rationing mechanism that entitles household to specified quantities of selected commodities of subsidies prices. In most parts of the country PDS ha been universal and all households, rural urban, with a registered residential address are entitled to rations. Eligible households are given a ration (Varying with house hold size and age composition) of selected commodities. The exact entitlement (quantity, range of commodities and prices) varies across states. The six essential commodities supplied through PDS nationally are rice, wheat, sugar, edible nil, kerosene and coal. Additional commodities like pulses, salt, tea are commodities that are made available through a network of Fair Price Shops. In 1998, there were a total of 4.5 lakhs Fair Price Shops in the country of which 3.6 lakhs were in rural areas, as of 1998 there were a total of 182.8 million families with ration cards in the country and an average, there were 406 ration cards assigned to each Fair Price Shop.

Keywords: Food Security, Public Distribution System and Food Subsidy.

Introduction

Public Distribution system has been one of the most crucial elements in food policy and food security system in India. It started as a rationing system in the back drop of Bengal famine in 1943 as well as a war time. Measure during the Second World War. Over the years, the system expanded enormously emerging as a poverty alleviation measure to become a permanent feature in Indian food economy. In the context of new economic and liberalization policy, it is regarded as a safety net to the poor whose number is more than 330 million and are nutritionally at risk. Further, it is regarded as an important delivery channel in the management of food security system of India, with a network of 4.63 lakh fair price shops catering of the needs of 1992 lakhs of ration cardholders. It distributes subsidized food and non-food items to India's poor. Major commodities distributed to consumers include staple food grains such as Wheat, Rice, Sugar, and Kerosene through a network of Fair Price Shops (FPS) established in several states across the country.

Food Corporation of India is the regulatory body which manages the complex task of providing food security in our nation. It is an ISO 9001:2001 certified organization which come into being in the year 1965. It fulfills mainly the following three objectives;

1. Carrying out an effective food distribution system and at the same time safe guarding the interest of the farmers.
2. Distributing food throughout the country through a public distribution system. Maintenance of satisfactory levels of food stock to secure the nation against food emergencies.

FCI is governed by the Food Corporation Act 1964. However with the passage of time this act has been amended. The latest act governing FCI is Food Corporation Act passed on 14th January 2006. Right to Information Act 2005 also covers FCI under its gamut. Essential Commodities Act, 1980, PDS control order 2001 (GOI), 2004 Amendments of PDS control order 2001(GOI) Governs the complete distribution system.

Wheat, Paddy and Rice are the basic food grains which are procured by the FCI. The procurement process is decentralized with the state government purchasing, storing and distributing food grains up to a pre decided level. The surplus of food grains is taken over by the FCI. FCI uses the policy of scientific it. It has a network of strategically located godowns all over the country to provide better and easy access. It uses silos and godowns for storage purpose. To face emergencies FCI has developed an indigenous method covers plinth (CAP). In addition to these FCI owned stores, private parties and CWC/SWC also provides with storage capacities to store the food grains. North Zone has 58% own storage capacity and 42% hired capacity.

FCI has created 5 lakhs fair price shops around the nation to distribute food grains and other commodities. The food grains are then made available to the public through schemes like TPDS, CIP (Central Issue Price), AAY (Anthyodaya Anna Yojana), FFW (Food for Work) etc. The above was the complete process of transfer of food from the farmers to the consumers.

PDS Administrative Set-Up at the Central Government Level in India

The department of civil supplies has been redesignated as ministry of civil supplies vide president of India order December No.CD-574/80 I (B), dated 22-7-1980. (9) The ministry of responsible for innumerable activities connected directly or indirectly with the public distribution system. These activities, as per the Act of 1980 include monitoring of prices and supply position of essential commodities, administration of supplies of essential commodities. Public distribution system, consumer protection and consumer co-operatives, integrated management of supply, price and distribution of vanaspathi, oil seeds, vegetable oils, cakes and fats. Control of futures trading and matters relating to weights and measures, the Bureau of Indian standards and many others. The lists is not exhaustive but suggestive only. The minister of civil supplies at the central level is in over all in charge of civil supplies including in his work by a Deputy Minister. The secretary to the Government is the chief administrative head of the civil supplies department and he is assisted by a staff of 188 including 4 joint secretaries.

As regards the management of different tasks assigned to this ministry. It is assisted by the forward markets commission. Trade marks registry. The Bureau of India standards. The Directorate of weights and measures and the Directorate of vanaspathi. Vegetable oils and fats. At present, the minister of state has been assigned the work of public Distribution system.

Foodgrains Production in India

The foodgrains production during 2009-10 is estimated at 218.11 million tonnes which is 16.36 million tonnes or 6.98% less than 234.47 million tonnes of foodgrains production in 2008-09. The khariff foodgrains production estimated at 103.95 million tonnes in 2009-10 is 14.19 million tonnes or 12% less than 118.14 million tonnes of khariff production in 2008-09. The rabi foodgrains production estimated at 114.16 million tonnes is 2.17 million tonnes or 1.87% less than 116.33 million tonnes or rabi foodgrains production in 2008-09.

The cumulative rainfall from Ist June to 30th September 2010 was excess to normal in 31 meteorological sub-divisions and deficient/scanty in 05 out of the 36 meteorological sub-divisions in the country. For the country as a whole, the rainfall from the south-west monsoon in 2010 was 2% above the long period average.

Table –1 Procurement of Foodgrains and Minimum Price

(Rs. Per Quintal)

Year	Wheat	Paddy	
		Common	Grade- A
2004-05	630	560	590
2005-06	640	570	600
2006-07	650	580	610
2007-08	750	645	675
2008-09	1000	850	880
2009-10	1080	950	980
2010-11	1100	1000	1030

Source: Annual Report, Dept.of Food and Public Distribution, New Delhi.

Food Subsidy of TPDS in India

Food subsidy is provide in the budget of the Department of Food and Public Distribution to meet the difference between the economic cost of food grains and their sales realization at the central issue prices fixed for PDS and other welfare schemes. In addition, the Central Government also procures food grains for meeting the requirements of buffer stock. Hence, part of the food subsidy also goes towards meeting the carrying cost of buffer stock.

The subsidy is provided to FCI, which is the main instrument of the Government of India for procurement and distribution of Wheat and Rice under PDS and for maintaining the buffer stock of food grains as a measure of food security. There states, namely, Madhya Pradesh, Uttar Pradesh and West Bengal, have undertaken the responsibility of not only procuring food grains from within the state but also distributing the same to the targeted population under PDS. Under this scheme of Decentralized procurement, state specific economic cost is determined by the Government of India and the difference between the economic cost so fixed and the central issue price is passed on to the state as food subsidy. Efforts are being made to persuade other states to adopt this scheme.

The TPDS, with its paradigm shift in subsidized provision of food grains, has been in operation since the last 7-8 years, itself warrants a diagnostic evaluation of its different aspects; its impact on the target group, factors affecting impact, effectiveness of targeting, leakage in delivery and its causes, etc. besides, while examining international experience on targeting.

Table- 2 Growth of Food Subsidies in India

Year	Food subsidy (in crores)	Annual growth rate	As percentage of GDP
1	**2**	**3**	**4**
1990-91	2.450	-	0.43
1991-92	2850	16.33	0.44
1992-93	2800	1.75	0.37
1993-94	5537	97.75	0.64
1994-95	5100	7.89	0.50
1995-96	5377	5.43	0.45
1996-97	6066	12.81	0.44
1997-98	7900	30.23	0.52
1998-99	9100	15.19	0.52
1999-00	9434	3.67	0.49
2000-01	12060	27.84	0.58
2001-02	17499	45.10	0.77
2002-03	24176	38.16	0.98
2003-04	-	-	-
2004-05	27077	-	-
2005-06	23200	-	-
2006-07	24204	-	-
2007-08	31546	-	-
2008-09	43,627	-	-
2009-10	56,002	-	-
2010-11	60,600	-	0.9
2011-12	60,573	-	-

Source: (Planning Commission of India Report 2005 and Union Expenditure Budget. Vol. II, Ministry of Consumer Affairs and Public Distribution in India. 2005-06 till 2011-12. Available online at:www.indiabugdget.nic.in.).

Allocation of Food Grains from Central Pool for Other Welfare Schemes

The Mid-Day Meal Scheme was launched and implemented by the Ministry of Human Resource Development with a view to enhancing enrollment, retention and attendance and simultaneously improving nutritional levels among children with effect from 15th August, 1995 for the benefit of students in primary schools, initially in 2408 blocks in country. By the year 1997-98 the scheme was introduced in all the blocks of the country. The scheme presently covers students of Class I – VIII of Government and Government aided schools. Education Guarantee Scheme/Alternative and innovative education centers to improve nutritional status of children and encouraging them to actively participate in the class-room activities. Allocation/off take of food grains under the scheme during the 10th Plan and the first four years of the 11th Plan 2007-08, 2008-09, 2009-10 & 2010-11 are as under.

Table –3 Allocation and Off take of Food grains in India

Year	Allocation			Off take		
	Rice	Wheat	Total	Rice	Wheat	Total
2002-03	18.84	9.40	28.24	13.75	7.45	21.20
2003-04	17.72	9.08	26.80	13.49	7.20	20.69
2004-05	20.14	7.35	27.49	15.41	5.92	21.33
2005-06	17.78	4.72	22.50	13.64	3.63	17.24
2006-07	17.22	4.38	21.60	13.05	3.50	16.55
2007-08	19.98	5.30	25.28	3.95	14.41	18.36
2008-09	21.48	4.78	26.26	15.82	4.37	20.19
2009-10	22.85	4.90	27.75	18.54	4.46	23.00
2010-11	24.55	5.33	29.88	13.84	3.59	17.43

Source: Annual Report, Dept. of Food and Public Distribution, New Delhi.

Wheat based Nutrition Programme

This scheme is implemented by the Ministry of Women & Child Development. The food grains allotted under this scheme are utilized by the states/UTs under the Integrated Child Development Scheme for providing nutritious/energy food to children below 6 years of age and expectant/lactating women from disadvantaged sections. Allocation/off take of food grains under the scheme during the 10th plan period and the first four years of the 11th plan i.e., from 2007-08, 2008-09, 2009-10 & 2010-11 are as under (table – 4).

Table-4 Allocation and Off Take of Food Grains in India under Wheat Based Nutrition Programme

Year	Allocation			Off take		
	Rice	Wheat	Total	Rice	Wheat	Total
2002-03	1.47	1.75	3.22	0.69	2.13	2.82
2003-04	1.04	3.72	4.76	0.61	3.16	3.77
2004-05	1.16	3.42	4.58	0.85	3.57	4.42
2005-06	1.50	2.82	4.32	2.07	2.73	4.80
2006-07	1.98	3.19	5.17	1.61	2.98	4.59
2007-08	2.31	3.20	5.51	1.79	2.74	4.53
2008-09	3.30	4.80	8.10	2.15	3.92	6.07
2009-10	3.44	5.82	9.26	2.40	5.13	7.53
2010-11	6.00	9.00	15.00	2.11	5.27	7.38

Source: Annual Report, Dept. of Food and Public Distribution, New Delhi.

With a view to meet the requirement of welfare institutions viz., NGOs/Charitable institutions which help the shelterless/homeless poor and other categories not covered under TPDS or under any other welfare schemes, an additional allocation of foodgrains not exceeding 5% of the BPL allocation of each state/UT is made to states/UTs at BPL prices. During 2005-06, the allocation and off take of food grains under the scheme were reviewed on recommendation of the Parliamentary Standing Committee for food. The allocation to the states/UTs accordingly was rationalized w.e.f August, 2005 on the basis of average off take of previous three years. Allocation/off take of food grains under the scheme during the 10th Plan period and the first four years of the 11th plan i.e., 2007-08, 2008-09, 2009-10 & 2010-11 are as under.

Table-5 Allocation and Off take of Food grains in India under Scheme of Supply of Food grains

Year	Allocation			Offtake		
	Rice	Wheat	Total	Rice	Wheat	Total
2002-03	6.58	4.53	11.11	1.30	0.14	1.44
2003-04	6.25	5.19	11.44	3.15	0.23	3.38
2004-05	6.06	4.80	10.86	1.94	0.75	2.69
2005-06	3.47	2.44	5.91	2.37	0.27	2.64
2006-07	3.26	0.57	3.83	2.76	0.25	3.01
2007-08	2.13	0.57	2.70	1.61	0.33	1.94
2008-09	2.96	1.12	4.08	2.43	0.41	2.84
2009-10	2.51	0.61	3.12	2.67	0.66	3.33
2010-11	1.64	0.71	2.35	0.93	0.39	1.32

Source: Annual Report, Dept. of Food and Public Distribution, New Delhi.

Scheme for Supply of Food Grains for SC/ST/OBC Hostels

This scheme was introduced in October, 1994. Department of Food & Public Distribution is the nodal Department for the scheme. The residents of the hostels having 2/3rd students belonging to SC/ST/OBC are eligible to get 15 kg food grains per resident per month. Allocations of food grains under the scheme are made based on request received from the State/UT Governments. Accordingly, during the current year, allocations under the scheme have been made to Andhra Pradesh, Dadra & Nagar Haveli, Karnataka, Nagaland and Tripura. Allocation/offtake of food grains under the scheme during the 10th Plan period and the first four years of the 11th Plan-2007-08, 2008-09, 2009-10 & 2010-11 are as under:-

Table- 6 Allocation/Off Take of Food Grains under the Scheme During The 10th Plan Period

Year	ALLOCATION		
	RICE	WHEAT	TOTAL
2002-03	0.36	-	0.36
2003-04	1.63	-	1.63
2004-05	1.34	-	1.34
2005-06	-	0.14	0.14
2006-07	1.62	0.14	1.76
2007-08	0.28	0.14	0.42
2008-09	1.14	0.65	1.79
2009-10	1.32	0.18	1.50
2010-11	1.32	0.17	1.49

Note: Offtake figures are combined with offtake against 5% BPL allocation w.e.f. 2002-03.

The Ministry of Rural Development launched the scheme in 2000-01. Indigent senior citizens of 65 years of ago or above who are not getting pension under the National Old Age Pension Scheme (NOPAS) are covered. 10kgs. of food grains per person per month are supplied free of cost under the scheme.

From 2002-03, the scheme has been transferred to State Plan along with the National Social Assistance Programme comprising the National Old Age Pension Scheme and the National and the National Family Benefit Scheme. The implementation of the Scheme at the State level rests with the respective States / UTs. Food grains are released to the State Governments at BPL rates. Allocation/offtake of food grains under the scheme during the 10th Plan period and during the first four years of the 11th Plan-2007-08, 2008-09, 2009-10 & 2010-11 are as under:-

Table- 7 Allocation/offtake of Food Grains

Year	ALLOCATION			OFFTAKE		
	RICE	WHEAT	TOTAL	RICE	WHEAT	TOTAL
2002-03	0.54	0.24	0.78	0.53	0.62	1.15
2003-04	0.56	0.67	1.23	0.45	0.64	1.09
2004-05	0.90	0.77	1.67	0.64	0.68	1.32
2005-06	0.90	0.77	1.67	0.69	0.70	1.39
2006-07	0.90	0.77	1.67	0.61	0.29	0.90
2007-08	0.92	0.77	1.69	0.70	0.30	1.00
2008-09	0.92	0.77	1.69	0.64	0.31	0.95
2009-10	0.61	0.34	0.95	0.55	0.28	0.83
2010-11	0.81	0.34	1.15	0.35	0.16	0.51*

*Offtake Upto December, 2010.

Emergency Feeding Programme (FEP)

Emergency Feeding Programme, is a food-based intervention targeted towards old, infirm and destitute persons belonging to BPL households to provide them food security in their distress conditions. This programme was introduced in 1995-96 covering initially 5 KBK Districts of Orissa with 45, 141 beneficiaries. The Scheme is now being implemented by Government of Orissa in eight KBK Districts namely Bolangir, Kalahandi, Koraput, Malkangiri, Nawarangpur, Naupada, Rayagada and Sonepur of Orissa covering around 2 lakh beneficiaries. Under the scheme, foodgrains (rice) at BPL rates are being allocated to the State Government since May, 2001 by Department of Food & Public Distribution. Annual allocation and offtake of rice during the 10^{th} Plan period and the first four years of the 11^{th} Plan-2007-08, 2008-09, 2009-10 & 2010-11 are as under:

Table- 8 Annual Allocation and Off Take of Rice

YEAR	ANNUAL ALLOCATION	OFFTAKE
2002-03	0.14	0.13
2003-04	0.14	0.14
2004-05	0.14	0.14
2005-06	0.14	0.12
2006-07	0.17	0.14
2007-08	0.17	0.16
2008-09	0.18	0.17
2009-10	0.18	0.17
2010-11	0.18	0.13*

Allocation Upto March, 2011.

*Offtake Upto December, 2010.

Village Grain Scheme

Village Grain Bank Scheme was earlier implemented by the Ministry of Tribal Affairs in 11 States. However, since November, 2004, the scheme has been transferred to the Department of Food & Public Distribution. The main objective of the scheme presently being implemented is to provide safeguard against starvation during the period of natural calamity or during lean season when the marginalized food insecure households do not have sufficient resources to purchase ratios. Such people in need of foodgrains will be able to borrow foodgrains from the Village Grain Bank. The grain banks are to be set up in food scarce areas like the drought prone areas, the inaccessible hilly area which remain cut off because of natural calamities like floods, etc. These villages are to be identified by the concerned State Government/Union Territory. Village Panchayat/Gram Sabha, Self Help Group for NGOs etc. identified by the State Government are eligible to run the Grain Banks.

Under the scheme Rs. 12,200/-per VGB is given as cash component towards infrastructure cost and 40 quintals of foodgrains free of cost. The number of VGBs sanctioned and expenditure incurred since 2005-06 have been as follows:

Table- 9 The Number of VGBS Sanctioned and Expenditure Incurred

Year	VGBs Sanctioned	State where sanctioned	Amount (Rs. In crore)
2005-06	3282	Andhra Pradesh, Orissa, Chhattisgarh, Madhya Pradesh, Jharkhand, Tripura & Meghalaya	19.76
2006-07	8191	Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Himachal Pradesh, Maharashtra, Manipur, Nagaland, Sikkim, Uttarakhand, Uttar Pradesh, and West Bengal	51.79
2007-08	2598	Bihar, Gujarat, Kerala, Manipur, Madhya Pradesh, Nagaland, Orissa, Rajasthan and West Bengal	17.44
2008-09	2407	Manipur, Tripura, Uttar Pradesh and Madhya Pradesh	16.81
2009-10	2214	Andhra Pradesh, West Bengal and Nagaland	17.23
2010-11	1520	Madhya Pradesh and Tripura	11.37*
Total	**20212**		**134.40**

*Amount sanctioned upto 31.12.2010.

Conclusion

Public Distribution System in India, comprising of more than 4.63 Fair Price Shops, better known as, Ration shops, and responsible for distributing to more than 160 million families commodities worth INR 15.000 crores, is one of the biggest of its kind in the world. The PDS has been initiated by the government as a system for distribution of food grains at affordable prices and management of secretary. Over the yare, PDS has become a central tool of the Government for managing the food economy of the country. PDS is currently operated as the joint responsibility of the state and the central governments, through the Food Corporation of India, the central Government has taken over the responsibility of procuring storing, transporting and allocating the food grains to the state Governments. The state Governments are responsible for the operation of the system and it includes the identification of families below the poverty line, allocation of ration within the state, the issuing of ration cards and supervising the functions of FPS. At present, commodities namely Rice, Wheat, Kerosene and Sugar are being allocated to the states for being distributed under PDS. This research study analysis the current PDS of the nation, throwing light on its shortcoming, there by suggesting a model for over coming these short coming with special focus on need of it in the system.

References

A.C. Jena (2002), “Public Distribution System impact, status and Future Programme”. Journal of Kurukshetra. Vol.50. No 12.

Varun Malhotra, Aditi Garg, Adit Dubey, Asif Nasim (2010); “Public Distribution system in India: The problems and Dimensions”. Indian institute of information Technology, Allahabad.

Bhandari.I.K (2010); “Public Distribution System”, RBSA publishers. S.M.S. Highway Jaipur-302 003 (India).

Montek Signh Ahluwalia (2005); “Performance Evaluation of Targeted Public Distribution System (TPDS)”, Planning Commission India Report.

Planning Commission of India Report 2005 and Union Expenditure Budget. Vol. II, ministry of consumer Affairs and Public Distribution in India, 2005-06 till 2001-2012. Available online at www.india budget.nic.in.

Rahim, C.A., Management of Public Distribution System in Andhra Pradesh: Administrative Arrangements in Delivery System, Journal of Rural Development, Jan-March, 1997, Vol. 16(1).

Mohanty, P.C., Mounting Foodgrain Stocks in the Face of Vicious Circle of Hunger; Third Concept, Aug. 2004, Vol. 18, No. 210.

World Bank, World Development Report (19860.

Indian Economy, S.K. Mishra and V.K. Puri.

Food Security in India- Rudder Datt.

Public Distribution, A National and International Perspective-World Bank Discussion Paper No. 380, Radha Krishna R., Subbarao, K., Indrakants, Andravi, K.

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A Comparative Study on National Stock Exchange of India and Shanghai Stock Exchange of China

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Abstract

The Asian stock market grabs a prominent place not only in Asia but also at the global market. In the current globalization era, Asian stock market integration acquires more importance in the work stock market. This paper attempts to compare whether the Indian stock market and Chinese stock market of Asia capture any similarity in price movement, trend, return and volatility. For this purpose, the study covers two indices of Indian and Chinese Stock markets i.e. Standard & Poor's CNX Nifty of National Stock Exchange of India and Shanghai Stock Exchange of Chinese Stock Market. The present study uses monthly data from 2005-06 to 2011-12. The correlation analysis shows the positive relationship between the closing prices of two indices and the Exponential trend line exhibits that S&P CNX Nifty follows the exponential trend. The return and volatility result explains that the return and risk or volatility level is not parallel with each other stock exchanges. It can be concluded that there is no commonality in the movement of closing price of S&P CNX Nifty and SSE 50 indices during the study period.

Keywords: S&P CNX Nifty, SSE 50, Return, Volatility, Exponential Trend.

1. Introduction

Asia is becoming the augmentation centre of the world economy. The dynamics of the world economy is changing from time to time. India and China take place the fourth and the second largest economies respectively in the world in terms of GDP at purchasing power parity[*]. The equity markets are on a high position since 2005. The Asian economies are developing technology wise and are acting as an attraction for foreign capital. The increasing regionalization of economic activities and globalization of financial markets had resulted in co-movement in the prices of stock markets across the world. Due to the increasing interdependence major financial markets all over the world, the transmission of stock price movements among the Asian countries has become a necessary research topic and is commonly termed as stock market integration.

Indian Stock Market

The Bombay Stock Exchange (BSE) is one of the oldest exchanges across the world, while the National Stock Exchange (NSE) is among the best in terms of sophistication and advancement of technology. The S&P CNX Nifty is the headline index on the National Stock Exchange of India Ltd (NSE). The Index tracks the behavior of a portfolio of blue chip companies, the largest and most liquid Indian securities. It includes 50 of the approximately 1430 companies listed on the NSE, captures approximately 65% of its float-adjusted market capitalization and it is a true reflection of the Indian stock market.

China Stock Market

Shanghai was the first city in China to see stocks, stock trading and stock exchanges. Stock trading started in Shanghai as early as 1860s. In 1891, the Shanghai Share brokers Association was established, which was regarded as the primitive form of stock bourses in China. On November 26, 1990, Shanghai Stock Exchange (SSE) came into existence, and on December 19 of the same year, it started formal operations. After 21 years' rapid development, SSE has entered into a new stage with rapidly enlarging market scale, more enhanced fundamental facilities and continuous improved regulation level. After decades of development, SSE has significantly enhanced its technological advantages. It has put into operation the world's most advanced new generation trading system (NGTS), built the global largest stock exchange database, launched a powerful and robust new generation website and established a first-class computer room. In addition, SSE has built a nation-wide securities-specific satellite communication network with complete functions and the largest user base in China. SSE has established a robust and real-time market monitoring system appropriate for market operations. It has put in place a self-regulatory framework that focuses on supervision of listed companies, SSE members and the securities market.

[*] http://www.altiusdirectory.com/Business/top-world-economies.php

2. Review of Literature

Masih, M.M. Abul and Masih, Rumi (1997) examined the dynamic linkage patterns among national stock exchange prices of four Asian newly industrializing countries - Taiwan, South Korea, Singapore and Hong Kong. The sample used comprised end-of-the-month closing share price indices of the four NIC stock markets from January 1982 to June 1994. They concluded that the study of these markets is not mutually exclusive of each other and significant short run linkages appear to run among them.

Agarwal, R N (2000) examined the financial integration of capital markets in developing nations gave insight with regards to the methodology and the area of study followed. In a similar study by Bae, K, Cha, B, and Cheung, Y (1999) the researchers tried to show the information transmission mechanism that operates for stocks which are dually listed. This has helped in understanding the channel of transmission of information that makes the exchanges dependant on each other.

Various papers have investigated the linkages among stock markets in the great China area such as Zhu et al. (2004), Groenewold et al. (2004) and Zhang et al.(2009), or the relationship between China's and foreign stock markets such as Ghosh et al. (1999), Chow and Lawler (2003), Cheng and Glascock (2005) and Li (2007). Among the first group, Zhu et al. (2004) reject causal relationship and co integration between market returns in Shanghai, Shenzhen and Hong Kong; Groenewold et al. (2004) support co integration between Shanghai and Shenzhen, but reject it between mainland markets and Hong Kong and Taiwan. Zhang et al. (2009) find weak return linkage and no volatility spillover between Shanghai and Hong Kong, but volatility linkage on both tails.

Among the second group of papers where international linkages are studied, Chow and Lawler (2003) find no correlation between Shanghai and New York stock returns and negative correlation between their volatilities, using weekly data from 1992 to 2002. They ascribe the negative correlation in volatility as spurious, driven by macroeconomic fundamentals in the United States and China as indicated by a negative correlation between the rates of change in their GDP while their capital markets were not integrated. Li (2007) finds evidence of spillover between Hong Kong and China's stock market with multivariate GARCH using daily data from January 2000 to August 2005, but no spillover between China and US markets; other papers in general also reject co integration relationship or spillover effect between China and the US market.

The above literature shows that the previous researchers have tested the linkages among the stock markets and the relationship between China's and foreign stock markets. They found that there is no causal relationship and co-integration between market returns in Shanghai and other markets. This result insisted the researcher to find out whether National Stock Exchange of India and Shanghai Stock Exchange of China have any similarity in the price movement, trend, return and volatility.

3. Data and Methodology

3.1. Objectives of the Study

The main objectives of the study are

1. To examine the relationship between S&P CNX Nifty and SSE 50 for the study period.

2. To find out whether S&P CNX Nifty and SSE 50 follow the same trend in the price movement during the study period.

3. To compare the return and volatility level of S&P CNX Nifty and SSE 50 indices during the study period.

3.2. Methodology

For the comparative analysis, the period chosen is from 2005-06 to 2011-12 on monthly basis. Data from 2005-06 to 2011-12 were collected from the National Stock Exchange of India and Shanghai Stock Exchange of China websites. The present study has attempted to compare whether the Indian stock market and Chinese stock market of Asia capture the similarity in price movement, trend, return and volatility during the study period. For this, the study considers S&P CNX Nifty of National Stock Exchange in India and Shanghai Stock Exchange 50 (SSE 50) of Shanghai Stock Exchange in China. S&P CNX Nifty and SSE 50 indices which consist of 50 equity stocks are the representatives from the respective securities market by scientific and objective method. This scientific objective is to reflect the complete picture of those good quality large enterprises, which are most influential in their respective securities market. The previous studies show that there is no causal relationship and co-integration between market returns in Shanghai and other markets. This result insisted the researcher to find out whether National Stock Exchange of India and Shanghai Stock Exchange of China have any similarity in the price movement, trend, return and volatility.

3.3. Statistical Tools

The following tools have been used for the study.

1. Adjusted closing price has been used to find the similarities in the price movement, trend and return-risk relationship.

2. Monthly return has been calculated by using the following formula.

$$\left(\frac{\text{Price at the end of the month}}{\text{Price at the beginning of the month}} \right) - 1 \times \quad 100$$

3. Volatility or Risk of the two indices return has been calculated by the following standard deviation formula.

$$\sigma = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(u_t - \bar{u})^2} \qquad \text{---------------- (1)}$$

Where $\bar{u}$ is the mean defined by

$$\bar{u} = \frac{1}{n}\sum_{j=1}^{n} u_j$$

u_j in equation 1 is the estimated volatility per interval. Usually volatility should be expressed in annual terms to compare volatilities for different interval lengths. The following annualization factor (normalising constant) h which is the number of intervals per annum is to be estimated.

$$\sigma_{an} = \sigma * \sqrt{h}$$

If daily data is used, the interval is one trading day and we use h=252, if the interval is a week, h=52 and h=12 for monthly data[†].

3.4. Conceptual Framework

3.4.1. Standard and Poor's CNX Nifty (S&P CNX NIFTY)

The S&P CNX Nifty consists of 50 stock indexes accounting for 23 sectors of the Indian economy. It is used for a variety of purposes such as benchmarking fund portfolios, index based derivatives and index funds. S&P CNX Nifty is owned and managed by India Index Services and Products Ltd. (IISL), which is a joint venture between NSE and CRISIL. IISL is India's first specialized company focused upon the index as a core product. IISL has the marketing and licensing agreement with Standard & Poor's (S&P), who are world leaders in index services.

- The S&P CNX Nifty Index represents about 67.27% of the free float market capitalization of the stocks listed on NSE as on September 28, 2012.
- The total traded value for the last six months ending September 2012 of all index constituents is approximately 55.037% of the traded value of all stocks on the NSE.
- Impact cost of the S&P CNX Nifty for a portfolio size of Rs.50 lakhs is 0.06%.
- S&P CNX Nifty is professionally maintained and is ideal for derivatives trading.

3.4.2. Shanghai Stock Exchange 50 (SSE 50)

[†] There is approximately 252 trading days per annum

SSE 50 Index selects 50 largest stocks of good liquidity and representativeness from Shanghai security market by scientific and objective method. The objective is to reflect the complete picture of those good quality large enterprises, which are most influential in Shanghai security market. SSE Indices reflect overall price changes of stocks listed at Shanghai Stock Exchange from various perspectives. SSE indices also reflect the level of prosperity and overall price changes of each industry, thus provide investors with benchmark systems for different investment portfolios. With security market's growing importance in national economy, an SSE index has gradually become a weatherglass for China's economy.

3.4.3. Adjusted Closing Price

The adjusted closing price is a useful tool when examining historical returns because it gives analysts an accurate representation of the firm's equity value beyond the simple market price. It takes into account all the corporate actions such as stock splits, dividends or distributions and rights offerings.

4. Results

4.1. Relationship between S&P CNX Nifty and SSE 50

Table I shows the adjusted closing price correlation result for the S&P CNX Nifty and SSE 50 indices for the period 2005-06 to 2011-12. The periods 2006-07 and 2008-09 had integration between S&P CNX Nifty and SSE 50. In 2006-07, Shangai stock Exchange got rapid growth in the market due to the rapid gains in the prices of bank stocks, particularly after listing of the Industrial and Commercial Bank of China (ICBC) on the Shangai Stock Exchange. Some analysts argued that the bullish period merely reflected euphoric sentiments associated with Beijing's 2008 Olympic Games.

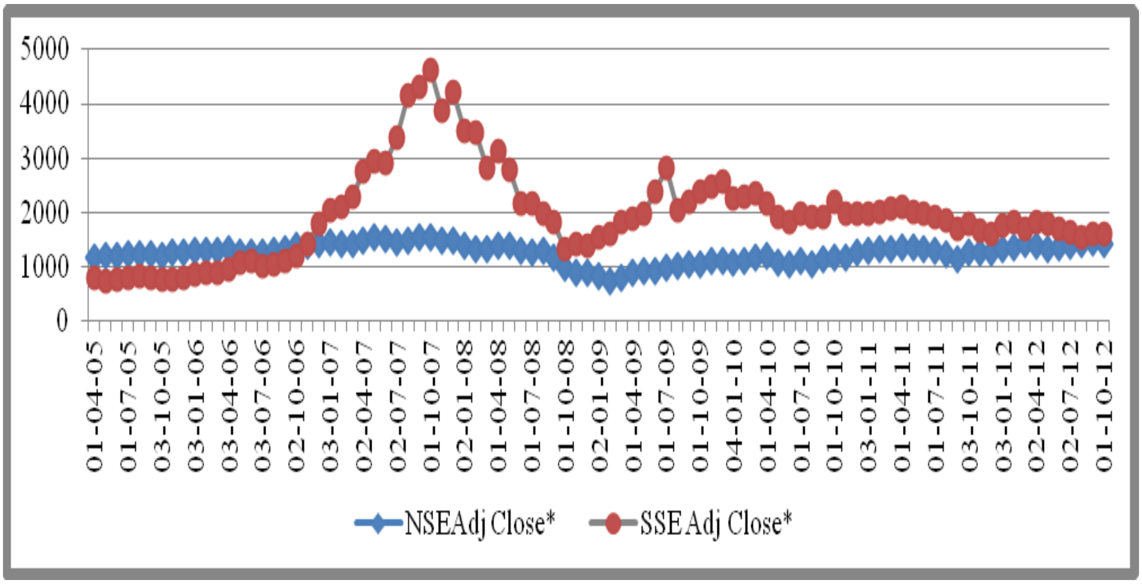
Table I. Correlation between S&P CNX 50 and SSE 50

YEAR	**CORRELATION**
2005-06	0.74839
2006-07	**0.85484**
2007-08	0.36278
2008-09	**0.81231**
2009-10	0.40320
2010-11	0.50708
2011-12	0.43669

The Indian Stock market witnessed a mixed trend in 2006-07. The S&P CNX Nifty recorded a gain of 12.3 per cent in 2006. The healthy corporate results, optimistic investment scenario and strong institutional investor support led the upward trend in the market. Even the Indian markets had recorded severe volatility at the close of 2007-08; S&P CNX Nifty recovered and registered gains during April-

May 2008. It is due to the quarterly profits declared by IT majors, net purchases by Foreign Institutional Investors in the market and the international crude oil prices. The following Chart I also supports the above correlation results of S&P CNX Nifty and SSE 50 indices.

Chart I. Closing Price Relationship between NSE 50 AND SSE 50



Source: Calculated from www.nse.com and www.sse.com

4.2. Trend analysis in the price movement of NSE 50 and SSE 50

Exponential trend

A trend line is most reliable when its R-squared value is at or near 1. When a trend line is fitted to time series data, the graph automatically calculates its R-squared value. A trend line can be drawn with the help of Exponential trend. An exponential trend line is a curved line that is most useful when the data values rise or fall at increasingly higher rates. A trend line cannot be drawn if the data have zero or negative values.

An exponential trend is appropriate when the time series changes by a constant percentage (as opposed to a constant amount) each period. An important feature of this trend is that, if a time series exhibits an exponential trend, a logarithm should be appropriately linear.

The equation for the exponential function is

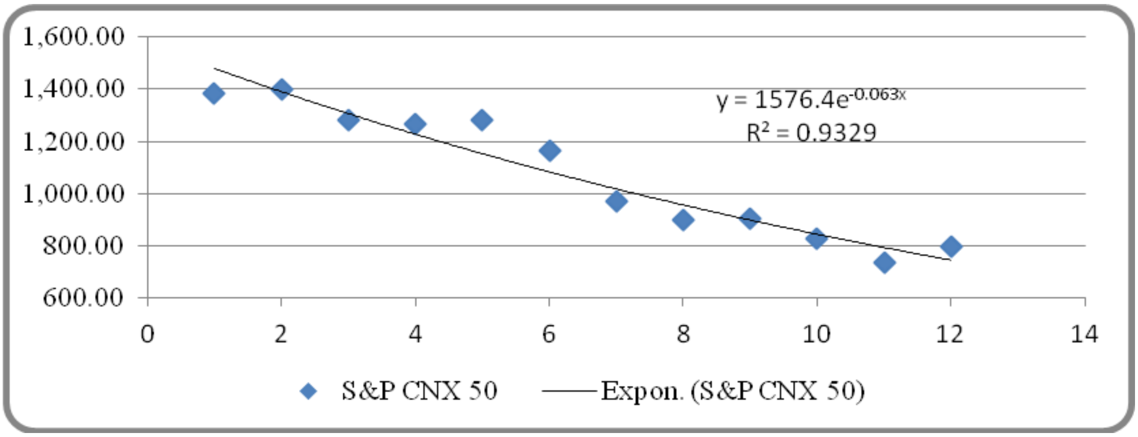
$$Y = ae^{bx} \qquad \text{------------------- (2)}$$

Here, x is the value of the independent variable (for example, say year), while y is the value of the dependent variable (say, for example, annual revenue). The number e (approximately 2.7182) is the base of natural logarithms. In this context, the method has been used to understand the existing trend in the movement of S&P CNX 50 and SSE 50 indices and whether the trends have commonality. In other words, an attempt has been made to find whether two exchanges follow the same pattern in their movements of adjusted closing price and, if so, to what extent they are related.

It can be seen from the following Charts[‡] II, III and IV that S&P CNX Nifty followed the exponential trend quite reasonably after publishing the first volatility index in India VIX[§] in the year 2009. Due to this, now, the market participants have an important tool to assess volatility and create trading strategies to exploit volatility movements. In May 2008, NSE developed a new trading application, NOW, or 'NEAT on Web'. The NOW platform allows trading members to connect to the exchange through the internet, and has resulted in a significant reduction in both the access cost and turnaround time for providing access.

It is also noticed that S&P CNX Nifty's exponential trend has been able to capture the trend quite well in two consecutive years 2008-09 and 2009-10. The R-square value for the two years is nearer to 1 (0.932 and 0.901). It shows that the model is able to explain above 90% of the variations in the index. It is also noticed that the R-square value of SSE 50 is very low except in the year 2006-07. The SSE 50 did not follow the exponential trend during the study period. It is also detected that there is no commonality in the movement of adjusted closing price of S&P CNX Nifty and SSE 50 indices during the study period.

Chart II. Closing Price of S&P CNX Nifty (2008-09)



‡ Other Charts are in Appendix 1

§ Volatility Index is a measure, of the amount by which an underlying Index is expected to fluctuate, in the near term, (calculated as annualised volatility, denoted in percentage e.g. 20%) based on the order book of the underlying index options.

Chart III. Closing Price of S&P CNX Nifty (2009-10)

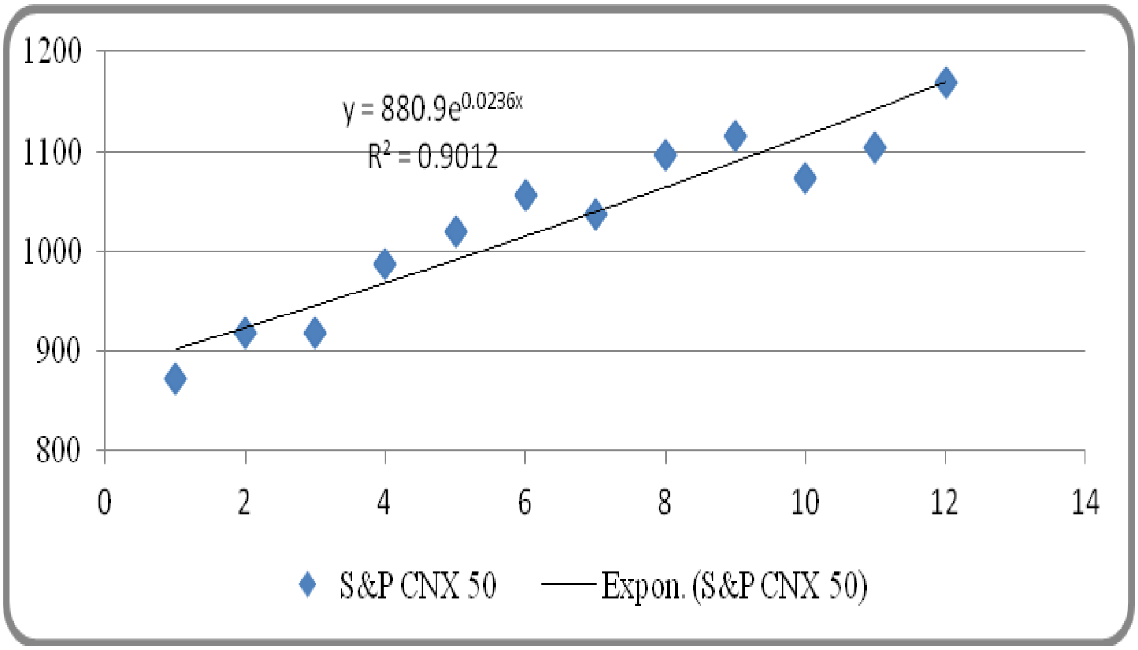
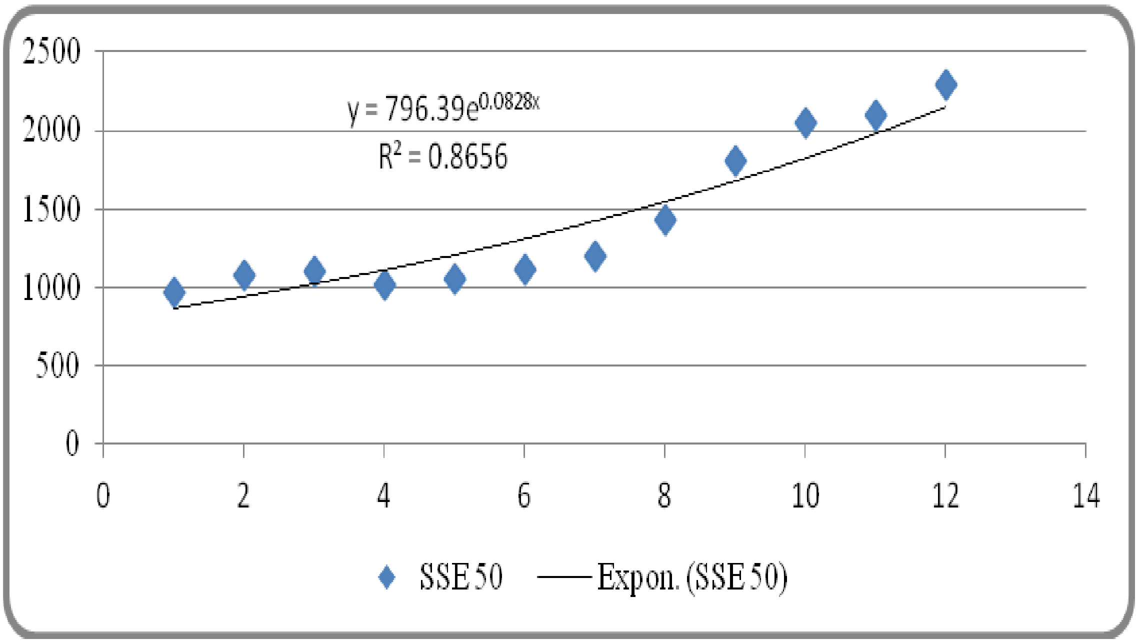


Chart IV. Closing Price of SSE 50 (2009-10)



4.3. Return and Volatility Level Comparison of S&P CNX Nifty and SSE 50

This section compares National Stock Exchange of India and Shangai Stock Exchange of China on the basis of returns and the corresponding risks associated with it, returns being, the single most important factor affecting the performance of any Index. While risk can be termed as the major factor underlying all activity, it becomes imperative to compare the exchanges based on this parameter. Table II and Table III exhibit the historical analysis of return and volatility of S&P CNX Nifty and SSE 50 Index. From the return perspective, it seems to be more fluctuate in both S&P CNX Nifty and SSE 50. Both the indices have positive as well as negative returns.

Table II. Return and Volatility analysis of NSE 50

MON	2005-06		2006-07		2007-08		2008-09		2009-10		2010-11		2011-12	
	Ret (%)	Vol	Ret (%)	Vol	Ret (%)	Vol	Ret (%)	Vol	Ret (%)	Vol	Ret (%)	Vol	Ret (%)	Vol
APR	-44.8	14.0	1.2	-1.8	4.3	-1.6	4.8	0.4	9.4	6.1	1.5	-0.1	2.8	-0.4
MAY	3.0	13.9	-3.1	-1.3	3.3	-1.5	1.1	0.1	5.3	6.4	-8.2	1.4	-1.4	-0.9
JUN	0.0	13.6	0.0	-1.5	-1.8	-1.2	-8.6	0.8	0.0	4.5	-5.4	1.8	-1.8	-0.7
JUL	3.6	13.5	0.5	-1.8	-3.2	-0.8	-1.0	0.7	7.4	4.3	6.9	1.9	-2.1	-0.4
AUG	-1.1	13.0	2.1	-1.7	1.3	-0.8	1.2	0.8	3.4	4.3	-4.7	2.2	-5.7	-0.4
SEP	0.7	13.1	2.5	-1.7	3.6	-0.6	-9.1	1.4	3.6	3.1	8.8	2.9	-7.2	0.2
OCT	-1.8	12.7	3.2	-1.5	1.5	-0.8	-16.9	3.7	-2.0	0.6	3.7	2.9	0.8	2.1
NOV	3.5	12.9	1.6	-1.5	-4.4	-0.2	-7.5	3.7	5.7	0.3	-0.2	2.6	-0.5	2.1
DEC	-0.1	-1.3	1.3	-1.5	-0.9	-0.5	0.8	3.1	1.8	-0.4	6.5	3.0	0.9	1.9
JAN	2.5	-1.4	1.4	-2.4	-6.1	-0.2	-8.6	2.7	-3.7	0.3	2.3	1.8	4.4	2.2
FEB	0.0	-1.4	-2.2	-1.8	-3.5	-0.1	-11.0	2.9	2.9	0.2	3.2	0.9	4.1	2.4
MAR	1.1	-1.7	1.0	-1.9	-0.6	-0.2	8.5	4.7	5.9	0.0	-0.1	0.7	3.1	2.3

Source: Calculated

Table III. Return and Volatility analysis of SSE 50

MON	2005-06		2006-07		2007-08		2008-09		2009-10		2010-11		2011-12	
	Ret (%)	Vol	Ret (%)	Vol	Ret (%)	Vol	Ret (%)	Vol	Ret (%)	Vol	Ret (%)	Vol	Ret (%)	Vol
APR	-5.1	0.1	9.8	1.6	20.5	5.0	10.7	9.1	3.6	9.6	-8.6	3.9	1.4	3.1
MAY	-7.4	0.4	11.9	2.1	6.6	4.9	-10.4	9.1	5.0	9.2	-10.4	4.3	-4.9	3.5
JUN	3.8	1.0	2.2	1.1	-0.8	6.1	-22.3	9.4	19.6	3.5	-5.6	3.3	-1.1	0.8
JUL	3.9	1.5	-7.5	2.7	16.3	5.9	-0.5	9.2	18.3	4.4	9.2	4.3	-4.1	-0.5
AUG	3.6	1.7	2.7	2.7	22.4	5.0	-8.7	7.6	27.3	11.5	-3.2	3.9	-3.5	-0.3
SEP	-2.8	1.6	6.4	2.7	3.8	5.3	-8.3	7.1	7.4	11.4	-0.6	3.0	-8.5	0.7
OCT	-4.3	1.2	7.0	2.8	7.4	4.8	-26.7	8.6	8.1	11.4	14.4	5.2	6.4	1.4
NOV	0.1	1.0	19.4	4.4	-16.2	9.1	6.3	9.5	3.8	10.9	-9.6	5.7	-7.2	1.4
DEC	4.8	1.1	26.7	7.2	8.9	8.0	-1.9	7.6	3.5	10.9	-0.1	5.2	-2.7	1.1
JAN	6.4	0.4	13.7	7.3	-17.2	10.7	11.1	9.6	-12.1	12.1	-0.7	4.3	7.9	2.4
FEB	5.4	0.5	2.1	7.3	-0.8	10.7	3.5	8.2	1.4	10.6	2.9	4.0	4.5	2.8
MAR	-1.6	0.7	9.2	5.1	-18.6	11.4	15.0	9.9	3.4	8.7	3.1	3.3	-6.4	3.0

Source: Calculated

From the risk or volatility perspective, SSE 50 has shown highest volatility except in the year 2005-06. But, nevertheless the SSE 50 has tried to reduce its volatility from 2011-12 onwards. S&P CNX seems to be more volatile in 2005-06 and less volatile in 2007-08. The S&P CNX Nifty has raised its volatility steadily over the last six months from October to March 2012 whereas SSE 50 has tried to reduce its volatility for the same period. The result shows that the return and risk or volatility level is not parallel with each other stock exchange.

5. Conclusion

It is observed that the adjusted closing price movement is positive between S&P CNX Nifty and Shanghai Stock Exchange of China. The percentage change in the adjusted closing price is moderately constant in S&P CNX Nifty Index. It is also noticed that return and volatility or risk level is not parallel with each other stock exchanges during the study period. The increased trend of Indian companies and the high degree of positive relations among the stock exchanges are due to the home country's results. It can be safely said that the global settings are the main reason for the stock market integration and the stock markets do react to global cues only.

Reference

Agarwal, R.N. (2000). Financial Integration and Capital Markets in Developing Countries: A Study of Growth, Volatility and Efficiency in the Indian Capital Market, mimeo. Institute of Economic Growth, Delhi.

Bae, K., Cha, B., & Cheung, Y. (1999). The Transmission of Pricing Information of Dually- Listed Stocks. Journal of Business Finance and Accounting, 26 (5) and (6), June-July, 709-23.

Cheng, H.,& Glascock, J.(2005). Dynamic linkages between the greater china economic area stock markets -- Mainland China, Hong Kong, and Taiwan. Review of Quantitative Finance and Accounting, 24(4):343–357.

Chow, G. C., & Lawler, C.C. (2003). A time series analysis of Shanghai and New York stock price indices. Annals of Economics and Finance, 4:17–35.

Ghosh, A., Saidi,R., & Johnson, K. (1999). Who Moves the Asia-Pacific Stock Markets -US or Japan? Empirical Evidence Based on the Theory of Co integration. Financial review, 34(1):159–169.

Groenewold, N., Tang, S., & Wu, Y. (2004). The dynamic interrelationships between the greater China share markets. China Economic Review, 15(1):45–62.

Li, H. (2007). International linkages of the Chinese stock exchanges: a multivariate GARCH analysis. Applied Financial Economics, 17:285–297.

Masih, A. M. M., & Masih, R. (1997). A comparative analysis of the propagation of stock market fluctuations in alternative models of dynamic causal linkages. Journal of Applied Financial Economics, 7 (1), 59-74.

Zhang, S., Paya, I., & Peel, D. (2009). Linkages between Shanghai and Hong Kong stock indices. Applied Financial Economics, 19(23):1847–1857.

Zhu, H., Lu, Z., & Wang, S. (2004). Causal linkages among Shanghai, Shenzhen, and Hong Kong stock markets. International Journal of Theoretical and Applied Finance, 7(2):135–149.

Appendix

Chart I. Closing Price of S&P CNX Nifty (2005-06)

Chart II. Closing Price of SSE 50 (2005-06)

Chart III. Closing Price of S&P CNX Nifty (2006-07)

Chart IV. Closing Price of SSE 50 (2006-07)

Chart V. Closing Price of S&P CNX Nifty (2007-08)

Chart VI. Closing Price of SSE 50 (2007-08)

Chart VII. Closing Price of SSE 50 (2008-09)

Chart VIII. Closing Price of S&P CNX Nifty (2010-11)

Chart IX. Closing Price of SSE 50 (2010-11)

Chart X. Closing Price of S&P CNX Nifty (2011-12)

Chart XI. Closing Price of SSE 50 (2011-12)

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An Empirical Analysis of Optimal Portfolio Selection using Sharpe's Optimization

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Abstract

Portfolio analysis considers the determination of future risk and return in holding various blends of individual securities. In the rapidly developing and changing capital markets an average investor finds himself in a fix to make decisions regarding the purchase of securities. Therefore, the present study highlights the optimal portfolio selection using Sharpe's Single Index model, through which a significant reduction in the riskiness or variability of the return of securities can be obtained. It tries to provide guidance for investor's rescue from this situation. For the purpose of the study, BSE Sensex index and its securities daily closing prices was collected and analyzed from April 2007 to March 2012. The proposed method formulates a unique cut off point (Cut off rate of return) and selects stocks having excess of their expected return over risk free rate of return surpassing this cut-off point. Percentage of investment in each of selected stocks is then decided on the basis of respective weights assigned to each stock depending on respective beta value, stock movement variance unsystematic risk, return on stock and risk free return vis-a-vis the cut off rate of return. The optimal portfolio consists of six stocks selected out of 28 short listed scripts, giving the return of 10.91 %.

Keywords: Portfolio Analysis, Capital Market, Optimal Portfolio Selection, Risk and Return, Sharpe's Single Index model, BSE Sensex index.

I. Introduction

Portfolio is a combination of securities such as stocks, bonds and money market instruments. The process of blending together the broad assets classes so as to obtain optimum return with minimum risk is called portfolio construction. Portfolio analysis considers the determination of future risk and return in holding various blends of individual securities. Investing and managing the investment is an area, that has grown and changed rapidly over a period of time as the array of investors-individual and institutional- has broadened with the investment in portfolios ranging in asset size from few thousands crores of rupees. Despite its growing stature, the subject of portfolio and investment management is largely misunderstood. In most cases portfolio management has been practiced an investment management counseling in which the investors are advised to seek assets that would grow in value and/or provide income.

Securities carry differing degrees of expected risk leads most investors to the notion of holding more than one security at a time, in an attempt to spreads risks by not butting all eggs in to one basket. Diversification of one's holding is intended to reduce risk in an economy in which every asset's returns are subject to some degree of uncertainty.

1.1 Portfolio Diversification

Diversification of investment helps to spread risk over many assets. Diversification is the strategy of combining distinct asset classes in a portfolio in order to reduce overall portfolio risk. In other words, diversifcation is the process of selecting the asset mix so as to reduce the uncertainty in the return of a portfolio. Diversification helps to reduce risk when one invest in different investment avenues, loss of one avenue would offset against the profit of another investment avenue. The combination of these assets will nullify the impact of fluctuation, thereby, reducing risk. Efforts to spread and minimize risk take the form of diversification.

1.2 Approaches in Portfolio Construction

Commonly there are two approaches in construction of the portfolio of securities viz traditional approach and modern approach.

1.2.1 Traditional Approach

In the traditional approach, investor's needs in terms of income and capital appreciation are evaluated and appropriate securities are selected to meet the needs of the investor. The common practice in the traditional approach is to evaluate the entire financial plan of the individual. It basically deals with two major decisions namely

1) Determining the objectives of the portfolio.2) Selection of securities to be included in the portfolio.

1.2.2 Modern Approach

The path-breaking mean variance portfolio theory of Markowitz published in 1952 together with the capital Asset pricing model of Sharpe brought about revolutionary changes in analyzing investors' attitude towards risk and deriving equilibrium price of capital asset. It includes Markowitz's approach and Sharpe's Portfolio optimization.

A) Markowitz's Approach

According to Markowitz, investors are primarily concerned with two properties of asset, viz risk and return, but by diversification of portfolio it is possible to trade off between them. The essence of his theory is that risk of an individual asset hardly matters to an investor. Markowitz analyses the various possible portfolio of the given number of securities and helps in the selection of best or the most efficient portfolio. Markowitz model shows as to how an investor can reduce the risk i.e., standard deviation of the portfolio returns by choosing those securities, which do not move exactly together.

B) Sharpe's Portfolio Optimization

The construction of an optimal portfolio is simplified if a single number measures the desirability of including a stock in the optimal portfolio. If any person is willing to accept the standard of the single index model as describing the co-movement between the securities, the justification of any stock in the optimal portfolio is directly related to its excess return –to-beta ratio. Excess return is the difference between the expected return on the stock and the risk free rate of interest such as rate of return on the government securities.

In the traditional approach, the stocks are selected on the basis of need for income or appreciation where as in the Sharpe's single model; portfolio selection is based on the risk and return analysis.

II. Review of Literature

Some of the select studies relevant to the present study are reviewed here. They are, Saravan.A and Natarajan.P,(2012) analyzed the optimal portfolio construction using Nifty 50 stocks. The study found that the Nifty stocks were asymmetrical and heterogeneous. Out of 50 companies, 24 companies where market beta is above 1, show that the investments in these stocks are outperforming than the market. It concluded out of 50 stocks, four stocks are selected for the Optimal Portfolio. Meenakshi Rani and Sarita Bahl(2012) found that the eleven out of thirty stocks have expected return greater than risk free rate of return and these eleven stocks have been used for optimal portfolio construction. All the selected stocks have represented positive return. The study concluded that the Sharpe's single index model is of great importance and the framework of Sharpe's single index model for optimal portfolio construction is very simple and useful. The findings of the study will be useful for investors and practically related for the purpose of investing. Varadharajan.P, Ganesh (2012), analyzed the optimum portfolio using Power, Shipping and Textile Sector. It found that portfolio of five stocks with maximum return for a given risk. The proportion of money to be invested in each of the securities is also found out. Yash Pal Taneja and Shipra Bansal (2011) found that the single index model has been successful to reach at the optimum portfolio by diversifying almost all the unsystematic risk. Nanda et al(2010) selected stocks from the clusters to build a portfolio, minimizing portfolio risk and compare the returns with that of the benchmark index i.e. Sensex. Singh (2007), Bansal and Gupta (2000), in their studies tested the efficiency of Sharpe Single Index Model to make optimum portfolio selection. Their results are similar as all concluded that Single index model is efficient in constructing optimal portfolio and portfolio return is much higher than the portfolio variance. Paudel and Koirala (2006) checked the efficiency of Sharpe portfolio optimization model in Nepalese Stock market and identified that portfolio beta is significantly lower than the market beta. Gregory and Shapiro (1986), examined a cross- section of 464 stock and found that average return is more closely related to the beta measured with respect to a stock market index than to the beta measured with respect of consumption growth.

III. Statement of the Problem

"Stock market is an ocean, where dealing in stock market is just like sailing in a ship without a compass". In the current highly volatile economic scenario, every investor is worried about appropriate diversification of his investment portfolio. Most individual investors would engage in some amount of diversification, as they would normally invest in more than one security. But sufficient diversification is required to protect from undue risks that may occur due to unforeseen circumstances. Sharpe's single index model helps to investor to select an optimal portfolio that gives maximum return at minimum risk level. In optimal portfolio construction very few studies have been conducted in India. Therefore, the present study is going to fulfill the research gap in Indian Stock Market a fresh look.

IV. Objectives of the Study

The following are the objectives of the study

- To rank the securities based on excess return to beta.
- To calculate the optimum portfolio, and
- To find the Proportion of investment for each securities in the optimum portfolio.
- To examine risk and returns of the optimal portfolio of sample companies.

V. Methodology of the Study

5.1 Sample of the Study

The study used only 28’ securities listed in the BSE 30 Sensex index. The closing prices of the sample securities for a period of five years from April 2007 to March 2012 and BSE 30 Sensex Index for the corresponding period were collected. For the non-availability data 2 securities of BSE Sensex Index excluded from the study. The study also used 364 days Treasury bill rate as a risk free rate.

5.2 Source of Data

The date pertaining to closing values of BSE, securities price have been collected from PROWESS database. The 364 days Treasury bill rates were collected from RBI website (www.rbi.org.in). Other information was collected from various books and journals of national and international repute.

VI. Tools Used for Analysis

The following are the some of the tools used for the analysis

6.1 Excess Return to Beta

If any person is willing to accept the standard form of the single-index model as describing the co-movement between the securities, the justification of any stock in the optimal portfolio is directly related to its excess return-to-beta ratio. The numerator of this ratio of excess return-to-beta contains the extra return over the risk-free rate. The denominator is the measurement of the non-diversifiable risk that we are subject to by holding risky assets rater than riskless assets.

Excess return-to-beta ratio = $$\frac{R_i - R_f}{\beta_i}$$ ………………...1

R_i = the expected return on stock i , R_f = return on a riskless asset

β_i = the expected change in the rate of return on stock i associated with a 1% change in the market return.

If the stocks are ranked by excess return-to-beta (from highest to lowest), ranking represents the desirability of any stock's inclusion in the portfolio. This implies that if a particular stock with a specific ratio of $(R_i-R_f)/\beta_i$ is included in the optimal portfolio, all stocks with a higher ratio will also be included. On the other hand, if a stock with a particular $(R_i-R_f)/\beta_{i\ i}$ is excluded from an optimal portfolio, all stocks with a lower ratio will be excluded, when the single-index model is assumed to represent the covariance structure of security returns, then a stock is included or excluded, depending only on the size of its excess return-to-beta ratio. The number of stocks to be selected depends on a unique cut-off rate which ensure that all stocks with higher ratios of $(R_i-R_f)/\beta_i$ will be included and all stocks with lower ratios should be excluded. We will denote this cut-off rate by C*.

6.2 Steps in Optimum Portfolio

The following steps are necessary for selection of the stocks that are included in the optimum portfolio.

Step 1: Rank them from the highest to the lowest based on excess return to beta ratio.

Step 2: Proceed to calculate C for all the stocks according to the ranked order using the following equation

$$C_i = \frac{\sigma_m^{2} \sum_{i=1}^{n} \frac{(R_i - R_f)\beta_i}{\sigma_{ei}^{2}}}{1 + \sigma_m^{2} \sum_{i=1}^{n} \frac{\beta_i^{2}}{\sigma_{ei}^{2}}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where,

$\sigma^2 m$ = Variance in the market index

β_i = Beta of the Security i

$\sigma^2 ei$ = Variance of stock's movement that is not associated with movement of market index. This is the stock's unsystematic risk.

R_i = Expected return on security.

R_f = Expected return on security

Step 3 : The cumulated values of C will steadily be rising up to a certain point and thereafter, it will start declining. The highest value of C is considered to be cut-off point. It is considered to be cut -off point. It is denoted as C*

All securities which make up the C* will be selected for constructing the optimal portfolio.

Step 4 : Construction of optimal portfolio does not stop with selection of securities .The proportion of investment in the selected securities also is required. This too is provided by Sharpe. The proportion to be invested in each of the selected securities is found using the following equation.

$$X_i = \frac{Z_i}{\sum_{i=1}^{n} Z_i} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Where,

X_i = Proportion invested in Security i

$$Z_i = \frac{\beta_i}{\sigma_{ei}^{2}} [\frac{R_i - R_f}{\beta_i} - C^*]$$

Though the above process we could select the securities to form the optimal portfolio and also the proportion of investment to be made in each of the selected securities is determined.

Step 5: The portfolio return calculated by using the following equation:-

$$\text{Portfolio Return} = \sum_{i=1}^{n} X_i R_i$$

Where X_i = Proportion invested in Security i R_i = Return on security i

Step 6: portfolio beta is calculated by using the following equation

$$\text{Portfolio Beta} = \sum_{i=1}^{n} X_i \beta_i$$

Where,

X_i Proportion invested in Security I β_i = Beta of Security i

6.3 Constructing Optimal Portfolio

An optimal portfolio is one that may diversify away almost all of the unsystematic risk. But diversification of risk depends on the inter relationship among the securities and their relationship with the market. William Sharpe has developed a model to construct optimal portfolio. The present study tries to form an optimal portfolio using this model.

VII. Results and Analysis of the Study

The analysis of this study is arranged as noted below:

1. Ranking of securities.
2. Selection of securities.
3. Determinig the proportion of investment, and
4. Return and risk of optimal portfolio.

7.1. Ranking of Securities.

According to the Sharpe model for Portfolio optimization, as a first step the securities should be ranked based on the excess return-to-beta ratio. The ratios were calculated for each of the sample securities using equation (1). Table–1 shows ranking of sample securities taken for this study. Table also gives returns, risk free rate, beta and excess return-to-beta ratio. The excess beta ratio gives the risk premium (i.e., return- risk free rate) earned by security for one unit of market risk. According to Sharpe, in an efficient market, only the market risk (systematic risk) will be rewarded. The appropriate measure of systematic risk is beta. Therefore, the securities have been ranked in the descending order based on excess return-to-beta ratio. According to above Table, the security of Hero Motor Corp. Ltd, tops the list, followed by Dr. Reddy's Laboratories Ltd, State Bank of India, Jindal Steel & Power Ltd and so on.

7.2. Selection of Securities

The next step is to identify the securities included in the optimal portfolio. Table -1 gives the ranking of securities results; this step identifies the securities to be included in the optimal portfolio. For this purpose, Sharpe says that the value C (equation 2) is to be calculated for each of security. The results of C are presented in Table-2. The last column gives result of C. The value C steadily increased from 0.006 to 0.026. Thereafter the value steadily declines. According to Sharpe, the highest value of C is the cut-off rate. All the securities with excess return to beta ratio greater than that of the security at the cut -off point are included in the optimal portfolio. As per these norms, all other securities let off. Only the first six securities are eligible for inclusion in the portfolio. Thus, a well diversified optimal portfolio be formed just with six stocks, namely Hero Motor Corpn. Ltd, Dr. Reddy's Laboratories Ltd, State Bank of India, Jindal Steel & Power Ltd, Hindustan Unilever Ltd and Maruti Suzuki India Ltd.

7.3. Determination of Proportion of Investment.

Construction of optimal portfolios does not end with selection of securities. Another equally important decision is determining the amount to be invested in the selected stocks. Sharpe also developed a model for this. The proportion of investment to be invested in the selected securities is computed applying equation (3). The determination of proportion of investment is given in Table-3. The result of X_i shows that the highest proportion goes to the top most stock, the next highest to the next stock, and so on. The construction of optimal portfolio consists of the six stocks.

According to above Table, 33.60% of investment could be made in Hero Motocorp Ltd, while 23.42% in Dr. Reddy'S Laboratories Ltd, 25.09% in State Bank of India, 25.86% in Jindal Steel & Power Ltd., 1.14 in Hindustan Unilever Ltd and -9.06% in Maruti Suzuki India Ltd.

7.4. Return and Risk of Optimal Portfolio

After constructing the optimal portfolios, one would be curious to know the risk and return of the portfolio. The return and risk (Beta) of the portfolio is worked out in Table-4. The portfolio return was equal to 10.91% which is 2.5 times higher than the market portfolio that is 4.47%, BSE 30 companies combined returns.

VIII. Discussion and Conclusions

8.1. Optimum Portfolio with Short Sales

If the Z value is positive, the stock will be held long and if negative, it will be sold short. Stock which are having excess return to beta above C* are held long as in the case of the portfolio without short sales. Stocks with an excess return to beta below C* are sold short. In this study, the Z value is positive for first Five Securities and the last stock was recorded the negative Z value. It indicate that the above five securities namely Hero Motor Corpn. Ltd, Dr. Reddy'S Laboratories Ltd, State Bank of India, Jindal Steel & Power Ltd, Hindustan Unilever Ltd will be held long and Maruti Suzuki India Ltd will be sold short. Saravan.A &Natarajan.P(2012), Singh (2007), Bansal and Gupta (2000), in their studies tested the efficiency of Sharpe Single Index Model to make optimum portfolio selection. Their results are similar and supported to this study, all concluded that Single index model is efficient in constructing optimal portfolio and portfolio return is much higher than the portfolio variance.

8.2. Findings of the Study

The following are the important findings of the study.

- During the study period, stock prices of sample companies highest mean return (0.1172) recorded by the Hero Moto Corpn. Ltd followed by SBI, Jindal Steel &Power Ltd and so, on.
- The Majority of the BSE stocks earned above the market return (0.0447). Few of the securities earned the negative return namely Bharti Airtel Ltd, Bharat Heavy Electricals Ltd, Sterlite Industries (India) Ltd and Oil & Natural Gas Corpn. Ltd with high beta(risk).
- The Top stocks were earned the high return with Minimum risk (low beta) except the SBI and Jindal Steel &Power Ltd. This shows that higher returns are associated with minimum risk.
- On the basis of excess return-to-beta analysis, the best combination of securities (Optimal Portfolio) is Hero Motor Corpn. Ltd, Dr. Reddy'S Laboratories Ltd, State Bank of India, Jindal Steel & Power Ltd, Hindustan Unilever Ltd and Maruti Suzuki India Ltd
- The optimal portfolio yields very high return (10.91 %) as compared to market return (4.47%)
- The beta of optimal portfolio is 0.813.

- The ranking of securities based on risk adjusted returns is different from ranking based on unadjusted return.
- An optimal portfolio consists of just around six stocks out of 28 stocks taken from BSE 30 during study period April 2007 to March 2012.
- The selected stocks belong to the following industrial sectors:-

a) Two Wheeler	b) Pharmaceuticals
c)Banking	d) Steel
e) Consumer Goods	f) Automobile

- The return of the optimal portfolio is very high, i.e, 2.5% higher than market return
- The constructed optimal portfolio will be held long period except the Maruti Suzuki India Ltd.

8.3. Suggestions of the Study

- Investors may be study the performance of the stock market in terms of risk, sensitivity and returns.
- To minimize the risk, investing in portfolio securities is good rather than investing in a single security.
- The present study suggests a combination of securities that give high rate of returns at minimum level of risk for the investors who wish to make an optimal portfolio.
- According to this suggested that the few of the sample companies namely Bharti Airtel Ltd, Bharat Heavy Electricals Ltd, Sterlite Industries (India) Ltd and Oil & Natural Gas Corpn. Ltd reported negative returns with high beta (risk). So these companies's management may take the necessary steps to remove/reduce this risk- return tradeoff.
- It also suggesting that investors who wish to hold the long term investment don't prefer Maruti Suzuki India Ltd shares.

IX. Conclusion

Portfolio analysis considers the determination of future risk and return in holding various blends of individual securities. The construction of an optimal portfolio is simplified if a single number measures the desirability of including a stock in the optimal portfolio. The present study is an effort to find an optimum portfolio and also the proportion of their investment. For the purpose of this study, it considered a sample of 28 stocks in BSE Sensex Index from April 2007 to March 2012. It applied the Sharpe Single Index model to generate an efficient combination of securities from amongst sample of shares and has come up with a subsequent investment pattern. The study found that, the return of the optimum portfolio is higher than the Market return with minimum risk. The analysis of the Portfolio provides enough evidence of the rationality for forming a portfolio of the securities instead of buying only single security. As optimal portfolio found highest weighted average return at low risk, hence, confirming the efficiency of Sharpe Single Index Portfolio Evaluation Model. Constructing a portfolio rather than a stand-alone stock may benefit an investor through diversification and utilization of different risk return combination.

References

I Books

Donald., E. Fischer, Ronald, J.Jordoan., 2005. Security Analysis and Portfolio Management, SixtCreated by userh Edition, Prentice Hall of India, New Delhi.

Edwin, J.Elton, Martin J.Gruber., 1996. Modern Portfolio Theory and Investment Analysis, Fifth Edition, John Wiley and Sons, Asia.

Gordon, J.Alexander, William F.Sharpe, Jeffery V.Bailey., 2001. Fundamentals of Investments, Third Edition, Prentice Hall International, Inc., New Jersey.

Prasanna Chandra., 2002. Investment Analysis and Portfolio Management, Tata McGraw-Hill Publishing Company Limited, New Delhi.

Puniyavathi Pandiyan., 2003. Security Analysis and Portfolio Management, Vikas Publishing House Pvt, Limited.

II.Journal

Bansal S.P.& Sunil Gupta(2000). Portfolio Management – The EPG Approach, Finance India, 14(4).

Chander Shekhar & Mahesh Chand Garg(2001). Portfolio Optimization: Transcending from Theory to Practice. Finance India, 15(3).

Gregory Markiw N. and Shapiro Mathew D, (1986). Risk and Return: Consumption Beta versus Market Beta. The Review of Economics and Statistics. 68 (3): 452-459.

Kandel, S. and Stambaugh, R.F. (1995). Portfolio Inefficiency and the Cross-section of Expected returns. Journal of Finance, 50(1):157-184.

Meenakshi Rani and Sarita Bahl(2012). Optimal Portfolio Selection with or without the Procedure of short sales. Asian j. of Research in Business Economics and Management

Nanda S.R., Mahanty B. and Tiwari M.K.(2010). Clustering Indian Stock Market Data for Portfolio Management. www.elsevier. com/locate/eswa, Expert Systems with Applications. 37(8): 863-879

Paudel, Rajan B and Koirala S (2006). Application of Markowitz and Sharpe Models in Nepalese Stock Market. The J. of Nepalese Business Studies. 3(1): 45-56

Perigon C and Smith D R (2008). Diversification and Value- At Risk. Downloaded from http://ssrn.com/abstract=1015590, pp. 1-29.

Saravan.A and Natarajan.P,(2012). Optimal Portfolio Construction with Nifty Stocks(An Analytical Prescription for investors). Advances in Management. 5(8): 47-53.

Singh S (2007). Portfolio Risk Diversification in Indian Stock Market: A Evidence from S&P CNX Nifty. Thesis submitted to University Business School, Panjab University.

Varadharajan.P, and Ganesh. (2012). Construction of Equity Portfolio of Large Caps Companies of Selected Sectors in India with reference to the Sharpe Index Model. International J. of Physics and Social Science. 2(8): 37-50.

Yash Pal Taneja and Shipra Bansal(2011). Efficient Security Selection: A study of Portfolio Evaluation Techniques. ZENITH International Journal of Business Economics and Management Research. 1(3): 48-60.

III.Websites

1.www.bseindia.com

2.www.rbi.org.in.

Table-1 Ranking of Sample Securities from 1st April 2007 to 31st March 2012

Rank	Company Name	Return	R_f	Beta	$Ri-R_f/\beta$
1	Hero Moto Corpn. Ltd.	0.11728	0.065	0.448112	0.116667
2	Dr. Reddy'S Laboratories Ltd.	0.092787	0.065	0.407443	0.0682
3	State Bank Of India	0.102348	0.065	1.10349	0.033845
4	Jindal Steel & Power Ltd.	0.108884	0.065	1.346732	0.032585
5	Hindustan Unilever Ltd.	0.076933	0.065	0.433257	0.027542
6	Maruti Suzuki India Ltd.	0.074671	0.065	0.697097	0.013874
7	ITC Ltd.	0.070582	0.065	0.560599	0.009958
8	Tata Steel Ltd.	0.066078	0.065	1.313625	0.000821
9	ICICI Bank Ltd.	0.062294	0.065	1.484758	-0.00182
10	GAIL (India) Ltd.	0.063066	0.065	0.773815	-0.0025
11	Hindalco Industries Ltd.	0.057283	0.065	1.249435	-0.00618
12	Mahindra & Mahindra Ltd.	0.052711	0.065	0.94596	-0.01299
13	Infosys Ltd.	0.055443	0.065	0.725484	-0.01317
14	Tata Motors Ltd.	0.047839	0.065	1.159779	-0.0148
15	HDFC Bank Ltd.	0.048318	0.065	0.953464	-0.0175
16	Housing Development Finance Corpn. Ltd.	0.040797	0.065	1.121165	-0.02159

17	Larsen & Toubro Ltd.	0.040145	0.065	1.130212	-0.02199
18	Tata Consultancy Services Ltd.	0.043938	0.065	0.829741	-0.02538
19	Tata Power Co. Ltd.	0.025503	0.065	0.962047	-0.04106
20	N T P C Ltd.	0.032608	0.065	0.78172	-0.04144
21	Cipla Ltd.	0.044097	0.065	0.472858	-0.0442
22	Wipro Ltd.	0.025313	0.065	0.849378	-0.04672
23	Reliance Industries Ltd.	0.005587	0.065	1.187618	-0.05003
24	Sterlite Industries (India) Ltd.	-0.00403	0.065	1.300034	-0.0531
25	Sun Pharmaceutical Inds. Ltd.	0.038003	0.065	0.365567	-0.07385
26	Oil & Natural Gas Corpn. Ltd.	-0.00915	0.065	0.838415	-0.08844
27	Bharti Airtel Ltd.	-0.01512	0.065	0.814408	-0.09837
28	Bharat Heavy Electricals Ltd.	-0.05635	0.065	1.035942	-0.11714

Source: Computed from PROWESS Corporate Database

Table- 2 Selection of Securities

Company Name	(Ri-Rf)*β	C*
Hero Motocorp Ltd.	0.023	0.006
Dr. Reddy'S Laboratories Ltd.	0.011	0.010
State Bank Of India	0.041	0.022
Jindal Steel & Power Ltd.	0.059	0.026
Hindustan Unilever Ltd.	0.005	0.026
Maruti Suzuki India Ltd.	0.007	0.026

Source: Prowess Database.

Table -3 Determination of Proportion of Investment

Company Name	Zi	Total	Xi	Xi%
Hero Motocorp Ltd.	0.00291	0.00867	0.3360	33.60
Dr. Reddy'S Laboratories Ltd.	0.00203	0.00867	0.2342	23.42
State Bank Of India	0.00217	0.00867	0.2509	25.09
Jindal Steel & Power Ltd.	0.00224	0.00867	0.2586	25.86
Hindustan Unilever Ltd.	9.89E-0	0.00867	0.0114	1.14
Maruti Suzuki India Ltd.	-0.00079	0.00867	-0.0906	-9.06

Source: Prowess Database.

Table- 4 Portfolio Return and Beta

Company Name	Return	Beta	Weights	Portfol.Ret	Portflo.Beta
Hero Motocorp Ltd.	0.1173	0.4481	0.3361	3.94	0.1506
Dr. Reddy'S Laboratories Ltd.	0.0928	0.4074	0.2343	2.17	0.0954
State Bank Of India	0.1023	1.1035	0.2509	2.57	0.2769
Jindal Steel & Power Ltd.	0.1089	1.3467	0.2587	2.82	0.3484
Hindustan Unilever Ltd.	0.0769	0.4333	0.0114	0.087	0.0049
Maruti Suzuki India Ltd.	0.0747	0.6971	-0.0907	-0.68	-0.0632
	Portfolio Return		10.91		
	Market Return		4.47		
	Portfolio Risk		0.813		

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A Study on SRI & ESG Investing

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Abstract

SRI and ESG "screens" are particular ways to determine what you have in your investment portfolio. Socially responsible investing (SRI) is a steadily growing market segment. socially responsible investing is done to fund activities that have a high social utility. It involves evaluating companies on CSR issues, analyzing corporate social and environmental risks, and engaging corporations to improve their CSR policies and practices. More and more investors apply socially responsible screens when building their stock portfolios. This raises the question whether these investors can increase their performance by incorporating such screens into their investment process. SRI fund managers employ several screens at the same time such as tobacco, alcohol, community, employee relations, environment, and diversity. Indian investors are not ready for SRI funds as yet since there is a feeling (even among high net worth investors) that fund managers will compromise on returns for the sake of meeting social objectives. Socially responsible investing also has tax advantage. SRI funds, currently, have $3 trillion in assets across the globe. SRI ratings are a valuable information for investors. A simple trading strategy based on this publicly available information leads to high abnormal returns. This immediately raises the question of where this extra profit stems from. Does it result from a temporary mispricing in the market or does it compensate for an additional risk factor? Answering this question seems to be a promising avenue for future research. Investors who choose to place their money in socially responsible investing product accept that their savings are invested in activities related to activities that help people in difficulty, improving housing of society, protecting the environment or even in international solidarity.

Keywords: Investment portfolio, tax advantage, Socially responsible investing, ESG, Returns.

Introduction

Socially Responsible Investment is an investment process that integrates ethical behavior and corporate governance, social and environmental performance of firms in investment decision making. An investor employs positive or negative screens based on non-financial (ethical, social, environmental, corporate governance) criteria to include or exclude firms from his investment horizon. For example, an investor employing negative screen may choose to exclude firms that degrades the environment or deals with liquor and tobacco products. Similarly, another investor employing positive screen may choose to invest only in firms that give equal opportunities to women and minorities. One of the key questions addressed by researchers is whether an investor can improve returns on his portfolio by employing one or more of these screens. Throughout the paper Socially Responsible Investment means investment in firms/funds that foster ethical, social, environmental, and corporate governance issues. Socially responsible investment (SRI)—also called social investing, ethical investing, mission-based investing, or socially aware investing—is "an investment process that considers the social and environmental consequences of investments, both positive and negative, within the context of rigorous financial analysis. As such, SRI serves as the bridge connecting private-sector investors with corporate social responsibility. Within the SRI market, there are a number of important market segments. These include institutional investors, individual investors, community investors, and mutual funds and asset managers, with risk/return profiles ranging from conservative (low financial returns, low risk, and low social impact) to moderate or aggressive (higher returns, risk, and impact). Community investors may, for example, be more likely to accept below-market rates of return for investments believed to have high, positive social impacts. Generally, however, most socially responsible investors are not looking to trade-off financial return for social return. Rather, the growth of the SRI industry has been fueled, in part, by a substantial body of research showing that, on average, SRI funds do not underperform conventional funds.

Main Activities Associated with Sri

There are four main activities associated with SRI

1. portfolio screening
2. shareholder advocacy/engagement
3. community investment
4. Economically targeted investments.

Portfolio Screening: Screening as a risk avoidance function will increasingly become integrated into mainstream analysis, while screening as an investment style for values-driven investors will remain as a niche industry . institutional investors will be integrating material social and environmental issues into their mainstream investment analysis process.In future SRI screening will be framed around a 'risk-management' model of investment analysis, with social, environmental and governance factors weighted in terms of the potential liabilities arising from each company's exposure to them. Portfolio screening uses social or environmental criteria to include or exclude securities from an investment portfolio. It is the most complex and commonly used SRI practice. Social screens may be either negative (e.g., refrain from activities that do harm) or positive (e.g., engage in activities that create social benefits). Common screens include the environment (e.g., emissions, toxic materials, recycling), human rights (e.g., minority and gender treatment), labor rights (e.g., working conditions, pay, benefits), "sin" stocks (e.g., alcohol, tobacco, pornography, gaming), defense/weapons (e.g., arms production or arms sales), and community (e.g., local development, charitable activities). Among these, tobacco is the most commonly applied social screen followed by alcohol and gaming. The choice of screens defines an investor's approach to SRI and its competitive advantage in the marketplace.

Shareholder Advocacy/Engagement

Shareholder advocacy and engagement is the use of shareholder voice and voting to influence corporate behaviour. which is one of the basic strategies of socially responsible investing. But how do investors decide which companies to boycott and which ones to engage? Some cases are obvious.Nike is apparently another of those companies. In the 1990s investors became aware of many of the Third World locations where the athletic shoe and apparel company was making its products – and the poor conditions that the workers in those supply companies were laboring under. So they began pressuring Nike to make changes. The company was dropped from the Domini 400 Social Index. Some investors sold the stock and the share price declined. Others maintained discussions with management. The company responded and instituted new policies to benefit its supply chain workers. It has improved its transparency as well. Investors can find the names of countries in which it operates on the corporate web site and the names of contract factories with which it does business. Today Nike is back in the Domini 400 and viewed more favorably by socially conscious investors. Shareholder advocacy and engagement is the use of shareholder voice and voting to influence corporate behavior. Examples include dialogue with firms on social issues, filing resolutions at shareholder meetings, and participating in initiatives encouraging better social behavior. Shareholder action takes two main forms. The first is dialogue or engagement; its objective is to engage management in discussions on environmental or social issues. The second, typically undertaken only after an unsatisfactory initial engagement, is to file a resolution at a company's shareholder meeting and put an issue to vote among shareholders.

Community Investment: Community investment is the use of finance to support economically disadvantaged communities, persons, or businesses underserved by mainstream financial institutions. Community investing makes it possible for local organizations to provide financial services to low-income individuals, supply capital for small businesses, and provide vital community services, like affordable housing, child care, healthcare, education, mentoring, and technical support. Community investing seeks to build relationships between families, nonprofits, small businesses, and conventional financial institutions and markets. The community investment industry is evolving rapidly in terms of investment products, data and information sharing, and other innovations that make it easier for a broad range of investors to participate in community investment. These developments include Opportunity Finance Network's CARS rating system, the CDFI Data Project, and the Social Investment Forum's Community Investing Center.

There are four primary types of community investment institutions commonly referred to as community development financial institutions (CDFIs):

a. Community Development Banks (CDBs)

b. Community Development Credit Unions (CDCUs)

c. Community Development Loan Funds (CDLFs)

d. Community Development Venture Capital Funds (CDVCs)

Community Development Banks (CDBs) operate much like conventional banks, but they focus On lending to rebuild lower-income communities. They offer services available at conventional banks, including federally insured savings, checking, certificate of deposit, money market, and individual retirement accounts. Fifty-four CDBs account for the largest amount of assets in measured CIIs.

Community Development Credit Unions (CDCUs) are the second-largest type of CII, with assets of $5.1 billion. Over 275 membership-owned and -controlled nonprofit CDCUs serve people and communities underserved by mainstream financial institutions. These regulated institutions offer federally insured accounts and other services available at conventional credit unions.

Community Development Loan Funds (CDLFs) pool investments and loans provided by individuals and institutions to further community development in specific geographic areas. CDLFs are not federally insured, though investor money is protected by collateral, loan-loss reserves, and the institution or fund's net worth.

Community Development Venture Capital Funds (CDVCs) make equity and equity like investments in highly competitive small businesses that have the potential for rapid growth. SRI considers both the investors financial needs and an investment impact on the society. By including these factors in their investing process these investors align their investments (Financial returns) with their personal values. socially responsible investors favour corporate that follow environment stewardship, consumer protection, corporate governance, human rights and diversity. By including these factors in their investing process these investors align their investments with their personal values. As human beings we all nuture within ourselves a deep desire to serve the community we live in. There are many instances where successful individuals have committed a large part of their wealth for charitable purposes .The two most notable examples being warren buffet and Bill Gates who have committed billions of dollars to the cause of AIDS and other welfare activities.

Table 1:- Investment Funds Incorporating ESG Factors 1995-2010

	1995	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2010**
No of Funds	55	144	168	181	200	201	260	493
Total Net Assets in Billion	$12	$96	$154	$136	$151	$179	$202	$569

Source:- Social Investment Forum Foundation Note:- ESG includes mutual funds, close ended funds, ETF's, alternative investment funds and other pooled products.

Table 2:-Socially responsible Investing in the US 1995-2010

	1995	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2010**
ESG Incorporation	$162	$529	$1,497	$2,010	$2,143	$1,685	$2,098	$2,512
Shareholder Advocacy	$473	$736	$922	$897	$448	$703	$739	$1,497
Community Investing	$4	$4	$5	$8	$14	$20	$25	$41.70
Overlapping Strategies	N/A	($84)	($265)	($592)	($441)	($117)	($151)	($981.18)

Source:- Social Investment Forum Foundation

Note:- Overlapping assets involved in some combination of ESG Incorporation , Filing shareholder resolutions or Community Investing are subtracted to avoid potential effects of double counting . Separate tracking of the overlapping strategies only began in 1997 , So there is no datum for 1995.Prior to 2010 assets subject to ESG Incorporation were limited to socially and environmentally screened assets.

S&P ESG India Equity Indices

The S&P ESG India index provides investors with exposure to 50 of the best performing stocks in the Indian market as measured by environmental, social, and governance parameters.

Sponsored by the International Finance Corporation (IFC), and developed by a consortium of S&P Dow Jones Indices, CRISIL, and KLD, the index represents the first of its kind to measure environmental, social, and corporate governing (ESG) practices based on quantitative as opposed to subjective factors. The index employs a unique and innovative methodology that quantifies a company's ESG practices and translates them into a scoring system which is then used to rank each company against their peers in the Indian market. Unlike previous indices of this kind that measure ESG parameters on a committee and internal consensus basis, the S&P ESG India index and its quantitative scoring system offers investors complete transparency.

Index Methodology

The creation of the index involves a two step process, the first of which uses a multi-layered approach to determine an 'ESG' score for each company. The second step determines the weighting of the index by score.

Quantitative Score: Each company is assigned a quantitative ranking based on three factors – transparency and disclosure on corporate governance, environment, and social governance as per the company’s published information.

Table 3:-Showing Top 10 Companies By Weight

Company	Float Adjusted Market Cap (INR Billion)	Index Weight	Industry
Reliance Infrastructure Ltd.	18,843.88	2.93%	Power
I T C Ltd.	17,432.12	2.71%	Cigarettes
Lanco Infratech Ltd.	17,387.06	2.70%	Construction
Larsen & Toubro Ltd.	17,116.23	2.66%	Engineering
Bharat Petroleum Corporation Ltd.	16,945.75	2.63%	Refineries
Reliance Capital Ltd.	16,936.68	2.63%	Finance
IDFC Ltd.	16,723.96	2.60%	Financial Institution
HCL Technologies Ltd.	16,208.55	2.52%	Computers - Software
Mahindra & Mahindra Ltd.	15,559.40	2.42%	Automobiles - 4 Wheelers
IndusInd Bank Ltd.	15,509.28	2.41%	Banks

Source:- Nseindia.com http://www.nseindia.com/content/indices/Factsheet_SP_ESG_India.pdf

Table 4:- Showing Index Performance

Returns	1 Month	7.69%
	3 Month	-5.22%
	YTD	17.19%
Annualized	1 Year	-7.94%
	3 Year	11.37%
	5 Year	11.69%
Returns	3 Year	11.37%
	5 Year	11.69%
Annualized	3 Years Std Dev	23.03%
Risk	5 Years Std Dev	34.27%

Source: India Index Services & Products Ltd. (IISL), nseindia.com

Table 5:- Showing Index Portfolio Characteristics

Number of Companies	50
Market Cap (INR Billion)	643,368.36
Company Size By Market Cap (INR Billion):	
Average	12,867.37
Largest	18,843.88
Smallest	8,445.12
Median	12675.03
% Weight Largest Company	2.93%
Top 10 Holdings (% Index Weight)	26.22%

SRI in Indian Context

India's foray into benchmarking SRI was made when the S & P ESG index was developed by S & P & CRISIL .The objective of the index is to measure environmental ,social and governance practices based on quantitative rather than subjective factors.

Index constituents are derived from the top 500 indian companies by market capitalization that are listed on the NSE. These stocks are then screened based on company's ESG(Environmental, social and governance)disclosure practices and assigned scores .Top 150 companies with highest quantitative scores are selected and then evaluated on qualitative factors. Liquidity is used as a separate factor and only stocks that have traded a min of Rs 250billion in the last 12 months are selected. Out of these the final 50 companies that would constitute the index are selected.

The first ever SRI fund in the Indian mutual fund industry was launched by ABN AMBRO Asset management company(Now FORTIS) in the year 2007 called ABN AMBRO Sustainable development fund. It received a moderate response from the investors and in terms of performance has not been able to give much to the investors which can also be due to adverse market conditions prevailing in the industry. Indian mutual fund industry has still a long way to go in catching up with their global peers in terms of AUM and schemes managed as per SRI norms.

Factors that would Drive SRI in Future

External pressure such as media, legislations, supranational initiatives such as UNPRI ,pension funds and asset owners would be the driving force for socially responsible investing, in times to come. SRI will become part of the risk reduction process, and taken for granted by the investment management industry. Over the decade SRI is predicted to grow exponentially. because it is their fiduciary duty to look at issues, including non-financial issues such as employee discrimination and climate change, that ultimately can have dramatic impacts on shareholder value. SRI is expected to make a successful transition from the margins to the mainstream.

Integrating ESG Issues into Executive Pay

Executive remuneration is One of the major element of corporate governance between Institutional shareholders & investee companies. remuneration packages should be designed in such a way as to optimize financial results and promote sustainable behavior without generating or exacerbating systemic risks that might undermine investors' long-term interests. Nowadays companies have started integrating ESG factors in incentive mechanisms for senior management but there is no proper way to link ESG metrics to executive pay. Considering the potential influence of ESG factors on performance, ideally all companies would link executive compensation to key ESG metrics.In some cases it might not be practical because of the difficulties in measuring ESG factors .Companies consider ESG metrics that are relevant to their business and clearly disclose the rationale for linking them to executive pay & those companies that do not want to integrate ESG components in compensation packages should provide adequate explanation for the same.

Positive Effects of Integrating ESG Metrics into Executive Pay

1. Aligning executives' incentives with long-term strategic plans helps in sustained shareholder value creation

2. Identifying major value drivers and the risk associated with the relevant company and sector triggers new business opportunities

3. ESG issues are more likely to be integrated into the company's dialogue with shareholders on its business strategy, effectively acknowledging their impact on corporate performance.

Challenges in Linking ESG Metrics to Executive Compensation Package

1.There is no proper universal standard to assess relevant ESG Risks and opportunities.

2.There is risk of creating additional ways to pay executives without concretely promoting a holistic approach towards sustainable performance.

Conclusion

SRI will experience significant growth over the decade, SRI as an investment style will move away from exclusionary screening and best of class selection of stocks towards an integrated assessment of both financial and non-financial considerations. Firms are now offering specialized services in SRI arena, where in they recommend products that are in line with clients risk profile and long term financial goals, but at the same time take into consideration the social concerns of the client. Every analyst will be considering questions of corporate governance, environmental management, corruption, health and safety, etc. as basic components of good management and an indicator of promising financial performance. In future there will be teams of financial and SRI analysts working together to develop portfolios. SRI will come to be known as "responsible investing". Everyone" will be a SRI consumer in future as a result of the mainstreaming trend and due to growing awareness of sustainability issues. Many people are becoming aware of the impact of global warming on our lives. But are not aware of what contribution they can make to address this issue. Often pressures related to time ,family,work act as a constraint in their taking a proactive decision . It is important to strike a balance between SRI and the financial goals of the client without any adverse impact on the prospective returns. for retail investors the low cost option would be SRI based mutual funds. It has also been observed companies that are more socially responsible tend to give better and more stable returns than their peers who do not share the same principles .Reliance industries, wipro,Aditya Birla Nuvo,Bharti, HDFC are all constituents of S & P ESG index .

Reference

http://www.corostrandberg.com/pdfs/Future_of_SRI_Study.pdf

http://www.nse-india.com/products/content/equities/indices/thematic_indices.htm#

www.spindices.com

www.djindexes.com

http://www.unpri.org/files/Integrating%20ESG%20issues.pdf

http://www.irrcinstitute.org/pdf/FINAL_IRRCi_ESG_Endowments_Study_July_2012.pdf

http://www.bsr.org/reports/BSR_Trends_in_ESG_Integration.pdf

http://www.top1000funds.com/analysis/2012/02/17/esg-seeks-meaningful-relationship-with-performance/

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An Analysis of Relationship between Occupational Stress and Demographics in Cement Industries

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Abstract

The present research attempts to investigate the effect of different types of managerial positions in cement industries in Tamilnadu, India. The study examines the incidence of occupational stress in reference to the problems that arise due to the interface of occupational stress with type of managers. The extent of work stress were examined on role overload, role ambiguity, role conflict, unreasonable group and political pressure, responsibility for persons, under participation, powerlessness, poor peer relations, intrinsic impoverishment, low status, strenuous working condition and unprofitability of occupational stress index. It was hypothesized that there is significant relationship exist between demographic factors of the executives and occupational stress and higher the occupational stress among the different levels of managers. The final data was collected on 300 managers which include 80 top level managers, 120 middle level managers, 100 low level managers. Researcher used structures questionnaires, it contains two parts; first part consists of demographic factors like age, gender, designation, monthly income, marital status and experience. Second part used to identify the occupational stressors. Researcher used occupational stress index (OSI) developed by Srivastava & Singh (1984). The scale consists of 46 items each having five alternatives such as strongly agree, agree, undecided, disagree and strongly disagree. Correlation analysis, one way ANOVA and independent T Test was done among all the demographic variables and occupational stress.

Keywords: Occupational stress, Demographic difference, cement industry.

Introduction

There are many studies conducted among the managers and white collar personnel working in different industries in different countries. The needs for dealing with stressors have been empirically established. A study of the literature reveals a formidable list of over 40 interacting factors which might be sources of managerial stress those to be dealt with here were drawn mainly from a wider body of theory and research in a verity of fields. The researcher has selected after a brief study, the most of the stressors have been found among the managerial cadres of cement industry. In Tamilnadu, India there are seven companies (Associated Cements Company Limited, Chettinadu Cements Corporation Limited, Dalmia Cements Limited, Dharani Cements Limited, India Cements Limited, Madras Cements Limited and Tamilnadu Cements Corporation Limited) manufacturing cements. In that seven, except Associated Cements Company Limited And Dalmia Cements Limited other five companies have their head offices in Tamilnadu. In this Madras Cements Limited (MCL) and Tamilnadu Cements Corporation Limited (TANCEM) are selected for analysis. MCL, a private sector unit and TANCEM, a public sector unit situated in Tamilnadu, India have been selected for the purpose of the study. Reasons for stress among the managers are similar in both units. But some issues like employment pattern, job security, and incentive systems are perceived to be different among managers of these two units. This research aims to understanding wide coverage of stressors among the managers of cement industries in Tamilnadu.

Review of Literature

The concept of job stress and how it affects work has received substantially attention in organizational research in recent years both in India and abroad. Richard S.Lazarus and Susan Folkman (1985) pointed out that, it is vertically impossible today to read extensively in any of the biological or social sciences without running into the term ‘stress’. Even more extensively discussed in the health care fields, and it is found as well in economics, political science, business and education. Luthans (1995) defined stress as an adaptive response to an external situation that results in physical, psychological and behavior deviations. Schuler (1980) feels that not a great deal is known about stress either academically or organizationally and there exist no common definition or conceptualization of stress.

Selye (1956) defines stress is the non specific response to any demand. Hall and Mansfield (1971) defines stress is an external force operating on a system, be it an organization or a person. Strain is the change in the state of an internal system which results from this stress-stress and strain, they are not synonymous. French et al., (1974) defines stress is misfit between a person’s skills and abilities and demands of the job and a misfit in terms of a person’s needs supplied by the job environment. Caplan et al.,(1975) define it as any characteristics of the job environment which poses a threat to the individual. Cooper and Marshall (1976) indicate by occupational stress is meant negative environmental factors or stressors (e.g. work overload, role conflict, role ambiguity, poor working conditions) associated with a particular job.

Stressors are the environmental factors that produce stress. Stated differently, stressors are a prerequisite to experiencing the stress response. Individual, group, organizational and extra organizational are the major types of stressors. Individual stressors means it directly associated with person's job duties. Group level stressors are caused by group dynamics and managerial behavior. The office design and general office environment are the main organizational level stressors. Extra organizational stressors are associated with outside factors like conflict between career and family, socio economic status.

Stephen Robbins (1998) stress has behavioral, cognitive and physiological consequences or outcomes. A large body of research supports the winding up that stress produces harmful physiological outcomes. Robbins feels, people do not experience the same level of stress or exhibit similar outcomes for a given type of stressors. It produces less force on people with a strong social support network and those employ a variety of coping strategies. Glowinkowski & cooper (1986) have thoroughly analyzed the factor associated with managerial stress. Work overload, role ambiguity, role conflict and poor inter personal relations are the some examples for managerial stressors. Job pressures and usage of drugs can be increase the managerial stress. Bhandarker & Singh (1986) study significant the above review. His study concludes that personal life style and habits played a significant role in stress prevention and control. Norfolk (1987) results reveal that executive stress affects the performance financially. In US ten to twenty billon dollars of loss happened due to executive stress. Menon & Akhilesh (1994) result highlighting those executive stressors includes role ambiguity, pressure for performance, frequent travel, crisis management and maintaining status. Abdoolcarim (1995) study reveals executive stress is rising like any thing in Asian countries & companies. Work discriminations and unpaid overtime are the some stressors.

Objectives

The ultimate purpose of the study is to find out the level of occupational stress among three different levels of managers in two cement units in Tamilnadu.

1. To highlight the effect of job related factors on occupational stress.

2. To explore the relationship of demographic factors on occupational stress.

Hypothesis

H_{01}: There is significant relationship exist between demographic factors of the executives and occupational stress.

H_{02}: Higher the occupational stress among the different levels of managers.

Methods

The researcher used descriptive and diagnostic study attempting to obtain a complete and accurate explanation of the circumstances. Therefore the researcher has used survey method through tested structures questionnaires for recognize the stressors existing in cement industries. From the population of 556 managers working in all levels in tamilnadu cements and madras cements, sample of 300 managers were selected using stratified random sampling technique. Sample includes 80 top level executives, 120 middle level executives and 100 low level executives. Structures questionnaires contain two parts; first part consists of demographic factors like age, gender, designation, monthly income, marital status and experience. Second part used to identify the occupational stressors. Researcher used occupational stress index (OSI) developed by Srivastava & Singh (1984). The scale consists of 46 items each having five alternatives such as strongly agree, agree, undecided, disagree and strongly disagree. The scale identifies occupational stresses such as role overload, role ambiguity, role conflict, political pressure, powerlessness, low status, poor relations, responsibilities for persons and strenuous working conditions. The reliability index ascertained by the authors, using split half method and cornbach alpha co-efficient for the scale were found to be 0.935 and 0.900 respectively. The scale was also found to be highly valid. The collected data were analyzed using SPSS17 version. The researcher used descriptive statistics, independent T test, one way ANOVA and correlation for statistical analysis.

Findings

Table 1: Descriptive Statistics

Demographic variables	Options	Frequency	Mean	S.D
Gender	Male	146	54.26	6.90
	Female	**154**	**56.66**	**7.74**
Organization	**Madras cements**	**150**	**56.93**	**7.77**
	Tamilnadu cements	150	54.05	6.80
Distance between residence	Less than 10 Kms	244	54.86	7.79
	More than 10 Kms	**56**	**58.27**	**4.70**
Marital status	Married	278	55.11	7.25
	Unmarried	**22**	**60.37**	**8.03**
Educational qualification	UG	76	53.71	5.87
	PG	**224**	**56.10**	**7.81**
Monthly income	Below 15000Rs	166	55.02	7.96
	15001-25000Rs	84	55.03	7.64
	25001-35000Rs	26	57.16	3.19
	Above 35000Rs	**24**	**58.60**	**5.02**
Designation	Upper level	60	15.74	10.03
	Middle level	**140**	**26.55**	**18.82**
	Low level	100	19.52	1.03
Age	**20-30 years**	**38**	**59.71**	**7.01**
	31-40 years	66	55.89	1.90
	41-50 years	138	54.88	6.75
	Above 50 years	58	53.74	7.78

Above table infers that female managers have high mean value (56.66) than male managers. So that female managers have more occupational stress. Madras cements have high mean value (56.93) than tamilnadu cements. Madras cements managers have more occupational stress. Managers who comes from long distance they have more occupational stress. Unmarried managers have facing more occupational stress compared to married managers. It is evident from the table that managers with P.G qualification have more occupational stress than their counterparts. Middle level managers have more stress than other levels of managers. Because middle level managers act bridge between low level and top level managers. Managers who are all belong to 20-30 years groups have more occupational stress than other age groups.

Table 2: T-Test for Occupational Stress of the Managers and Demographic Details

Demographic variables	Options	T-value	H_0
Gender	Male	2.12	Accepted
	Female		
Organization	Madras cements	3.42	Accepted
	Tamilnadu cements		
Distance between residence	Less than 10 Kms	4.25	Accepted
	More than 10 Kms		
Marital status	Married	2.98	Accepted
	Unmarried		
Educational qualification	UG	2.8	Accepted
	PG		

The significance of statistical difference is computed for gender, organization, distance between residence and organization, marital status and qualifications of the managers. Independent sample T test is applied to test the hypothesis that there is significant difference in the mean score of occupational stress level and demographic details like gender, organization, distance between residence and organization, marital status and educational qualifications of the manager.

Table 3: One Way ANOVA for Occupational Stress of the Managers and Demographic Details

Demographic variables	Source	D.F	S of S	Mean Square	F-ratio	H_0
Monthly income	Between groups	3	359.18	119.72	2.19	Rejected
	Within groups	296	16155.81	54.58		
	Total	299	16514.99			
Designation	Between groups	2	5047.4	2523.7	12.13	Accepted
	Within groups	297	61742.88	207.88		
	Total	299	66790.28			
Age	Between groups	3	915.11	305.03	5.78	Accepted
	Within groups	296	15599.89	52.7		
	Total	299	16515			

Table shows that income difference is not statistically confirmed by the obtained F-ratio (2.19), which is non-significant. All level of income groups has experiencing same amount of occupational stress. Designation difference is confirmed statistically by the obtained F-ratio (12.13) which is highly significant. Different levels of managers have facing different amount of occupational stress. Age difference is confirmed statistically by the obtained F-ratio (5.78) which is highly significant. Different age groups of managers have experiencing different amount of occupational stress. Hence the hypothesis is accepted for designation and age.

Table 4: Correlation between Demographic Variables and Occupational Stress

Correlation	Income	Age	Education	Marital status	Gender	Distance
Occupational stress	-0.204**	0.052	0.1293	-0.333**	0.147	-0.116

** Significant at 5%

The above table shows that correlation between the demographic variables and occupational stress. Negative correlation indicates that there is an indirect relationship between the variables. Here income and marital status of the managers are negatively correlated with occupational stress.

Discussion and Conclusion

The present investigation was an attempt to study the occupational stress of the managers and how demographic variables influences occupational stress. In this regard, certain conclusion has emerged as result of both acceptance and rejection of the formulated hypothesis. This study aims at verifying the managers old by age have more occupational stress than mangers young by age. It found that unmarried managers have more stress. The researcher tried to find out whether the managers educational qualification influence their occupational stress. The result showed that high qualified managers have more occupational stress than less qualified managers. Managers native place distance from their organizations also influences the occupational stress.

There are number of realistic aspects of the research which can use managers to improve their managerial activities and enhance operational efficiency and effectiveness. They can make their performance better, while taking a following into concerns: chalk out plan to mange with stress of all level managers; take defensive measures to avoid irresistible stress especially in female managers; developing recreation training programs and participative culture; adequate support from all levels.

Reference

Bhandarkar, A., & Singh, P. (1986). Managerial Stress: A sturdy in cyclical perspective. ASCI Journal of Management, 16, 25-59.

Caplan, R.D., Cobb, S., French, J.R.P. Jr., Harrison., R.V and Pinnean, S.R., J.R. (1975). Job demand and Worker Health.

Cooper, C.L and Marshall, J. (1976). "Occupational sources of stress: A Reivew of the literature realting to coronary health diseases and mental ill health", Journal of occupational pshchology, 49, II-28.

Cooper, C. L. 1985. The road to health in American firms. New Society, 335–336.

Cooper, C. L., & Cartwright, S. 1994. Healthy mind; healthy organizations-a proactive approach to occupational stress. Human Relations, 47: 455–471.

Cooper, C. L., Kirkaldy, B. D., & Brown, J. 1994. A model of job stress and physical health: The role of individual differences. Personality & Individual Differences, 16: 653–655.

Cooper, C. L., & Marshall, J. 1978. Understanding executive stress. London: Macmillan

French, J.R.P. Jr., Rogers, W. and Cobb, S.(1974). "Adjective as a person- environment fit ", coping and adaptive: Interdisciplinary perspective, (New York: Basic Books).

Glowinkowski, S. P., & Cooper, C. L. 1986. Managers and professionals in business/industrial settings: The research evidence. Journal of Organizational Behavior Management, 8: 177–193.

Hall, D.T and Mansfield, R. (1971)."Organizational and individual response to external stress", Administrative Science Quarterly, 16, 533-547.

Kumar, S., & Darolia, C. R. (2006). Adaptive and maladaptive coping style in relation to stress and emotional control. Presented in the 10th International & 41st National Conference of Indian Academy of Applied Psychology February 16 –18, 2006, Chennai, India

Lazarus, R.S., & Folkman, S. (1984). Stress, Appraisal and Coping. New York: Springer.

Luthans, F. (1995) organizational behavior, McGraw hill, Inc.,7th edition, new delhi.

Robbins, S. P. (1998). Organizational behavior. New York: Prentice Hall.

Schuler, R.S (1980) organizational behavior and human performance, 24, 115-130.

Selye, H (1956). "Stress and the general adaptation syndrome". Br. Med. J. **1** (4667): 1383–92. PMC 2038162. PMID 15426759.

Srivastava, A.K. (1997). Self management of occupational stress: Cognitive – behavioural approach. INDIAN JOURNAL OF INDUSTRIAL RELATIONS, 32, 487-95.

Srivastava, K.K., & Singh, A.P. (1981) Construction and standardization of an occupational stress index; a pilot study. Indian Journal of Clinical Psychology, 8,133-136.

Watson, D., & Pennebaker, J. W. 1989. Health complaints, stress, and distress: Exploring the central role of negative affectivity. Psychological Review, 96: 234–254.

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A Study on the Organizational Commitment of Managers in Public Sector Banks of Andhra Pradesh

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Abstract

The level of Organizational Commitment and the personal factors influencing it was explored with samples of managers in public sector banks in the State of Andhra Pradesh using Mayer and Allen's three dimensional Organizational Commitment Scale. Results show that bank managers in general are positively oriented in their intensity of commitment towards their organization. Length of service, salary, level of management is found to be positively related to Organizational Commitment of sampled respondents. Gender difference has no significant impact on organizational commitment. Age is found to have positive correlation with both Affective Commitment and Continuance Commitment of bank managers.

Keywords: Organizational Commitment, Allen and Mayer's Organizational Commitment Scale, Affective Commitment, Continuance Commitment, Service Sector.

1. Introduction

Human resources are the most vital and valuable investment for any organization as they are the instruments for its effective management and attainment of objectives. Progressive and growth oriented organizations thrive on dynamic people. However the active involvement of human resources in an Organizational environment depends on the psychological environment that exists within the organization. Persistence of unhealthy psychological conditions in the organization leads to people related problems which may have negative impact on productivity and consequently organizational failure.

Human Resource Management basically deals with procuring right people, placing them on the right job, at the right time, training and developing for better performance, providing a growth oriented career path and sustaining their motivation and commitment through suitable reward system. Ultimately both the employer and employee should be in a position to achieve their respective goals without any conflict. In this context the success depends on how the management is able to make its human resources committed to the Organizational goals. Several empirical studies on organizations in Indian context revealed that degree of Organizational Commitment of employees is a key issue in their success and lack of commitment is the root cause behind major problems like high cost of production and poor services. This is especially true in service sector industry like Banking, where human beings still play a key role despite the extensive use of Information Technology. The existence of committed workforce raises the reliability of these organizations and provides the required background for their development and growth. Lack of commitment and low levels of commitment leads to decrease in customer loyalty and profitability. In this context the present study aims to investigate the Organizational Commitment of managers in public sector banks in Krishna District of Andhra Pradesh.

2. The Concept of Organizational Commitment

The attachment of employees to their organizations has been extensively documented in the fields of Management Science and Organizational Behavior. This attachment or loyalty to the organization is generally conceptualized as Organizational commitment. The concept of Organizational Commitment is defined by authors in several ways. According to March and Simon (1958) Organizational Commitment is ‘the identification with an organization and acceptance of its goals and values as one’s own’. Grusky (1966) described it as the nature of relationship of the member to the system as a whole. Hall, Scheider and Nygren (1970) define Organizational Commitment as the ‘process by which the goals of the organizations and those of the individual become increasingly integrated and congruent’. Sheldon (1971) defines Organizational Commitment as an attitude or an orientation towards the organization, which links or attracts the identity of the person to the organization. Salancik (1977) defines Organizational Commitment as “a state of being in which an individual becomes bound by actions to beliefs that sustains activities and involvement’’. Porter, Steers, Mowday and Boulian (1974), define Organizational Commitment as “the strength of an individual’s identification with and involvement in a particular organization”. According to Weiner (1981), Organizational Commitment implies identification with an organization, acceptance of its goals and values as one’s own and a strong desire to remain as a part of the organization. Mottaz (1988) defined Organizational Commitment as an 'effective response resulting from an evaluation of work situation, which links or attaches the individual to the organization'.

Although some differences exist in the definition of the concept, most of the researchers agree that the commitment of an employee towards an organization can be attributed to three of his observable patterns of behavior:

i) Identification with Organizational goals by contributing effectively and efficiently to achieve them.

ii) Long-term Membership in the organization and his intension to remain with the organization

iii) Extra Role Performance indicating behavior beyond his required performance.

These observable behavioral patterns are driven by employee's personality, attitude and his interaction and relationship with the organization. Further the employees' present contribution to the organization and the expectation of future gains, called as Side Bets (Becker, 1960) ties him to the organization.

3. Operationalization of the Concept of Organizational Commitment

Organizational theorists have developed numerous models and scales to measure the concept of Organizational commitment. The Organizational Commitment Questionnaire developed by Porter et al (1974) is one such scale and has been extensively used by researchers for assessing Organizational commitment. They conceptualized Organizational Commitment as one dimensional construct and explained it in terms of 'the relative strength of an individual's identification with and involvement in a particular organization. Mowday and Seers (1979) proposed a scale to measure the degree to which employees are committed or attached to the organization. As part of their research, Meyer & Allen (1991) developed a framework that was designed to measure three different types of organizational commitment: (a) Affective Commitment refers to employees' emotional attachment, identification with, and involvement in the organization. Employees with a strong affective commitment stay with the organization because they want to. (b) Continuance Commitment refers to employees' assessment of whether the costs of leaving the organization are greater than the costs of staying. Employees who perceive that the costs of leaving the organization are greater than the costs of staying remain because they need to. (c) Normative Commitment refers to employees' feelings of obligation to the organization. Employees with high levels of normative commitment stay with the organization because they feel they ought to. Because of its multidimensional nature, Mayer and Allen Model has become the most popular instrument for assessing Organizational Commitment in empirical research.

The Organizational Commitment Scales (OCS) developed by Balfour and Wechsler (1996), uses nine items to measure three dimension of the overall organizational commitment: commitment based on affiliation or pride in the organizational objectives, commitment based on the identification with the organization, and commitment based on satisfactory exchange with the organization resulting in appreciation of the individual by the organization. Another recent attempt to measure Organizational Commitment is the Attitude Behavior Model of Alice Eagly and Shelly Chaiken (2004), where they considered Organizational Commitment as a uni-dimensional construct. The present study utilizes the three dimensional employee commitment model of Mayer and Allen (1991) to assess the Organizational Commitment of bank managers in selected branches of State Bank of India in the State of Andhra Pradesh.

4. Review of Literature

There are a large number of empirical studies on organizational commitment. Mowdey et al. (1984) found that tenure in the organization and Organizational Commitment are positively related. Balaji (1984) found that Organizational Commitment is related to person oriented variables and not to Organizational variables. Sharma (1990) found that individual characteristics like education, age , tenure are positively correlated with organizational commitment. Some studies on commitment have provided strong evidence that affective and normative commitment are positively related and continuance commitment is negatively connected with organizational outcomes such as performance and citizenship behavior (Hackett, Bycio, and Hausdorf, 1994; Shore and Wayne, 1993). Researchers (e.g. Mayer and Allen, 1997) have found that age was positively correlated with affective and normative commitment, but not to continuance commitment. Meyer and Allen (1991), in an exploratory and confirmatory analysis of factors that can significantly predict job satisfaction and Organizational Commitment among blue collar workers, reported that promotion, satisfaction, job characteristics, extrinsic and intrinsic exchange, as well as extrinsic and intrinsic rewards, were related to commitment. Dornstein and Matalon (1998) describe eight variables that are relevant to organizational commitment. These are interesting work, coworker's attitudes towards the organization, organizational dependency, age, education, employment alternatives, attitude of family and friends. These variables explain 65% of the variance in organizational commitment. Glisson and Derrick in their study of 319 human service organization workers analyzed the effects of multiple predictors (job, organization, and worker characteristics) on satisfaction and commitment. They showed that skill variety and role ambiguity are best predictors of satisfaction, while leadership and the organization's age is the best predictor of commitment. Ellemer, Gilder, and Heuvel (1998) found that background variables as gender, level of education, or team size were not clearly related to three forms of commitment. Irving, Coleman, and Cooper (1997) found that age was not related to organizational commitment. Meyer and Allen (1984) earlier argued that age might be correlated with commitment by postulating that it serves as proxy for seniority that is associated with opportunity to better one's position in the work. On the issue of gender, Mathieu and Zajac (1990) reported its relationship to organizational commitment. Similarly, it was found by Irving, et, al. (1997) that the men in their sample had higher level of commitment than the women. Balaji (1984) found that Organizational Commitment is related to person oriented variables. Mukherjee and Jayant (1997) reported positive correlation between Organizational Commitment and human resource management systems in Indian context. Paul, A.K and Anantharaman, R.N (2004) studied the impact of HRM practices on Organizational Commitment of Indian software professionals and they reported a positive impact of personale policies on Organizational commitment. Bhatnagar.J (2007) studied the linkages between Organizational Commitment and strategic HR roles, empowerment of employees, Organizational learning capability using a sample of 640 Indian Managers.

She found that strategic HR roles and employee empowerment are the key predictors in Organizational commitment.

5. Research Problem

Banks are an integral part of Indian Service Sector deploying thousands of employees. Productivity in service industries mainly depend on their human resources. Despite the extensive use of information technology in banking sector in India, human beings still play a decisive role there. Delivering high-quality services and products to customers is essential for success and survival in today's globalized and highly competitive banking environment. This underlines the need for motivated personnel who are committed to the goals and objectives of the organization.

The staff in Indian public sector banks is highly qualified and well paid compared to their counterparts in other sectors. However it is felt that their level of commitment towards achieving Organizational goals, which reflect their output both in terms of quality and quantity, is below par. The recent reforms witnessed in the banking sector are not complete without reforming human resource area. In this context the present study aims at evaluating the Organizational Commitment of bank managers in public sector banks in the State of Andhra Pradesh which can throw some light on the general state of affairs in these organizations across India.

Table 1: Profile of the Sample

130 Bank Managers in SBI, Krishna District, AP			
		No of Respondents	**% of Total**
Branch	Urban	77	59%
	Rural	53	41%
Age	< 30 – yrs	33	25%
	30 – 45 yrs	48	37%
	> 45- yrs	49	38%
Gender	Males	104	80%
	Females	26	20%
Level of Management	Junior	28	21.50%
	Middle	48	36.90%
	Senior	54	41.60%
Income	< Rs.40,000	18	13.80%
	Rs.40000 to Rs.50,000	54	41.50%
	> Rs.50,000	58	44.70%
Length of Service	< 10 yrs	23	17.60%
	10 – 20 yrs	48	36.90%
	> 20 yrs	59	45.50%

6. Objectives of the Study

The main objectives of the present study in relation to Public Sector Bank Managers are:

1. To evaluate their Affective, Normative and Continuance Commitment to the organization.
2. To study the relationship between their Organizational Commitment and personal attributes like age, gender, length of service, salary income.
3. To investigate the relationship between their level of management and Organizational Commitment.

7. Hypothesis for the Study

Based on the above objectives and previous research findings the following hypotheses are tested in the present study.

H_{01}: Bank managers are neutral in their commitment to their organization

H_{02}: The commitment of managers to their banks is independent of their length of service.

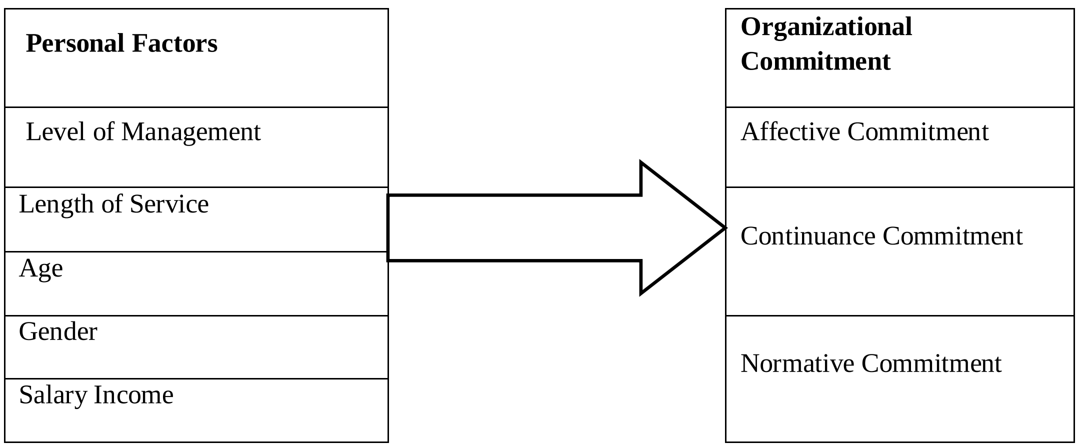
H_{03}: The level of management and Organizational Commitment are independent for bank managers

H_{04}: Age has no impact on Organizational Commitment of bank managers.

H_{05}: Gender difference does not have significant influence on Organizational Commitment of bank managers

H_{06}: There is no association between salary income and Organizational Commitment of bank managers.

Theoretical/Empirical Framework of the Study



Source: Authors

8. Research Methodology

The present study employs survey research design and is based on primary data. The sample design used for collecting primary data is as follows. For selecting the sample bank managers in public sector banks in Andhra Pradesh a four staged stratified random sampling design has been used. The first stage sampling units are the districts of the State, the second stage is the public sector banks within the selected district, the third stage sampling units are rural and urban branches within selected bank and the fourth stage sampling units are the bank managers in the selected branches. The selected district was Krishna. A random sample of 130 branch managers were selected on this basis of them 77 are from urban branches and 53 are from rural branches. These managers belong to junior, middle and senior levels of management. The Organizational Commitment Questionnaire of Mayer and Allen (1997, 2004) is used to assess the Organizational Commitment of sampled bank managers. It consists of 6 items of Affective Commitment, 5 items of Continuance Commitment and 6 items of Normative Commitment. It contains both positive and negative statements. The responses are collected on a five point Likert's scale of Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree with scores ranging from 5 to 1 respectively for positive statements and the scoring is reversed for negative statements. The total scores on each measure were obtained by averaging across items. After scrutiny 25 questionnaires were rejected and finally 105 questionnaires were used for analysis. Reliability of the Organizational Commitment Questionnaire is indicated by Cronbach's Alfas of 0.73, 0.79, and 0.81 respectively, as obtained for the three sub scales.

9. Statistical Tools Used for Data Analysis:

In order to test the various hypotheses on Affective, Normative and Continuance Commitment, sample statistics like Arithmetic Mean and Standard Deviation and testing tools: t- test and ANOVA were considered. The processing of data is done with the help of statistical software package, SPSS 20.

Table 2: Mean Scores of Organizational Commitment of Bank Managers

Organizational Commitment	Mean (N = 105)	Standard Deviation	t- value	d.f	Sig
Affective Commitment	3.95	0.46	2.35	104	0.010**
Continuance Commitment	3.62	0.68	2.56	104	0.005**
Normative Commitment	3.53	0.71	1.82	104	0.035*

** significant at 1% level, * significant at 5% level.

Table 3: Age Wise Distribution of Organizational Commitment Scores

Age / Organizational Commitment	Below 30 Years	30 – 45 years	Above 45 years	Total
	N = 16	N = 44	N = 45	N = 105
Affective Commitment	3.16	3.69	3.66	3.26
Continuance Commitment	2.41	3.12	3.85	3.02
Normative Commitment	3.73	3.45	3.74	3.37

Table 4: ANOVA Results of Scores of Organizational Commitment Grouped by Age

Components	Sum of Squares		Mean Square		F – Value
	Between	Within	Between	Within	(2, 102) df
Affective Commitment	2.86	28.93	1.43	0.298	4.79*
Continuance Commitment	36.95	41.27	18.47	0.425	43.45**
Normative Commitment	1.56	59.12	0.78	0.609	1.31

** significanct at 1% level. * Significant at 5% level.

Table 5: Gender wise Distribution of Scores of Organizational Commitment

Gender / Organizational Commitment	Male (N = 84)		Female (N = 21)		Mean Difference	't' value
	Mean	SD	Mean	SD		
Affective Commitment	3.84	0.45	3.95	0.62	0.11	1.23
Continuance Commitment	3.59	0.65	3.47	0.59	0.08	0.89
Normative Commitment	3.51	0.72	3.46	0.76	0.05	1.48

Table 6: Distribution of Mean Scores of Organizational Commitment Based on Length of Service

Length of service / Organizational Commitment	Below 10 years (N = 20)	10-20 Years (N = 43)	Above 20 Years (N = 42)	Total (N = 105)
Affective commitment	3.41	3.84	4.12	3.92
	(0.43)	(0.57)	(0.51)	(0.55)
Continuance Commitment	2.35	3.56	3.84	3.43
	(0.78)	(0.68)	(0.66)	(0.71)
Normative Commitment	3.23	3.31	3.48	3.52
	(0.39)	(0.44)	(0.48)	(0.42)

Table 7: ANOVA Results of Scores of Organizational Commitment Grouped by Length of Service

Components	Sum of Squares		Mean Square		F – Value
	Between	Within	Between	Within	(2,102) df
Affective Commitment	7.63	44.47	3.81	0.45	8.46 **
Continuance Commitment	44.48	146.03	22.74	1.50	15.16**
Normative Commitment	5.39	38.15	2.69	0.39	6.89**

**Significant at 1 % level

10. Analysis of Results

The results of analysis of Organizational Commitment in terms of its three dimensions: Affective Commitment, Continuance Commitment and Normative Commitment are presented below. Table 2, gives the mean scores of the three dimension of Organizational Commitment with their respective standard deviations. All the mean scores presented in the table are more than 3, the neutral point and are statistically significant at 5% level as indicated by their respective t- values. Thus, we may infer that the strength of the intensity of an attitude score is represented by the extremity of the position occupied by it on the attitude continuum and therefore we may infer that the bank managers in the sampled branches are inclined positively in their commitment to their organization. The personal attributes selected for study are age, length of service, level of management and salary income. The age wise distributions of the scores of Organizational Commitment are presented in Table.3 and the related ANOVA is shown in Table 4. Results shows that the mean scores of Continuance Commitment and Affective Commitment differs among the age groups significantly and the Continuance Commitment seems to be positively correlated with age. The gender wise mean scores of Organizational Commitment for all the three components presented in Table.5 indicate that there is no significant difference in Organizational Commitment between male and female bank managers as the t- statistic for group difference is not statistically significant at 5%. The length of service wise analysis of the three components of Organizational Commitment is shown in Table 6 and Table 7. It is evident from the results that there is a positive relationship between mean scores of all the three components of Organizational Commitment and the length of service. Thus we may infer that the length of service of bank manager is a predictor of his Organizational commitment. The analysis of mean scores of three Organizational Commitment components across the levels of management are presented in Table 8 and Table.9 Results show that the senior managerial personal have the highest mean score for all the three components of Organizational commitment. It seems that there is a significant difference among the different levels of management in the case of Continuance Commitment as indicated by the F value of 3.59, which is significant at 5% level. Coming to analysis of mean scores of salary income as presented in Table 10 & Table 11, it seems that the mean scores of the three components of Organizational Commitment are positively correlated with salary income. The ANOVA for salary income shows that the mean scores differences for the sampled respondents are significant only for Normative Commitment at 5% level.

Table 8: Level of Management-wise Distribution of Organizational Commitment Scores

Organizational Commitment \ Level of management	Junior Management N = 21	Middle Management N = 40	Senior Management N =44	Total N = 105
Affective commitment	3.96	4.1	4.11	4.03
	(0.54)	(0.6)	(0.39)	(0.58)
Continuance Commitment	3.16	3.75	3.81	3.52
	(0.78)	(0.64)	(0.53)	(0.58)
Normative Commitment	3.31	3.35	3.63	3.39
	(0.59)	(0.63)	(0.56)	(0.54)

Table 9: ANOVA Results of Scores of Organizational Commitment Grouped by Level of Management

Components	Sum of Squares		Mean Square		F - Value (2,102) df
	Between	Within	Between	Within	
Affective Commitment	2.46	153.21	1.23	1.57	0.78
Continuance Commitment	17.82	240.63	8.91	2.48	3.59*
Normative Commitment	3.11	132.68	1.55	1.36	1.13

* Significant at 5% level

Table 10: Income-wise Distribution of Organizational Commitment Scores

Organizational Commitment \ Salary Income	Below 40,000 (N = 12)	40,000 – 50,000 (N = 35)	Above 50,000 (N = 58)	Total (N = 105)
Affective Commitment	3.21	3.65	3.68	3.73
	(0.58)	(0.55)	(0.49)	(0.53)
Continuance Commitment	3.12	3.45	3.66	3.41
	(0.69)	(0.78)	(0.64)	(0.68)
Normative Commitment	3.25	3.48	3.56	3.51
	(0.65)	(0.52)	(0.57)	(0.61)

Table 11: ANOVA Results of the Scores of Organizational Commitment Grouped by Income

Components	Sum of Squares		Mean Square		F – Value (2,102) df
	Between	Within	Between	Within	
Affective Commitment	4.81	73.02	2.45	0.75	3.26*
Continuance Commitment	6.25	145.39	3.12	1.49	2.09
Normative Commitment	1.26	124.83	0.63	1.86	0.33

* significant at 5 % level.

11. Conclusions of the Study

The following conclusions emerged on Organizational Commitment of managers in public sector banks in Andhra Pradesh based on the analysis of responses given by sample of managers.

- Bank Managers in general are positively oriented in their intensity of commitment to words their organization.
- Length of Service of managers is found to be positively correlated with all the three components of organizational commitment.
- Age is found to be having positive correlation with both Affective Commitment and Continuance Commitment of bank managers.
- Gender difference does not have any significant impact on Organizational Commitment of bank managers.
- Level of management is positively related to all the three forms of Organizational Commitment of bank managers.
- Salary Income has a significant positive impact on Organizational Commitment of bank managers at all levels.

12. Testing of Hypotheses

Based on the findings presented above the maintained hypotheses are tested as below:

i. In the light of the finding made above the first hypothesis that managers are neutral in their commitment to the organization is rejected. Bank managers are found to be positively inclined in their commitment towards their organization.

ii. The second hypothesis that length of service has no impact on Organizational Commitment of bank managers is also rejected as it was found that there is a positive relationship between length of serve and Organizational commitment.

iii. The hypothesis that level of management and Organizational Commitment are independent for bank managers stands rejected as it was found that Organizational Commitment is positively correlated with level of management.

iv. The hypothesis that age has no impact on Organizational Commitment is also rejected as it is found that both affective commitment and continuance commitment are found to vary positively with age.

v. The last hypothesis that there is no association between salary income and Organizational Commitment is also rejected. Salary Income is found to have significant positive impact on Organizational Commitment of bank managers at all levels.

References

Alice Eagly and Shelly Chaiken(2004): Psychology of Attitudes, Harcourt Brace Jovanovich College Publishers.

Alutto, J. A., Hrebiniak, L, G. & Alonso, R. C. (1973): On operationalzing the concept of commitment, Social Forces, 51: 448-454.

Balaji. C(1984):Organizational Commitment and Human Resource Management: A study of managers in cooperatives, Indian Institute of Management, Ahammedabad.

Balfour, D., & Wechsler, B. (1996). Organizational Commitment: Antecedents and outcomes in public organizations. Public Productivity and Management Review, 29, 256-277.

Batnagar.J(2007): Predictors of Organizational Commitment in India, International Journal Of Human Resource Management,18:10,October, 2007.

Becker, H. S. (1960): Notes on the concept of commitment, American Journal of Sociology, 66: 32–42.

Bennett, H. & Durkin, M. (2000): The effects of organizational change on employee psychological attachment, Journal of Managerial Psychology: 126-147.

Dornstein, M., & Matalon, Y. (1998). A comparative analysis of predictors of organizational commitment. A study of voluntary army personnel in Isreal.Journal of Vocational Behaviour 34 (2), 192-203.

Ellemmer, N., Gilder, D., & Heuvel, H. (1998). Career oriented versus team oriented commitment and behaviour at work. Journal of Applied Psychology 83 (3), 717-730.

Grusky, O. (1966): Career Mobility and Organizational commitment, Administrative Science Quaterly, Vol.10.

Hackett, R.D, Bycio,P & Hausdorf, P (1994): Further Assessments of Mayer and Allen's Model of Organizational commitment, Journal of Appled Psychology, 15-23

Hall, D. T., Schneider, B. & Nygren, H. T. (1970): Personal factors in organizational identification, Administrative Science Quarterly, Vol. 15: 176-190.

Hovekamp, T. M. (1994): Organizational Commitment of professional employees in union and non-union research libraries, College & Research Libraries, Vol. 43:297-307.

Irving, P.G., Coleman, D.F., & Cooper, C.L. (1997). Further assessment of a three component model of occupational commitment: Generalizability and differences across occupations. Journal of Applied Psychology 82,444-452.

Ko, J., Price, J. L. & Mueller, C. W. (1997): Assessment of Meyer and Allen s three-component model of Organizational Commitment in South Korea, Journal of Applied Psychology, 82: 961–973. methodological considerations, Journal of Applied Psychology, 69: 372-378.

March, J & Simon. H(1958) : Organizations, Wiley.

Mathieu, J.E. & Zajac, D.M.(1990). A review and meta analysis of the antecedents correlates and consequences of organizational commitment.Psychological Bulletin 108, 171-199

Meyer, J. P. & Allen, N.J. (1984): Testing the side-bet theory of organizational commitment: Some

Meyer, J. P. & Allen, N.J. (1991): A Three Component Conceptualization of Organizational Commitment, Human Resource Management Review, 1(1): 61-89.

Meyer, JP and Allen, NJ (2007). A three-component conceptualization of organizational commitment: Some methodological considerations, Human Resource Management Review, 1, pp. 61-98.

Mottaz. C.J (1988): Determinants of Organizational commitment, Human Relations, Vol 41/6

Mowday, R. T., Porter, L. M. & Steers, R. M. (1982): Employee–organization linkages: The psychology of commitment, absenteeism and turnover, New York, NY: Academic Press.

Mowday, R. T., Steers, R. M. & Porter, L. M. (1979): The measurement of organizational commitment, Journal of Vocational Behavior, 14: 224–47.

Mukherjee, Jayanth(1997): The Role of Human Resource Management Systems in Influencing Orgnisational Commitment, Indian Institute of Management, Ahammedabad.

O'Reilly, C. A., Chatman, J. & Caldwell, D. F. (1986): People and organizational culture: a profile comparison approach to assessing person– organization fit, 1; 34:487– 516.

Paul, A.K and Anantharaman, R.N (2004): Influence of HRM practices on organizational commitment: A study among software professionals in India, Human Resource Development Quarterly, Feb, Vol 15,1.

Porter, L. W., Steers, R. M., Mowday, R. T. & Boulian, P. V. (1974): Organizational commitment, job satisfaction and turnover among psychiatric technicians, Journal of Applied Psychology, 59: 603–609.

Robins. S.P(1974): Managing Group Conflict, Englewood Cliff, NJ:Prentice Hall.

Rubin, R. & Buttlar, L. (1992): A study of the Organizational Commitment of highschool library media

Salancik, G. R. (1977): Commitment and control of organizational behavior and beliefs, New Directions in Organizational Behavior: 420-453.

Sharma, C.S (1990): Organizational Commitment: A Test of Predictor Models, Productivity: Vol 31/2.

Sheldon, M. E. (1971): Investments and involvement as mechanisms producing commitment to the organization, Administrative Science Quarterly, 16:142-150. Specialists in Ohio, Library Quarterly, 62(3): 306-324.

Vandenberg, R. J. & Sep, J. H. (1994): A critical examination of the internalization, identification, and compliance commitment measures, Journal of Management, 20: 123-140.

Wiener, Y. (1981): Commitment in Organizations. A normative view. Academy of Management Review. 7(3). 418-428.

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Long Term Performance of Value and Growth Stocks on DSE: 3-Year Holding Period Returns

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Abstract

The study examines the performance of value and growth stocks on DSE, an emerging stock market in South Asia for the period of 2000 to 2009. The P/E and the P/B ratios are used to classify value and growth stocks for a 10-year period. Stocks with low ratios are value stocks and stocks with high ratios are growth stocks. The returns difference between value and growth stocks is value premium. The performance of value and growth portfolios have been examined in terms of 3- year buy-and- hold returns for the same value and same growth portfolio. The study found that value stocks portfolio outperforms growth stocks portfolio. However, the results indicate that a P/E ratio based search process appears to do a better job than does a search process based on P/B ratio in the Dhaka Stock Exchange during the study period.

Keywords: value stocks, growth stocks, value premium.

Introduction

Value and growth investing are widely considered as two contrasting strategies for investment in the capital market. Considerable attention has been devoted to explaining the differences in returns performance between such value and growth stocks.

The value investor is looking for a company with sound fundamentals that may trade below its "intrinsic value" for some reasons. The market should eventually correct its inaccurate valuation and send stock prices sharply upward when that correction occurs.

Growth investors normally buy stocks of companies that are capable of increasing sales, earnings, and other important business metrics by a minimum amount each year. The stocks that are bought by growth investors often appear expensive at first glance but such stocks must be looked at from a future perspective.

3. Review of Literature

A body of research is available demonstrating the significant value premium over long times (Lakonishok, Shleifer and Vishny 1994, Capaul, Rowley and Sharpe 1993) and in different parts of the world (Athanassakos 2009, Fama and French 1998). Athanassakos (2009) provides evidence for a consistently strong value premium over a 1985-2005 sample period in the Canadian market; a value premium that persists in both bull and bear markets as well as in recessions and recoveries. Some of this research shows that historically the value premium persists during all aspects of the business cycle (Arshanapalli and Nelson 2007, Kwag and Lee 2006). While the aforementioned evidence provides a strong case for the performance of value over growth stocks during all aspects of the business cycle, value stocks have also performed poorly for significant periods of time (Asness et al. 2006). The finding of Xing and Zhang (2006) is that the fundamentals of value firms decline sharply in recessions. While growth firms also experience a decline in fundamentals, the decline experienced is not as deep as that of value firms. This provides the reason for conducting a study on proposed topics by using data of the DSE from 2000 to 2009.

4. Rationale and Objective of the Study

Value and growth stocks may indeed perform differently in non-U.S. markets because of the differences in the ways investors behave in those markets. Bauman and Johnson (1996) showed that the availability, quality, and timeliness of research information used by investors frequently vary considerably from one country to another. This provides the reason for conducting a study on proposed topics by using data of the DSE. The main objective of this study is to evaluate the performance of value and growth investing strategies and test whether the value stocks outperform growth stocks on Dhaka Stock Exchange.

5. Methodology and Data Description

5.1 Secondary Data

Since the data required from the Dhaka Stock Exchange before 2000 is not published in DSE website and is not available in any other easily accessible way, the study limited to use data which are already available in soft copy, compiled and printed. The data for all stocks listed on DSE have been collected from four sources. One is DSE website. The second is the publications of central library of the Dhaka Stock Exchange such as Various Issues of Monthly Review, fortnightly capital market, and Annual Report of the Dhaka Stock Exchange during the study period. The third is the website of Securities Exchange Commission of Bangladesh. The fourth is the publications of SEC such as Quarterly Review and Annual Report under the study period.

5.2 Sample Selection

The method of selecting value and growth stocks is done by systematic sampling. The total observations are 678 individual listed stocks that are taken from the population of 3390 individual stocks of the Dhaka Stock Exchange. However, stocks of life insurance companies and mutual funds have been excluded in the sampling of this study as their characteristics are not like other securities of the capital market.

5.3 Portfolio Formation

The portfolio formation mechanism follows closely Fama and French (1992). In order to form value and growth stocks portfolio, the stocks have been divided into two deciles, i.e. 10 % groups classified depending on the level of their ratios. The lowest decile, is the group comprising stocks with low P/E and P/B ratios is selected as value stocks. On the other hand, the highest decile, is the group comprising stocks with high P/E and P/B ratios is selected as growth stocks. For the price/earnings ratio and price/book value ratio, only positive ratios have been used to classify stocks into decile portfolios. The stocks with negative ratios (negative P/E ratios and negative P/B ratios) are excluded because negative ratios cannot be interpreted in terms of expected growth rates (Lakonishok et.al. 1994). Stocks in each portfolio are equally weighted and this kind of portfolio construction has been done for each year similarly during the sample period.

5.4 Holding Returns

3-Year holding returns refer to share price returns three years respectively after portfolio formation, representing a buy-and-hold investment strategy, where investors hold the same portfolios for three years. Portfolio formation still takes place annually (in the same way as for annually adjusted return), but each portfolio is carried for three years, as opposed to one year. These share price returns are calculated as follows:

·Three years after portfolio formation: (Share price in year3 – share price at portfolio formation) + cash dividend received during three years /share price at portfolio formation

However, for comparison of performance of value and growth portfolio for longer holding period, 3-years- holding period returns have been calculated.

6. Long Term Performance of Same Value and the Same Growth Portfolio: 3-Year Holding Period Returns

A long-term horizon, assuming a buy-and-hold strategy is an important part to be examined and compare the long- term performance of value and growth stocks portfolio. A number of researchers (Lakonishok et al.1994, Beneda 2003) have studied the performance of value and growth stocks using long-term buy-and-hold strategy to measure their long-term performance. However, in this section, 3-year holding period returns for the same value and the same growth portfolios have been analysed.

Portfolios are formed based on Price -to –Earnings ratios and Price -to - Book value ratios of prior to the portfolio formation year. Stocks with low ratios are value portfolio and stocks with high ratios are growth portfolio. Portfolios are formed on fixed style basis and same portfolios are held for three consecutive years to measure their long term holding performance. Spread between returns on the value stocks portfolio and growth stocks portfolio is value premium. Significance of spread (Value Premium) is tested by t- statistics (1-tailed).

Table 1: 3 –Year Holding Period Returns for Value and Growth Portfolios

(Percent)

Year of Portfolio Formation	Price / earnings ratio			Price / book value ratio		
	Low P/E (Value)	High P/E (Growth)	Value Premium (Spread between Value and Growth)	Low P/B (Value)	High P/B (Growth)	Value Premium (%) (Spread between Value and Growth)
2000	194.16	3.23	190.93**	122.10	1.42	120.68**
2001	59	9.01	49.99	51.78	7.97	43.81
2002	133.58	36.29	97.29*	-13.00	120.08	-133.08**
2003	154.14	-17.66	171.80**	-57.35	31.57	-88.92**
2004	56.10	27.70	28.40	7.45	14.98	-7.53
2005	54.31	106.83	-52.52	53.79	34.87	18.92
2006	266.20	120.60	145.60*	182.75	55.65	127.10**
2007	536.28	315.44	220.84*	316.40	184.83	131.57
2008	678.69	372.45	306.24*	528.03	146.03	382*
2009	161.03	139.86	21.17	262.13	37.34	224.79**
Period average	229.35	111.38	117.97	145.41	63.47	81.94

** Significant at the 1 % level (1- tailed).

* Significant at the 5% level (1- tailed).

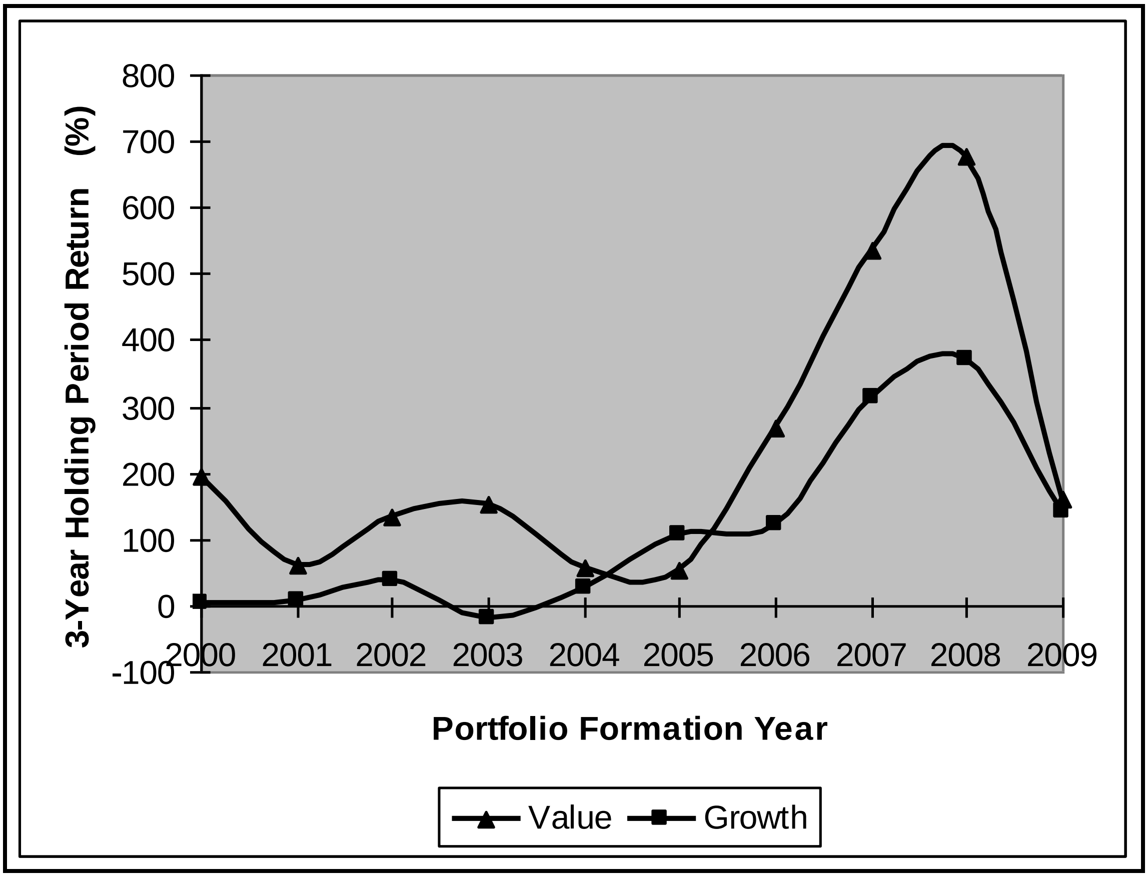
To analyse the long-term performance of value and growth portfolio, 3- year holding period returns have been calculated. Three year holding period returns- refers to share price returns three years after portfolio formation representing a buy –and- hold investment strategy where investors hold the same portfolios for three years. Table 1, reports 3- year holding period returns for the value stocks portfolio and the growth stocks portfolio based on P/E ratio and P/B ratio.

[1] In 2008 and 2009, the returns of 'Chittagong Vegetables Ltd' of value portfolio are 20714.29% and 9202.40% respectively. Thus, the returns of these two extreme values have considered as zero return.

Portfolio Sorted by P/E ratio

Based on P/E ratio, value premiums are found to be statistically significant at the conventional level using t-tests (1-tailed) for all the portfolios except the portfolios of 2001, 2004, 2005, and 2009. It is observed that there is no significant negative value

Figure 1: 3-Year Holding Period Returns for Value and Growth Portfolios Based on P/E Ratio



Premium for ten portfolios based on P/E ratio. The average annual portfolio returns for value and growth portfolios are 229.35 percent and 111.38 percent respectively.

Figure 1 shows 3- year holding period returns for the value and growth portfolios based on P/E ratio. The figure exhibits mixed trend in value premium over time for 3-year holding period.

Portfolio Sorted by P/B Ratio

Based on P/B ratio, the value premiums are found to be statistically significant at the conventional level using t-tests (1-tailed) for all the portfolios except the portfolios of 2001, 2004, 2005 and 2007. It is observed that the portfolios of 2002 and 2003 witnessed negative value premiums. These results indicate that the growth portfolios of 2002 and 2003 outperform the corresponding value portfolios respectively. The average annual portfolio returns for value and growth portfolios are 145.41 percent and 63.47 percent respectively.

Figure 2: 3- Year Holding Period Returns for Value and Growth Portfolios Based on P/B Ratio

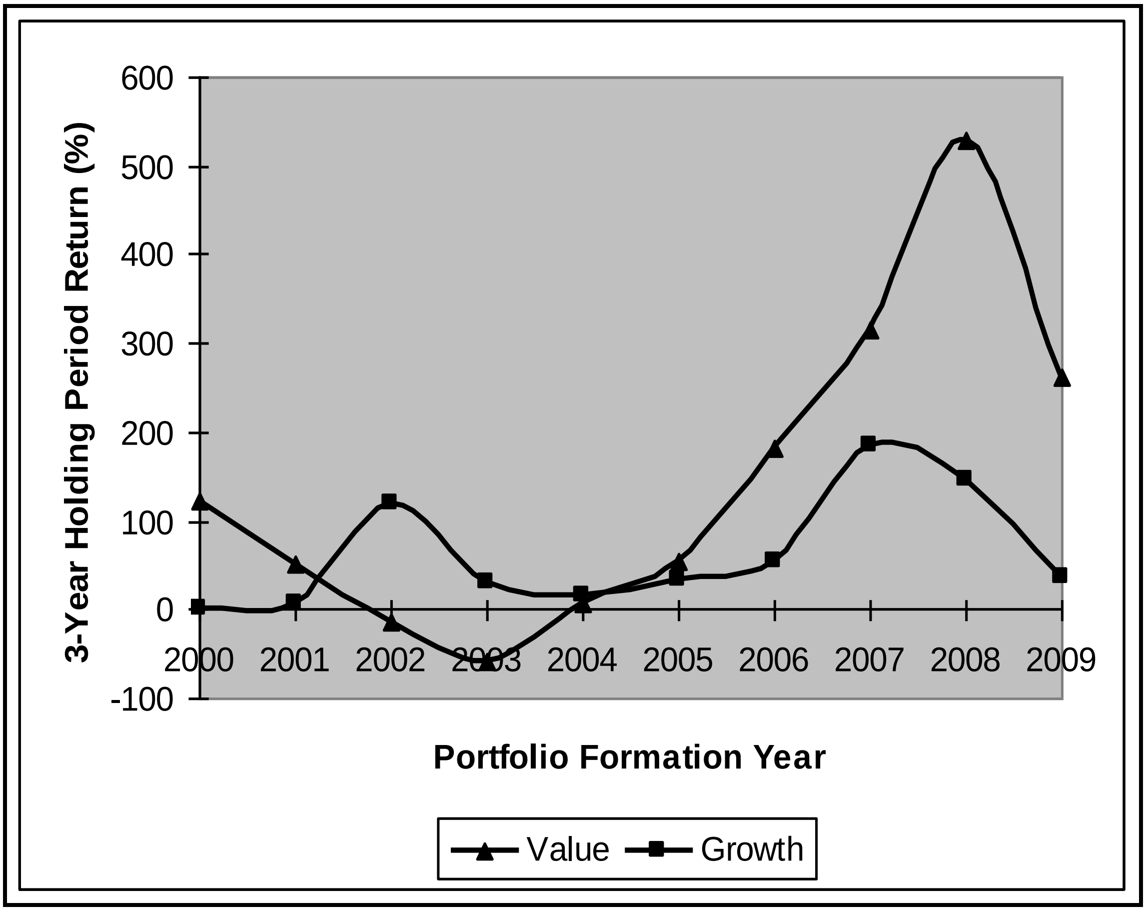


Figure 2 shows 3- year holding period returns for the value and growth portfolios based on P/B ratio. The figure exhibits mixed trend in value premium over time for 3- year holding period. In fact, the value premium exists over longer holding period of value and growth portfolio. For long term holding of the same value and the same growth portfolio, the P/E sorted portfolio does better job for fairly and consistent value premium than the corresponding P/B sorted portfolio. It is quite clear that, based on both the selection criteria, value stocks portfolio outperforms growth stocks portfolio for longer holding (3-year) period. This finding is consistent with the study of Lakonishok et al. (1994) and Beneda (2003).

7. Conclusions

Value stocks portfolio outperforms growth stocks portfolio as measured 3-year holding returns. However the performance indicates that value stocks portfolio produces superior returns for longer time horizon. It may happens for the convergence of markets towards fundamental values in the long run. Thus for a long-term buy-and- hold strategy value investing may be an appropriate style of investment in the DSE based on both the P/E and the P/B ratios. However, the result is consistent with those of other researchers such as the latest findings of Athanassakos (2009).

References

Arshanapalli, B., and Nelson, W.B., 2007, “Small Cap and Value Investing Offer both High Returns and a Hedge”, The Journal of Wealth Management, Vol. 9, No. 4, pp. 44-50

Asness, Clifford, Jacques Friedman, Robert Krail, and John Liew, 2000, “Style timing: value versus growth”, Journal of Portfolio Management 26, pp. 50–60.

Athanassakos, G., 2009, “Value vs. Growth Stock Returns and the Value Premium: The Canadian Experience 1985-2005”, Canadian Journal of Administrative Studies vol. 26, no. 2, pp. 109-129.

Bauman, W. Scott, and James M. Johnson., 1996, “Investment Research Information in Europe”, Journal of Investing, vol.5, no. 2, pp. 21-35.

Beneda Nancy, 2003, “Growth Stocks Outperform Value Stocks Over Long Term”, Academy of Accounting and Financial Studies Journal, Vol. 7, No. 2, pp. 79-97

Capaul, Carlo, Ian Rowley, and William F. Sharpe, 1993, “International value and growth stock returns”, Financial Analyst Journal, January-February, pp. 27-36.

Fama, Eugene F., 1998, “Market Efficiency, Long-Term Returns and Behavioural Finance”, Journal of Financial Economics, 49, pp. 283-306.

Fama, Eugene F., and Kenneth R. French, 1998, “Value versus Growth: The International Evidence”, Journal of Finance, 53, pp. 1975-1999.

Kwag, S.W., and Lee, S. W., 2006, “Value Investing and the Business Cycle”, Journal of Financial Planning, Article 7, August, pp. 1-10.

Lakonishok, J., Shleifer, A., and Vishny, R.W., 1994, “Contrarian Investment, Extrapolation and Risk”, Journal of Finance 49, pp. 1541–1578.

Finance and Economics. ISSN 1450-2887 Issue 6, pp-116-132

Rasul, M.S., 2013, “Performance of Value and Growth Stocks: Returns of Stocks on Dhaka Stock Exchange”, Indian Journal of Applied Research, Vol.3, No.2, pp. 205-208.

Zhang, Lu, and Ralitsa Petkova, 2005, “Is Value Riskier Than Growth”? Journal of Financial Economics 78, pp.187

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Effect of Primary Energy Consumption towards Disagregated Sectoral Outputs of India

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Abstract

This paper investigates the co-integration relationship and causality effect between energy used and main economic sectors such as agriculture, services and industrial sector in India for the period of 1980-2009. The purpose of this study is to well organise the energy used among the sectors in India to achieve the optimum usage of energy and reduce the wastage. Empirical results suggest that short-run causality running from services outputs towards energy used and energy used towards agriculture outputs. There is no evidence of short-run causality effect between energy used and industrial outputs. This study revives that services outputs not depending on energy used and agriculture output's growth mainly depending on the energy. Based on the findings, few recommendations have been suggested to well organise the energy usage wisely.

Keywords: Energy Consumption, Services Outputs, Transport Outputs, Industrial Outputs, Data Analysis, Pantula Principle.

Introduction

The causal relationship between energy consumption and economic growth or gross domestic product (GDP) is a widely studied subject in economic literature. Energy is a significant foundation which contributes to the economic growth of a country and also to a region depends on the amount of the energy consummated. It is also important in human development and in the welfare of humanity because energy is an input in lots of manufacturing and consumption performance (Ghorbani et al., 2009). Consequently, energy accessibility and consumption play a vital role in the process of economic development. Interestingly, in India, it is important to bring out the issue of energy consumption because this country recently experienced energy shortage (BBC news, 31 July 2012). According to the 2nd International Exhibition on Energy Sector in India, in recent years, India's energy consumption has been increasing at one of the fastest rates in the world due to population growth and economic development. Commercial primary energy consumption in India has grown by about 700% in the last four decades. The per capita consumption in India is 400 KWH per annum. Driven by the rising population, expanding economy and a quest for improved quality of life, energy usage in India is expected to grow at an exponential rate in upcoming years (Renewable Energy World Editors, 2011). Despite the overall increase in energy demand, per capita energy consumption in India is still very low compared to other developing countries. To overcome the energy shortage, efficient allocation of energy among various sectors is needed in this country.

Recently the global energy issues appeared to gain increased concentration from various interest groups and the international compulsory policies of decreasing greenhouse gas emissions have given motivation to researchers to link the energy sector and the outputs (income)[*]. It is appropriate to identify the effect of energy towards the sectoral contribution rather than the overall GDP. This is because; the traditional way of identifying GDP-energy relationship is more general and unable to identify the real effect of energy consumption in the production process. As a contribution, this paper is going to identify the long-run relationship and the causality effect between energy consumption and disaggregated sectoral outputs in India[†]. The disaggregated sectors under studied are agriculture, services, and industrial outputs which contribute 17.2%, 56.4% and 26.4% of overall GDP of India, respectively in 2011 (Central Intelligence Agency, 2011).

Commonly, there are four possible causality directions which are used by researchers in interpreting the effect of energy consumption in a particular country. According to Lee (2005), the

[*] For instance, Liew et al. (2012), Costantini & Martini (2010), Bowden & Payne (2009, 2010), Chebbi & Boujelbene (2008) and Aqeel & Butt (2001).

[†] The advantage of replacing the GDP with the sectoral outputs able to identify the specific sectors that depending on energy in a particular country. With the specific findings, solid policies can be recommended to well organize the energy used.

causality result is not consistent and may run in either direction[‡]. This statement was supported by other studies (Masih & Masih, 1998; and Hatemi & Irandoust, 2005) and added that if there is causality running from energy consumption to income (outputs), then denotes an energy-dependent economy such that energy is a momentum for income, implying that a shortage of energy may negatively affect income. Hatemi & Irandoust (2005) added that causality run from income (outputs) to energy will denotes a less energy-dependent economy such that energy protection policies may be implemented with little unfavourable or no effects on income. Bohm (2007) added that, bi-directional causal relationship implies that energy use and GDP growth are together resolute and affected at the same time. Finally, and Ghorbani et al. (2009), Olusegun (2008) and Bohm (2007) asserted that, if no causal relationships between the energy consumption and income are found, then the "neutrality hypothesis" holds and the income is mainly depending on other factors[§]. Thought-out those causality directions, the amount of energy that India used can be allocated wisely, reduce wastes and as overall can increase the economic growth of India.

Methodology and Data Description

At first, unit root tests are applied to test the order of integration between the variables. When the number of observations is low, unit root tests have little power (Chebbi & Boujelbene, 2008). Due to this matter, two types of unit root tests were employed. Augmented Dickey-Fuller test (ADF) and the Kwiatkowski–Phillips–Schmidt–Shin (KPSS) (Kwiatkowski et al., 1992) test were used because they use two opposite null hypothesis. The ADF test suggested that the null hypothesis is integrated of order one I(1) is stationary. The KPSS is suggested for null hypothesis in order to test the stationarity process. The optimum lag-length for unit root tests is selected based on Akaike information criterion (AIC) followed Chebbi & Boujelbene (2008).

Next the Johansen-Juselisus co-integration test is conducted to study the long-run relationships among the variables. The concept of co-integration states that if a long-run relationship exists between two variables, then the deviations from the long-run equilibrium path should be bounded. If this is the case, the variables are believed to be co-integrated. For variables to be co-integrated, two conditions must be satisfied: the series for the individual variables must have the same statistical properties, and the variables must be integrated in the same order (Jahanson, 2002). If a series is stationary after differencing once, it is said to be integrated of order one or I(1) (Dhungel, 2008). In addition, Pantula principle has been used to choose the appropriate specification. The Pantula principle chooses both the correct specification of the deterministic components and also the order of the co-integration rank (r) (Pattichis et al, 2005).

Finally, the direction of causality in the short-run will be assessed by using the Granger causality test based on Vector Error Correction Model (VECM) framework. Co-integration implies the existence of

[‡] Lee & Chang (2005) found that different directions of causality exist between GDP and various kinds of energy consumption.

[§] Neutrality hypothesis implies that energy consumption is not correlated with GDP.

causality between series but it does not indicate the direction of this causal relationship. Granger causality tests is based on VECM framework which is known as short-run causality test in the sense that the dependent variable responds only to short-term shocks to the stochastic environment (Bohm, 2007).

Annually data enclosed from 1970 to 2009 for India were use in the study. Data on total energy used are obtained from the Energy Information Administration (EIA)International Energy Annual report (2010), while data on the sectoral outputs such as agriculture, services and industrial sector are obtained from the World Bank (2011) and International Financial Statistics (ISF) of International Monetary Fund (IMF). The energy data expressed in terms of kilogram (kg) of oil equivalent per capita. Value added of corresponding sectors represents the sectoral outputs followed Costantini & Martini (2010), and those data expressed in constant 2000 U.S dollars. All the variables are changed into the type of logarithm.

Emprical Results and Discussions

Table 1 and Table 2 show the ADF and KPSS unit root test results, respectively. The null hypothesis of variables contains a unit root is rejected if the t-statistic value is greater than the critical value in magnitude. At first, the variables are estimated in level form with trend and intercept. The results will be reported in the table if the trend value (T) is significant. If the value is not significant, then the intercept value should be reported. The estimation will be continued until the stationary of the variable is obtained. The ADF unit root results indicate that all of the sectoral outputs and energy used of India are integrated of order 1. Next, the KPSS test employed where the null hypothesis of KPSS test states that the variable is stationary, whereas the alternative hypothesis is the variable is contains unit root. The null hypothesis of KPSS is rejected if the t-statistic value is greater than the critical value. From Table 2 can seem that the null hypothesis rejected in level for all the variables. This indicates that, the variable is integrated of order one, I (1) same as ADF unit root test.

Table 1: The ADF Unit Root Test

Variables	Augmented Dickey-Fuller (ADF) Test	
	Level	First difference
Agriculture outputs (T)	-2.747(6)	-8.515(0)***
Services outputs (T)	-1.408(0)	-4.545(0)***
Industrial outputs (T)	-1.075(1)	-3.443 (0)**
Energy used (T)	-2.905(0)	-6.912(0)***

Notes: (T) indicates that trend and intercept value taken into the account since the trend value of the data are significant (less than 10% level) (Rapach & Wohar, 2002). All variables are transformed to natural logs. Asterisks (***) and (**) indicate statistically significant at the 1% and 5% levels, respectively. The optimum lag length for ADF test was selected based on Akaike Information Criterion (AIC)[**].

[**] The largest lag of maximum lag length selection based on AIC in unit root test is set to be six.

Table 2: The KPSS Unit Root Test

Variables	Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test	
	Level	First difference
Agriculture outputs (T)	0.121(4)*	0.076(2)
Services outputs (T)	0.160(4)**	0.357(3)
Industrial outputs (T)	0.126(2)*	0.235(2)
Energy used (T)	0.162(4)**	0.266(3)

Notes: (T) indicates that trend and intercept value taken into the account since the trend value of the data are significant (less than 10% level) (Rapach & Wohar, 2002). All variables are transformed to natural logs. Asterisks (**) and (*) indicate statistically significant at the 5% and 10% levels, respectively. The optimum lag length was selected based on Akaike Information Criterion (AIC).

After identified that order of integration, the next step is the co-integration tests to investigate the long-run relationship. As mentioned earlier, the Pantula principle has been used to identify the co-integration among the variables. The result of co-integration test is shown in Table 3.According to Pantula principle, the trace value will be compared with the critical value. If the trace value higher than the critical value, it indicates that there is a rejection of null hypothesis of no co-integration at 5% level. At first, model 2 (rank 0) will been estimated. If the model is rejected, than Model 3 will be estimated with the rank being kept fixed. This procedure is continued until the null is accepted for the first time. From the Table 3, it is identified that, energy used co-integrated with agriculture outputs and industrial outputs. Those two outputs are co-integrated in model 2 whereby there is no co-integration relationship between energy used and services sector. It is because; the entire model rejected the null hypothesis for that particular sector. This indicated that there is no long-run relationship between services sector and energy used in India.

Table 3: Co-integration Test (Trace Statistics)

Variables	H_0	H_1	Model 2	Model 3	Model 4
Energy used & Agriculture outputs	$r = 0$	$r \geq 1$	31.69*	23.29*	95.93*
	$r \leq 1$	$r = 2$	7.91	0.14	19.45*
Energy used & Services outputs	$r = 0$	$r \geq 1$	40.72*	34.13*	44.63*
	$r \leq 1$	$r = 2$	19.05*	13.17*	18.02*
Energy used & Industrial outputs	$r = 0$	$r \geq 1$	52.74*	41.74*	194.40*
	$r \leq 1$	$r = 2$	6.57	5.78*	33.25*
Critical value (95%)	$r = 0$	$r \geq 1$	20.26	15.49	25.87
	$r \leq 1$	$r = 2$	9.16	3.84	12.52

Notes: * The number of cointegrating vectors selected by Pantula Principle. The lag parameters are selected based on the AIC. Result comparing the trace test statistic with the critical value.

Finally, the Granger causality test has been employed to investigate the causality effect of energy used towards the sectoral outputs. The causality result tabulated in Table 4. The Granger causality test based on VECM framework is to show the direction of short-run relationship between the variables. From the table know that, short-run causality relationship exist between energy used towards agriculture outputs and services outputs towards energy used. At the same time, there is no short-run causality relationship exist between industrial outputs towards energy used.

Table 4: The Granger Causality (VECM Framework) Test

Null hypotheses	Chi-square [Probability]	Causality direction
Agriculture outputs does not Granger-cause energy used	5.44 [0.489]	
Energy used does not Granger-cause agriculture outputs	29.63* [0.000]	Ener → Agr
Services outputs does not Granger-cause energy used	13.12*[0.041]	Ser → Ener
Energy used does not Granger-cause services outputs	4.31[0.634]	
Industrial outputs does not Granger-cause energy used	5.81[0.440]	
Energy used does not Granger-cause industrial outputs	4.92[0.550]	

Notes: The lag lengths are chosen by using AIC information criterion. * Denotes the rejection of the null hypothesis at 5% level of significance.

Conclusion and Recommendations

The entire sectoral outputs have long-run relationship with energy used except for the services sector. This shows that energy is very important to all the sectoral outputs in long term. The VECM approach exposed that one way causality running from services outputs to energy used and from energy used to agriculture outputs. This statistically suggests that it is services sector's growth that drives the energy used and not vice versa in India.

This unidirectional causality running from services outputs to energy used signifies a less energy dependent economy and suggests that India's services sector does not depend on energy, and high consumption of energy do not implies more productivity in the short-run and there is not co-integration relationship as well. Consequently, more productivity in this sector will increase the energy used in India. Practically this results are supported because when the services outputs increase, the usage of energy especially electricity usage will increase automatically. When the amount of housing, tourism and development areas increase, the amount of energy usage will also increases. Services sector is the main sector which contributes to GDP of India, but the energy used in this sector can be minimized until its reach optimum usage. In reality, services sector consume more energy in India. It is about 41% of overall energy in 2005 (Leena & Ripu, 2007). So, based on this study, the energy can be channeled to agriculture sector which is solely depends on the energy. In the policy term, the energy conservation policies are very suitable policy that can be applied for the services sector.

On the other hand, energy used drives the agriculture sector in India. This indicates that, this sector depends on the energy and more energy used in that particular sector will lead to more productivity in short-run and also long-run since energy used and agriculture outputs are co-integrated. Hence, to increase the productivity of agriculture sector, government of India need to find way to increase the energy allocation in this sector. Energy efficiency investments and emission reduction policies will not hurt economic activities, agricultural productivity and can be a feasible policy tool for India. Besides that, there is no causality relationship between industrial outputs with energy used in short-run but, co-integrated in the long-run. This indicates that both variables are not correlated in the short-run. Somehow, in the long-run there is an existence of energy impact to the industrial sector. This indicates that existence of energy crisis or shortage will never give any impact to the industrial sector directly. But, it may affect this sector indirectly throughout other sectors since the sectoral activities are interdependent from each other's[††].

References

Aqeel, A. & Butt, M.S. (2001).The Relationship between Energy Consumption and Economic Growth in Pakistan. Asia-Pacific Development Journal: 8(2): 101-109.

Bohm, D. C. (2007). The Causal Relationship between Energy Prices, Energy Consumption and Economic Growth; A Panel Co-Integration Analysis. University of Hohenhein/Robert Bosch GmbH, Germany.

Bowden, N. & Payne, J. E. (2009). The Causal Relationship between U.S. Energy Consumption and Real Output: A Disaggregated Analysis. Journal of Policy Modeling: 31(2): 180-188.

Bowden, N. & Payne, J. E. (2010). Sectoral Analysis of the Causal Relationship between Renewable and Non-Renewable Energy Consumption and Real Output in the U.S. Energy Sources. Part B: Economics, Planning and Policy: 5(4): 400-408.

Central Intelligence Agency (2011). South Asia: India. CIA World Factbook. Retrieved September 18, 2012, from http://www.indexmundi.com/india/gdp_composition_by_ sector.html.

Chebbi, H. E. & Boujelbene, Y. (2008). Agriculture and Non-Agriculture Outputs and

Energy Consumption in Tunisia: Empirical Evidences from Cointegration and Causality. 12th Congress of the European Association of Agriculture Economists – EAAE, 2008.

Costantini, V. & Martini, C. (2010). The Causality between Energy Consumption and Economic Growth: A Multi-Sectoral Analysis Using Non-Stationary Co-Integrated Panel Data. Dipartimento di Economia: 102: 4-28.

Dhungel, K. R. (2008). A Causal Relationship between Energy Consumption and Economic Growth in Nepal. Asia-Pacific Development Journal: 15: 140-148.

Ghorbani, M., Mansoori, H. & Hasraz, S. (2009). Reinvestigation of Relationship between Macroeconomic Indexes and Energy Consumption in Iran. Journal of applied sciences: 2-4.

[††] This paper study about the overall energy consumption where all types of energies has been total up together. May be some type of energies is not mainly used by the industrial sector. So here, the further study can be conduct by using different types of energy consumption with the sectoral outputs where the findings will be more significant.

Hatemi-J, A. & Irandoust, M. (2005). Energy Consumption and Economic Growth in Sweden: A Leveraged Bootstrap Approach, (1965-2000). International Journal of Applied Econometrics and Quantitative Studies: 2-4: 89-96.

Jahansen, S. (2002). A Small Sample Correction for Test of Hypotheses on the Cointegration Vectors. Journal of Econometrics: 111: 195-221.

Kwiatkowski, D., Phillips, P. C. B., Schmidt, P. & Shin, Y. (1992). Testing the Null Hypothesis of Stationarity against the Alternative of A Unit Root: How Sure Are We That Economic Time Series Have A Unit Root?. Journal of Econometrics: 54: 159-178.

Lee, C. C. (2005). Energy Consumption and GDP in Developing Countries: A Cointegrated Panel Analysis. Energy Economics: 27: 415-427.

Lee, C. C. & Chang, C. P. (2005). Structural Breaks, Energy Consumption, and Economic Growth Revisited: Evidence From Taiwan. Energy Economics: 27: 857–872.

Liew, V. K. S., Nathan, T. M., & Wong, W. K., (2012). Are Sectoral Outputs in Pakistan Led by Energy Consumption. Economics Bulletin: 32(3): 2326-2331.

Masih, A. M. M. & Masih, R. (1998). A multivariate cointegrated modelling approach in testing temporal causality between energy consumption, real income and prices with an application to two Asian LDCs. Applied Economics: 30: 1287-1298.

Olusegun, O. A. (2008). Energy Consumption and Economic Growth in Nigeria: A Bound Testing Co-Integration Approach. Journal of economic theory: 4: 118-123.

Pattichis, C. & Maratheftis, M. (2005). Economic Fundamentals and the Behavior of The Real Effective Exchange Rate Of The Cyprus Pound. University of Cyprus-Hermes Center working paper number 03-02.

Rapach, D. E. & Wohar, E. M (2002). Testing the Monetary Model of Exchange Rate Determination: New Evidence from a Century of Data. Journal of International Economics: 58: 359-385.

Renewable Energy World Editors (2011, September 19). Energy Report: India, China to Lead Massive Growth in Consumption. World Renewable Energy Network for News & Information. Retrieved December,16,2012,fromhttp://www.renewableenergyworld.com/rea/news/article/2011/09/energy-report-india-china-to-lead-massive-growth-in consumption.

Singh, P. P. (2012, July 31). India's Energy Crisis Threatens Its Economic Growth. BBC News Business. Retrieved December, 16, 2012, from http://www.bbc.co.uk/news/ business-19059213.

U.S. Energy Information Administration (EIA). Retrieved March, 21, 2011 from http://www. eia.gov/iea/overview.html.

World Bank. World Development Indicators (WDI) and Global Development Finance (GDF). Retrieved on March, 23, 2011 from http://databank.worldbank.org/ddp/home.do?Step =12&id=4&CNO=2.

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Selection of Index Fund - A Theoretical Prospective

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Abstract

As equity markets in U.S evolved and became more sophisticated, the fund managers found it more and more difficult to outperform the Index net of trading costs, broker commissions, market spreads and taxes. It has been seen that over the last 20 years over 85% of active fund managers have underperformed the S&P 500. To add to that, as the mutual fund industry grew in size, it became difficult to say that a fund manager who had outperformed the Index this year would be able to do the same year after year. Realizing this, it was felt that if it was difficult to beat the Index consistently, one could at least get Index returns. Thus, many Investment managers purchased stocks in proportion to the Index, either knowingly or simply by default. As a result this process became to known as closet Indexation. Out of this evolved the idea of a passive buy and hold portfolio with a reduced trading cost and with a greater control over the portfolio risk.

Keywords: Fund Manager, S&P, investment, portfolio, risk.

Introduction

There are various investment avenues available for the individuals viz. shares, mutual fund, index fund, life insurance schemes etc. Index funds represent the most appropriate investment opportunity for the small investor. Index fund essentially collect money from many investors and invest it in the indexes. However, they consistently provide a better return than most mutual funds, providing all of the benefits of those investments without the risk.

An index fund is really quite simple in its premise: the investments in the fund are designed to behave as the market does as closely as possible. This is done by selecting an index – the S&P 500 and the NADSAQ 100 being two of the most popular, though others exist – and then buying shares in companies listed in that index at about the same ratio as they exist in the market. The stock market is made up of thousands of individual stocks that have both gone up and down, and choosing the right stocks isn't an easy task. An index fund simplifies this process by allowing for investment in the index as a whole.

As equity markets in U.S evolved and became more sophisticated, the fund managers found it more and more difficult to outperform the Index net of trading costs, broker commissions, market spreads and taxes. It has been seen that over the last 20 years over 85% of active fund managers have underperformed the S&P 500. To add to that, as the mutual fund industry grew in size, it became difficult to say that a fund manager who had outperformed the Index this year would be able to do the same year after year. Realizing this, it was felt that if it was difficult to beat the Index consistently, one could at least get Index returns. Thus, many Investment managers purchased stocks in proportion to the Index, either knowingly or simply by default. As a result this process became to known as closet Indexation. Out of this evolved the idea of a passive buy and hold portfolio with a reduced trading cost and with a greater control over the portfolio risk.

These factors along with technological advancement formed the foundation for the development of Index funds. Well Fargo bank pioneered Index funds offering its first product in 1971 with a $ 6 million contribution from the Samsonite pension fund. The growth in Index funds thereafter has been a natural consequence of increased emphasis on equity investment by institutional investors around the world. However, in the US markets, the growth in Index funds and Index products gained momentum only from 1996

Objectives

1. To study the index fund as an investment option.
2. To analyze the performance of index funds.

Importance and Scope of the Study

This comparative study of index fund will help the investor to choose the best fund among the selected index funds. It will also help the organization to suggest their investors to select the best index fund. it will also give information about index fund. This study helps to investors to gain capital appreciation on his investment. It also helps to know which index fund has given the maximum annual returns among the selected one and also to know fluctuation in NAV.(i.e.net asset value)

An index Fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, passively managed basket of securities at a relatively low cost. India has a burgeoning population of middle class now estimated around 300 million. A typical Indian middle class family can have liquid savings ranging from Rs.2 to Rs.10 Lacs today. Investments in Banks are liquid and safe, but with the falling rate of interest offered by Banks on Deposits, it is no longer attractive. At best a part can be saved in bank deposits, but what are the other sources of investment for the common man? Index Fund is the ready answer. Viewed in this sense globally India is one of the best markets for Index Fund Business, so also for Insurance business. This is the reason that foreign companies compete with one another in setting up insurance and index fund business units in India. The sheer magnitude of the population of educated white collar employees provides unlimited scope for development of Index Fund Business in India.

The alternative to index fund is direct investment by the investor in equities.

The study is undertaken to suggest the investor the best index fund, so as to have the best option for investment.

Research Methodology

The secondary data is used for the purpose of study. The details of the funds are collected from fact sheets, internet, books, magazines, News papers, etc.

Basic of Index Funds

Any Index is used to give information about some system or financial markets. Financial Indexes are constructed to measure price movements of stocks, bonds, and other investments. Stock market Indexes are meant to capture the overall behavior of equity markets. It is created with a group of stocks that are representative of the whole market or a specified sector or segment of the market. Any Index is calculated with reference to a base period and a base Index value.

"Indexing" is an investment approach that seeks to match the investment returns of a specified stock market benchmark, or Index. While Indexing, an investment manager attempts to replicate the investment results of the target Index by holding all -- or in the case of very large Indexes, a representative sample -- of the securities in the Index. There is no attempt to use traditional "active" money management or to make "bets" on individual stocks or narrow industry sectors in an attempt to outpace the Index. Thus, Indexing is a "passive" investment approach emphasizing broad diversification and low portfolio trading activity.

An Index fund is a mutual fund scheme that invests in the securities of the target Index in the same proportion or weight age. Though they are designed to provide returns that closely track the benchmark

Index, Index funds carry all the risks normally associated with the type of asset the fund holds. So, when the overall stock market falls, you can expect the price of shares in a stock Index fund to fall, too. In short, an Index fund does not mitigate market risk -- the chance that the overall market for bonds or stocks will decline. Indexing merely ensures that your returns will not stray far from the returns on the Index that the fund mimics. The underlying assumption of Indexed management is that financial markets are efficient over the long term, making it virtually impossible for active managers to consistently outperform market averages consistently. For this reason, Indexing has become popular with corporate pension fund managers who seek steady returns through a conservative, long term, low-risk investment strategy.

Types of Index funds

1 Sampled Funds 2 Fully Replicated Funds

1) Sampled Funds**:** If the benchmark Index is large in size (number of constituents) then fully replicated fund is likely to have a huge establishment and annual maintenance cost. In such cases, it may be easier and beneficial to select a sample from the target Index to represent the entire Index. Sampling enhances savings in transaction costs but on the flip side the tracking error is likely to be much higher.

2) Fully Replicated Funds: Fully Replicated Funds hold all the constituents of the chosen Index in the same proportion as held in the Index. This type of fund is expected to have the lowest tracking error.

NAV & Calculation of NAV

NAV stands for net asset value. the performance of the particular scheme of a index fund is denoted by NAV. Net Asset Value of the securities held by the scheme. since, the market value the securities changes everyday, NAV of a scheme also varies on day to day basis.

NAV is calculated as –

NAV = investment + accrued income and receivables **-**

liabilities and accrued expenses / number of units outstanding

Eg. If the market value of securities, of a index fund scheme is 200 lacs & the index fund has issued 10 lacs units of Rs. 10?**-** each to the investors , then the NAV per unit of the fund is Rs. 20/- Each day NAV is updated on AMFI’s website by 8:00 p.m. of the relevant day. Investors can get these NAVs from newspapers, websites etc.

Risk and Risk Measurement

Index funds are not free from risks. It is so because basically the index funds also invest their funds in the stock market on shares which are volatile in nature and are not risk free. In general sense, risk means the possibility if financial loss. In the investment world, the possibility of loss is considered to arise from variability of earnings from time to time i.e. Total Return of a Fund. A fund with stable, positive earnings is less risky than a fund with fluctuating total return. 'Risk' is thus equated with volatility of earnings, a statistically measurable concept.

There are various risk measures to measure the Volatility of the investment.

A) Standard Deviation

Standard deviation measures the dispersion of data from its mean. The more that data is spread apart, the higher the difference is from the norm. In finance, standard deviation is applied to the annual rate of return of an investment to measure its volatility i.e. risk. A volatile stock would have a high standard deviation. With index funds, the standard deviation tells us how much the return on a fund is deviating from the expected returns based on its historical performance. SD can be computed for both equity and debt funds. SDs of different funds can be computed with each other, or with SD of a market index or even that of another category. SD measures the volatility of stock. Higher value means fund is more volatile and vice-versa.

B) Beta

Beta relates a funds return with a market index and measures the sensitivity of the funds return to changes in the market index. A beta of 1 means the fund moves with the market. A beta less than one means the fund will be less volatile than market. higher beta portfolios give greater returns in rising markets and are riskier in falling markets. Beta is a good measure of fund risk level. But, it is based on past performance, it does not necessarily indicate future performance. It is level of correlation between returns of a fund and market returns. Positive beta means fund is directly correlated with the market and vice-versa.

C) Sharp Ratio

Sharp ratio and standard deviation are interlinked with each other. Sharp ratio is the difference between the portfolios returns over and above the return earned on a risk free investment divided by the SD of the portfolio. The standard deviation is the risk factor of the portfolio. SD is used as it is indicative of the volatility in the fund. A lower SD implies little fluctuation in the returns. And when the sharp ratio represents a higher return generated per unit of risk. Excess return i.e. risk premium per unit of total risk. Higher sharp ratio means higher return for same risk level.

D) Mean

It is an average return.

E) Fama

Excess returns over and above the return required to compensate the total risk taken by the fund manager. High value means favorable performance.

F) Correlation

It is relation between fund and benchmark portfolio. A positive ratio means fund is positively related and vice-versa.

G) Sortino

It is a variation of sharp ratio measuring only return against downward price volatility.

H) Treynor

It is a measure of return in excess of risk free rate of return. Risk averse investors prefer the value to be high.

I) Expense Ratio

The expense ratio is the total amount of annual expenses incurred by the fund. It includes the management fees and operating expenses like the registrar and transfer agent fee, audit fee, custodian fee, marketing and distribution fee.

As per the regulations of the SEBI , Index fund can charge a maximum expense of 1.5 per cent for the index fund.

Tracking Error

Tracking error is defined as the annualized standard deviation of the difference in returns between the Index fund and its target Index. In simple terms, it is the difference between returns from the Index fund to that of the Index. An Index fund manager needs to calculate his tracking error on a daily basis especially if it is open-ended fund. Lower the tracking error, closer are the returns of the fund to that of the target Index. Tracking Error is always calculated against the Total Returns Index which shows the returns on the Index portfolio, inclusive of dividend.

Tracking Error Indicates

1. How closely the fund is tracking the Index: It refers to the how close the weight ages of the stocks in the portfolio are to the weight ages of the stocks in the Index. The more closely the weight age of the stocks are tracked in the Index, lower will be the tracking error. The factors that affect tracking error are inflows / outflows in the fund, corporate actions, change of Index constituents and the level of cash maintained in the fund for liquidity purposes.

***2. The cost that routinely subtracts from fund returns*:** Expenses like transaction costs including broker' commission, bid and ask spread, etc. gets subtracted from the returns of the fund. Higher the expenses incurred, greater will be the tracking error.

Calculation of Tracking Error

Step 1:	Obtain the NAV values and the TR Index values for each day of the total time period required
Step 2:	Calculate the percentage change in the NAV and TR Index for each day over its previous day Percentage change in the NAV NAV as on day (t) – NAV as on day(t-1) / NAV as on day (t - 1)
Step 3:	Calculate the difference between the percentage change in the NAV and the percentage change in the TR Index for each day
Step 4:	Calculate the standard deviation of the difference obtained from day(1) today(n) in Step 3
Step 5:	Calculate the annualized tracking error as per the formula given below Annualized tracking error = Standard deviation obtained (Step 4) * sqrt (250)

Choosing the Right Index

The aim of an Index fund is to match as closely as possible the returns of its target Index. This makes it all the more essential to choose the right Index. In most cases around the world today, market Indexes were created years ago, in an environment with limited information access, poor computation and limited knowledge of financial economics. However, all three factors are much altered today. Over the last two decades, the revolution in technology and greater research into Index funds and Index derivatives has shed new light upon issues of Index construction. Every stock market Index is a trade-off between diversification and liquidity. Small market Indexes are liquid but under-diversified while large market Indexes tend to be well-diversified but illiquid. Hence an Index that that has the right mix of both would be the best Index.

The S&P CNX Nifty

In India, the S&P CNX Nifty is the most scientific Index that was constructed keeping in mind Index funds and Index derivatives.

The S&P CNX Nifty is a market capitalization-weighted Index with base year as November 03, 1995. The base value has been set at 1000. The S&P CNX Nifty is an event-driven Index i.e., price change in any of the Index securities will lead to a change in the Index. It also takes into account substitutions in the Index set and importantly, corporate actions such as stock splits, rights, etc without affecting the Index value. For the purpose of Indexation, market cap weighted Index offers the advantage of simplifying the day to day management of the fund. As market prices rise or fall, the value of the Index fund rises and falls in tandem with the target Index.

Since market price change does not require any rebalancing, there are savings in the number of transactions, thus reducing transaction cost.

The construction of the S&P CNX Nifty was motivated by the need to create a methodology to intelligently address the following four major issues in Index creation:-

1) Evolution of an Index Set

India's corporate sector is dynamic: old companies go defunct, and IPOs (including newly disinvested public sector companies) frequently turn into some of the largest companies in the country.

2) The Problem of Stale Prices

The market Index should reflect market conditions at a point in time – when some components trade infrequently, they detract from this objective. Stringent liquidity India Index Services & Products Limited Index funds conditions should be applied so as to minimize the difficulties caused by non-synchronous trading, and its more extreme version, non-trading.

3) The Size of the Index Set

Should an Index set comprise 30, or 50, or 100, or 3000 stocks? We should have a clear quantitative foundation for implementing the choice of the set size.

4) Modern Applications

The Index should have liquidity of a form which is well-suited for modern applications such as Index funds and Index derivatives, both of which require the entire Index set to be treated and traded as a portfolio. An Index Committee consisting of eminent personalities in the field of finance such as mutual fund managers, trading members, academicians and persons who have experience trading in futures and options markets abroad, designed the S&P CNX Nifty so as to make it more representative of the entire market, provide high hedging effectiveness for any portfolio and minimize impact cost of transactions. Among the biggest findings of the committee was that the number 50 was found to be the ideal size of the Index and that liquidity should be judged by impact cost. It is indeed the case that putting more stocks into the Index yields more diversification. However, two things go wrong when we do this too much: Firstly, there are diminishing returns to diversification. Going from 10 stocks to 20 gives a sharp reduction in risk. Going from 50 stocks to 100 stocks gives very little reduction in risk. Going beyond 100 stocks to gives almost zero reduction in risk. Hence, there is little gain by diversifying, beyond a point. The more serious problem is the inclusion of illiquid stocks due to diversification.

Liquidity of the asset is one of the most important criteria for an investor. In the derivatives market, investors are more concerned with the liquidity of the underlying. All the securities constituting the S&P CNX Nifty are highly liquid. Liquidity of the S&P CNX Nifty is important in reducing the reflection of stale prices and in enabling spot-to-futures arbitrage.

A variety of measures such as trading volume, trading frequency, bid-ask spread etc are used for quantifying liquidity. For measuring liquidity of Nifty securities, their impact costs have been calculated. Impact cost of a security as the term suggests, is the cost of executing a transaction in

the given security in proportion of its weight age in the portfolio under consideration, on immediate basis at any point of time in the market.

Selection Criteria

a) All companies to be included in the Index should have a market capitalization of Rs. 5 billion or more

b) Company entering the Index should have double the market capitalization of the company leaving the Index Liquidity (Impact Cost)

c) All securities should fully satisfy the required execution on 90% of the trading days at an impact cost of less than 0.75% in the last six months.

Total Returns Index

A Total Returns (TR) Index is calculated on S&P CNX Nifty. This Index shows the returns on the Index portfolio, inclusive of dividend. The difference between the two Indexes Nifty and TR Index at any given time is the return obtained on reinvestment of dividends through the intervening period. Thus it is the ideal benchmark for Index Funds which earns dividend and reinvests promptly.

Calculation Methodology of the S&P CNX Nifty

The S&P CNX Nifty is computed using market capitalization weighted method wherein the level of the Index reflects the total market value of all the stocks in the Index relative to the base period November 3,1995. The total market cap of a company or the market capitalization is the product of market price and the total number of outstanding shares of the company.

Market Capitalization = Outstanding Equity Capital * Price

In this method the weight ages are not fixed, they change with the stock price movements and changes in the number of shares outstanding. All selected securities in the Nifty bear a weight in the proportion of their market capitalization.

General Index Formula Calculation

Base Capitalization Method

$$\text{Index value} = \frac{\text{Current market capital}}{\text{Base market capital}} * \text{Base Index Value (1000)}$$

Base market capital of the Index is the aggregate market capitalization of each scrip in the Index during the base period. The market cap during the base period is equated to an Index value of 1000 known as the base Index value.

Current market capital of the Index is the aggregate market capitalization of each scrip in the Index during the current period. The current price of each stock is multiplied by the number of shares outstanding to give the aggregate current market cap of the Index At any given time , the Index level is equal to the total current market value of the portfolio, divided by the base period market value , multiplied by base Index value. A Nifty Index level of 1500 will indicate that the aggregate price of the portfolio has risen by 50% over the base period.

References

Prasanna Chandra, Investment & Portfolio Management, Tata Mcgrow Hill Publication,New Delhi 2010

Dr.P.C.Tulcian, Financial Management, S.Chand, New Delhi 2010

Preeti Singh, Investment Management, HimalayaPublication, New Delhi 2010

V.A.Avdhani, Security Analysis, HimalayaPublication, New Delhi 2010

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Cost Competitiveness of Textile Industry of Punjab: Analysis and Findings

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Abstract

Textile industry in Punjab is making significant contribution to the State's economy and to the national foreign exchange earnings. With dismantling of the quota system in January 2005, the structure of worldwide trade in textiles also marked a significant turnaround after this period, as all the textile and clothing products can be traded globally without quota-restrictions. In order to face new challenges and opportunities by the Textile Industry in India, efforts are being made to sharpen the competitive edge. The Paper aims at studying the cost competitiveness of textile industry in Punjab. The study provides comprehensive analysis of the primary data collected by questionnaires from various stakeholders, conducted during the research.

Introduction

Textile industry in Punjab is making significant contribution to the State's economy and to the national foreign exchange earnings. It adds about 19 percent to the total industrial production in the State and contributes to nearly 38 percent of the total exports from Punjab. Today this sector is highly globalized but, it is further organizing itself to crave a bigger share to become the market leader. With dismantling of the quota system in January 2005, the structure of worldwide trade in textiles also marked a significant turnaround after this period, as all the textile and clothing products can be traded globally without quota-restrictions. In order to face new challenges and opportunities by the Textile Industry in India, efforts are being made to sharpen the competitive edge. The Paper aims at studying the cost competitiveness of textile industry in Punjab.

The study provides comprehensive analysis of the primary data collected by questionnaires from various stakeholders, conducted during the research. The main respondents include top and middle level management of the selected firms, government, and industry associations. The empirical analysis of the study is based on filled questionnaires, using scaling techniques on a five point Likert scale. The value on the scale signifies a continuum from 1 to 5 (5 being very high/ excellent and 1 as very low/ poor), which is further tested through statistical chi-square method at 5 percent level of significance. Results are obtained based on observation of knowledgeable respondents of textile industry in Punjab and measurement of its competitiveness is made in terms of input factors like labour, raw material, power, technology, finance, transportation.

Cost Competitiveness of Inputs: The findings of the study are based on empirical data collected from various stake holders with respect to cost competitiveness, has been presented in the Table-1.The six variables –labour, raw material, transportation cost, finance, technology and power, have been considered as the input factors for the purpose. For the purpose of using the null hypothesis of study a detailed factor wise analysis of hypothesis have also been carried out.

Table 1: Cost of Input Factors in Punjab Vis-à-vis Competing Nations

Nature of responses	**V.Low**		**Low**		**Medium**		**High**		**V.high**		**Cumulative %**	
Variables-Costs	N	%	N	%	N	%	N	%	N	%	Agreed (a)	Dis-agreed (b)
Raw Materials	3	11.7	10	5.5	127	70.55	40	22.23	0	0	77.77	22.23
Labour	5	2.77	20	11.1	134	74.44	21	11.68	0	0	88.32	11.68
Technology	0	0	0	0	59	32.77	103	57.22	18	10	32.77	67.22
Power	0	0	0	0	65	36.11	100	55.55	15	8.33	38.11	63.89
Transportation	0	0	0	0	102	56.67	70	38.89	8	4.44	56.67	43.33
Cost Of Funds	0	0	12	6.67	68	37.77	93	51.66	7	3.89	44.43	55.57

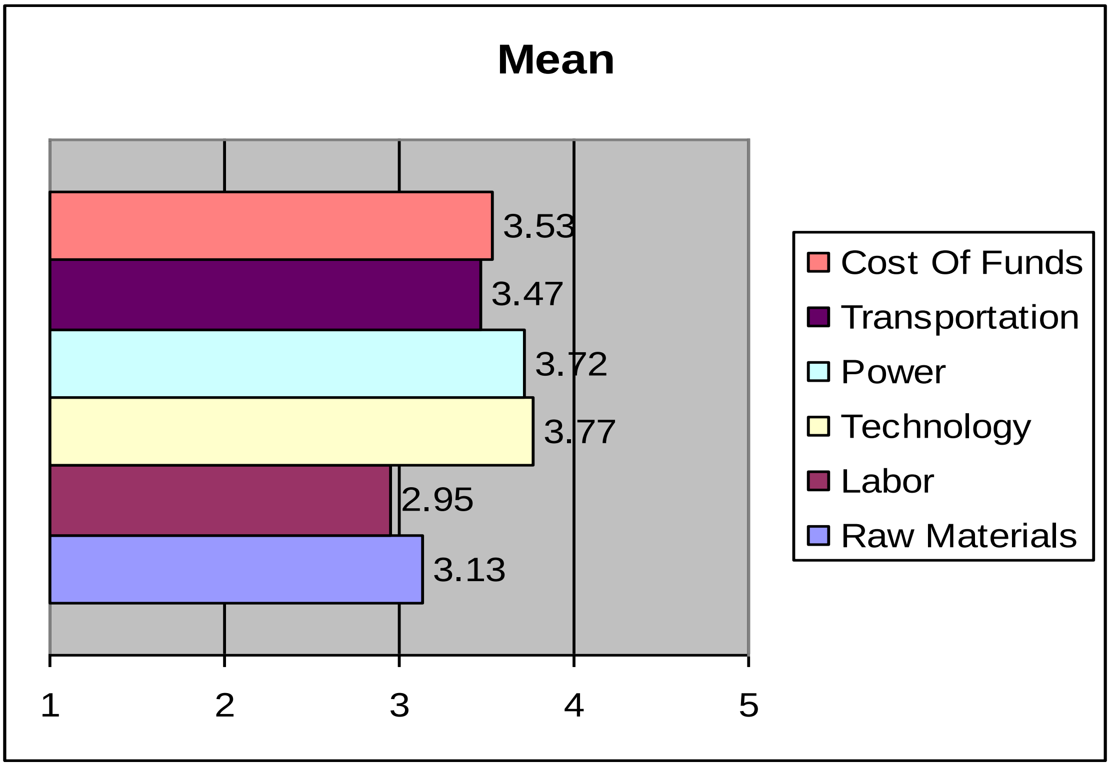
$\chi 2$ =105.04, d.f =5, α=0.05

a=very low, low and medium.

b= disagreed as regards 'a' (i.e. high and very high)

Table 1 reflects that nearly 90 percent of the respondents are of the opinion that state of Punjab enjoys competitiveness with respect to labour cost, whereas in case of raw material and transportation cost, this agreed percentage is 77.77 and 56.67 respectively. However, poor cost competitiveness is reflected by technology and power variables as the agreed percentage of the respondents have just been 32.77 and 36.11 respectively. Chart 1 postulates that the mean value of the cost of labour ($\bar{x}$=2.75) fall on the continuum of the scale at "quarter to medium" and cost of raw material and transportation in the state ($\bar{x}$=3.13 and 3.4 > 3.0) fall are slightly above "medium". Whereas the mean values for power, technology and finance ($\bar{x}$=3.72, 3.77 & 3.53) fall on the continuum scale at near "high". Therefore it can be inferred from the analysis that labour; raw material and transportation are perceived to be competitive, whereas the other three are not competitive.

Chart 1



Average rating out of 5, (5, being very high and 1=Very low)

After applying statistical Chi-square test on the results, it is found that the calculated value (105.04) is more than the Table value (11.1). Statistical calculations depicts that there is a significant difference in the perception of the responses in terms of cumulative agreed and disagreed for the variables –labour, raw material, transportation cost, finance, technology and power, hence null hypothesis (i.e. textile industry in Punjab as well on Indian scene has lost cost competitiveness in terms of input factors like raw material, labour, transportation, finance, power and technology) is rejected.

Competitiveness in Terms of Raw Material

As raw material accounts for major part of the cost of production and has significant impact on operational performance of textile units, therefore data has been presented and analyzed in Table-2 in terms of requirement wise, variety wise and quality availability of raw material.

Table 2 Availability of Raw Materials in Punjab Vis-à-vis Competing Nations

Nature of responses	Excellent		V.Good		Good		Average		Poor		Cumulative %	
Variables-	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**Agreed (a)**	**Dis-agreed (b)**
Requirement-wise *	51	28.3	45	25	65	36.11	19	10.55	0	0	89.45	10.55
Variety-wise*	5	2.77	80	44.44	60	33.33	35	19.44	0	0	80.55	19.45
Quality-wise**	30	16.7	24	13.33	60	33.33	50	27.77	16	8.89	63.33	36.67

$\chi2$ =20.41, d.f =2, α=0.05

a=Excellent, very good and good

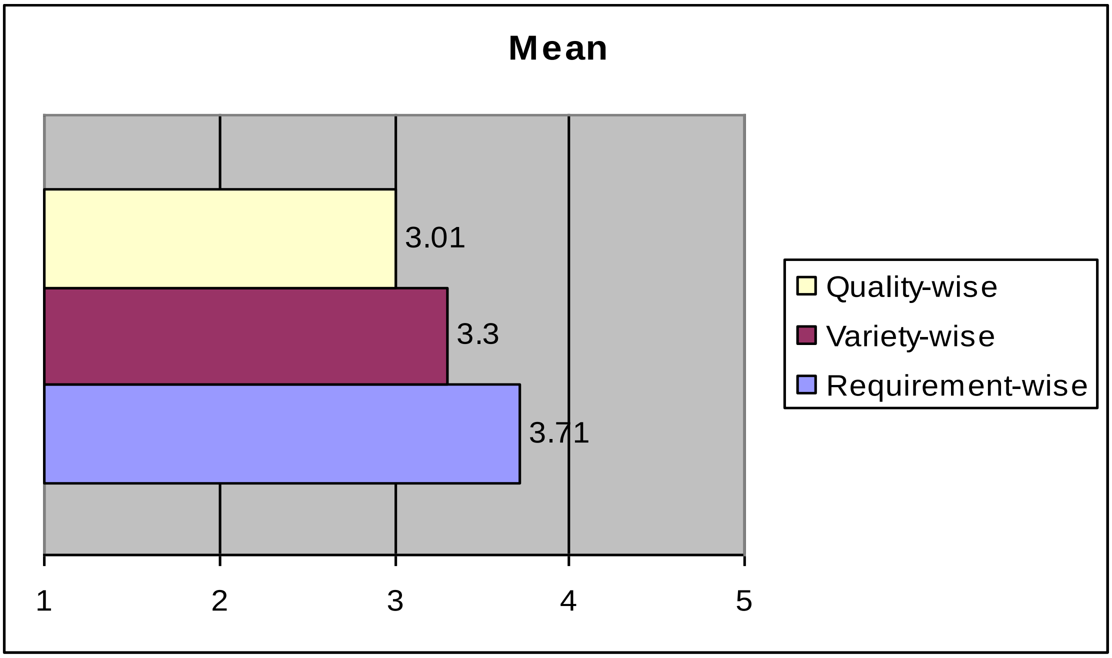
b= disagreed as regards ‘a’ (i.e. average and poor)

* Industrial demand, ** Superior quality of fabrics.

Table 2 shows that the agreed responses on the above three parameters are: near 90 percent, 80 percent and 63 percent respectively, in the descending order. The mean value in terms of requirement wise availability of raw material ($\bar{x}$ =3.71 > 3.5) that lie near “Very good” on five point scale. The mean values of variety wise ($\bar{x}$=3.3) as well as quality wise ($\bar{x}$=3.01) also fall on “good” on the scale. Therefore, it is concluded that the supply of raw materials is competitive vis-à-vis competing nations, on the all parameters analyzed in the Chart 2.

When statistically tested through chi-square at 5 percent level of significance, it is found that there is significant differences in the perception of the responses and thus, calculated value of chi-square (20.41) is less than the table value (5.99), therefore, the null hypotheses (i.e. the state is not competitive in terms of raw materials) is rejected with the inference that there is significant difference in the perception of the respondents in term of cumulative agreed and disagreed response for the above variables.

Chart 2



Average rating out of 5, (5, being excellent)

Competitiveness of Human Resources

Labour is a major cost element in the textile Industry. Given the industry's labour intensive nature, affable relations help ensure uninterrupted operations and controlled the labour cost. In the Table 3 competitiveness of labour is prepared in terms of availability and productivity as well as labour turnover.

Table 3 Competitiveness of Human Capital in Punjab Vis-à-vis competing Nations

Nature of responses	**Excellent**		**V.Good**		**Good**		**Average**		**Poor**		**Cumulative %**	
Variables-	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**Agreed (a)**	**Dis-agreed (b)**
Availability of Labour	91	50.55	54	30	30	16.67	5	2.77	0	0	97.23	2.77
Productivity of Labour	12	6.67	33	18.33	63	35	32	17.8	40	22.2	60	40
Labour Turnover	10	5.55	63	35	46	25.55	61	33.9	0	0	66.11	33.89

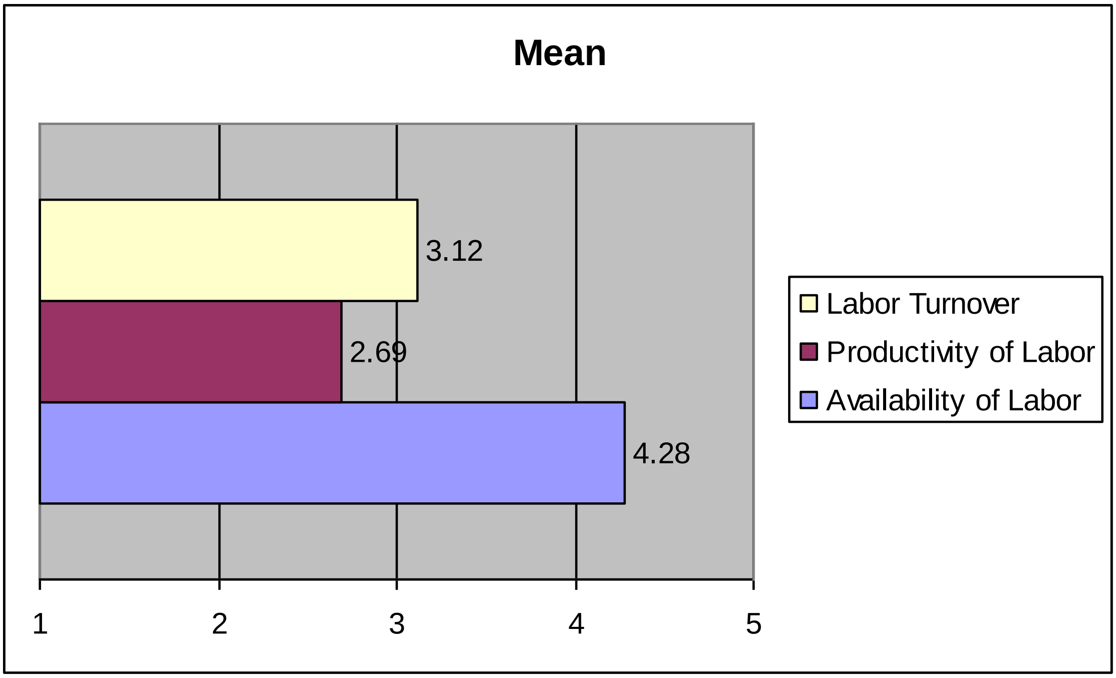
$\chi 2 = 41.92$, d.f $= 2$, $\alpha = 0.05$

a=Excellent, very good and good

b= disagreed as regards ‘a’ (i.e. average and poor)

Table 3 depicts the perception of the human capital competitiveness vis-à-vis other countries. The industry enjoys the competitiveness with regard to the availability of labour, as 97.23 percent of the respondents have marked their response “excellent” on the continuum five point scales. However, labour productivity (60 percent) and labour turnover (66.11 percent), highlights less competitiveness.

Chart 3



Average rating out of 5, (5, being excellent)

Chart 3, postulates that the mean value of the availability of labour is very competitive ($\bar{x}$=4.28> 4.0)) as it fall on the continuum of the scale at more than “very good” But in term of Productivity parameter ($\bar{x}$=2.7<3.0) and labour turnover ($\bar{x}$=3.13>3.0), it is not competitive. To conclude, from the analysis, it can be stated that labour is perceived to be competitive, while the labour productivity is low and labour turnover is high vis-à-vis other nations. Thus making the state not so globally competitive on these parameters. Gaps in skill set of labour force only add to the problem of low productivity.

When statistically tested through chi-square at 5% level of significance, it is found that there is significant difference in the perception of the respondents in term of cumulative agreed and disagreed response for the variables: availability of labour, labour productivity and turnover of labour. Hence, it can be concluded that textile industry in the state is competitive on this parameter in comparison to other nations. Hence, null hypothesis (i.e. the state lost competitive advantage on human resources), is rejected at 5 percent level of significance.

Competitiveness in Terms of Technology in Punjab

In an increasingly technology-based competitive global business environment, the operational and competitive strategic potentials of advanced manufacturing technologies (AMT) and related systems cannot be overlooked. Empirical data with respect to technological competitiveness is presented in the Table 4

Table 4 Technology in Punjab Vis-à-vis Competing Nations

Nature of responses	**Excellent**		**V.Good**		**Good**		**Average**		**Poor**		**Cumulative %**	
Variables-	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**Agreed (a)**	**Dis-agreed (b)**
Up-to-date Technology	9	5	30	16.66	46	25.55	52	28.89	43	23.88	47.21	52.79
Better than competing Nations	6	3.33	22	12.22	39	21.67	66	36.67	47	26.11	37.21	62.79

$\chi 2$ =2.049, d.f =1, α=0.05

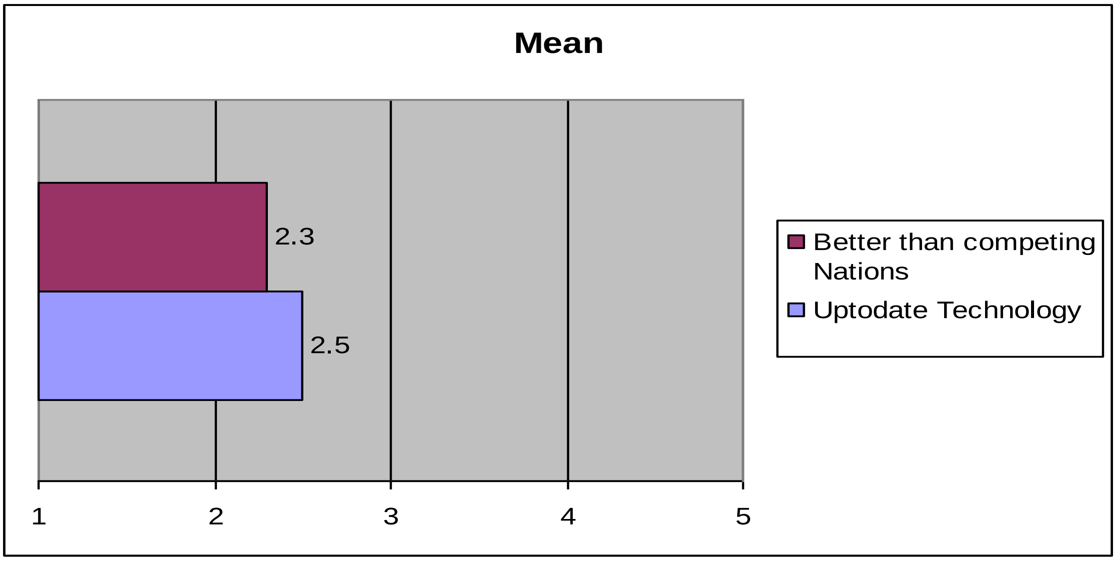
a=Excellent, very good and good

b= disagreed as regards ‘a’ (i.e. average and poor)

Table 4 reflects that the kind of technology used in the state (especially SSI) is not up-to-date (47.21 percent responses-agreed). However 37.21 percent respondents agreed that it is better than the competing nations. The mean values in chart 6.1.3, for these variables are 2.5 and 2.3 respectively also fall on the continuum above “Average” which is the mid-point of the five point scale. Therefore, it can be concluded that the textile industry in the state, perceived to be neither better than the competing nations nor having with up-to-date technology. It is also observed by SMERA rating agency that SMEs in the textile units lag behind to meet the international standard of technology and modernization. Only few financially strong units resort to continuous modernization. The units which have done continuous modernization have improved the installed capacity as well as captured export market.

When statistically tested through chi-square at 5 percent level of significance, it is found that, calculated value of chi-square (2.049) is less than the table value (3.84), therefore, the null hypotheses (i.e. the state is not competitive in terms of technological factors) is accepted with the inference that there is no significant difference in the perception of the respondents in term of cumulative agreed and disagreed response for the above variables.

Chart 4



Average rating out of 5, (5, being excellent)

Competitiveness in Terms of Finance

Finance is an important component affecting cost of production and competitiveness of any business unit. The two parameters: easy availability and financing procedure is presented and analyzed in the Table 5. It depicts that based on five point ratings, nearly 72 percent respondents have agreed with the easy availability of finance in the state. Whereas, as regard financing procedure, nearly same percentage stands on the disagreed side.

Table 5 Availability of Finance in Punjab Vis-à-vis Competing Nations

Nature of responses	**Excellent**		**V.Good**		**Good**		**Average**		**Poor**		**Cumulative %**	
Variables-	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**Agreed (a)**	**Dis-agreed (b)**
Easily Available	19	10.6	40	22.22	71	39.44	40	22.29	10	5.55	72.21	27.79
Financing Procedure	6	3.33	16	8.89	30	16.67	50	27.77	78	43.73	27.77	72.23

$\chi2$ =39.49, d.f =1, α=0.05

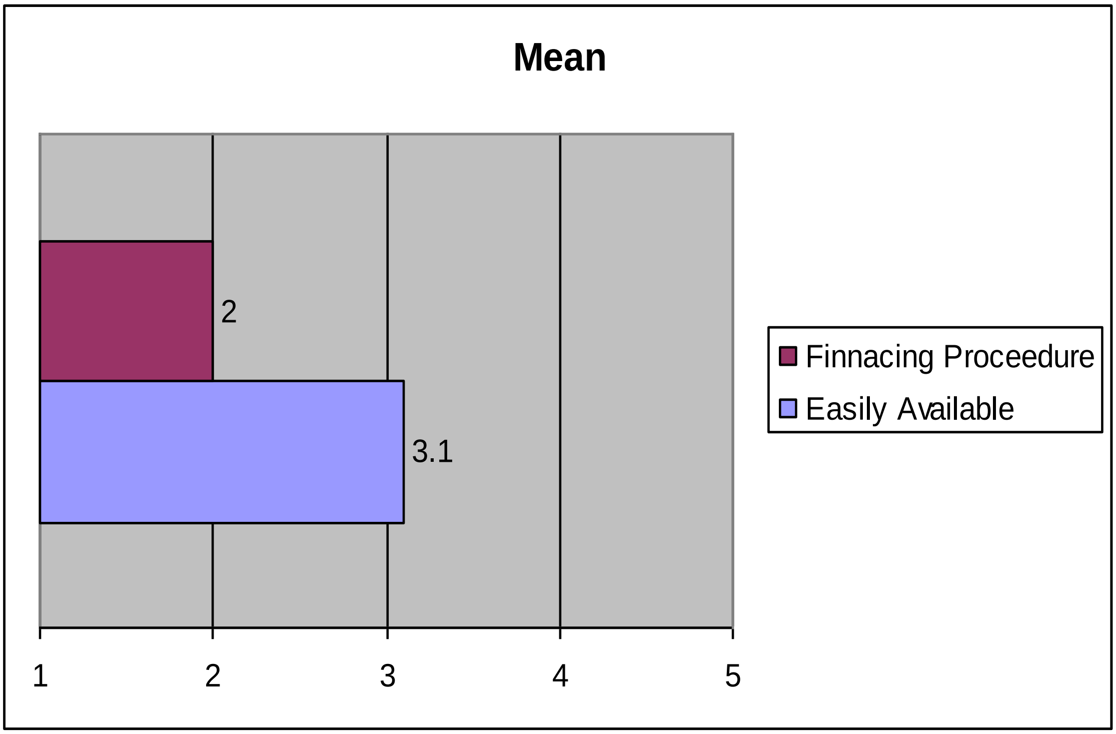
a=Excellent, very good and good

b= disagreed as regards 'a' (i.e. average and poor)

The chart 5 shows that the mean value ($\bar{x}$=3.10) for easy availability lie in the range of "good" on the scale, whereas the mean value ($\bar{x}$=2.01) for financing procedure is "average", which describe that the process of financing is very much tedious in the state. Hence, it can be concluded that textile industry in the state is not competitive on this parameter in comparison to other nations.

On application of chi-square test at 5 percent level of significance, it is found that there is significant difference in the perception of the responses for the variables: easy availability and financing procedure. Hence, the null hypothesis (i.e. state lost its competitiveness on this parameters), is rejected.

Chart 5



Average rating out of 5, (5, being excellent)

Competitiveness in Terms of Power

Empirical data regarding supply of power in Punjab vis-à-vis competing nations is presented in Table 6, in terms of its requirement and voltage-wise position.

Table 6 Supply of Power in Punjab Vis-à-vis Competing Nations

Nature of responses	Excellent		V.Good		Good		Average		Poor		Cumulative %	
Variables-	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**Agreed (a)**	**Dis-agreed (b)**
Requirement-wise	4	2.22	25	13.89	37	20.55	73	40.55	41	22.77	36.67	63.33
Voltage-wise	10	5.55	30	16.67	45	25	69	38.33	26	14.44	47.22	52.78

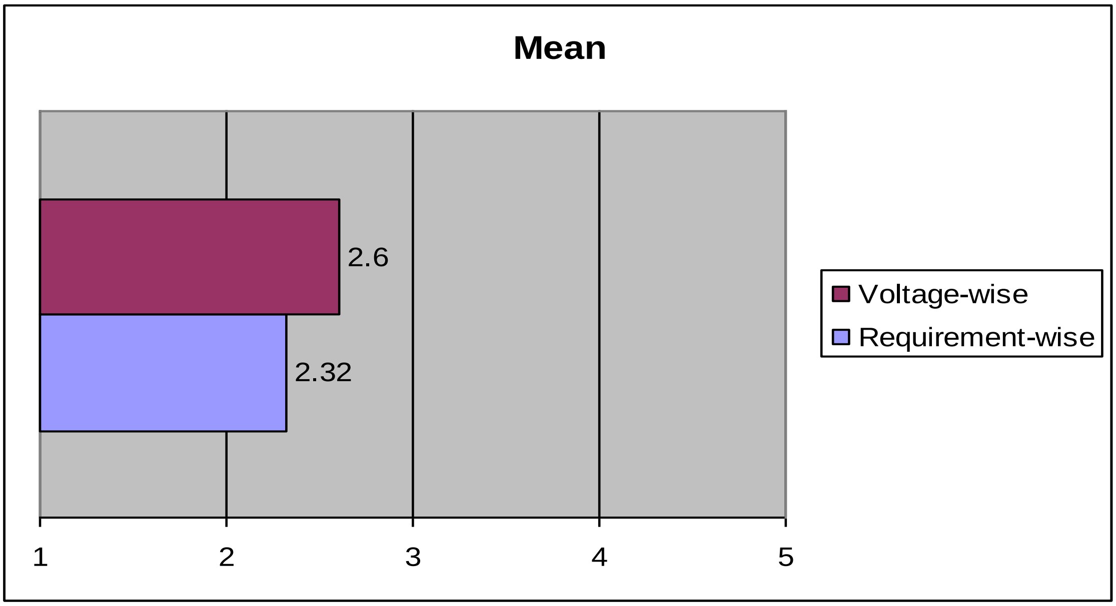
$\chi 2$ =2.29, d.f =1, α=0.05

a=Excellent, very good and good

b= disagreed as regards 'a' (i.e. average and poor)

Table 6 reflects that more than 2/3rd of the respondents and more than half respondents are disagreed with respect to the quantity and quality of power, which shows that the supply of power (requirement-wise and voltage-wise) is not up to the mark vis-à-vis competing nations. The study is also supported by Jayavarithanavelu[1,] who states that India is gradually losing its competitiveness due to high power cost and poor infrastructure.

Chart 6



Average rating out of 5, (5, being excellent)

Chart 6. depicts that the Mean values for the supply of power in terms requirement-wise ($\bar{x}$=2.32) and voltage-wise fall below the critical value or "good" on the five point scale. Hence it is concluded that the supply of power is not competitive vis-à-vis competing nations, on the above both parameters.

On application of chi-square test at 5 percent level of significance, it is found that there is no significant difference in the perception of the responses for the variables: requirement-wise and voltage-wise. Statistical calculations shows that calculated value (2.29) is less than the table value (3.84) and therefore null hypotheses (i.e. the state is not competitive in terms of supply of power) is accepted.

Competitiveness in Terms of Transport

Competitiveness of transport is determined in terms of four variables presented in the Table 7 as per the data so collected. Table highlights that more than 2/3rd of the respondents have agreed with the opinion that transportation facility in terms of requirement wise, service wise and security wise is good in comparison to the competing nations. But it marginally lost its image in terms of safety wise (44.45%).

Table 7 Competitiveness of Transportation in Punjab Vis-à-vis Competing Nations

Nature of responses	**Excellent**		**V.Good**		**Good**		**Average**		**Poor**		**Cumulative %**	
Variables-	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**Agreed (a)**	**Dis-agreed (b)**
Requirement-wise	7	3.89	67	37.22	45	25	61	33.88	0	0	66.12	33.88
Service-wise	23	12.77	58	32.22	26	14.44	73	40.6	0	0	59.45	40.55
security-wise	7	3.89	48	26.67	65	36.11	40	22.2	20	11.1	66.66	33.34
safety-wise	3	1.67	11	6.11	66	36.67	70	38.9	30	16.7	44.45	55.55

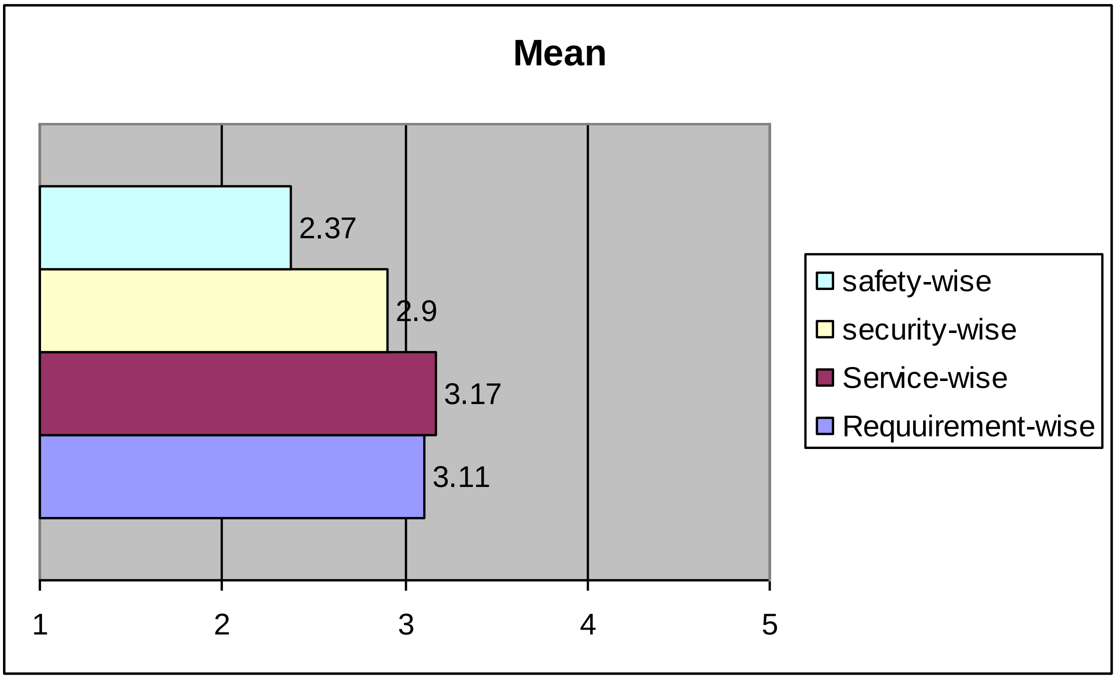
$\chi 2$ =13.29, d.f =3, α=0.05

a=Excellent, very good and good

b= disagreed as regards 'a' (i.e. average and poor)

Chart 7 reflects that requirement wise and service wise ($\bar{x}$=3.11.3.17 >3.00) are above the mid point i.e. good on the scale, whereas security wise it is near "good". Therefore it can be concluded that the transport facility in the state is competitive on all the above parameters except safety wise.

Chart 7



Average rating out of 5, (5, being excellent)

When statistically tested through chi-square at 5% level of significance, it is found that there is significant differences in the perception of the responses in terms of cumulative agreed and disagreed for the variables – requirement wise, security wise and safety wise. Hence, null hypothesis (i.e. the state lost competitiveness in terms of transport factor), is rejected. However, proper up gradation of road network/infrastructure and effective traffic management, will go a long way in further enhancing the competitiveness of the sector.

To conclude, from the analysis, it can be stated that labor is perceived to be competitive, while the labor productivity is low and labor turnover is high. However on the Indian scene it also found that the estimated cost of labor was 43 cents for Pakistan followed by 47 cents in India, 57 cents in China, 52 cents in Indonesia and 60 cents in Egypt while Bangladesh and Vietnam outweighed this advantage with even lower costs 27 and 29 cents respectively in 2007. However, gaps in skill set of labor, low productivity, high labor turnover and poor technology are the major constraints faced by the cluster, largely offset advantage of cheap labor. Special attention must be devoted to strengthen human resource development facilities particularly in vocational & technical education in the state by inviting participation of industry associations and private entrepreneurs for restructuring industry specific training programmes in Industrial Training Institutes ('ITIs) Facilities for training and retaining the labor for new and more skilled job profiles need to be strengthened to compete globally. The textile industry is confronted with the problems of electricity like frequent shutdowns and load-shedding which is affecting the productivity of the units. Uninterrupted supply of power at a fair rate should be provided. Captive power generation by the industrial houses may continue to be encouraged. In order to give an impetus to the development of non-conventional energy, such as solar energy, wind energy, energy generation from biogases; such projects may be made eligible for benefits under the new Package Scheme of Incentives.

Punjab has started modernizing and expanding to bring operations to economical scales. However, there is further scope to consume internal adjustments and gear itself for a better future. For growth & sustainability, Punjab textile will have to adopt integrated and collaborative functioning. Secondly there is dire need to improve infrastructure facilities for the industry to function efficiently to compete in the global market.

References

Jayavarithanavelu (2002), "Monsoon delay may push cotton prices up," www.google.com

Shekhar, Business Standard Aug 3, 2006

CII-Industry Monitor Punjab, 2006

IBEF,Punjab (www.ibef.net.)

ERMIU (2008), Ministry of textile, New Delhi,(www. texmin.gov.in)

Economic survey of Punjab, 2007-08, Advisor to Govt. of Punjab (India).

Compendium of Textile Statistics-2012, Ministry of Textile (www.texmin.gov.in)

Garmentline-2007, "The Shifting apparel export market in China and India." Pp 51-52, Dec. 2007.

Vinod Thaper, President, Knitwear club, 2008

Questionnaire filled from exporters ,manufacturers and Association Members.

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Socio-economic Empowerment: Initiatives for Women in Himachal Pradesh

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Abstract

Women constitute half of the human race, yet their position in society is ambiguous. They have been subject to all forms of discrimination and in every institutional structure extending from family to state. Discrimination has led to her subordination which is defined as the gender gap between men and women. Women not only in India but all over the world have been a subject of suppression, neglect and demoralisation lot on the society. In India women constitute 48.4 per cent of the total population, whether engaged in gainful employment or working mainly as housewives they are an important constituent of the human resources, so closely linked to national development. Thus emancipation of women is an essential prerequisite for economic development and social progress of the nation. The present era needs to react sharply to empower women at all cost. Empowerment is the effective answer to oppression, exploitation, injustice and other maladies which are done on women. Hence the empowerment of women is smart economics. Women's empowerment is an all encompassing phenomenon, social empowerment, economic empowerment and political empowerment are its corner stones. The paper seeks to examine the status of Women Empowerment in Himachal Pradesh and to evaluate the governmental initiatives and policies for empowerment of women in Himachal Pradesh.

INTRODUCTION

Women constitute half of the human race, yet their position in society is ambiguous. They have been subject to all forms of discrimination and in every institutional structure extending from family to state. Discrimination has led to her subordination which is defined as the gender gap between men and women. Women not only in India but all over the world have been a subject of suppression, neglect and demoralisation lot on the society. They have been exploited and denied equal place in the society. Rehman and Biswal (1993) suggested that this gap may be measured by the levels of their disproportionate representation in various areas of life such as education, employment, politics and health etc. After independence the participation of women in socio-economic activities has gained special attention. The Constitution of India has granted them equal status and opportunities. A series of social legislations have been enacted from time to time for raising the status of women in the country.

When "women move forward, the family moves the village moves and the Nation moves,"[Saha, and Banerjee, 2001].

Empowerment means giving legal and moral power to an individual in all spheres of life viz. social, economic, political psychological, religious and spiritual which are essential for the survival and overall development of the individual. Power is the key word in the term, empowerment which means control over the material assets, intellectual resources and ideology. In broader terms empowerment is nothing but a religious, cultured legal struggle against operational injustice and discrimination [Patel and Gandotra, 2007].

The United Nations Development Fund for Women (UNDFW) includes the following factors in its definition of women's empowerment-

- Acquiring knowledge and understanding of gender relations and the way in which these relations and the way in which these relations may be changed.
- Developing a sense of self worth, a belief in one's ability to secure desired changes and the right to control one's life

However, empowerment does not mean setting women against men. Indeed, it means making both men and women realize their changing role and status and develop a consensus for harmonious living in the context-of an egalitarian society. It means redistribution of work rotes, reorienting their values to the changing new kinds of adjustments, understanding and trust with each other. Empowerment of women is a new ideology for carrying democratic values into the family and society. It demands a basic change in the system of marriage and family, husband wife relationship, attitude towards gender, socialization, and remarriage [Sharma, 2004].

Empowerment of women also demands that women should be some what mentally prepared to face the consequences such as divorce, court litigation, resulting from their non cooperation with and resistance to male dominance in maters of family planning, the wife taking up a full/part-time job, greater freedom for taking part in domestic social and political functions [Das, 2003].

"One motivation for women's empowerment is basic fairness and decency. Young girls should have the exact same opportunities that boys do to lead full and productive lives. … the empowerment of women is smart economics." (Robert Zoellick 2008). "We stress that investing in women and girls has a multiplier effect on productivity, efficiency and sustained economic growth." (United Nations (2010).

Without economic empowerment the development of women would be at its lowest level. Policies and legislation provide only blueprint for directing the progress of society. These plans would be successful only when women receive economic power. The main reasons for women's subordination are her economic dependence. This condition brings them to a social crisis where a woman is unable to express or decide for herself and her children. It is precisely because of this that many women development programmes emphasise the income generating activity so that there is money available for her and she can move towards economic independence. This according to Prasad (2008) is the first step towards empowerment [Prasad 2008].

REVIEW OF LITERATURE

From the work of Azad and Singh (2008), Vidya,K.C (1997), Gurumoorthy, T.R. (2000), Anand (2003, Panwar, Manju (2004), Chattopadhyay (2005), Das (2007), Chandrasekar (2008), Manimekalai (2008), Gupta, (2008), Chandrasekar (2008).It was evidenced that women's empowerment is an all encompassing phenomenon, Social empowerment, economic empowerment and political empowerment are its corner stones. The status of women particularly in terms of their general health and nutrition, education etc, are key issues.

Regarding the political empowerment of women literature documents that women generally participate in large numbers in voting but in other political activities such as membership of social and political organizations, their participation is very low. The few women who succeed in being elected generally come from affluent, urban and educated family backgrounds. Participation of women in Panchayati Raj Institutions (PRIs) has been considered as the most effective instrument to remove their in equality, invisibility and powerless. The review of literature further shows that economic empowerment of women in achieved through education, labour force participation, decision-making, employment and awareness. In this respect empowerment as a continuous process for realizing the ideas of equality, human liberation implies equality of opportunity and equity; between the genders, ethnic groups, social classes and age groups, strengthening of life changes. Right to education and political participation as well as economic independence are some of the key to women's emancipation and empowerment, eradication of gender based discrimination and an assurance of all other human rights on an equal footing

OBJECTIVES

The present study seeks to examine the status of Women Empowerment in Himachal Pradesh and to evaluate the governmental initiatives and policies for economic empowerment of women in Himachal Pradesh.

METHODOLOGY

The study is based on secondary sources. Data/ material have been collected from various Journals, books, articles, economic surveys, government reports and other relevant documents etc.

THE STATUS OF WOMEN EMPOWERMENT IN HIMACHAL PRADESH

Himachal Pradesh is a hilly state. Hill women's life is extremely busy from early morning to late evening and sometimes even till late at night. The contribution of women in agriculture is more than that of men. The women in Himachal Pradesh are not only performing productive work but their overall contribution to productive agricultural work is more than that of men. In fact more than 75 per cent of the agricultural work is done by women. Women account for 70% of the world's poor and two third of the world's illiterates. In India they constitute almost 50 per cent of the total population and make up one third of the labour force. Many of the activities performed by women are not recognized for national income in India (State). They do not own land or property in their own names nor are they credited with decision making capacity [Azad and Singh, 2003]. A plethora of literature documents that woman are generally neglected to the background, both socially and economically .Women are denied their legitimate position, ignored the resources for their own growth and continued to live for others [Manimekalai, 2007].

The status of women presents a rather bleak picture in Himachal Pradesh, but some changes are taking place women contribute 49.23 per cent of population in the state. Despite a relatively higher contribution of women in the development of an economy, they lack an equal access to opportunities and other resources (Government of Himachal Pradesh 2002). Education, health and employment are preconditions for a healthy economic status of women. Himachal Pradesh ranks at number 11 in literacy in the country. The literacy of Himachal Pradesh is 77.13 per cent. Male literacy rate of Himachal Pradesh is 86.02 and female literacy rate is 68.08 per cent **(Census, 2001)**

EMPOWERMENT OF WOMEN IN HIMACHAL PRADESH

Women empowerment implies to do away with 'subordination' discrimination and 'injustice' done to them in a male dominated society.

(a) Social Empowerment of Women

Social empowerment of women refers to the creation of an enabling environment by adopting various affirmative policies and programmes for development of women, besides providing, them easy and equal access to all the basic minimum services to enable them to realize their full potential. Education is a source of enlightenment and a means to achieve the goal of faster social development. Even after more than 50 years of Indian independence, gender-disparity in literacy continues and the situation varies from state to state and even within a state from district to district and from one community to another, Cultural prejudices, government apathy, lack of political and community will, illiteracy and the negative attitude of parents towards the education of the girl child, cost of education, etc,, are some of the factors which have deprived girls and women of their right to education.

Himachal Pradesh has made considerable progress in the matter of universalisation of primary education and has successfully raised the level of literacy. As Jean Dreze (1999) has said "the schooling revolution has raised the literacy status in general and women in particular in Himachal Pradesh. Fifty years ago, educational level in Himachal Pradesh was no higher than Bihar or Uttar Pradesh. Today, Himachal Pradesh is second only to Kerala in terms of school participation and literacy rate in the younger age-groups.

The government of Himachal Pradesh has taken a number of steps in order to raise the educational status of women in the state. Some of these are; (1) formation of Village Education Committees (VECs) with one-third women members, and making them responsible for universal enrolment and retention of children in schools (II) A girl child scheme was launched on 2 October 1997 involving a gift amount besides a scholarship at the age of six; (III) 2745 Mother-Teacher Associations have been formed till 31 March 2000; (IV) exemption of tuition fee to Himachal domicile girl students in all institutions within the state irrespective of the income of parents; (V) free text books to girls of DPEP districts and free uniform to tribal girls; (VI) girls' attendance scholarship at two rupees per month up to ten months.

The rate of growth of female literacy in Himachal (68) has been the highest as compared to Kerala (88), Punjab (64) and the national average (54.35) as per census 2001. This clearly reveals that after becoming full-fledged state, the literacy status of its women has risen considerably.

Notwithstanding all the supporting measures. however, the gap between male and female literacy in Himachal Pradesh is 17.94 per cent, which is three times higher than that of Kerala. Moreover, female drop-out rates of 31.03 per cent, 28,05 per cent and 43.20 per cent at the stages of I-V, VI-VIII and IX-X respectively are a cause of concern . The districts which need special attention for the promotion of women's literacy are Chamba, Solan, Kullu, Lahaul and Spiti, and Sirmaur. The poverty of the household, distance of school from the village, girl child labour In rural areas, etc., are a few of the many reasons for a high drop-out rate in the state. Literacy is a necessary but not a sufficient condition for gender empowerment. The higher the level of women's education, the better will be their understanding of and participation in the development process of the society and the nation. Therefore, the level of education of women in general and vocational and technical education in particular needs to be raised in the state.

In Himachal Pradesh as per 2001 census, though the sex ratio is higher (970 females per thousand males) than that of the all India average (933 females per thousand males) yet it has declined during 1991-01. The matter of great concern is the very heavy decline in sex-ratio of children in 0-6 years age group from 957 in 1991 to 897 in 2001. The strong male child preference may be one of the main reasons for declining sex ratio is the state. Crime against women is a manifestation of social insecurity and of the real lower status of women in the society. Himachal Pradesh falls in the category of higher-ranking states in crime against women (whereas Punjab low ranking), Kangra, Mandi and Shimla districts have recorded high rates of crime against women (EPW 2001). The prevalence of drug abuse among male, female-headed households, migrant population, etc., are some of the reasons for this state of affairs. This is needed a process of undermining the status of women and girl children in Himachal Pradesh.

(b) Economic Empowerment of Women

The economic empowerment of women means their participation in economically productive activities, their control over income and other productive assets such as land, business and industries. **Work participation rate** is an important indicator of development showing the proportion of working population in the economy (Achala, 2007). Women constitute significant proportion of the work force in Himachal Pradesh. Female workforce participation in the state is 43.7 per cent, which is higher than other major states and much higher than that of Indian's average of 25.6 per cent. The total Work Participation Rate (WPR) in the state as a whole has increased during 1991-2001. It has increased from 42.80 per cent in 1991 to 49.20 per cent in 2001. However, the female work participation Rate has increased substantially during this period i.e. form 34.80 per cent in 1991 to 43.69 per cent in 2001 as compared to male work participation rate which increased from 50.60 per cent in 1991 to 54.70 per cent in 2001. The increase in female work participation rate is encouraging. Among Indian states and Union Territories, Himachal Pradesh ranked second in 2001 in terms of the female work participation rate (Himachal Pradesh Development Report, 2005). However, the quality of women employment is poor in the state. This supports the finding that the effective per day wage rate for all wage-work (agricultural and non-agricultural work) for females is Rs. 18.6, at least 40 per cent lower than that of male workers (Rs. 31.2). The wage rate of women in Haryana is Rs. 38.3; Kerala, Rs. 30.3 and Punjab, Rs. 26.2. The lower wage rate means greater exploitation of women by the employers. Higher work burden and lower wage rate have affected the health and well-being of women and their dependent families in the state (Director of Census, H.P. 2002)

The rural population segment of Himachal Pradesh shows that the work participation rates of males workers in 1991 was 48.79 which decreased to 42.30 in 2001 but the work participation rate of female main workers in 1991 was 20.08 per cent which increased to 21.88 in 2001. In the marginal workers category, the percentage of (both males and females) marginal workers in 1991 was 9.07 which increased to 18.49 in 2001 (HP Census, 2001).

Urban population segment of Himachal Pradesh shows that the work participation rate of male main workers in 1991 was 51.92 per cent which decreased marginally to 51.64 in 2001 but in case of marginal category male work participation in 1991 was 0.44 per cent and increased to 2.74 in 2001. In case of female main workers in 1991 it was 11.10 per cent which increased to 12.78 in 2001 but in marginal female workers case work participation in 1991 was 2.98 and this increased to 3.18-in 2001 (HP Census, 2001).This is because in urban areas women are employed in government and also in private jobs. They are in regular salaried Jobs and there working hours are defined.

It shows that among the total rural female workers 88.48 per cent of women are cultivators 2.94 per cent of women are agricultural labours, 1.36 per cent of women are workers in household industry and 7.22 per cent, of women workers are engaged in other activities. Study shows that among the total urban female workers population, 11.61 per cent of women workers cultivators. 0-91 per cent of women workers are agricultural workers, 2.11 per cent of women workers are in household industry and 85.37 per cent of women workers are in other activities.

It is revealed that percentage of rural women workers in agricultural activities in greater as compared to urban women agricultural workers. In other workers category, the percentage of women workers is mere i.e. 85.37 per cent in urban area as compared to the percentage in rural area i.e. 7.22 per cent (HP Census, 2001). This is due to the fact that in urban areas women are mostly engaged in service sectors because in urban setting mostly women are educated. They are occupied in government and private services, some are also self-employed. It is encouraging that of total women employed in organised sectors in Himachal, 94.95 per cent are in the public sector. But this is mainly in lower-cadre jobs. The number of men employed in the gazetted posts are ten times higher than women. Of the total employed women only 3.1 per cent are in gazetted posts and the rest 97 per cent in non-gazetted posts.(HP Development Report 2002).

Political Empowerment of Women

The constitution of India has recognized the need for free and active participation of women in politics and their political empowerment so that they may contribute towards nation building. However, the impact is more visible in voting than in other political activities. In India, women's representation's in Parliament and Legislative Assemblies of many states have not gone beyond eight and ten per cent respectively. As far as Himachal Pradesh is concerned though the number of women voters has been nearly equal to the number of men voters, sometimes even more (1982 and 1985) but their representation in the State Legislative, Parliament and decision-making bodes has been very small in comparison to men (Jharta, 1996).

In India, women's representations in Parliament and state assemblies of many states have not gone beyond eight and ten percent respectively. The average percentage of women elected to state legislative assemblies in Himachal Pradesh, Punjab and Kerala during 1970-75 to 1998-99 are 5.04, 4.35 and 4.66 respectively. This clearly reveals the lower level of political participation of women in state level politics. However, as compared to socially progressive Kerala and economically developed Punjab, Himachal Pradesh has the highest representation.

In Parliament, women's representation from Himachal Pradesh has been extremely disappointing so far. There have been only three women representatives in Lok Sabha and five in Rajya Sabha from 1952 to 2005. Himachal Pradesh has only one woman MP in the present 14th Lok Sabha, but does not have even a single woman member in the Rajya Sabha. Women are also marginal in decision-making bodies. From 1952 to 2005 there have been very few women in the Council of Ministers in the State. They have been mostly in the rank of State and Deputy Ministers. This clearly reveals the lower level of participation in women in the state politics. Nevertheless the rate of success of women who contested the elections in the past the state is quite encouraging, but political parties seem very reluctant to give party tickets to women. If provided with the opportunity, women can excel in the politics of the State. The 73rd and 74th Amendments (1993) to the Indian constitution and also adopted by the State Government by its Panchayati Raj and Municipalities Act of 1994, have provided for reservation of 33 per cent seats for women in the Panchayati Raj Institutions and Municipalities. One-third reservations of seats for women in these bodies has laid a strong foundation for their participation in decision-making process and has also enhanced their participation in public life at the grass root level. Due to this a good number of women have been elected to these bodies in these bodies in the state. These are the steps in the right direction and represent a landmark in the history of efforts for empowering women.

The Himachal Pradesh government took yet another step towards women empowerment by clearing a bill for increasing reservation for women in Panchayats, Nagar Panchayats and Nagar Parishad from 33% to 50%. Himachal Pradesh would thus become the third state after Rajasthan and Madhya Pradesh to give 50% reservation to women in panchayats and local bodies. Three separate bills were introduced to bring about the amendment – Himachal Pradesh Panchayati Raj (Amended) Bill, 2008, Himachal Pradesh Nagar Palika (Amended) Act and Himachal Pradesh Municipal Corporation (Amended) Act.
Chief Minister PK Dhumal said that there were 3,242 Panchayats, 28 Nagar Panchayats, 20 Nagar Parishads and one Municipal Corporation in Shimla, where due to the enactment in future **50%** of those to be elected would be women. This step would go a long way in empowerment of women.

GOVERNMENT INITIATIVES AND POLICIES FOR EMPOWERMENT OF WOMEN IN HIMACHAL PRADESH

The Government of India as well as various state govts have taken numerous measures and are continuing in their endeavors to raise the status of women in society. The constitutional obligations and different plans, programmes and policies have laid emphasis on women empowerment to make then active participants in the process of development.

WOMEN IN FIVE YEAR PLANS

Five year plans envisaged welfare measures for women, establishment of the Central Social Welfare Board (CSWB) in 1953, community development programme , Organization of Mahila Mandals, supported female education for the women upliftment and maternal and child welfare, health, education, nutrition and family planning. The fifth five year plan emphasized training of women, who are in need of income and protection. This plan coincided with international women's decade and the submission of report of the committee on the status of women in India. In 1976, women's welfare and development bureau was set-up under the ministry of social welfare. It was to act as a nodal point to co-ordinate policies and programmes for women's development (Peerzade, and Parande, 2005).

Whereas the latest plans operationalised the concern for equity and empowerment and focused on empowering women, especially at the grass roots level, through Panchayati Raj Institutions. The voluntary organizations were assisted for promotion of welfare of the tribal women, the rehabilitation health and sanitation etc. were given due emphasis. Employment of women and socially disadvantaged groups. Promotion and development of women's participation in imitations like Panchayati Raj, cooperative and voluntary-organizations (Sahu,2001). 89th amendment, provides for constitutions of a separate national commission for scheduled tribes (2003).

The Government of India has formulated various schemes for women. These schemes are located is different departments and ministries of the Government of India such as Rural Development, Labour Education, Health, Science and Technology Welfare, Women and Child Development etc. The review of all these plans for women shows an increasing concern of the government for women. The major schemes introduced specially for women are : Non Formal Education, Science and Technology schemes Working Women's Hostels, Family and child welfare schemes, Women's training centers/institution for rehabilitations of women in distress, Self Employment to Women, Indira Mahila Yojna Development of Women and Child in Rural Areas (DWCRA), Anganwadi Training Centers, Women's Development Corporation, Rashtriya Mahila Kosh, Reservation at Grassroot, Mahila Mandal Programmes. Special initiatives includes setting up National commission for women (1992), reservation of women in local self Govt (73rd and 74th Constitutional Amendment Acts), National Plan is to ensure Survival, Protection and Development of Girl Child with the ultimate objection of building up a better future for the girl child.

SCHEMES FOR EMPOWERMENT OF WOMEN

***(a) Policies*:** The setting up of stale homes for destitute women, rehabitation of in Mates discharged from the State homes, Assistance to women for Self employment, Awareness camps, Establishing working women hostels, H.P. State commission for women. Grant in aid to voluntary organization marketing in the field of women welfare.

(*b) Schemes*: Mahila Mandal, Support to Training and Employment Programmes, Rashtriya Mahila Kosh, Kishori Shakti Yojana - aims at improving nutritional and health status of adolescent girls and Promoting Self Development , Balika Smridhi Yojana - to change negative family and community attitudes towards the girl child at the birth and rise the age at marriage of girls, Swayamsidhan Schemes- based on the formation of women self-help group (SHGS) and aims at empowerment of women through awareness generation, social and economic empowerment and convergence of various schemes, Pension Schemes for widow / Desserted women, Working women's Hostel, State Homes, Free education to girls, Bal Balika Ashram, Special Nutrition

Programmes, Integrated child Development Services Programmes (Annex-I).

To sum up, impact of the various developmental policies, and programmes implemented by the Government of India and Himachal Pradesh Government has brought forth a perceptible improvement in the socio-economic status of women. The study shows that really women has been empowered. They are more independent to select their own field, make their own decision making and are more liberal now. They have proportionately equally voice in the once male dominated society. It all came to happen with the great effort the government.

CONCLUSION

Himachal Pradesh is ranked third in the Women Empowerment Index, calculated by using following 14 variables i.e. (1) female literacy rate, (2) girl enrolment rate, (3) girl drop-out rate, (I-V), (4) antenatal care, (5) post-natal care, (6) institutional deliveries, (7) nutritional anaemia in women, (8) women life expectancy, (9) crime against women, (10) female child labour (average of rural and urban percentages) (11) women members in Lok Sabha. (12) women members in Rajya Sabha, (13) female work participation rate, usual and subsidiary status, and (14) effective wage rate for all wage work for females. However, the state should not be complacent about its high position in the Women Empowerment Index among 16 major states (HP Development Report 2002). Rather it should think of taking appropriate steps to overcome the shortcomings in different areas of women's empowerment. Himachal must augment its efforts to elevate the status of women by formulating appropriate strategies to deal with some of the existing weaknesses: (i) The state should launch a special drive for the education of women and girl children belonging to Scheduled Castes and Scheduled Tribes. Reduce gender gap in literacy below five per cent and female drop-out rate at the primary level of education below five per cent. Districts requiring specific attention are Chamba, Solan, Kullu, Lahaul and Spiti and Sirmaur; (ii) reduce discrepancies in effective wage rates between male and female workforce and raise the effective wage rate for women, at par with men, more time should be given to women to prove her economic efficiency (iii) more percentage of women need to be positioned in gazetted posts. Protective discrimination measures of reservation in government jobs would enable women to occupy gazetted posts. Orissa government has for instance reservations for women in government jobs; (iv) reduce girl child labour to less than 10 per thousand female children in rural areas; (v) 100 per cent female-headed households living below poverty line need to be covered under social security schemes; (vi)

Women should be given vocational training so that they do not remain unskilled. (vii) reduce crimes against women such as rape, molestation, abduction, eve-teasing, dowry deaths, etc. and (viii) considering the success of women in recent assembly elections (2003), one Lok Sabha seat and 33 per cent of State Assembly seats need to be voluntarily left for women until reservation is made through a constitutional amendment.

REFRENCES

- Anand, Neeta, "Working Women: Issues and Problems," Yojana, Vol. XXXXVII, No. 3, March 2003.
- Azad, Chandraprakash and Singh Chandraprakash, Empowerment of Women after Fifty Years of Independence; Where Do They Stand? In impact of Economic Reform Policies on Dalit and Weaker Section, Deep & Deep Publication, Pvt. Ltd., New Delhi, 2008
- Das, Nirmala, "Women Entrepreneurs; Karnataka Manila Urban Co-Operative Bank", Kurukshetra, Vol. XXXXXIV, No. 7, May 2006.
- Dreze Jean, " A surprising exception Himachal's success in promoting female education." , Manushi no.112 may –June 1999.
- Chandrasekar, C., NGOs Role in Women Empowerment, Empowerment of Women in India, New Century Publication, New Delhi, 2008.
- Chattopadhyay, Arundhati, "Empowerment of Women and Entrepreneurship", Yojuna. Vol. XXXXIX, Jan. 2005
- Chattopadhyay, Arundhati, "Women and Entrepreneurship", Yojana, Vol.49,Jan. 2008.
- Das, Subhamitra, Gender and Local Self Governance, Women in India, Issue Perspective and Solutions, New Century Publication, 2007, .New Delhi, India.
- Department of Economics and Statistics, Gender Statistics Himachal Pradesh, 2002.
- Department of Social Justice and Empowerment, Annual Administrative Report 2004-05.
- Economic Survey Himachal Pradesh, "Department of Economic and Statistics",

Government of Himachal Pradesh, 2006-07, P. 18.

- Economic Survey of Himachal Pradesh Department of Economics & Statistics 2007-08.
- Rameshwari Pandya (eds.). Women in India: Issue,-Perspective and Solutions, New Century Publications, New Delhi, 2oo7, P.154.
- Gupta, Manoj Shankar, Empowering Women Though Legal and Government Based Approaches in India, Economic Reform Policies on Dalit and Weaker Section, Deep & Deep Publication, Pvt. Ltd., New Delhi, 2008.
- Gurumoorthy, T-R., "Self-Help Groups: Empower Rural Women," Kurukshetra, Vol. XXXXVIH, No. 5. Feb.2000.
- Manimekalai, N., Micro Financing for Promoting Women Entrepreneurship in India, Economic Empowerment of Women, New Century Publications. New Delhi, July 2007.
- Manimekalai, R., Status of Women in India, Empowerment of Women in India, New Century Publication, New Delhi, 2008.
- Panwar, Manju, "The Sewa Movement Empowering Women," Kurukshetra, Vol. XXXXXII, Feb. 2004.
- Patel,Sarjoo, & Gandoyra, Veena, empowerment of women through self employment, Kanishka Pub. And Distributor new Delhi, April 2007.
- Prasad, P., Economic Empowerment of Women's, Deep & Deep Publications, New Delhi, 2008, P. 318.
- President Robert Zoellick World Bank spring meeting 2008
- Peerzade, Sayed Afzal and Parande, Prema "Empowerment of Women", Kurukshetra, Vol. XXXXX1V, November 2005.
- Rehman, M.M. and K. Biswal, Education Work and Women, An Enquiry into Gender Bias, Common Wealth Publishers, New Delhi, 1993.
- Saha, Sujay and Benrjee. Trithamkar, "Women-Pertness in Development", *Employment News*, Vol. XXV. No. 49, New Delhi, March 2001, P. 13.
- Sharma, Sheetal, "Women's Empowerment for Gender Equality." Kurukshetra,

Vol. XXXXIII, No.11, August 2004.

- United Nations (2010), Keeping the promise: united to achieve the Millennium Development Goals, para. 54 of UN, New York
- Vidhya, K.C., Political Empowerment of Women at the Grassroots, Kamshka Publisher, New Delhi, 1997.
- Chandrasekar, C., NGOs Role in Women Empowerment, Empowerment of Women in India, New Century Publication, New Delhi.

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A Study of the Relationship between Contextual factors and Academic Entrepreneurship

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Abstract

Several researches have been done in applied knowledge entrepreneurship and particularly in academic entrepreneurship up to now. Many studies more concentrated on institutional policies, institutional and organizational environment based individual and academic entrepreneurship external environment. This research is applied research and sample test included clerks of organizational levels, experts, coaches and managers. Method of research was descriptive also a questionnaire was used in order to collect data. Following, we used T-student, multiple regression, analysis variance by SPSS18 software. This paper identified and examined relationship between contextual elements and academic entrepreneurship. We considered theatrical analysis like economical, financial, educational, innovative channels, administrative, socio-cultural, regulatory, legal, physical location and political factors as contextual elements. Results indicated that physical location, innovative channels, political and administrative factors.

Keywords: Contextual Factors, Academic Entrepreneurship, Entrepreneurship.

Introduction

Importance of entrepreneurship in universities and their collaboration in development of economic society has led to more concentration of scholars, researches. Almost, academic entrepreneurship is described as commercialization knowledge distracted of universities. From point of view of researches, this phenomenon happened when researchers in universities and institutional researchers make decision about commercialization of technology in theses institution (Toole and Czarnitzki, 2007). However, this process always has not been comfortable and eventual economic growth extracted from investing on knowledge. This phenomenon shows that some factors limit process of commercialization of knowledge and identify and eliminate theses limits are necessary in order to development of entrepreneurship in universities (Audretsch, and Lehmann, 2005). Of course, these factors are different in societies, environments and various conditions.

Academic Entrepreneurship

Researchers have various defined from academic entrepreneurship and each of them describes one dimension of this phenomenon. Some, of them described whole commercialized activities of exterior duties of the universities (Klofsten and Jones-Evans, 2000). Meanwhile, some others pay more attention to emerging activities of universities particularly to create generative companies. As an example, Eztkowitz believed that academic entrepreneurship assumed is a center of natural growth which is included supportive, commercial, intellectual structures and students and professors can emphasize on the structures in order to create new companies (Etzkowitz, H., 2003). Wright et al 2007 also descried academic entrepreneurship as development of commercialization, beyond of traditional concentration and creating generative companies which are extracted from technology and knowledge in universities. In some researches also academic entrepreneurship is described as field of entrepreneurship which following innovative ideas and new products which are intellectual assets of universities.

Thus, this research tries to Study of relationship between contextual factors and academic entrepreneurship.

Literature Review

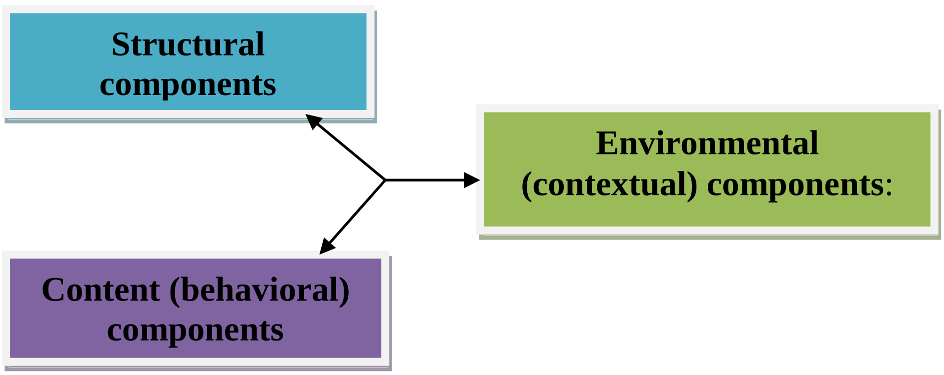
These days, most of experts about higher education know entrepreneurship as survival factor in development of universities and higher education. Since, in era of developed technology and knowledgeable industries in global and local economy; we just face with wide crisis by strengthen link between universities and corporations (Guliński, 2008). In fact, academic entrepreneurship is originated from link between organizational entrepreneurship and new higher education and have considered for several years by developed countries. In other hand, universities as the richest research-scientific center and technology has key and essential role in economical, cultural, cultural changes. Educational entrepreneurship and create central entrepreneurship and growth are initial actions for development of cultural entrepreneurship and following commercialization of knowledge and inventions and also emerging academic entrepreneurship and create companies derivative knowledge university based on developed technologies (Brinckmann, 2011).

One of the most efficient ways to adapt changes in the growing environmental phenomena is the name (entrepreneurial). Today, most organizations are aware of the importance of the of entrepreneurial phenomenon to identify key factors influencing this phenomenon in order to the estimate amount of entrepreneurship of organization and then do necessary steps to improve the persons. In late 1980s and early 90s expressed entrepreneurial organization in literatures and aim of entrepreneurship for big organization was creating flexibility and innovation (Vaziri et al, 2013).

Research Framework

By investigating and studying literature and scientific resources and investigating available patterns in organizational entrepreneurship and opinion of academics for analyzing variables of university the best theoretical pattern of Dr Hassan Mirzae Ahranjani was chosen. Based on the pattern, all of concepts, phenomena and actions are analyzed based on following Ramification model:

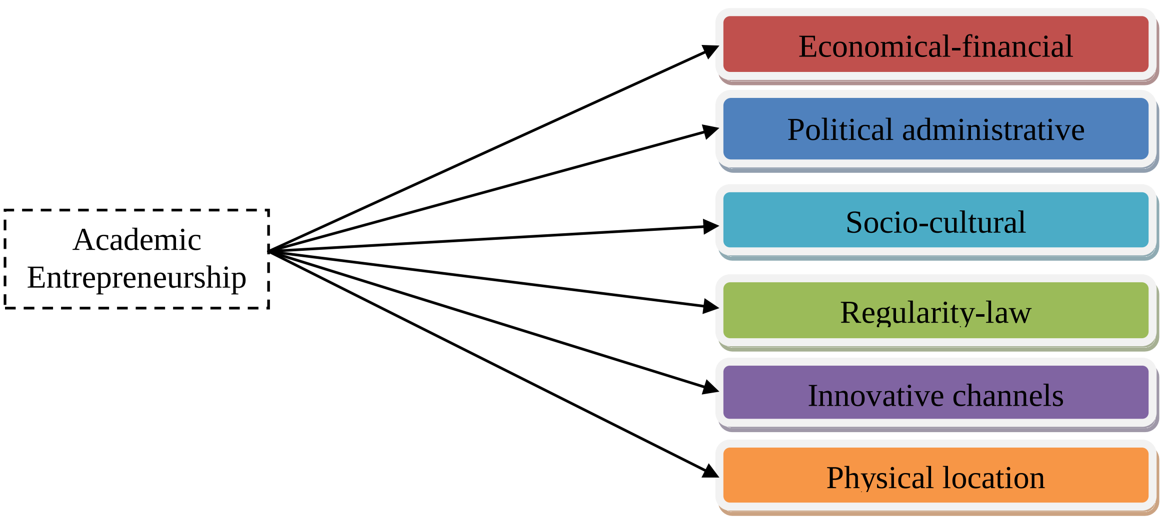
Figure 1. Ramification Model



Ramification model which is based on our conceptual model is systematic model and whole effective factors in formatting a phenomenon. Meanwhile, available models like event model of Fry (1993), multidimensional model of Gartner (2005), watch global entrepreneurship (2004), youth entrepreneurship development model (2005) have not these features and following models

Based on Ramification model can present following model:

Figure 2. Conceptual model of contextual factors and academic entrepreneurship



Hypotheses

H_1: Significant relationship exists between contextual factors and academic entrepreneurship.

H_2: Significant relationship exists between economical-financial factors and academic entrepreneurship.

H_3: Significant relationship exists between political-administrative factors and academic entrepreneurship.

H_4: Significant relationship exists between socio-cultural factors and academic entrepreneurship.

H_5: Significant relationship exists between regularity-law factors and academic entrepreneurship.

H_6: Significant relationship exists between innovative environment factors and academic entrepreneurship.

H_7: Significant relationship exists between physical location factors and academic entrepreneurship.

Methodology

In according to aim of this research and by findings of this research can improve, ways, tools, structures and patterns in universities. Therefore, this research is applicable, descriptive and analytical research.

In analyzing the data, in first step statistics data and descriptive statistics of each variable should be studied. Then, linear regression (from first to fourth hypotheses) is used in order to data analysis and test hypotheses. In the study, we use normality tests and VIF. We consider a questionnaire which evaluates impact essential factors (structural elements) and academic entrepreneurship. The sample test is included of whole personnel's of central and sub units of Payam Noor University of Khorasan Razavi in 2010. On way of test reliability and validity is using Cronbach's alpha.

Table 1. Cronbach's alpha test

variables	Questions	Coefficient's alpha
Contextual	24	0.94
Academic entrepreneurship	9	0.92

Reliability and Validity

For assessing validity, the questionnaire is vetted by experienced researchers and stated that our measuring instrument is valid and will result in correct measurement. A reliability measure essentially shows us if researcher does a test again and again, the test would provide the same score or the same respondent. We used Cronbach's alpha that ranges between 0 and 1. The greater the value of alpha, the more the scale is coherent and thus reliable (alpha is actually an approximation to the reliability coefficient). Some authors have proposed a critical value for alpha of 0.94, above which the researcher can be confident that the scale is reliable (Encyclopedia of Survey Research Methods, Lavrakas).

In order to test normality, we use Kolomogorov-Smirinov and Shapiro – Wilkie:

Table 2. Normality test

Kolmogorov-Smirinov			**Shapiro - Wilkie**		
Sig	Df	Statistics	Sig	Df	Statistics
0.20	25	0.14	0.14	25	0.94

The table above shows P> 0.05 and the null hypothesis which is normality of residual approved

To test this hypothesis, we used a multiple regression in order to test the independent variables include contextual factors like economical, financial, educational, innovative channels, administrative, socio-cultural, regulatory, legal, physical location and political and dependent variable (academic entrepreneurship). We use multi-regression in order to test dependent variable include contextual elements.

Table 3. Adjusted data

Model	R	r^2	Adjusted r^2	standard error of estimate	Changes r^2
1	0.63 a	0.40	0.38	4.77	0.40
2	0.71 b	0.51	0.47	4.41	0.11
3	0.78 c	0. 60	0.54	4.07	0.09

The table above shows the results of multiple correlations (0.78), which represent the correlation between the dependent and independent variables is high. The model presented in physical location variable only 0.40 of the variance explained by the model. Innovative networks added to model 2 and it is led to 0.11 changes of the variance in the dependent variable (entrepreneurship) and by adding political – administrative variable to model 3; it is led to 0.09 changes of the variance in the dependent variable (entrepreneurship). Generally, the model 0.60 changes in entrepreneurship are estimated by standard error of estimate by the factors. Based on all that has been said, standard error of estimate is 4.07, therefore, this model indicates that the difference with actual value is 4.07 averagely.

Table 5. ANOVA regression

Models	Variables	Square	Df	Average	F	Sig
1	**Regression**	351.19	1	351.19	15.45	0.001a
	Remaining	522.81	23	22.73		
	Total	874.00	24			
2	**Regression**	445.55	1	222.77	11.44	0.001b
	Remaining	428.45	23	19.48		
	Total	874.00	24			
3	**Regression**	525.45	1	175.15	10.55	0.001c
	Remaining	348.55	23	16.60		
	Total	874.00	24			

In this table show that results of the regression model is (P <0/01). We conclude that the null hypothesis is rejected; therefore, there is a significant relationship in the regression model:

Table 6. Non-standardized and standardized coefficient

Model	Variable	Non-standardized coefficient		Standard Coefficients Error	t	Sig	Tolerance	VIF
		B	sd	Beta				
1	Constant	17.22	3.10		5.56	0.00		
	Physical location	1.88	0.48	0.63	3.93	0.00	1	1
2	Constant	9.57	4.50		2.12	0.05		
	Physical location	1.82	0.44	0.61	4.11	0.00	1	1
	Innovative channels	0.85	0.39	0.33	2.20	0.04	1	1

3	Constant	9.83	4.16		2.36	0.03		
	Physical location	2.73	0.58	0.92	4.70	0.00	0.50	2.02
	Innovative channels	1.11	0.38	0.43	2.95	0.01	0.90	1.11
	Political-administrative	1.19	0.54	0.44	2.19	0.04	0.46	2.16

Dependent variables: Academic entrepreneurship

The regression equation is:

$$\mathbf{Y = 9 / 83 + 2 / 73}_{\text{(Physical Location)}} \mathbf{+ 1 / 11}_{\text{(Innovative Networks)}} \mathbf{+ 1 / 19}_{\text{(Political - administrative)}}$$

We evaluate standardized beta coefficients in the above table in order to evaluate the contribution of each variable in the model. Large numbers indicate that a unit change in the predictor variable has a severe impact on the criterion variable. Consequently, it shows by minimum changing in each variable can have substantial impact on dependent variable. Thus, if other variables constant and physical locations change it can increase 2.73 changes in entrepreneurship. Following, by adding innovative channels can change 1.11 units in entrepreneurship. Then, by adding political-administrative can change 1.19 units in entrepreneurship. Beta coefficient of physical location is 0.63, therefore, physical location has the highest Beta coefficient and innovative channels had the lowest Beta coefficient (0.33).

Table 7. Test results

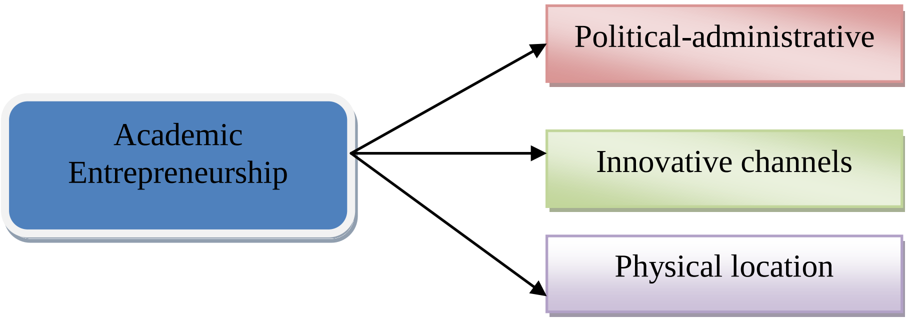
Row	Independent variable	Dependent variable	T	Sig	Results
1	Economical-Financial	Academic entrepreneurship	0.223	0.825	Not confirmed
2	Socio-cultural	Academic entrepreneurship	0.038	0.970	Not confirmed
3	Political-Administrative	Academic entrepreneurship	-2.194	0.040	Confirmed
4	Regularity-law	Academic entrepreneurship	-1.072	0.297	Not confirmed
5	Innovative channels	Academic entrepreneurship	2.951	0.008	Confirmed
6	Physical location	Academic entrepreneurship	4.697	0.000	Confirmed

Conclusion

In according to all 28 center and sub-units completed the questionnaire and results of research which are extracted from multiple regression and T-student test by SPSS software. The results indicated that physical location, innovative channels and political-administrative factors are strong predictable elements for predicting entrepreneurship.

Based on all that has been said, this research was about contextual elements and academic entrepreneurship, therefore, following model proposed as final conceptual model:

Figure 3. The final model



References

Antoncic, Bostjan, and Hisrich, Robert, D. (2003). Clarifying the intrapreneurship concept. Journal of small business and enterprise development, 10 (1): 7-24

Audretsch, D. B.and Lehmann, E. E. , (2005). Do University policies make a difference?"; Research Policy, 34: 343–47.

Etzkowitz, H., (2003). Research groups as quasi-firms: the invention of the entrepreneurial university. Research Policy, 32: 109–21.

Gulinski, J., (2008). Academic Entrepreneurship, Report, Available from: Http://Www.paip.poznan.pl / 31P.htm.

Jochen Röpke, (2010). Knowledge Mobilization and Academic Entrepreneurship.

Klofsten, M. and Jones-Evans, D., (2000). Comparing academic entrepreneurship in Europe, The case of Sweden and Ireland. Small Business Economics, 14: 299-309.

Lacetera, N., (2008). Academic Entrepreneurship, MIT doctoral dissertation, USA, Massachusetts Institute of Technology, available from: http://ssrn.com / abstract = 1090714

Toole, A. A. and Czarnitzki, D., (2007). Biomedical academic entrepreneurship through the SBIR program"; Journal of Economic Behavior & Organization, 63: 716–38.

Vaziri, S, A., Malekzadeh, G., Arzameh, M, A., Naji, H, A (2013). Investigate relationship between Organizational Citizenship Behavior and Personality of Organizational Entrepreneurship managers, life science journal, 10:270-278

Wright, M., Clarysse, B., Mustar P. and Lockett A., (2007). Academic Entrepreneurship in Europe. Edward Elgar, Cheltenham and Northampton; 172-3.

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The Model of Strategic Planning Process in the Project-Oriented Organizations towards Creating the Competitive Advantage

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Abstract

The project-oriented organizations need to recognize the strategic issues and their impact on the organizational management in order to achieve a competitive advantage in the modern markets. These organizations should be able to manipulate the environmental challenges and adapt themselves with them through strategic planning and applying the expert-views. These organizations can only optimize their performance on the basis of dynamic models of strategic planning. The large project-oriented deal with a wide range of the strategic issues by applying their limited resources; a suitable model of strategic planning enables them to overcome this lack of resources which is a potential threat. The present paper aimed at proposing the proper model of strategic planning which leads to achieving market competitive advantage while ensuring the organizational structural integrity.

Keywords: Strategic Planning Process, Project-oriented Organization, Competitive Advantage, Organizational Factors, Control Strategy.

1. Introduction

The project-oriented organizations (POOs) rely on the use of their resources (projects, human resources, and machinery) extensively; therefore, these resources are constantly subject to change. The POOs success depends on the full understanding of both internal and external factors as well as the possible challenges that affect the optimized performance. These ongoing challenges can only dealt with when detailed action plans on the basis of pinpointing organizational strengths and addressing weaknesses would be in place. These plans must optimize their performance to sustain the organizational profitability, market viability and ensure that future developments leads to the achievement of competitive advantage in the intended markets.

The present paper presents the findings of a field study on various models of strategic planning, the related literature, expert views to underlines the role of the organizational factors (environment, resources, organizational culture) and the strategic issues (viability, profitability , development, and competitive advantage). The proposed strategic planning process model (SPPM) sums up the impact of these factors on the project-oriented organizations.

2. Theoretical Background

The project-oriented organizations and their performance to achieve competitive advantage has been the subject of interest in many researches. The present study aimed at proposing a suitable comprehensible model for strategic planning through focusing on the findings of the previous research; this model intends to implement dynamic control measures on all factors affecting organizations in the process of achieving competitive advantage.

Rodney Turner, Martina Huemann, and Anne Keegan in their book entitled" Human Resource Management in the Project-Oriented Organization" state that the management of the human resources in POOs is still not fully understood and studied within the framework of current management theories, while the project-oriented organizations form the common development trend in many industries. Sido (2004) believes that the new approach to the POOs is due to the need for productive organizations, high-tech in industries, proper structures in the professional organizations and the ability to address the requirements and demands of target group customers.

Gris and Humen believe that the POOs as progressive bodies which mature in the course of time have the specific features such as transient projects, dynamic work environment, unidentified demands, project management paradigm, project resources and demands, heavy work load of employees and development prospective; these features generate challenges and need to be addressed by allocation of human resources. Poter used the term "Competitive Advantage" (CA) and discussed the main features of competitive strategies (cost-effectiveness and distinctiveness) for the first time (1985). Barney set forth a more comprehensible definition of CA and stated that an organization would gain a stable CA in case of creating a competitive value system that could not be emulated and executed by its current and potential competitors in the market (1991).

Poter (1996) referred to the following characteristics of the "Strategic Positioning":

1-Strategy consists of a set of activities that are conducive to a distinct and valuable market position.

2-Strategy necessitates trade-off in the market competition to distinguish undesirable course of action.

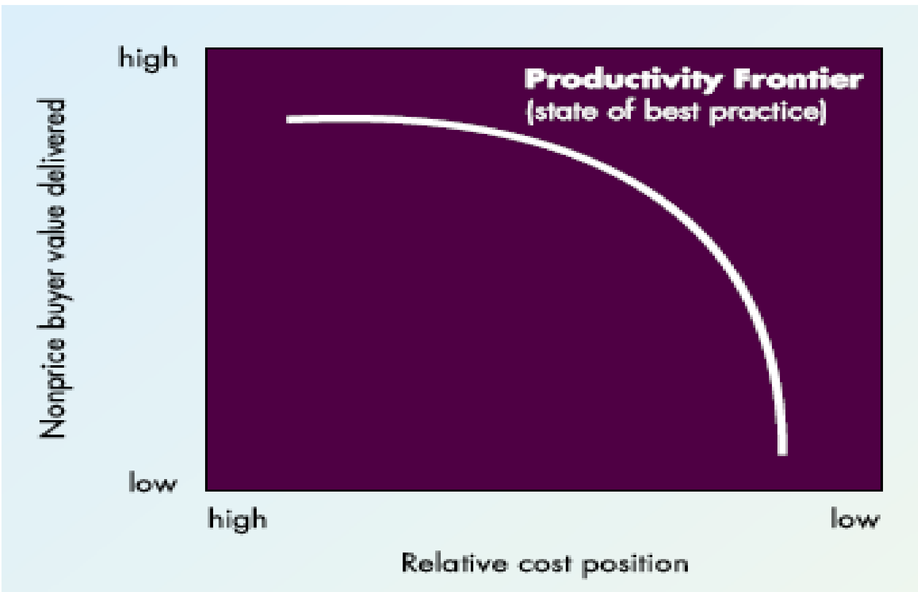
3-Strategy includes "Fit" in all the organizational endeavors.

The competitive strategy defines a set of unique value-based activities that end up in the organization distinctive qualities in the market. Poter also stated that:

- CA main components consist of manufacturing /production and selling/offering of a product/service.
- The Operational effectiveness means that the organization would be able to gain the desired objectives with a minimum percentage of loss within a short interval as compared to its rivals.
- Strategic positioning that is the distinctive feature of an organization enables it to undertake a different course of action towards similar market objectives; in other words the organization has its different set of activities.
- The sum total of the activities within a definite time limit determines "the Productivity Frontier" in the organization.

The productivity frontier refers to the highest value that an organization produces by keeping fix costs in the process of production and offering services (Figure 1). The optimized performance ends up in this PF. The strategic positioning needs a high degree of awareness and initiatives.

Figure 1. Productivity Frontier



There are usually 3 main over-lapping sources in the strategic positioning as follows:

- The production of a sub-class of products or services within an industry, which is known as variety-based positioning.
- The addressing of the customers' needs (needs-based positioning) completely or partially. This is a traditional approach to the SP.
- The access-based positioning which refers to the process of locating various target customers and the proper access methods to be applied.

The SP is subject to change as a process as there is an ongoing trade-off whenever there are conflicting courses of action. The three models of fit that lead to stability and CA are as follows:

- First-order Fit: it indicates the relationship between any single action and the totality of the strategy.
- Second –order Fit: it indicates that the activities enforce each other.
- Third-order Fit: it indicates the optimization of the processes.

The strategic fit is not only an essential feature of CA but also safeguards that it becomes a stable and constant process within the organizations. While the external factors affect organizational strategies, the main source of threat is internal. The decision makers need to find the right approach the issue of development that sustains and enforces the current strategies. The following approach is recommended in Strategic positioning:

- Strategy depth is more important than strategy scope and would be attained by:
- Distinctive activities
- Enforcing fit
- Communicating the strategies to customers who appreciate their value

The organizational management which forms the core of the strategy includes these activities:

- Defining and expounding the specific strategic position
- Trade-off
- Enforcing fit

Virne model of the CA refers to these 5 features within the framework of organizational resources and capacities (5):

- To be Valuable
- To be unique
- Not to be imitated
- Not to be replaced
- To be Useful

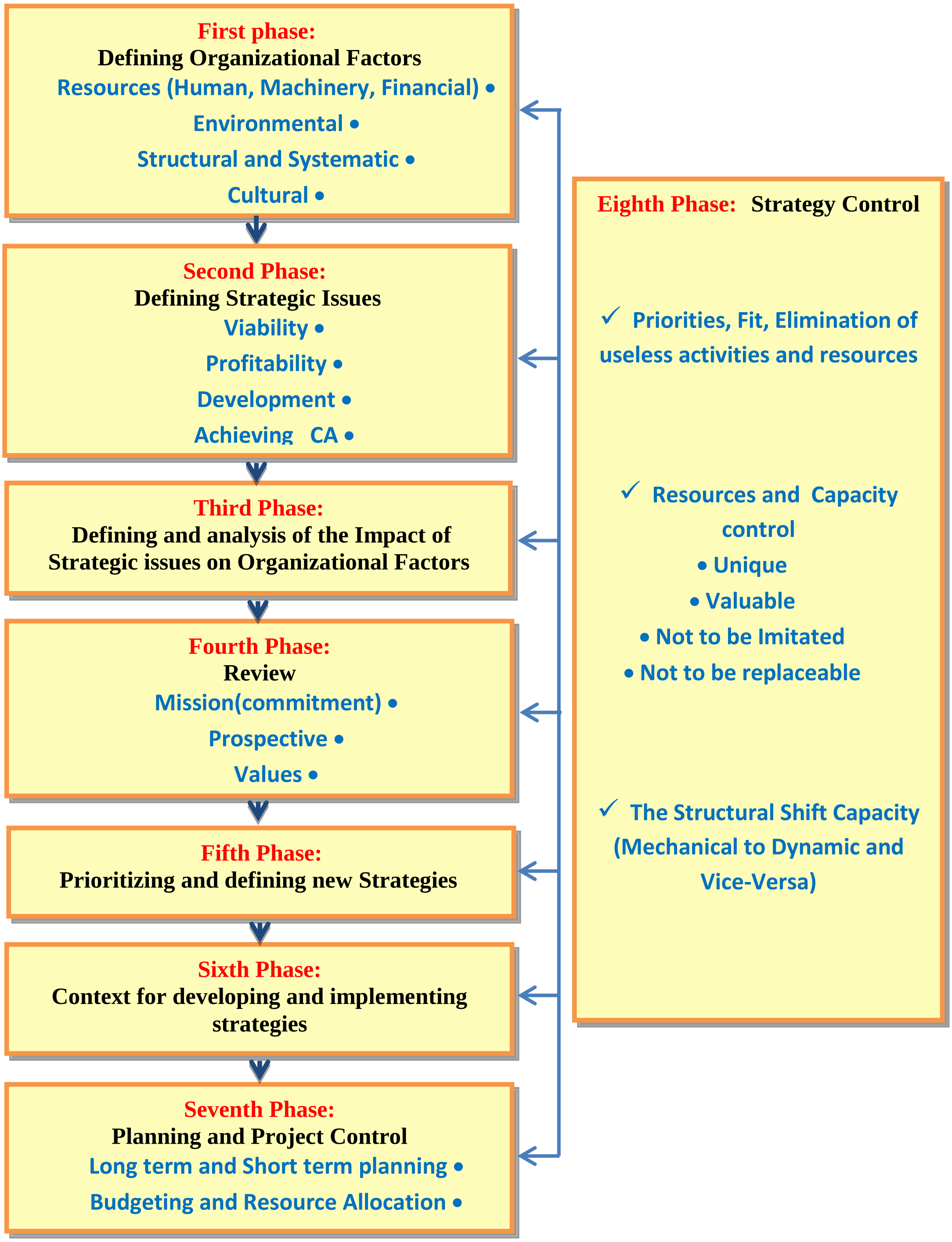
The POOs play a crucial rule in development of the national economy through optimizing the production process and service provision.

3. The Model of Strategic Planning in the Project-oriented Organizations with the Competitive Advantage in Markets

The large project-oriented organization face with both internal and external challenges and are characterized and categorized in accordance to their life span, similar or different projects, number of employees and machinery used , as well as the performance of the management, financial, technical and executive departments. Their projects are classified on the basis of their timeline (Beginning, middle, late phases), financial situation (profitable, non-profitable…), environment (financial resources, social and economic issues, customers, rivals, employers, consultants, and supervisors) and internal concerns (the resource structure, cultural and technical issues…). The senior managers need to apply a model of strategic planning process to overcome these challenges. This model is to replace weakness with strength in the process of gaining and structural institutionalizing CA in organizations.

This model is proposed on the basis of the previous models and studies to enable POOs achieve CA. The model approaches the impact of strategic factors on the organizations. The findings of the previous research are taken into consideration in designing the present model. The model is to be applied in real life practice.

Model 1. The process of strategic planning towards Competitive Advantage in the Project-oriented Organizations



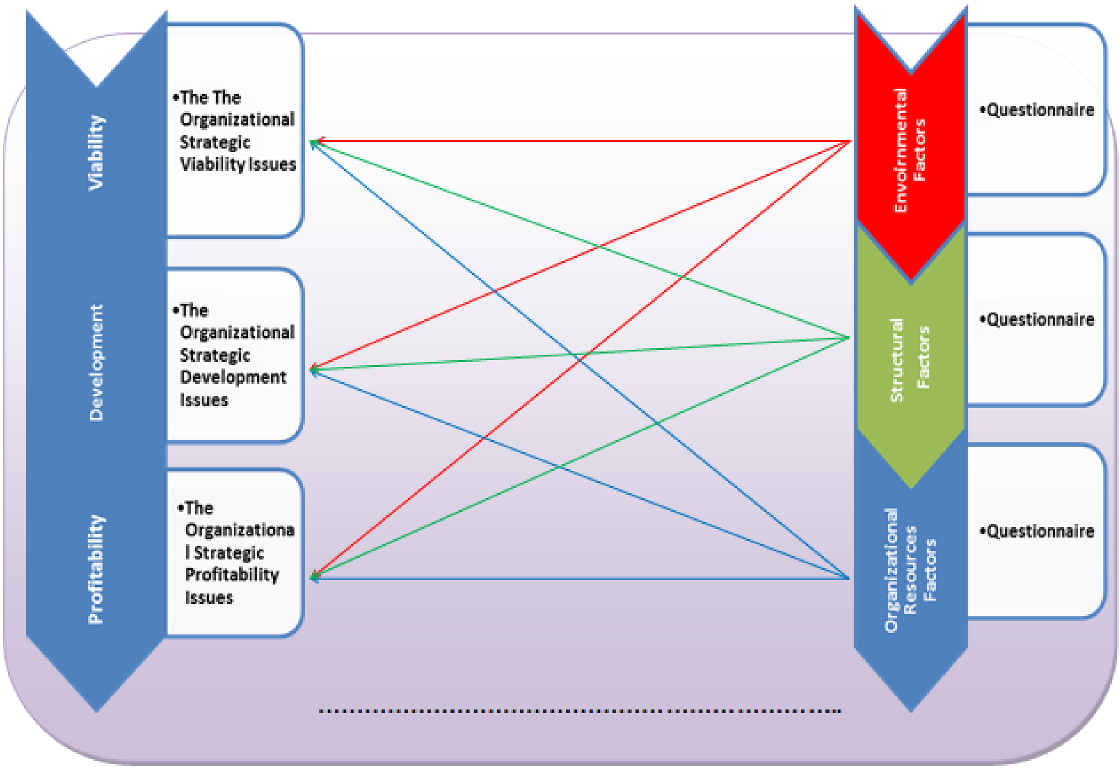
3.1. Defining the Organizational Factors and Strategic Issues

The first phase of the designing the model was defining the organizational factors and the related strategic issues based on experts' views and field study. The model was tested and approved by applying a questionnaire that was completed by the staff of a large engineering company with 3500 employees, 1500 pieces of machinery, and 140 current projects all over Iran. The organizational factors, which are prioritized as required, include the followings:

- The human resources
- Financial resources
- Machinery
- Environmental issues
- Structural & Cultural issues

The main objective of the model is the achievement of competitive advantage.

Model 2. The conceptual model of variables and their interrelations



3.2. The analysis of the impact of organizational factors on strategic issues and organizational commitment

The next phase of designing the model was to prioritize the organizational factor through determining their interrelations and defining and reviewing the organizational values, prospective, and commitments. The various management levels as shown in the table 1 responded the questionnaire items on the basis of Likert Scale. The findings of the study were analyzed through application of Friedman Test and SPSS software to test study hypotheses. The collected data was used to prioritize the organizational factors. The following tables show the findings of the data analysis.

Table 1. The Position of Variable Distribution

Position	Distribution	Percentage
Senior Managers	2	2.3
Middle Managers	8	9.3
Operational Managers	17	19.8
Experts and Professionals	59	68.6
Total	86	100.0

Freidman test was applied to determine the factors that affect organizational viability; the results are given in Tables 2 and 3.

Table 2. The Factors Affecting Organizational Viability based on Freidman Test

Variable	Number	Mean	Standard Deviation	Percentile Rank
Structural	86	3.5465	0.71385	2.35
Human Resources	86	4.4767	0.52279	4.15
Machinery	86	4.0233	0.95765	3.22
Environmental	86	3.3581	0.58460	1.97
Financial Resources	86	4.0581	0.85893	3.30

Table 3 shows the priority of the factors affecting organizational viability.

Table 3-The Priority of the Factors Affecting Organizational Viability

Priority	Factor	Percentile Rank
1	Human Resources	4.15
2	Financial Resources	3.30
3	Machinery	3.22
4	Structural	2.35
5	Environmental	1.97

Freidman test was applied to determine the factors that affect organizational profitability; the results are given in Tables 4 and 5.

Table 4. The Factors Affecting Organizational Profitability based on Freidman Test

Variable	Number	Mean	Standard Deviation	Percentile Rank
Structural	86	3.4477	0.74766	2.23
Human Resources	86	4.4574	0.53881	4.05
Machinery	86	4.2093	0.92184	3.65
Environmental	86	3.2535	0.56019	1.78
Financial Resources	86	4.0000	0.89443	3.28

Table 5 shows the priority of the factors affecting organizational profitability.

Table 5. The Priority of the Factors Affecting Organizational Profitability

Priority	Factor	Percentile Rank
1	Human Resources	4.05
2	Machinery	3.65
3	Financial Resources	3.28
4	Structural	2.23
5	Environmental	1.78

Freidman test was applied to determine the factors that affect organizational development; the results are given in Tables 6 and 7.

Table 6. The Factors Affecting Organizational development based on Freidman Test

Variable	Number	Mean	Standard Deviation	Percentile Rank
Structural	86	3.5930	0.65759	2.68
Human Resources	86	4.2791	0.55745	4.08
Machinery	86	3.7791	0.92547	2.94
Environmental	86	3.3093	0.55701	2.08
Financial Resources	86	3.9302	0.95537	3.23

Table 7 shows the priority of the factors affecting organizational development.

Table 7.The Priority of the Factors Affecting Organizational Development

Priority	Factor	Percentile Rank
1	Human Resources	4.08
2	Financial Resources	3.23
3	Machinery	3.94

4	Structural	2.68
5	Environmental	2.08

These findings show that defining organizational factors and the proper strategic issues play a crucial role in designing and optimization of the model of strategic planning in POOs.

3.3. Organizational Strategy Determination

The third phase is to determine the proper strategy based on the organizational potentials to optimize and safeguard the on-going practices. This strategy need to include the following characteristics defined in the previous studies:

- Organizational positioning strategy(Poter strategy)
- Difference strategy, Trade-off, Fit
- Organizational capacities and resources
    - These strategies need to be Valuable, unique, useful and at the same time must not be imitable and replaceable
- Mechanical and Dynamic exchange strategy
    - It refers to the process of organizational shift from mechanical state to a dynamic state or vice-versa while being in the confidence level; this strategy ensures that the stability of the organizations in the process of achieving sustainable CA is preserved.

The POOs are subject to the modification of their human resources (the increase is known as getting fat and the decrease is referred to as thinning); the proper strategy enables the organizations to address challenges and restructure with ease. The managers' expertise and experience play a crucial role in this respect.

3.4. Facilitating Strategy Definition

The complete understanding of the resources and dominant culture facilitates the process of defining and executing the proper strategy which need to be implemented in consecutive phases to realize organizational potentials. This strategy must reduce predictable and unpredictable internal and external resistance within the organizations.

3.5. Planning and Project Control

The senior managers define the main policies to be applied in the course of executing a balanced project in this stage. This decision-making process involves allocating the proper resources such as machinery, labor force, and budget to the activities that make up the project bulk; the cost and the financial gain of the project is also calculated to facilitate the success of the project.

3.6. Strategy Control

The strategy control must be designed based on the following guidelines which are the outcome of previous researches such as Virne model, Poter's principals, and a two-year hand on study on this subject.

3.6.1. Fit, priorities and coordination

This stage refers to focusing on the organizational resources and projects through posing these questions:

- Does the organization function properly in respect to its commitments, planning, and environmental conditions (economic situation, rules and regulations, customers, and other factors involved)?
- Is there a need for modification of investment pattern to allocate more financial resources to projects? What is the budgeting priority of the projects?

The important issues in this respect are follows:

- The budget must be allocated based on the project profitability; in case those non-profitable projects cannot be halted they must be financed through the profitable ones.
- All resources need to be used on the basis of the standard defined for utilizing the organizational capacities

3.6.2. Reliance on the unique, valuable useful organizational capacities

While the concept of "Fit" refers to the physical aspect of the organizational potentials, the main focus in this stage is on the qualification of the organizational potentials and the resources. Any failure in utilizing and qualifying these resources will damage the organizational structure. These organizational capacities are unique, valuable and useful and cannot be replaced or imitated with ease. The priority is on the empowerment of human resources, upgrading the machinery, optimizing the performance and controlling the pertaining costs and other issues. The decline in the human resources at the final stages of the project must not lead to any decline in the organizational capacities.

The following measures are recommended:

- On-going staff training
- Utilizing high-tech specially in machinery(Reduces cost, Upgrades quality)
- Promoting capable staff
- Occupational rotation
- Proper allocation of quality resources
- Projects budget and liquidity management

- Locating the external marketing options
- Addressing customers requirements
- Financial balance
- Establishing productive and innovative work environment
- Introducing organizational capacities to the target customers through conferences
- Empowering planning ,development and commerce departments

3.6.3. The Organizational Capacity to Control the Mechanical and Dynamic Shifts

The organizations become less dynamic and more mechanical in the course of their life span; this process makes them less responsive to the challenges and modifications the implementation of the well-defined strategies keeps the organizational productive capacity in the mechanical phase; if the existing strategies will not be responsive under this circumstance, the organization must shift to new and dynamic strategies to reach stability before getting to mechanical phase again. This strategy shift may modify the organizations capacities, resources or even commitment permanently.

4. Conclusion

In the modern world the success and failure of large organizations depend on the implementation of proper strategies based on the well-defined models. This model must enable the organizations to utilize their policies, manage the ongoing projects and design long-term plans. The project-oriented organizations are characterized with the following features which lead to both challenges and development opportunities:

- Transient projects
- Dynamic work environment
- Indefinite
- Project management paradigm
- Project resource allocation and requirements
- Staff work-load

Disregarding any of these issues will affect the organizational structure. The present study aimed at proposing a balance model that leads to achieving CA as it sets the priorities and enables the organization to deal with challenges by applying the right strategies. The proposed model consists of these 8 phases which fall into 3 stages: phases 1-5 define the strategy, phases 6-7 execute the strategy and phase 8 controls the strategy. This model determines organizational factors as well as strategic issues and defines their interrelation through data analysis. The strategy is implemented through prioritizing on the basis of the available facilities and resources. The project control and budget allocation is the outcome of implementing these strategic decisions. The control phase that enables the organizations to execute its strategy as planned includes these features:

- Priority dependence
- Activity Fit- the elimination of irrelevant activities and resources
- Control of resources
- Utilizing the organizational capacities
- Being unique
- Not to be imitated
- Not to be replaced
- Mechanical and dynamic shift

This model, which is designed after a two-year field study, enables the organizations to achieve CA and face the challenges in the modern markets.

References

Barney, J. B. (1986). Stategic Factor Markets Expectations Luck and Business Strategy. Management,Science, 32(10): 1241- 1231.

Barney, J. B. (1991). Firm Resources and Sustanined Competitive Advantage. Journal of Management, 17 (1): 99–120.

Barney, J. B. (1995). Looking inside for Competitive Advantage. Academy of Management, executive, 9(4): 49–61.

Carpenter,M.A. , Sanders,G., & Gerared,W. (2009). Strategic Management: a Dynamic Perspective Consepts and Cases,Second Edition.

Daft, R. L . (2007). Organization theory and design, South-Western.

Huemann, M. , Keegan, A. , & Turner, R. (2007). Human resource management in the project-oriented company: a review. International Journal of Project Management, 25(3): 315-323.

Kaplan, R. S. & Norton, D. P. (1993). Putting the balanced scorecard to work. Harvard Business Review, September-October, 134-142.

Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard: measures that drive performance. Harvard Business Review, January-February, 71-79.

Kaplan, R. S., & Norton, D. P. (2001). The Strategy-Focused Organization:How Balanced Scorecard Companies Thrive in New Business Environment. Boston: HBS Press.

Porter, M.E. (1985). Competive Advantage : Creating and Sustanining Superior Performance. Free Press New York.

Porter, M.E. (1996). What is Strategy?. Harvard Business Review, 74, 61-78.

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A Survey on Timeliness in Financial Reporting and Corporate Governance: Evidence from Iran

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Abstract

Timeliness has been one of the effective factors on the transparency of reporting and enhances the ability of stakeholders to recognize the capacity of an enterprise; its revenues, finance and the financial circumstances. Corporate governance, as a means to make equilibrium among the interest of stakeholders, affects the managers' decisions. The current study has focused on efficacy of corporate governance on the timeliness on the annual financial reports of listed companies on Tehran Stock Exchange. The factors studied were the ratio of the institutional shareholders ownership; the ratio of the non-executive members; the ratio of the shares held by the CEO and the quantity of the majority shareholders and big auditor during 2009-2011. The efficacies of the mentioned factors were studied on the timeliness of the annual financial reporting. Results indicated that the effects of the factors such as majority shareholders and ROE were meaningful on the timeliness of the financial reporting. The statistical coefficients specified that increase in the quantity of the majority shareholders and ROE improved the timeliness of reporting whereas auditing by big Auditor decrease the timeliness. There was no meaningful relation between the timeliness of reporting and the ratio of non-executive members, the ratio of the shares of the managers and the quantity of the majority shareholders.

Keywords: Timeliness, Reporting Financial Statements, Corporate Governance.

Introduction

The financial accounting standards board (FASB) outlines the components of quality information: predictive value, feedback value, timeliness, verifiability, neutrality, and representational faithfulness. Timeliness and relevance are main features of useful information therefore financial statements must issue on time to be useful to users in decision making (Aktas and Kargın, 2011). Timeliness is one of the factors which influence on transparency of reporting (Kulzick, 2004). In fact timeliness is the essential factor for related financial information that has drawn the increasing attention of regularity and legislative institutions (Abdelsalam and Street, 2007). Timeliness and reliable reporting increases the ability of investors, creditors and other users to understand the capacity of an entity in income generation and cash flow and its financial conditions (Etemadi and Yarmohammadi, 2003). Disclosure of accurate, comprehensive and timely information assures the shareholders and let them assess their performance and assets wisely. This increases the investor protection and market efficiency (The European Union, 2004). In theory, it is said if the financial information was issued shortly after the end of the year; it will be more useful, even from the audited annual reports (Turel, 2010). The main issue of this research is that whether there is a relation between timeliness of annual financial reporting and corporate governance mechanisms. Especially it is studied that whether timeliness of annual financial changes with different types of corporate governance or not.

In the second section, the literature review and hypotheses are explained. In section 3, research method, population and sample and model are presented and in the sections 4 and 5, results and statistical analyses are explained.

Literature review and hypotheses background

During four past decades, Timeliness found its place in accounting researches. The concept of “Timeliness" has two dimensions in financial reporting: frequency of financial reporting and the gap between the end of the financial year and the issue date of the financial statements (Davies and Whittred, 1980). In fact, it is stated in theory that if there is less delay in disclosure of the report, timeliness of reporting will be better. According to executive introductions of disclosing listed companies information to Tehran Stock Exchange (2007), exchange publishers must prepare and reveal the audited annual financial statements of parent and consolidated company at least ten days before the general assembly and utmost four months after the end of the financial year.

According to the importance of the method that managers choose to publish the financial report, some researchers study the features affecting time of financial reporting. Corporate governance is one of the important factors that have influence on timeliness of financial reporting. According the literature, except corporate governance, other factors like good news (Bates, 1968; Chai and Tung, 2002; Leventis and Weetman, 2004; Basu, 1997), reaction of market (Ball and Brown, 1968; Brown and Kennelly, 1972), environment (DeCeuster and Trappers, 1993; Annaert et al., 2002), industry (Ahmad and Kamarudin, 2003; Aktas and Kargın, 2011), size and volume of activity (Carslaw and Kaplan, 1991; Abdelsalam and El-Masry, 2008) Auditor and opinion (Whittred, 1980; Owusu-Ansah and Leventis, 2006), profitability and performance (Davies and Whittred, 1980; Mahajan and Chander, 2008) that affecting the timeliness.

Many researchers such as Ball et al. (2000), Beekes et al. (2004), Bdelsalam and Street (2007) and Afify (2009) showed the effect of the corporate governance mechanisms on timeliness. For example, findings of Akle (2011) showed that application corporate governance principals in Egyptian stock exchange improved the timeliness of reporting.

Cadbury Report (1992) defines corporate governance as: "Corporate governance is the system by which companies are directed and controlled. The boards of directors are responsible for the governance of their companies. The shareholder's role in governance is to appoint the directors and the Auditors to satisfy themselves that an appropriate governance structure is in place. The responsibilities of the board include setting the company's strategic aims, providing the leadership to put them into effect, supervising the management of the business and reporting to shareholders on their stewardship. The board's actions are subject to laws, regulations and the shareholders in general meeting". Corporate governance helps to keep the balance between social, economic, personal and collective goals. Framework of the corporate governance enforces the utilization of resources and responding in order to supervise those resources. The goal of corporate governance is to parallel the interests of individuals, corporations and society. The mission of corporate governance is realization of highest moral standards such as:

- Doing what have been promised.
- Reporting the results accurately and precisely.
- Respecting the laws, rules and bylaws of corporation.

Any change in corporate governance structure components results in a change of strategic route and its performance and also increase or decrease the agency costs. In researches it is said that increase in concentration of ownership of main shareholders motivate the managers to supervise and on the other hand scattered ownership are less motivated to supervise management because costs of supervision will be more that benefits of supervision (Roe, 1990; Agha`ei and Chalaki, 2010). It can be said that concentration of ownership is a supervisory characteristic of corporate governance that potentially limits the agency problem (Shleifer and Vishny, 1986; Noe, 2002; Agha`ei and Chalaki, 2010). Ball et al. (2000) found that corporations with major and powerful shareholders tend to disclose information earlier than others. Abdelsalam and Street (2007) showed a negative and significant relation between the ownership of majority shareholder and timeliness of internet based reporting but Etemadi and Yarmohammadi (2003) found that concentration of ownership has no effect on timeliness of reporting.

According to literature, first hypothesis is explained as below:

H_1: There is significant relation between number of majority shareholders and timeliness of annual financial reporting.

Occurrence of issues related to corporate governance system attracts the role of institutional investors because as institutional investors own the considerable amounts of the corporation's share play the important role in policies and improvement of managing system (Al-Najjar, 2005). Presence of institutional investors among shareholders leads to decrease of the need for external supervision system in capital market. Therefore, researchers said that institutional ownership play an important role in decrease of conflict of agency with supervision or indirect control of corporation (Hudart, 1993; Admati et al, 1994; Maug, 1998). Results of Hossain and Taylor (1998) showed that connection to international corporations has significant relation with timeliness of reporting. McGee & Yuan (2008) found that ownership of international shareholders has positive and significant relation with timeliness of reporting. In fact, it seems that institutional shareholders because of their power have more skills in analysis of information and also the need of information to exercise on their consolidated accounts affects quality of timeliness. According to these factors second hypothesis explained as below:

H_2: There is a significant relation between the ownership of institutional shareholders and timeliness of annual financial reporting.

There is a general belief that with increase of the percentage of ownership of managers via decrease of information asymmetry results in decrease of conflicts of manager's and shareholder's interests so the need for more supervision will decrease (Abdelsalam and El-Masry, 2008; Setayesh et al., 2011). In fact, it is expected that ownership of management to negatively influence the timeliness as the need of supervision decreases. On the other hand, if the dispersal of shares and number of shareholders increase the need of supervision will increase (Abdelsalam and Street, 2007). According to what Abdelsalam and El-Masry (2008) found there is a positive and significant relation between the ownership of CEO with timeliness. Third hypothesis is explained as below:

H_3: There is a significant relation between the ownership of CEO and timeliness of annual financial reporting.

According to full authority of CEO in assigning the executing managers, execution of effective supervisory role weaken by them and other executing managers can misuse their position via their salaries etc (Nikbakht et al., 2011). Non-executive members are professional managers with the ability to control decision that their role are to decrease the conflict between the interests of executing members and shareholders and supervise top managers. Non-executive members better support shareholders' interests (Setayesh and Kazem-Nezhad, 2011; Ghalibaf and Rezaei, 2011). Beekes et al. (2004) showed a positive relation between the ratio of non-executive members and timeliness of reporting but Bushman et al. (2004) showed the negative relation between these two factors. Ajinkya et al. (2005) found that corporations with higher ratio of non-executive members are more willing to publish their forecasted profit and are more timeliness in reporting. In contrast with previous findings, Owusu-Ansah and Leventis (2006) said that corporations with more ownership of executive shareholders have more delay in reporting. Abdelsalam and Street (2007) found that the number of non-executive members has negative relation with timeliness of annual financial reporting and Abdelsalam and El-Masry (2008) showed that there is a relation between these two. Afify (2009) showed that there is a significant relation between independency of board of directors and Auditor`s lag. Hashim and Rahman (2011) found no relation between these two. According to the effects of independency of board of directors, the forth hypothesis is set as below:

H_4: There is a significant relation between the ratio of the number of non-executive members in board of directors and timeliness of annual financial reporting.

The quality of auditing directly related to corporate governance and supervisory system but there is no definition for quality of Auditor. Therefore, factors such as: the size auditing firms, age and the reputation is taken as a proxy of the quality of audit (Setayesh et al., 2010). As said before, according to Gilling (1977), Ashton et al. (1989), Owusu-Ansah and Leventis (2006) and McGee & Yuan (2008) there is a less delay in reporting of the corporations which audited by big Auditors. In Iran according to previous researches, "Auditing Organization" is known as the biggest auditing firm according to its number of workers and contracts. Here is the fifth hypothesis:

H_5: There is a significant relation between the size of the auditing firm and timeliness of annual financial reporting.

According to the hypotheses mentioned above, in this research we will examine the effect of ratio of institutional shareholders ownership, ratio of non-executive members, ratio of CEO's ownership, number of majority shareholders and the size of auditing firm on timeliness of annual financial reporting.

Research Methodology

Statistical community in this study included all listed companies in Tehran Stock Exchange that the following conditions are met:

A: Company`s financial information is available for the period between 2009 and 2011.

B: The fiscal year ends in March 19. Most Iranian companies their fiscal year end with the end of solar year, i.e. March 19.

C: The Company has no experience during the studied period of fiscal year change.

Therefore the statistical community included 762 company-year and 254 companies. By applying the above criteria and assessment and collection of basic information, the suitable sample of research were chosen by SPSS software. 323 company-year were chosen that 7 company-year were deleted from initial sample due to lack of necessary information.

In this research, in order to examine the effect of ratio of institutional shareholders ownership (INSSHLD), ratio of non-executive members (BDINDEP), ratio of CEO's ownership (CEOSHld), number of majority shareholders (MJSHLD) and the size of auditing firm (AUDITOR) on timeliness of annual financial reporting we use multi variable regression model.

$$TRi = \alpha + \beta 1BDINDEP + \beta 2INSSHLD + \beta 3CEOSHld + \beta 4MJSHLD + \beta 5AUDITOR + \beta 6SIZE + \beta 7ROE$$

Result Analysis

In Table A, you can see the summary of descriptive statistics of data. The least delay in reporting was 29 days and utmost delay was 181 days. Table 1 shows the general information of the sample society.

Table 1. Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. Deviation
TR	-181.00	-29.00	-86.91	26.116
Bd_Indep	0.20	1.00	0.648	0.1962
MJSHLD	-1.01	3.37	0.000	0.74052
INSSHLD	0.01	1.00	0.7613	0.28726
CEOSHld	0.01	0.99	0.3635	0.30724
AUDITOR	0.00	1.00	0.23	0.422
SIZE	3.80	8.20	5.556	0.7860
ROE	-2.88	1.94	0.1138	0.40914
N: 316				

Data Analysis

In order to examination the effects of variables the model has been set. In this model number of delayed days in reporting considered as dependent variable and the ratio of institutional shareholders ownership, ratio of non-executive members, ratio of CEO's share, number of majority shareholders and the size of auditing firm are considered as free variable. The size of auditing firm (corporate market value logarithm) and ROE are considered as control variables.

As you can see in table B the amount of R2 coefficient shows that 0.181% of changes of dependant variables explained by this model. According to the results, InShld (institutional shareholders ownership), AUDITOR (big Auditor), ROE variables are meaningful and coefficient of InShld and ROE variables were positive and AUDITOR coefficient was negative.

The positive and significant coefficient of INSSHLD showed that as more shares belonged to institutional shareholders, quality of timeliness of reporting will improve. The positive and significant coefficient of ROE showed that firms with more power of profitability, published with least delay. In average, corporations with higher ROE issued their report 10 days faster. On the other hand the negative and significant coefficient of AUDITOR showed that presence of big Auditor results in 8 days of more delay. Table 2 shows the results of testing of hypotheses.

Table 2. Regression Model

$TR_i = \alpha + \beta_1 BDINDEP + \beta_2 INSSHLD + \beta_3 CEOSHld + \beta_4 MJSHLD + \beta_5 AUDITOR + \beta_6 SIZE + \beta_7 ROE + \varepsilon$

Variable	Index	t	Sig.
(Constant)	**-107.097**	**-10.247**	**0.000**
Bd_Indep	**11.866**	**1.683**	**0.093**
MJSHLD_QNml	**3.144**	**1.524**	**0.128**
INSSHLD	**35.967**	**6.773**	**0.000**
CEOSHld	**0.945**	**0.188**	**0.851**
AUDITOR	**-8.341**	**-2.491**	**0.013**
SIZE	**-2.610**	**-1.352**	**0.177**
ROE	**10.477**	**3.124**	**0.002**
F test	**9.728**		
R Square	**0.181**		
Adjusted R Square	**0.162**		

Conclusion

The current study is developed to examine the effects of effect of ratio of institutional shareholders ownership, ratio of non-executive members; ratio of CEO's share, number of majority shareholders and the size of auditing firm on timeliness of annual financial reporting. Statistical test showed that InShld, AUDITOR, ROE variables are significantly affected the timeliness of financial reporting therefore H2 and H5 are approved. In approval of H2 the positive and significant coefficient of INSSHLD showed that institutional shareholders because of their power and their skill in analysis of information and the need of corporation's information to exercise in their consolidated accounts influenced positively on quality of timeliness. Result for AUDITOR variable did not match with Gilling (1977), Ashton et al. (1989), Owusu-Ansah and Leventis (2006) McGee and Yuan (2008) findings. Because bigger auditing firms are more professional and have enough human resources, they improve the quality of reporting but the higher quality results in delay. The positive coefficient of ROE shows that more successful corporations are more willing to disclose the information fitly. In fact this matches with the Bates (1968), Beaver (1968), Givoli and Palmon (1982), Trueman (1990), Chai and Tung (2002) and Mehrdad (2011) findings that bad news reflects later in market.

Results show that our research model, describe only 18% of timeliness changes. In other words, about 82% changes of dependent variables are explained by other variables, including auditor fees, auditor change, month of fiscal year-end and … . On the other hand, one of the most important factors in timeliness is preparation of reports by companies. Since factors such as location, skill level and expertise of the staff (especially accountants) and independent auditor are effective on the preparation of reports process, testing that was impossible due to lack of information. According to the results of this research and the challenges occurred during the research, it is necessary to consider following issues in next researches:

(a) Evaluation other variables such as Auditor`s fee, manager's & Auditor's tenure, age and education of manager. (b) Examination of capital market during the reporting and market's reaction to date of issue.

References

Aghaei, A and Chalaki, P (2010). Relationship between corporate governance characteristics and earnings management in companies listed in Tehran Stock Exchange,Iranian Accounting Research; No. 4; pp. 54-77.

Aktas, R and Kargın, M (2011). Timeliness of Reporting and the Quality of Financial Information; International Research Journal of Finance and Economics, Issue 63, 2011; 71-77.

Abdelsalam, O.H. and Street, D.L. (2007). Corporate governance and the timeliness of corporate internet reporting by UK listed companies, Journal of International Accounting, Auditing and Taxation, Vol. 16, No. 2, pp. 111-130.

Abdelsalam, O and El-Masry, A (2008). The impact of board independence and ownership structure on the timeliness of corporate internet reporting of Irish-listed companies; Managerial Finance Vol. 34 No. 12, 2008; 907-918.

Admati, A., Pfleiderer, P., and Zechner, J. (1994). Large shareholder activism, risk sharing, and financial market equilibrium. Journal of Political Economy 102 (December): 1097-1130.

Akle , H.Y (2011). The relationship between corporate governance and financial reporting timeliness for companies listed on Egyptian stock exchange an empirical study ; Internal Auditing & Risk Management; 2(22),2011; 81-90.

Ahmad, R.A.R. and Kamarudin, K.A (2003). Audit delay and the timeliness of corporate reporting: Malaysian evidence. Working paper, MARA University of Technology, Shah Alam.

Annaert, J, Marc J.K. DeCeuster, Ruud Polfliet & Geert Van Campenhout. (2002). To Be or Not Be … 'Too Late': The Case of the Belgian Semi-annual Earnings Announcements. Journal of Business Finance & Accounting 29(3 & 4): 477-495.

Afify, H.A.E. (2009). Determinants of audit report lag: Does implementing corporate governance have any impact? Empirical evidence from Egypt. Journal of Applied Accounting Research, 10(1), 56-86.

Ajinkya, B., Bhorjraj, S., & Sengupta, P. (2005). The association between outside directors, institutional investors, and the properties of management earnings forecasts. Journal of Accounting Research, 43(3), 343–376.

Al-Najjar, B (2010). Corporate governance and institutional ownership: evidence from Jordan. Corporate Governance; Vol. 10, pp. 176-190.

Ashton, Robert H., Paul R. Graul & James D. Newton. (1989). Audit Delay and the Timeliness of Corporate Reporting. Contemporary Accounting Research 5(2): 657-673.

Basu, S (1997). The Conservatism Principle and the Asymmetric Timeliness of Earnings. Journal of Accounting & Economics 24: 3-37.

Ball, R. & Brown P (1968). An Empirical Evaluation of Accounting Income Numbers. Journal of Accounting Research 6: 159-178.

Ball, R., Kothari S.P& Robin, A (2000). The Effect of International Institutional Factors on Properties of Accounting Earnings. Journal of Accounting and Economics 29(1): 1-51.

Brown, Philip & John W. Kennelly (1972). The Information Content of Quarterly Earnings: An Extension and Some Further Evidence. Journal of Business 45: 403-415.

Beaver, W.H. (1968). The Information Content of Annual Earnings Announcements. Journal of Accounting Research 6 (Supp.);67-92.

Beekes, Wendy; Pope, Peter; and Young, Steven (2004). The Link between Earnings Timeliness, Earnings Conservatism and Board Composition: evidence from the UK; Blackwell Publishing Ltd; Vol. 12 No 1 Jan 2004; 47-59.

Cadbury Report; (1992). Financial Aspects of Corporate Governance; available in: http://www.ecgi.org/codes/documents/cadbury.pdf

Carslaw, C.A. and Kaplan, S.E. (1991). An examination of audit delay: further evidence from New Zealand. Accounting & Business Research, 22(85), 21-32.

Chai, Mary L. & Samuel Tung (2002). The Effect of Earnings-Announcement Timing on Earnings Management. Journal of Business Finance & Accounting 29 (9 & 10): 1337-1354.

DeCeuster, M. & Trappers D (1993). Determinants of the Timeliness of Belgian Financial Statements. Working Paper, University of Antwerp, cited in Annaert et al, 2002.

Davies, B., and Whittred G. P (1980). The Association between Selected Corporate Attributes and Timeliness in Corporate Reporting: Further Analysis, Abacus, 16(1), pp. 48–60.

E`temadi, H and Yarmohammadi, A; 2003; Examination of effective factors on timeliness semiannual reporting in Tehran stock exchange, Social and human sciences, vol. 19, No 2, p 87-99.

Ghalibaf-Asl, Hasan and Reza`ei Fateme (2011). The effects of board composition on performance of companies listed in Tehran Stock Exchange; Financial Research; No 23; p 33-48.

Gilling, D.M. (1977). Timeliness in corporate reporting: some further comment. Accounting and Business Research, winter, 8(29): 34-36.

Givoli, Dan & Dan Palmon (1982). Timeliness of Annual Earnings Announcements: Some Empirical Evidence. The Accounting Review 57(3): 486-508.

Hashim, U & Rahman, R (2011). Board independence, board diligence, board expertise and impact on audit report lag in Malaysian market; Finance and Corporate Governance Conference.

Hossain, M. Alam and Taylor, Peter J (1998). An examination of Audit delay: Evidence from Pakistan. Working Paper, University of Manchester

Huddart, S. (1993). The effect of a large shareholder on corporate value. Management Science 39 (November): 1407-1421.

Leventis, Stergios & Pauline Weetman (2004). Timeliness of Financial Reporting: Applicability of Disclosure Theories in an Emerging Capital Market. Accounting and Business Research 34(1): 43-56.

Kulzick, Raymond S. (2004). Sarbanes-Oxley: Effects on Financial Transparency. S.A.M. Advanced Management Journal 691; 43-49.

Maug, Ernst, 1998, Large shareholders as monitors: Is there a trade-off between liquidity and control? Journal of Finance, 65-98.

Mahajan, P and Chander, S (2008). Timeliness of Corporate Disclosure: An Evidence from Indian Companies; Decision, Vol. 35, No.2, July – December; 39-62.

McGee, Robert W. and Xiaoli Yuan (2008). Corporate Governance and the Timeliness of Financial Reporting: An Empirical Study of the People's Republic of China. International Journal of Business, Accounting and Finance, forthcoming.

Mehrdad, S (2011). The relationship between the delay in announcing the quarterly earnings forecast and the forecast accuracy of earnings news; unpublished thesis, Ferdowsi university, Iran.

Nikbakht, Muhammad-Reza, Seyedi, Seyed-Aziz and Hashim-Al-Hoseyni, Roozbeh; (2011). The effect of board characteristics on firm performance; Journal of Accounting Advances; No 58; p 251-270.

Noe, T. (2002). Institutional activism and financial market structure, Review of Financial studies, 15, 289-319.

Owusu-Ansah, S. and Leventis, S (2006). Timeliness of corporate annual financial reporting in Greece, European Accounting Review, 15, 273-287.

Shleifer, A. And Robert W. Vishny (1986). Large shareholders and corporate control, Journal of Political Economy, No 94,pp. 461-489.

Roe, J. (1990). Political and legal restraints on ownership and control of public companies. Joumal of Financial Economics, 27, 7-41.

Setayesh, Muhammad Hossain and Kazem-Nezhad, Mostafa (2011). The effect of ownership structure and board composition on the dividend policy of companies listed in Tehran Stock Exchange; Journal of Accounting Knowledge; No 1; p 29-51.

Setayesh, Muhammad Hossain, Ghorbani, Asghar and GolMuhammadi, Maryam; (2011). Smoothing effect of corporate governance on earnings in Tehran Stock Exchange Listed Companies; Accounting Research; No 7; p 34-51.

Tehran stock exchange board of directors (2009). Administrative instructions for Information disclosure of companies registered in stock exchange; available in: http://www.rdis.ir/ApprovedGuidLinesDetail.asp?AppBLID=31

Trueman, Brett (1990). Theories of Earnings-Announcement Timing. Journal of Accounting & Economics 13: 285-301.

Türel, A., (2010). Timeliness of Financial Reporting in Emerging Capital Markets: Evidence from Turkey, Istanbul University Journal of the School of Business Administration, Vol. 39, No. 2, pp. 227-240.

Whittred, G.P. (1980). Audit Qualification and the Timeliness of Corporate Annual Reports. The Accounting Review 55(4): 563-577.

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FDI and Economic Growth in Asian Developing Countries: A Toda-Yamamoto Approach

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Abstract

The aim of this paper is to examine the causality relationship between foreign direct investment and economic growth for 15 Asian developing countries from 1980 to 2010 years. The ARDL-Bounds test proposed by Pesaran et al. (2001) employed to analyze long-run cointegration relationship. Furthermore, a modified version of Granger causality test proposed by Toda and Yamamoto (1995) used to examine the causal relationship. The result of causality is mixed for different countries. Identify the direction of causality can be useful for policymakers and economist.

Keywords: Foreign Direct Investment, Economic Growth, Causality. **JEL classifications:** C32, F21, F43.

1. Introduction

Achieving to the economic growth is one of the key objectives of each country. Several factors can affect the economic growth, and many researchers tried to study the effects of these factors and conclude policy implication to stimulate growth of economic. However, investment is one of the most important factors that affecting the economic growth. So a large number of studies focused their attention to growth effect of foreign direct investment. FDI can play a key role in the process of economic growth, in particular for developing countries, and usually associated with enhancement of technology transfer in host countries. The nature of relationship between foreign direct investment and economic growth can investigates by examining the direction of causality between FDI and GDP. Four possible propositions can be considered for relationship between FDI and GDP: causality from FDI to GDP and vice versa, feedback relationship, and neutrality in some countries.

Although there are many empirical studies about the relationship between foreign direct investment and economic growth, but the results are mixed. Herzer et al. (2008) analyzed the FDI-led growth hypothesis for developing countries by using cointegration and causality techniques. They cannot found evidence for effects of FDI to economic growth.

The empirical work of Zhang (2001) investigated relationship between FDI and economic growth for Latin America and East Asia and countries, and concludes support for FDI-led growth hypothesis in particular for Hong Kong, Indonesia, Singapore, Taiwan, and Mexico. Foreign direct investment has more growth effects when the host countries adopt liberalized trade regime, improve human capital, and maintain macroeconomic stability.

Chowdhury and Mavrotas (2006) attempted to examine the causality relationship between FDI and economic growth for Chile, Malaysia and Thailand over the 1969 to 2000 years. This paper employed Toda and Yamamoto (1995) technique to investigate the causality relationship and indicate unidirectional causality from GDP to FDI in Chile and bidirectional causality between FDI and economic growth in Malaysia and Thailand.

Basu et al. (2003) examined the linkage between FDI and growth for 23 developing countries for 1978 to 1996 periods. The results of panel cointegration test support the existence of long-run cointegration relationship between FDI and GDP, in addition the results of panel causality reveal bidirectional causality for more open economies and unidirectional causality from GDP to FDI for closed economies.

The study of Hansen and Rand (2006) attempted to investigate the causal relationship between foreign direct investment and economic growth for 31 developing countries over the 1970 to 2000 years. The empirical finding of this paper confirmed FDI-led growth hypothesis which means FDI can stimulate GDP and therefore economic growth.

Alfaro et al. (2004) examined the relationship between FDI, financial markets, and economic growth for OECD and non-OECD countries over the 1975 to 1995 years. The empirical results indicate the key role of FDI in growth of economic. Furthermore, we must respect to this subject that the nature and level of development of local financial markets has major effects on FDI-growth linkage.

Nair-Reichert and Weinhold (2001) found a causality relationship from FDI to economic growth for developing countries and conclude that the growth effect of FDI is higher in more open economies.

The study of Li and Liu (2005) examined the relationship between FDI and economic growth for a panel of 84 developed and developing countries for 1970 to 1999 years. The results indicate FDI can promote economic growth directly and indirectly through its interaction with human capital.

Adams (2009) used OLS and fixed effects estimation to investigate the effect of foreign direct investment and domestic investment on economic growth for a panel of 42 Sub-Saharan African countries over the 1990 to 2003 period. The empirical result of OLS estimation reveals that foreign direct investment has significant positive impact on the economic growth; furthermore, the results indicate domestic investment has significant positive impact on economic growth in both the OLS and fixed effects estimation.

Borensztein et al. (1998) attempted to analyze the impact of FDI on economic growth for developing countries. They found that FDI has important role for technology transfer to the host countries. Furthermore, the maximum effect of FDI acquire when the host country has a minimum threshold stock of human capital.

Yang (2008) studied 110 countries and found that growth effect of foreign direct investment is not uniform over time and across countries. The finding of Yang (2008) indicates positive impact of FDI in Latin America for 1973 to 1987 periods and negative impact for Middle East. Also, there is positive impact for OECD and ECA countries over the 1988 to 2002 years.

The study of Vadlamannati and Tamazian (2009) investigate effect of FDI on economic growth for a panel of 80 developing countries over the 1980 to 2006 periods. This paper used aggregate production function augmented with FDI inflows, economic policy reforms and institutional constraints. The results of estimation provide significance of FDI, policy reforms and institutional development for growth in these countries.

Liu et al. (2009) employed vector error correction model (VECM) causality framework to investigate relationship between trade, foreign direct investment and economic growth for nine Asian countries over the 1970 to 2002 years. The results indicate bidirectional causality between trade, FDI, and growth for most of the sample countries.

However, in this paper we attempt to examine the cointegration and causality relationship between foreign direct investment and economic growth in Asian developing countries by employing ARDL-Bounds test and Toda-Yamamoto approach. The rest of this paper is organized as follows: Section 2 discussed data and methodology. Section 3 present empirical results and finally conclusion presented in Section 4.

2. Data and Methodology

2.1. Data

In this paper we use annual data of FDI and real GDP to analyze the causality relationship between foreign direct investment and economic growth. Sample periods cover 1980 to 2010 years for 15 Asian developing countries includes: Bahrain, Bangladesh, India, Indonesia, Iran, Jordan, Malaysia, Oman, Pakistan, Philippines, Saudi Arabia, Sri Lanka, Syria, Thailand, and United Arab Emirates. The data of GDP and FDI was derived from the World Development Indicators. Real GDP measured in constant 2000 US dollars and considered as logarithmic form, and FDI defined as ratio of foreign direct investment to GDP.

2.2. Methodology

2.2.1. ARDL-Bounds test

In this paper we use recently developed Autoregressive Distributed Lag (ARDL) bounds test proposed by Pesaran et al. (2001) to examine the long run cointegration relationship between foreign direct investment and economic growth. The ARDL approach, at first was present by Pesaran and Shin (1999) and then developed by Pesaran et al. (2001). An ARDL model is a general dynamic specification, which uses the lags of the dependent variable and the lagged and contemporaneous values of the independent variables, through which the short-run effects can be directly estimated, and the long-run equilibrium relationship can be indirectly estimated.

The ARDL cointegration approach has numerous advantages in comparison with other cointegration methods. ARDL-Bunds test does not require knowledge of the order of integration of variables. This approach is not sensitive to the sample size and also ARDL technique provides unbiased estimates of the long-run model.

The bounds test is based on F-statistic (or Wald statistic) used to test the significance of the lagged levels of the variables in a first-difference regression. The asymptotic distributions of these statistics are non-standard under the null hypothesis that there exists no level relationship between the dependent variable and the included repressors, irrespective of whether the regressors are I (0) or I(1). Two sets of asymptotic critical values are provided: One set assuming that all regressors are I (1), and another set assuming that they are all I (0). These two sets of critical values provide a band covering all possible classifications of the regressors into I(0), I(1) or mutually cointegrated. If the computed test statistic exceeds the upper critical value, then there is evidence of a long run relationship, if below the lower critical values, we cannot reject the null hypothesis of no cointegration and if it lies between these two bound, inference is inconclusive.

The ARDL unrestricted error correction model (UECM) can be expressed as follows:

$$\Delta LGDP_t = \alpha_0 + \alpha_1 LGDP_{t-1} + \alpha_2 FDI_{t-1} + \sum_{i=1}^{n} \alpha_{3i}\, \Delta LGDP_{t-i} + \sum_{i=0}^{n} \alpha_{4i} \Delta FDI_{t-i} + \varepsilon_t \quad (1)$$

$$\Delta FDI_t = \beta_0 + \beta_1 FDI_{t-1} + \beta_2 LGDP_{t-1} + \sum_{i=1}^{n} \beta_{3i}\, \Delta FDI_{t-i} + \sum_{i=0}^{n} \beta_{4i} \Delta LGDP_{t-i} + \mu_t \quad (2)$$

2.2.2. Toda-Yamamoto (1995) Approach

The modified version of Granger causality test proposed by Toda and Yamamoto (1995) employed for testing the causality between foreign direct investment and economic growth. Toda and Yamamoto (1995) procedure based on augmented VAR system and a Wald test statistic that asymptotically has a chi square distribution. In Toda and Yamamoto (1995) approach, the augmented (k+dmax)th order of VAR estimated where k is the lag length of the system and dmax is the maximum order of integration.

The Toda-Yamamoto model can be specified as following bi-variate VAR system:

$$LGDP_t = c_0 + \sum_{i=1}^{k} \alpha_{1i}\, LGDP_{t-i} + \sum_{j=k+1}^{d\,max} \alpha_{2i}\, LGDP_{t-j} + \sum_{i=1}^{k} \gamma_{1i}\, FDI_{t-i} + \sum_{j=k+1}^{d\,max} \gamma_{2i}\, FDI_{t-j} + \varepsilon_{1t} \quad (3)$$

$$FDI_t = c_1 + \sum_{i=1}^{k} \beta_{1i}\, FDI_{t-i} + \sum_{j=k+1}^{d\,max} \beta_{2i}\, FDI_{t-j} + \sum_{i=1}^{k} \varphi_{1i}\, LGDP_{t-i} + \sum_{j=k+1}^{d\,max} \varphi_{2i}\, LGDP_{t-j} + \varepsilon_{2t} \quad (4)$$

In Eq. (3), the null hypothesis of foreign direct investment does not Granger cause GDP can be expressed as H0: $\gamma i = 0\ \forall i$; similarly in Eq. (4), the null hypothesis of GDP does not Granger cause foreign direct investment can be expressed as H0: $\varphi i = 0\ \forall i$.

3. Empirical Results

3.1. ARDL-Bounds test results

The results of ARDL-Bounds test for null hypothesis of no long-run relationship between foreign direct investment and economic growth are reported in table 1.

Table 1. ARDL-Bounds Test

Dependent Variable	*F- Statistic*
Bahrain	
LGDP	25.159 **
FDI	9.334 **
Bangladesh	
LGDP	423.658 **
FDI	2.467
India	
LGDP	117.282 **
FDI	4.144 *
Indonesia	
LGDP	21.091 **
FDI	7.928 **
Iran	
LGDP	5.420 **
FDI	1.820
Jordan	
LGDP	4.893 **
FDI	1.352
Malaysia	
LGDP	9.401 **
FDI	12.013 **
Oman	
LGDP	2.255
FDI	7.149 **

Pakistan	
LGDP	85.357 **
FDI	7.018 **
Philippines	
LGDP	6.438 **
FDI	10.589 **
Saudi Arabia	
LGDP	11.764 **
FDI	0.555
Sri Lanka	
LGDP	9.556 **
FDI	4.212 *
Syria	
LGDP	8.570 **
FDI	0.853
Thailand	
LGDP	0.572
FDI	6.194 **
United Arab Emirates	
LGDP	4.919 **
FDI	4.757 **

Critical Values	**Lower Bound**	**Upper Bound**
5%	3.482	4.435
10%	2.588	3.407

Note: ** and * denote statistical significance at the 5% and 10% levels, respectively.

When the real GDP is dependent variable, computed statistic is higher than upper bound at 5% significant for all countries except Oman and Thailand, which means existence of long-run cointegration relationship. Furthermore, the results of ARDL-Bounds test when the FDI is dependent variable cannot support existence of cointegration for five countries: Bangladesh, Iran, Jordan, Saudi Arabia, and Syria; and for other ten countries we can conclude long-run cointegration relationship.

3.1. Toda-Yamamoto (1995) causality results

The first step in Toda-Yamamoto approach is to finding the maximum order of integration of the variables (dmax). The Augmented Dickey-Fuller (ADF) test performed to investigate stationary properties of series and finding maximum order of integration. The results of ADF unit root test reported in table 2.

Table 2. ADF Unit Root Test

Dependent Variable	***F- Statistic***
Bahrain	
LGDP	25.159 **
FDI	9.334 **
Bangladesh	

LGDP	423.658 **
FDI	2.467
India	
LGDP	117.282 **
FDI	4.144 *
Indonesia	
LGDP	21.091 **
FDI	7.928 **
Iran	
LGDP	5.420 **
FDI	1.820
Jordan	
LGDP	4.893 **
FDI	1.352
Malaysia	
LGDP	9.401 **
FDI	12.013 **
Oman	
LGDP	2.255
FDI	7.149 **
Pakistan	
LGDP	85.357 **
FDI	7.018 **
Philippines	
LGDP	6.438 **
FDI	10.589 **
Saudi Arabia	
LGDP	11.764 **
FDI	0.555
Sri Lanka	
LGDP	9.556 **
FDI	4.212 *
Syria	
LGDP	8.570 **
FDI	0.853
Thailand	
LGDP	0.572
FDI	6.194 **
United Arab Emirates	
LGDP	4.919 **
FDI	4.757 **

Critical Values	**Lower Bound**	**Upper Bound**
5%	3.482	4.435
10%	2.588	3.407

Note: ***, ** and * denote statistical significance at the 1, 5 and 10% levels, respectively. Optimum lags are in parenthesis.

The result of ADF unit root test indicates that LGDP is non-stationary in levels and become stationary after first difference for all countries. Furthermore, the results of unit root test of FDI at levels reveals rejection of the null hypothesis of having unit root for Bahrain, Indonesia, Oman, Pakistan, Philippines, Sri Lanka, and United Arab Emirates. This means that FDI is stationary in levels for these countries and become stationary after first difference for other countries. In overall, the result of unit root test reveals that the maximum order of integration (dmax) is one for all countries.

The next step in Toda-Yamamoto approach is to find the optimal lag length (k). Akaike Information Criteria (AIC), Schwarz information Criteria (SC), and Hannan-Quinn criteria (HQ) indicate k=2 for Pakistan and Thailand, k=3 for Indonesia, k=4 for Oman and k=1 for other countries.

Table 3. Toda-Yamamoto (1995) Causality Test

Country	***From FDI to LGDP***	***From LGDP to FDI***
	χ2 Statistic	***χ2 Statistic***
Bahrain	0.695	5.398 **
Bangladesh	0.946	5.733 **
India	1.037	7.705 **
Indonesia	0.950	13.208 ***
Iran	1.119	2.494
Jordan	0.830	0.043 **
Malaysia	0.999	0.668
Oman	29.02 ***	3.917
Pakistan	0.923	14.646 ***
Philippines	1.584	0691
Saudi Arabia	15.599 ***	5.423 **
Sri Lanka	0.278	6.186 **
Syria	0.759	2.525
Thailand	9.315 **	7.262 **
United Arab Emirates	0.268	2.135

Note: ***, ** and * denote statistical significance at the 1, 5 and 10% levels, respectively.

Finally, after investigate integration of series and finding optimal lag we can perform Toda-Yamamoto causality test. the results of causality test indicate bidirectional causality between FDI and economic growth for Saudi Arabia and Thailand; and unidirectional causality from FDI to economic growth for Oman, and unidirectional causality from economic growth to FDI for Bahrain, Bangladesh, India, Indonesia, Jordan, Pakistan, and Sri Lanka.

4. Conclusion

This paper attempts to analyze the causality relationship between foreign direct investment and economic growth for 15 Asian developing countries over the 1980 to 2010 years by employing ARDL-Bounds test and Toda-Yamamoto (1995) approach. The results of ARDL-Bounds test support existence of cointegration for all countries except Oman and Thailand, when the real GDP is dependent variable .

run -the results of Bounds test rveals exisetence of long ,when the FDI is dependent variable ,Furthermore .cointegration relationship only for ten countries

growth to the empirical finding of causality test indicate unidirectioanl causality from economic ,Finnaly :FDI for seven countriesBahrain, Bangladesh, India, Indonesia, Jordan, Pakistan, and Sri Lanka; and unidirectional causality from FDI to economic growth for Oman. Furthermore, the result of causality test indicates bidirectional causality between foreign direct investment and economic growth for Saudi Arabia and Thailand and neutrality between FDI and growth for Iran, Malaysia, Philippines, Syria, and United Arab Emirates. This result can be useful for policymakers; causality from economic growth to FDI implies that economic growth is prerequisite to attract FDI. Causality from FDI to economic growth imply that attract of foreign direct investment can promote growth in host countries.

References

Adams, S. (2009). Foreign Direct investment, domestic investment, and economic growth in Sub-Saharan Africa. Journal of Policy Modeling, 31: 939–949.

Alfaro, L. et.al. (2004). FDI and economic growth: the role of local financial markets. Journal of International Economics, 64: 89–112.

Basu, P, el. al (2003). Liberalization, FDI, and Growth in Developing Countries: A Panel Cointegration Approach. Economic Inquiry, 41: 510–516.

Borensztein, E. et.al. (1998). How does foreign direct investment affect economic growth? Journal of International Economics, 45: 115–135.

Chowdhury, A., & Mavrotas, G. (2006). FDI and Growth: What causes what? The World Economy, 29: 9–19.

Hansen, H., & Rand, J. (2006). On the Causal Links Between FDI and Growth in Developing Countries. The World Economy, 29: 21–41.

Herzer, D et al. (2008). In search of FDI-led growth in developing countries: The way forward. Economic Modelling, 25: 793–810.

Li, X., & Liu, X. (2005). Foreign Direct Investment and Economic Growth: An Increasingly Endogenous Relationship. Worm Development, 33: 393-407.

Liu, X. et.al. Trade, foreign direct investment and economic growth in Asian economies. Applied Economics, 41: 1603–1612.

Nair-Reichert, U.,& Weinhold, D. (2001). Causality tests for cross-country panels: a new look at FDI and economic growth in developing countries. Oxford Bulletin of Economics and Statistics, 63: 153–171.

Pesaran, M. H. et.al. (1999). Approaches to the analysis of long run relationships. DAE Working Paper No.9907, University of Cambridge.

Pesaran, M. H. et.al. (2001). Bounds testing approaches to the analysis of level relationships. Journal of Applied Econometrics, 16: 289 – 326.

Toda, H. Y., & T. Yamamoto, 1995. Statistical inference in vector autoregressions with possibly integrated process. Journal of Econometrics, 66: 225-250.

Vadlamannati, K. C., & Tamazian, A. (2009). Growth effects of FDI in 80 developing economies: the role of policy reforms and institutional constraints. Journal of Economic Policy Reform, 12: 299-322.

Yang, B. FDI and growth: a varying relationship across regions and over time. Applied Economics Letters, 15: 105-108.

Zhang, K.H. (2001). Does foreign direct investment promote economic growth? Evidence from East Asia and Latin America. Contemporary Economic Policy, 19: 175–185.

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The Effect of Firm Size and Financial Leverage on Ethical Decision-Making by Using Structural Equation Modeling

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Abstract

The purpose of this paper is to evaluate the effect of financial leverage and firm size on ethical decision making of accountants and financial managers. The statistical population in this study consists of firms listed on the Iran Stock Exchange. Respondents to the ethics questionnaire were accountants and financial managers working in companies listed on the Stock Exchange in Iran. To analyze and hypotheses testing, we used structural equation modeling method. In general, in parallel with the reduction in size of firms, the positive relationship between financial leverage and ethics increases in both the individual and corporate level; and with increasing in firm size, this relationship is reduced. Also, in parallel with the reduction in financial leverage of firms, the positive relationship between size and ethics increases in both the individual and corporate level; and with increasing in financial leverage level, this relationship is reduced.

Keywords: Firm Size, Financial Leverage, Ethical Decision-Making, Structural Equation Modeling.

1. Introduction

In the area of economic and financial issues, many years there has been view that individual and corporations pursue profit maximization rational behavior; therefore, this type of behavior is the default financial and economic analysis, but today, another approach has been proposed by many authors that does not negate the idea but relying on self-interest as the only significant factor for economic behavior is not consistent with the facts of human life And instead suggest that many human behaviors, originating from moral values. Thus, ethical considerations should be considered in the theory and financial analysis **(**Afza and Hussain, 2011).

In other words, in the financial area, the information user and providers are looking to maximize profits but, the material self-interest is not the only cause of the desirability also It can be desirable to act ethically preferences that should be considered in the financial analysis.

Some of the recent corporate ethics scandals - such as Tycho, WorldCom and Enron -Expectations of accountants have increased to meet rigorous ethical guidelines (Cohen, 2001).

Today, accountants work in a changing world where rising corporate collapses, business failures and natural disasters. In the advanced economies, the accounting has become a key profession; because each country's economy flows with this career.

Accountants are responsible for providing quality financial information for users of this information and decision-making; but there is many Worries about accountants have failed to provide quality information and transparency in many cases (Waddock, 2005).

According to reports in recent years, one important reason for this failure, distort the ethical behavior of accountants counted that leading to the development of professional ethics in accounting students ccourses. Research results indicate that a high level of individual and corporate ethics in a company has an impact on the disclosure of illegal or unethical activities to outside the organization (Cohen, 2001).

In view of the importance of ethics in Organizations and company, evaluation of factors influencing on accountants and financial managers ethics in both the individual and company level is very important. Several variables effective on ethical decision making (Richardson, 2008).

One of the variables is a size company which usually is defined as the market value. It is concluded that small firms have high profitability average. Therefore be expected that the price changes be specified in stocks prices of small companies. On the other hand, large firms have low profitability growth average and usually do not expect major changes in high size corporate profitability.

Several studies indicate different aspects of the company's size. Company's size can be indicative of the company's leverage. Financial leverage is a means to achieve higher profits (Al-Qaisi, 2010). Also, size indicates company's competitive advantage. Since most of the market share needs to produce and sell more; so having sufficient financial resources and larger sizes to enable the company to produce more production and spend higher production costs and marketing; And thus able to create competitive advantages(Richardson, 2008; Waddock, 2005; Al-Qaisi, 2010).

Firm size could be capable of indicating management and accounting project quality. Firm size is Indicator a strong management by using accounting project try to increase the company's financial resources. (Nguyen and Neelakantan, 2006).

Company's size can be represented as informational efficiency. Usually, the bigger companies, are concerned more analysts and investors; Thus, accounting information have more efficient process on larger firms. (Afza and Hussain, 2011; Elias, 2002).

Finally, company's size is an indicator of the company's overall risk. Financial ability can be reduced company's overall risk because larger firms are more exposed to public safety because of financial analysts, who are better known because financial analysts know better them(Afza and Hussain, 2011).

Another variable is effective on ethical decision making is firm leverage. Financial leverage measures the company's overall debt. This ratio reflects the company's ability to meet short-term and long-term commitments. Financial Leverage ratio is very important for creditors because it show whether are there sufficient assets to repay the debt in a bankruptcy condition? If debt and interest expense too much, possibility of corporate bankruptcy increased (Al-Qaisi, 2010).

As much as the company's return and revenue be more predictable, the amount of the debt more acceptable. Companies that have stable earnings and profits generally have high debt ratio; In contrast, firms with volatile earnings and revenues should be have less debt (Nguyen and Neelakantan, 2006; Al-Qaisi, 2010).

One of the basic hypotheses of this paper is that the company size impact of Ethical decision making of accountants and financial managers.Empirical studies find a positive relationship between firm size and leverage. large size firms tend to have high leverage maybe because they are transparent; have more diversified; lower asset volatility; naturally sell large enough debt issues so that the fixed costs of public borrowing are not deterrent; have lower probability of default and less financial distress costs and expenditure.

Thus, on the one hand, business focused to maximize profits; which leads to accountants filled in an environment with conflict and pushes the lead to immoral consequences for them; On the other hand globalization attention to the accounting profession has increased to providing quality information. These issues led to the evaluation of the effect of firm size and leverage on the ethical decision making of accountants and financial managers (Elias, 2002).

2. Review of Literature

Afza and Hussain (2011) explain that debt is considered as a way to highlight investors' trust in the firm. If a firm issues debt, it provides a signal to the outside that the firm is expecting positive cash flows in the future. Thus, the higher level of debt indicate the confidence of the managers in future cash flows but another impact of the signaling factor is the problem of under -pricing of equity. If a firm issues equity security instead of debt security for financing its new projects, investors will interpret the signal negatively and vice versa.

Myers (1977) states that agency costs of debt may cause firms to take riskier investment after the issuance of debt security to expropriate wealth from the firm's bondholders because the firm's equity is effectively a stock price.

Biger et al. (2008) and Gill et al. (2009) explain that collateralized assets, non-debt tax shield, corporate profitability, firm size, and growth opportunities influence capital structure choices of the firm. The findings of previous authors on financial leverage (also called leverage) are as follows:

Roden and Lewellen (1995) collected a sample of US firms from 1982 through 1991 and found a positive relationship between profitability and leverage.

Majumdar and Chhibber (1999) collected data from Indian firms and found a negative relationship between corporate profitability and leverage; but individual ethics has a positive effect on profitability

Nguyen and Neelakantan. (2006) used data collected by International Finance Corporation (IFC) from 1981 to 1991 and analyzed capital structure choices of the firm in 10 developing countries. Authors fined a negative relationship between firm's profitability and financial leverage; but ethics has a positive effect on profitability.

Al-Qaisi (2010) took data from United Arab Emirates (UAE) and found a negative relationship between profitability and leverage, and a positive relationship between leverage and firm size.

Several papers too state a positive relationship between firm sizes and leverage (e.g. Rajan and Zingales, 1995), among others. The explanation offered is that information asymmetries are smaller for large firms so that the latter have easier access to the market of debt finance. Hence, at least when compared to internally generated funds, issuance costs of debt financing decrease, so that this mode of financing becomes more attractive. Thus one could discuss that the Pecking Order theory would predict a positive relationship between firm size and leverage. However Titman and Wessels (1988) find that both the cost of issuing debt and equity securities is related to firm size.

Small firms may be more leveraged than large companies, as issuing equity is relatively much more costly for small firms as compared to the costs for large ones,. Furthermore to reduce issuance costs, small firms may prefer to borrow short term rather than issue long term debt. Therefore, if there are important differences in the way firm size impacts on the issuance costs of alternative sources of financing, a negative relationship between firm size and leverage may also materialize within the Pecking Order logic. From the orientation of the Trade-Off theory one would expect that, as large companies tend to be more diversified and less capacity to bankruptcy, the latter firms would opt for more debt in their firm capital structure (Al-Qaisi, 2010).

As more information is accessible for large firms, there is also less need for quality signaling through high debt levels by those companies (Elias, 2002).

Furthermore, in view of the availability of more information, the agency theory perspective would also forecast less need for debt as a disciplining device. Hence signaling and agency perspectives would forecast a negative relationship between firm size and leverage. Overall, preceding argue indicates that finance theory is not unambiguous about its prediction of the impact of size on firm leverage.

Rajan and Zingales (1995) find a positive relationship for the US, UK, Japan and Canada companies. For France they state no effect while the impact for Germany is negative. Other authors like Titman and Wessels (1988) state no relationship for the US. For Deloof and Verschueren (1998) indicate a positive relationship between firm size and leverage, but when looking separately at short term debt, this study does not find a relationship with firm size.

The size of a firm is an important factor in explaining the ethic basis. A firm's commitment to a particular ethical behavior as well as the accessible instrument to implement this commitment is expected to be sensible to the size of a firm. Larger firms tend to be more visible and receive more stakeholder scrutiny, which influences their identity (Fombrun, 2004).

Richardson (2008) has a study titled " Due process and standard setting: an analysis of due process ". In his study, they were used structural equation model for data analysis method based on partial least squares method. The results have shown an ethical perspective of financial managers is effective on the quality of financial reporting, so that this variable is explained 18% of the variation.

Conroy et al. (2010) argues that ethical theories are not sufficient and complete guidance for the accounting professions are faced with different ethical situations (especially large companies); So that In the larger firms, accountants encountered more ethical challenges.

Roy study (2009) shows that managers use make of their prospective rational perception sense and sometimes they make decisions that can have a legal defense, even if it is contrary to their ethical and social responsibility. Managers understand the social and ethical implications of current decisions, but they believe the company's current law requires them to perform complex actions that maximize firm value for the stakeholders. Furthermore, their results show that even higher ethical training of managers and accountants have little effect on most decisions. They make decisions based on law firms are not individual ethics.

Shawver & Sennetti (2009) was prepared questionnaire with composition of stakeholder management theory and theory of planned behavior and distributed among 302 financial managers. The results showed that financial managers tend to adopt strategic decisions in the company to act in accordance with ethical laws.

Jin seok et al. (2013) in their study sought to examine the effect of corporate ethics on the company's financial performance. They were used Intermediate variables in their study of collective organizational commitment and organizational citizenship behavior. First the researchers evaluated the effect of corporate ethics on mediator variables and then the resulting impacts on financial performance were tested using structural equations. The results indicate that corporate ethics through an intermediary variable of collective organizational commitment and organizational citizenship behavior has a significant effect on the financial performance of the company and the higher level of corporate ethics is enhanced corporate financial performance.

They also explains the increase in financial leverage due to the pressure of debt contracts reduce the chance of opportunistic behavior by managers and the other hand, they will be more cautious.

They argue that despite the high level of financial leverage, High level of free cash flow may encourage managers to be unethical behavior.

In summary, the literature review indicates that, firm size, and financial leverage of the firm associated together and this tow variables influence on individual and corporation ethics.

The purpose of this study was to evaluate the effect of size and leverage firm on the individual and company's ethics.

3. Research Methodology

This study is an empirical study and given that historical information and a questionnaire were used to test the hypothesized justify a quasi-experimental studies class.

3.1. The hypothesis of the study

This paper evaluates the effect of financial leverage and firm size on ethical decision making of accountants and financial managers; and try to answer a scientific question as follows: does Financial leverage and firm size affect the ethical decisions accountants and financial managers?

In order to answer the question based on the description given above, the following hypothesis is formulated.

According to the literature, some studies have indicated that increasing the size of the companies shows strong management occurred in all aspects of individual and corporate. It is expected that increasing the size of the company, the level of accounting ethical Increase (individual and corporate); therefore main hypothesis of this study can be formulated as follows:

H_1: increase in firm size increases the level of ethical decision making of accountants.

Since the study area is divided into two sections: individual and corporate ethics, the above hypothesis can also be divided into two hypotheses.

It also noted that the increase in financial leverage due to the pressure of debt contracts reduce the chance of opportunistic behavior by managers and the other hand, they will be more cautious.

Thus, the second hypothesis can be formulated as follows:

H_2: increase in firm financial leverage increases the level of ethical decision making of accountants.

3.2. Statistical Population and Sample

The population in this study consists of firms listed on the IRAN Stock Exchange. Respondents to the ethics questionnaire were accountants and financial managers working in companies listed on the Stock Exchange in Iran. Accounting information has been extracted from financial statements to measure a firm's size and leverage. The main reason for choosing a sample stock exchange is availability and quality of accounting information.

According to the ethics data of this research is qualitative; to calculate sample size the following formula is suitable to be used:

$$n = \frac{Z^2{\frac{\alpha}{2}} \times p_0(1-p_0)}{\varepsilon^2} = 136$$

The minimum number of 136 questionnaires should be distributed among companies. Tow ethics questionnaires were distributed in company's 85 among the financial managers and accountants. 9 companies were not allowed to distribute the questionnaire were excluded from the sample. In total of 209 people responded to the questionnaire that number of 11 questionnaires were incomplete; at the end of the 198 questionnaires were considered for both the individual and corporate ethics.

3.3. Measurement of Variables

In this study, measurement instrument of individual ethics is the Multidimensional Ethical Scale (MES). First, the respondents evaluate three scenarios are presented based on seven moral philosophy (Justice, Relativism, Deontology, Egoism, Utilitarianism, Care & Religion).

Scenarios used in this study were involved in some previous studies (Cohen 2001; Lopez Palau 2000, 2006). Cohen may be inferred from the two studies ethical business scenarios. Tow pre-test was performed to improve these scenarios.

The three scenarios used are as follows:
1 - deliver early sales to get the reward
2 - Select one of layoff
3 - selling toys without safety testing

For corporate ethics evaluation used to the criteria developed by Hunt, Wood and Chonko. Many studies have been used this measure to measure corporate ethics (Hunt and Wood, 1989; Elias, 2004; Valentine et al., 2001; Vitell et al., 2003; Elias, 2002).

In this study, Cronbach's alpha coefficient was used to determine the reliability of the questionnaire (which is one of the most common methods, with emphasis on the internal consistency of the questionnaire). Table 1 shows the high level of reliability of the questionnaire.

Table 1 - Cronbach's alpha for each dimension

factor alpha	Variable	item
Justice	.855	2
Relativism	.865	3
Deontology	.791	2
Egoism	.740	3
Utilitarianism	.835	3
Care	.771	3
Religion	.812	2
Corporate ethics	.908	5

To analyze and hypotheses testing used structural equation modeling method. There are different approaches on structural equation model; one of the most useful methodology based on a variation or soft models. Partial Least Squares is an efficient way to construct predictive model; especially when the number of indicators per factor is high and there is a multiple alignment between the first alternative approach is to estimate the model.

4. Findings

PLS path modeling used to testing the research model. In PLS models evaluate two models. (External model and internal model). Internal model shows the factor loadings of the observed variables. First of all external model for testing hypotheses must be evaluated. For external model evaluation is used two measures ρ Dillon - Gold Stein (composite reliability) and average variance extracted (AVE); in the table below, along with item loadings, are summarized.

Table 2. Assessment of the reliability of the variables in the research model hypothesis

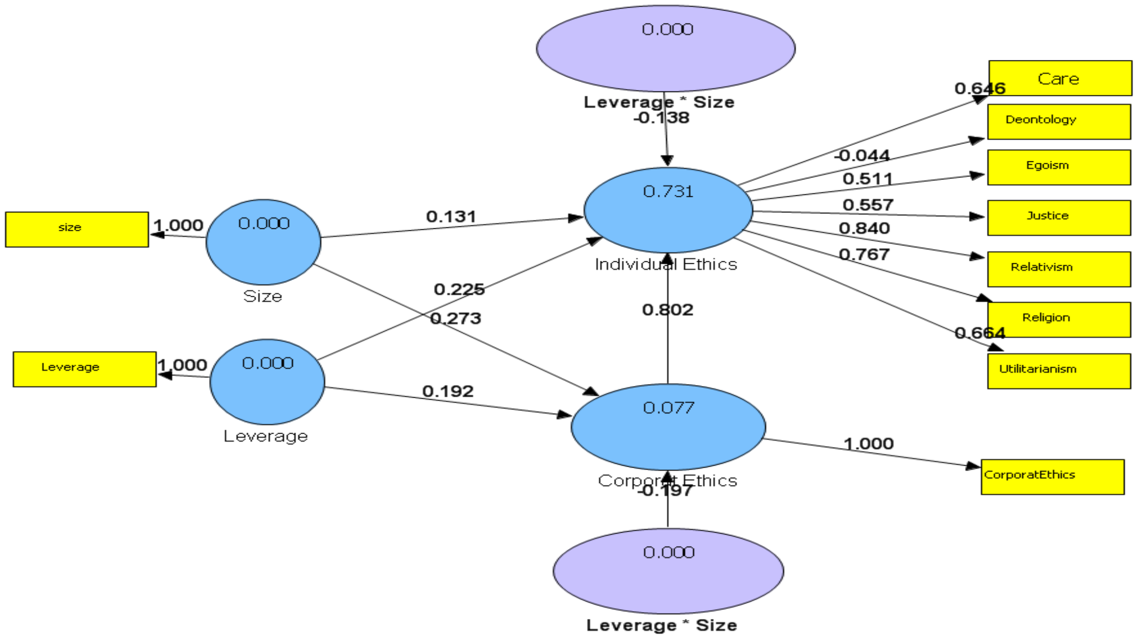
<table>
<tr><th>Main variables</th><th>variable component</th><th>Factor Loading</th><th>ρc (>0.7)</th><th>AVE (>0.5)</th></tr>
<tr><td rowspan="7">individual ethics</td><td>Care</td><td>.646</td><td rowspan="7">.809</td><td rowspan="7">.632</td></tr>
<tr><td>Deontology</td><td>.044</td></tr>
<tr><td>Egoism</td><td>.511</td></tr>
<tr><td>Justice</td><td>.557</td></tr>
<tr><td>Relativism</td><td>.840</td></tr>
<tr><td>Religion</td><td>.767</td></tr>
<tr><td>Utilitarianism</td><td>.664</td></tr>
<tr><td>corporate ethics</td><td>Corporate ethics</td><td>1.00</td><td>1.00</td><td>1.00</td></tr>
<tr><td>Firm size</td><td>Firm size</td><td>1.00</td><td>1.00</td><td>1.00</td></tr>
</table>

Financial leverage	Financial leverage	1.00	1.00	1.00

According to Table 2, the composite reliability (ρc) for measurement model more than .7; this indicates that the model complex reliability is enough.

Also, the average variance extracted (AVE) above 0.5 is stated that the item could be enough to explain the variance in this model.

Figure 1. Hypotheses test (path coefficients and factor loadings)



Factor loadings represent the correlations between variables with the agent. Factor loadings are shown in the conceptual diagram above.

Figure 2. Hypotheses test (t values in each direction)

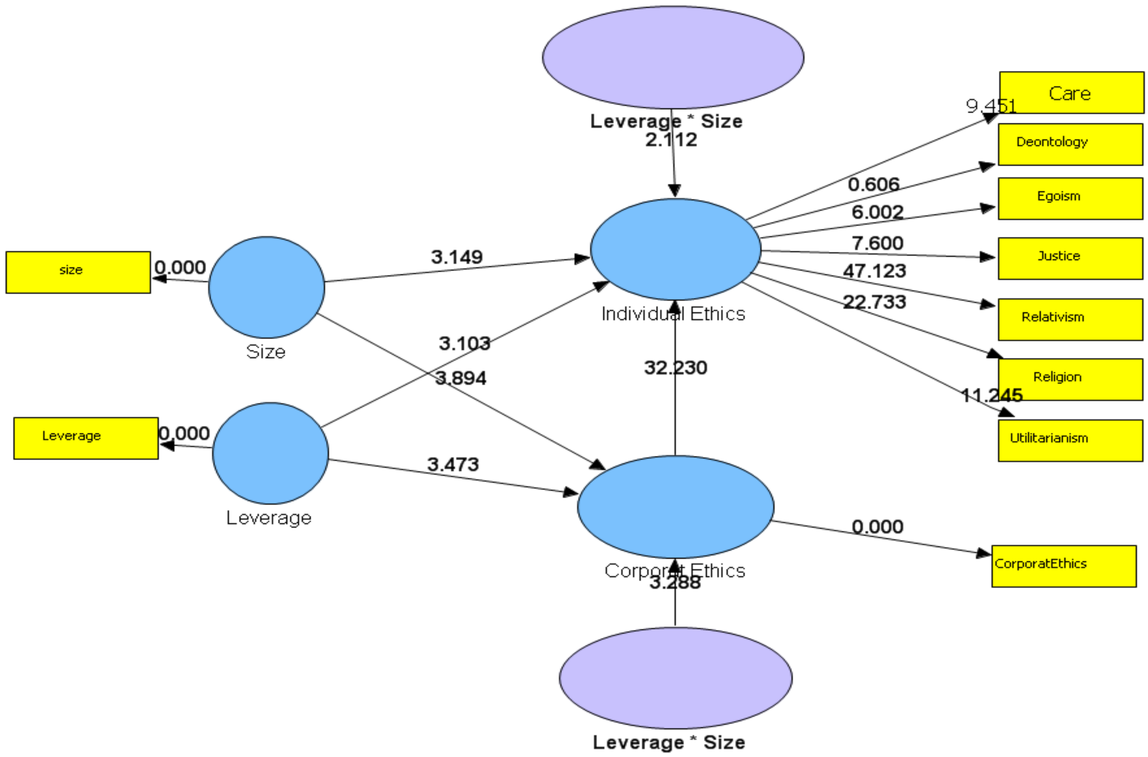


Table 4 - Results of hypothesis

Path		path coefficients	t-values	Results
Firm size	→ Individual ethics	0.131	3.149	**Confirmed**
Firm size	→ Corporate ethics	0.273	3.894	**Confirmed**
Financial leverage	→ Individual ethics	0.225	3.103	**Confirmed**
Financial leverage	→ Individual ethics	0.192	3.473	**Confirmed**
Corporate ethics	→ Individual ethics	0.802	32.230	**Confirmed**
<u>Interactive effects of variables</u>				**Confirmed**
Size* Financial leverage	→ Individual ethics	-0.138	2.112	**Confirmed**
Size* Financial leverage	→ Corporate ethics	-0.197	3.288	**Confirmed**

At this section, hypothesis test and we will consider interactive effects on the dependent variable.

- Path coefficients firm size affection on individual ethics 0.131, and since the t-statistic is greater than 1.96 (t =3.149), so the hypothesis is Confirmed. In other words, it can be stated with 95% confidence that the firm size has positive and significant effect on individual ethics. Whatever the company size increases, individual ethics increases too.
- This interpretation is also expressible for corporate ethics because t-statistic greater than 1.96 is (t =3.8949), whatever the company size increases, corporate ethics increased too.
- Financial leverage effect on corporate and individual ethics positively and since the t-statistic both of them is greater than 1.96 (t =3.149), so the hypothesis is Confirmed and that means that whatever the degree of financial leverage increases, corporate and individual ethics increased too.
- Finding show that corporate ethics has a significant positive effect on individual ethics.

Interactive effects of variables

One purpose of this study was to examine the effects of structural adjustment. These effects are in the form of new structures that are formed from the interaction of structures. Thus, in this section used interaction or moderating effects techniques.

1-Size* Financial leverage → Individual ethics

The path coefficient is negative and it is Confirmed at the 95% confidence level. This means that in parallel to reduce the size of firms (the coefficient of the interaction effect is negative) relationship between financial leverage and individual ethics (which is a positive relationship) is increased and with increasing size, this relationship decreases. In smaller firms compared with larger companies, whatever the level of financial leverage increases which increases the individual ethics but this relationship in larger firms (compared to smaller firms) are less.

Also, another analysis of this hypothesis is that parallel to the decrease in firms financial leverage (the coefficient of the interaction effect is negative) correlation between firm size and individual ethics (which is a positive relationship) is increased and this relation decreases with increasing financial leverage. In other words, firms with lower financial leverage in comparisons firms with high financial leverage, whatever the firm size increases, which increases the company's ethics but this relationship in firms with high financial leverage (compared to firms with low financial leverage), are less.

2-Size* Financial leverage → Corporate ethics

In this section also happened to corporate ethics like the previous section.

The path coefficient is negative and it is confirmed at the 95% confidence level. This means that in smaller firms compared with larger companies, whatever the level of financial leverage increases which increases the company's ethics but this relationship in larger firms (compared to smaller firms) are less. Also, another analysis of this hypothesis is that parallel to the decrease in firms financial leverage (the coefficient of the interaction effect is negative) correlation between firm size and corporate ethics (which is a positive relationship) is increased and this relation decreases with increasing financial leverage.

The R^2 value indicates that these factors are explained about 7.7% of changes in corporate ethics and about 73% of individual ethics.

5. Conclusion

In general, the two hypotheses, in parallel with the reduction in size of firms, the positive relationship between financial leverage and ethics increases in both the individual and corporate level and with increasing in firm size, this relationship is reduced. Also, in parallel with the reduction in financial leverage of firms, the positive relationship between size and ethics increases in both the individual and corporate level and with increasing in financial leverage level, this relationship is reduced.

The result shows that the ethical views are affected of the specific characteristics and information environment of each firm's. Based on the Positive Accounting Theory(PAT) and the assumption of debt contract, if the company has high financial leverage, Managers will try to increase profits through the use of certain accounting practices, according to divert the attention of the owners from the potential debt contract requirements. Because with over-stating in profits, then the capital of the company increased and consequently financial leverage decreases.

Also as PAT political cost hypothesis, larger firm's more than smaller firms are exposed to political costs. Thus, larger firms are likely to be used in ways that profit is shown below. This shows that with increasing the size of the company, the company political attentions increased and firms try to manipulate earnings figures and they reduce these political costs.

According to Roy research (2009) that state managers use make of their prospective rational perception sense and sometimes they make decisions that can have a legal defense, even if it is contrary to their ethical and social responsibility. Managers understand the social and ethical implications of current decisions, but they believe the company's current law requires them to perform complex actions that maximize firm value for the stakeholders. Furthermore, their results show that even higher ethical training of managers and accountants have little effect on most decisions. They make decisions based on law firms are not individual ethics.

Therefore recommended that a separate study, effects of different size on individual and corporate ethics in small, medium and large firm will be investigated.

Also this can be done in different countries, the effect of culture on the relationship between size and leverage on individual and corporate ethics.

References

Afza and Hussain, A. (2011). Determinants of capital structure: A case study of automobile sector of Pakistan, Interdisciplinary Journal of Contemporary Research in Business, 2(10): 219-230.

Al-Qaisi, (2010). The capital structure choice of listed firms on two stock markets and one country, The Business Review, Cambridge, 16(2): 155-160.

Biger, N.V. Nguyen and Q.X. Hoang, (2008). The determinants of capital structure: Evidence from Vietnam, International Finance Review, 8, 307-326.

Cohen, j. (2001). A Methodological on cross-cultural accounting research ethics. International journal of accounting, 31: 55-65.

Conroy Stephen J., Emerson Tisha L. N., Pons Frank (2010). Ethical Attitudes of Accounting Practitioners: Are Rank and Ethical Attitudes Related? Journal of Business Ethics, 91:183–194.

Deloof, M. and Verschueren, I., (1998). De determinanten van de kapitaalstructuur van Belgische ondernemingen, Tijdschrift voor Economie en Management 42, 2, 165-188.

Elias. R. Z. (2004). The Effect of Corporate Ethical Values On perceptions of earnings management. Managerial Auditing Journal 19(1): 84-98.

Elias R. Z. (2002). Determinants of earnings management ethics among accountants. Journal of Business Ethics 40: 33-45.

Hunt, S. D., Wood, V. R., Chonko, L. B. (1989). Corporate ethical values and organizational commitment in marketing. Journal of Marketing 53: 79-90.

Fombrun, C. J., C. Foss (2004). Business ethics: Corporate Responses to Scandal, Corporate Reputation Review, 7(3): 284-288.

Gill, N. Biger, C. Pai, and S. Bhutani, (2009). The determinants of capital structure in the service industry: evidence from United States. The Open Business journal, 2, 48-53.

Majumdar and Chhibber, P. (1999). Capital structure and performance: evidence from a transition economy on an aspect of corporate governance, Public Choice, 98(3-4): 287-305.

Myers, (1977). Determinants of corporate borrowing. Journal of Financial Economies, 9, 147-76.

Nguyen and Neelakantan, R. (2006). Capital Structure in Small and Medium-sized Enterprises: The Case of Vietnam. ASEAN Economic Bulletin, 23(2): 192-211.

Palau, S. L. (2000). Research Design issue in Earning management studies and ethics", Journal of Accounting and public policy, 19: 313-345.

Palau, S. L. (2006). Culture effects in the ethical decision-making process of Latin American Accountants. Unpublished doctoral dissertation, University of Texas.

Rajan, R. G. and Zingales, L. (1995). What do We Know about Capital Structure? Some Evidence from International Data, Journal of Finance 50, 1421-1460.

Richardson, A. (2008). Due process and standard setting: an analysis of due process. Journal of Business Ethics, 81, 679-696.

Roden and Lewellen, W. G. (1995). corporate capital structure decisions: evidence from leveraged buyouts. Financial Management, 24(2): 76-87.

Roy, C. (2009). The Impact of Moral Intensity and Ethical Climate on the Decision-Making of Finance and Accounting Professionals. Doctoral dissertation , Wadlen University.

Shawver, T. J., & Sennetti, J. T. (2009). Measuring ethical sensitivity and evaluation. Journal of Business Ethics, 88: 663-678.

Titman, S. and Wessels, R., (1988). The Determinants of Capital Structure Choice. Journal of Finance 43, 1-19.

Valentine, S., Young, K., Bailey, L., Barhoum, N., LaBure, G. N., Isaac, P. (2001). Expressing organizational dissent: the role of ethical ideology and corporate ethicalvalues. Journal of Business Strategies. 18: 71- 89.

Vitell, S. J, Bakir, Paolillo, A., Hidalgo, J.G.P, Al- Khatib, E.R, Rawwas J, M.Y.A (2003). Ethical judgments and intentions: a multinational study of marketing professionals. Business Ethics: A European Review. 12(2): 151-71.

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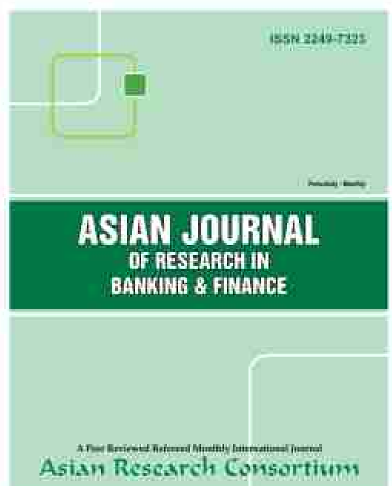

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Expectation Based Customer Oriented Marketing Mix- A Conceptual Framework

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Abstract— Marketing mix is an important concept in the marketing literature. Marketing mix helps the organizations to get favorable response from a target market by blending its elements. This paper examines the literatures relating to marketing mix and customer expectation and integrates the concept of marketing mix with customer expectation which is expected to deliver a better result from a marketing plan. The paper suggests the use of customer centric model of marketing mix by understanding the customers' needs and expectations.

Keywords—Marketing mix, expectation, customer solution, customer cost, customer communication, customer convenience

I. INTRODUCTION

Customers are the epicenter of any business because there cannot be any business without them. In fact, survival of a firm is dependent on the customers' acceptability of the offerings of a firm. Business organizations always make all possible attempts to make their customer satisfied (Bhowal & Paul, 2013). They do so by implementing a marketing mix strategy that best suits its' customers. There are large numbers of mix models but the unique aspect of all the models is getting the desired response from the target market. Majority of these models are seller centric and have not given due attention to the customer centric view. 4C model developed by Lauterborn (1990) have given adequate attention to the customer centric marketing mix. To get a desired response from the market, it is essential to meet customers' expectations. Expectation is an important determinant of satisfaction. Satisfaction comes from meeting or exceeding the expectation of the customers and mismatch between the two leads to dissatisfaction (Bhowal & Paul, 2012; Paul T. , 2012). Therefore, there is a need to deliver offerings and services according to the expectations of the customers. This paper emphasized on the adoption of expectation based customer centric marketing mix model for an effective marketing strategy.

II. CONCEPT OF MARKETING MIX

Neil Bordencoined the term 'marketing mix' in 1953 (Borden, 1964). Marketing mix provides a conceptual framework that serves the principal decision making managers in configuring their offerings to suit customers' needs. It represents a collection of elements clustered together in order to simplify managerial activity(Kalyanam & McIntyre, 2002). The marketing mix tools are blended to produce the desired response in a target market (Kotler, et al., 2012). These variable scan also be used to influence a brands sale or increase the market share of a product or company (Tellis, 2006). The marketing mix elements can be adjusted according to the changing needs of the target group. Rosann, et al. (2002)stated in Management of Sales Force 'these are to be blended effectively to form a marketing program that prove want satisfying need goods and services for the company's markets'. Marketing mix used by a particular company may vary according to its resources, market conditions and changing needs of clients. Blending of these elements expected to provide a desired response in a target market.

III. MARKETING MIX MODELS

Borden's original marketing mix had a set of 12 elements namely: product planning; pricing; branding; channels of distribution; personal selling; advertising; promotions; packaging; display; servicing; physical handling; and fact finding and analysis. MaCarthy (1964) redefined Borden's 12 elements into four elements or 4Ps, namely product, price, promotion and place. A large number of researchers proposed new elements into the marketing mix. For example, Judd(1987) proposed a 5thP (people); Booms & Bitner(1980) added 3 Ps (participants, physical evidence and process); Kotler (1986) added political power and public opinion formation in the Ps concept; Baungartner (1991) provided a model of 15 Ps; Vignali & Davies (1994) suggests the addition of S namely service to the marketing mix. Sheth & Shah(2003)proposed 4A's concept stating that customers who intend to purchase should have Acceptance, Affordability, Accessibility and Awareness.

IV. CUSTOMER CENTRIC MARKETING MIX MODEL

4P model is producer centric and criticized by number of studies. Rafiq & Ahmed (1995) observed a high degree of dissatisfaction with the 4P model. 4Ps marketing mix variables have no relation to customers and that make it relatively void (Gronroos, 1994; Dixon & Blois, 1983).Lauterborn (1990)stated that for a successful marketing plan customers must be placed in the center of the marketing plan. He replaced 4Ps by 4Cs which focus on the customer centric view of marketing. The 4Cs are - Customer needs, Convenience, Cost and Communication. Paul (2012 &Rousey & Morganosky(1996)supported the 4Cs concept by stressing on the replacement of the 4Ps by Lauterborn's 4 C.

Thus, from discussion it can be inferred that marketing mix model has under gone several changes since its inception. The 4C approach, being a customer centric approach, better study and understand the customer from varies aspects.

V. 4C'S OF MARKETING MIX

The 4Cs suggested by Lauterborn (1990) are - Customer needs, Convenience, Cost and Communication. The unique feature of 4C concept is that it addresses customers' needs(Miller, et al., 2002). The following four elements were proposed in the 4C model.

- Customer Solution:

The customer solution concept is based on the fact that customers are interested in the solution of their problem in the form of need rather than the products and services offered by a company. Wolcott & Arroniz (2006)termed solution "as a customized, integrated combination of products, services and information that solves a customer's problem." Customer want solutions to problems they face in their lives. True customer focus requires marketers to begin with a customer problem, and work towards creating solutions that address these problems (Sawhney, 2004).Customer solution is a better approach it believes in offering the products as per customers' requirement. On this ground, it is said that customer solution can serve customer better by designing customer oriented solution in form of products and services.

- Customer Cost:

Customer cost represents a comprehensive approach of looking the total cost incurred by a customer for buying goods or services. The price is an essential component of cost, but not the total cost. Price represents the price fixed by a seller while customer cost includes all other associated cost in addition to the price. The cost other than price may include all those cost required for acquiring the products for actual use. In some cases such cost may be a substantial part of the total cost which should not be ignored. The traditional models have failed to recognize this fact which was considered as relevant by 4C model. Thus, price of a product shows the seller centric view while customer cost represents the buyers' centric view.

- Customer Communication

In marketing, communications consists of all the promotional elements which involve the communications between an organisation and its target audiences (Kotler & Keller, 2006).The role of marketing communications is to support the marketing plan and help the key audiences to understand the marketer's advantage over the competition (Shimp, 2000). Marketing communications can provide information to create points of difference and allow brands to stand out and help consumers appreciate their comparative advantages(Keller, 2008). The communication model adopted by an organisation should be a customer centric. The customer communication focuses on the two-sided communication and includes all those strategy that is desired by a customer form the company. All promotional activities adopted by a company for communicating with the customers need re-modeling depending on what type of promotional strategy the customers expect from the companies. Customer communication element of 4C marketing mix framework provides a comprehensive sense of promotional activities from customer view point.

- Customer convenience

The concept of customer convenience dimension of 4C marketing mix model is the reformation of place dimension of 4P marketing mix. Place concept of 4P marketing mix refers to the availability of the products to the target customer customers(Kotler, et al., 1999). Customer convenience concept is based on the paradigm of providing convenience to the customers' while buying/using the products or services. The customer convenience concept emphasizes on the fact that customers are interested in the convenience they actually require rather the place of availability of the products or services. Customer convenience element of 4C marketing mix framework has provided a comprehensive sense to place concept from customer view point.

VI. CUSTOMER EXPECTATION

Expectation is the beliefs about a product's attributes or performance at some time in the future (Rust, et al., 1999)and always is a key element of satisfaction (Oliver & Winer, 1987).A Customer forms expectations from many sources such as previous experience, word of mouth and advertising (Anderson & Sullivan, 1993). Researchers have found a diminishing effect of the gap between performance and expectations on consumer satisfaction (Mittal, et al., 1998).Meeting the expectations of customers will cement the relationships, increase customers' satisfaction and retain their business. Nazare (2012)pointed out that business firms can no longer be indifferent to their customer's need and expectation and hence business units should meet customers' expectation in order to achieve the target customers' satisfaction. Seth & Mittal (1996)stated that a firm's customer may have unjustified, unfeasible and unproductive expectation. Thus, their expectation should be shaped rather than fulfilled. Oloka(2012)stated mentioned that how customers' expectations are met or surpassed by a company's products and services measures the Customers' satisfaction.

VII. CONCLUSION

From the above discussion, it can be concluded that customers' expectation should always be given special attention along with the use of a customer centric marketing plan. Service providers do their best to make the customers satisfied but still dissatisfaction is found among customers(Bhowal & Paul, 2013). Customers deserves the products that are expected to provide solution of their needs/problems, affordable cost to satisfy their needs, proper communication required for acquiring a product and finally convenience in acquring the product. Therfore, we suggest an integrated approach of customer centric marketing mix coupled with customers' expectation which is expected to deliver better service to the customers. This study leaves scope for further research in the areas of understaning what and how expectations are created and the cognitive process involved in it.

REFERENCES

[1] Anderson, E. W. & Sullivan, M. W., 1993. The Antecedent and Consequence of customer satisfactions for Firms. Marketing Science, 12(2), pp. 125-143.

[2] Baungartner, J., 1991. Nonmarketing Professionals Need More Than 4Ps,. Marketing News, 22(July), p. 28.

[3] Bhowal, A. & Paul, T., 2012. Mental Accounting of Retail Investor and Marketing Mix- A Tango. Reflection, 1(1), pp. 39-48.

[4] Bhowal, A. & Paul, T., 2013. Gaps in Customer Solution - A case stuy of Mutual funds in India. The SAMS Journal, 7(1), pp. 33-41.

[5] Bhowal, A. & Paul, T., 2014. Mutual Fund Investors' Expectation and Experience Gap A study from the 'Customer Convinence' Dimension of 4C marketing mix. Asian Journal of Research in Marketing, 3(1), pp. 183-194.

[6] Booms, B. H. & Bitner, B. J., 1980. Marketing Strategies and Organisation Structure. In: J. Donnelly & W. R. George, eds. Marketing of Services. s.l.:American Marketing Association, pp. 47-51.

[7] Borden, N. H., 1964. The Concept of Marketing Mix. Journal of Avertising Research, Volume 2, pp. 7-12.

[8] Dixon, D. F. & Blois, K. J., 1983. Some Limitations of the 4P's as a Paraigm for Marketing, In Back to Basics, Proceeding of the Marketing Eucation Group. UK, Cranfield School of Management, Cranfield University

[9] Gronroos, C., 1994. Quo Vadis, Marketing? Toward a Relationship Marketing Paraigm. Journal of Marketing Management, 10(5), pp. 347-360.

[10] Judd, V. C., 1987. Differentiate With the 5th P: People. Industrial Marketing Management, 16(4), pp. 241-247.

[11] Kalyanam, K. & McIntyre, S., 2002. The E-Marketing Mix: a Contribution of the E-Tailing Wars. Academy of Marketing Science Journal , 30(4), pp. 487-499.

[12] Keller, K. L., 2008. Strategic Brand Management. 12th ed. Upper Saddle River, New Jersey: Prentice Hall.

[13] Kotler, P., 1986. Principles of Marketing. 3rd ed. New Jersy: Prentice Hall

[14] Kotler, P. & Armstrong, G., 1996. Principles of Marketing. 7th ed. Upper Saddle River, New Jersey: Prentice-Hall.

[15] Kotler, P., Armstrong, G., Sunders, J. & Wrong, V., 1999. Principles of Marketing. 2nd European Edition ed. Upper Sadle River, NJ: Prentice Hall Inc.

[16] Kotler, P. & Keller, K. L., 2006. Marketing Management. 12th ed. Upper Saddle River, NJ: Prentice-Hall

[17] Kotler, P., Keller, K. L., Koshy, A. & Jha, M., 2012. Marketing Management A south Asian Perspective. 13th ed. New Delhi: Pearson Publications.

[18] Lauterborn, B., 1990. New Marketing Litany: Four Ps Passe: C- Wors Take Over. Avertising Age, 61(41), p. 26.

[19] MaCarthy, E. J., 1964. Basic Marketing, IL. Irwin: Richard.

[20] Miller, D., Hope, Q., Eisentat, R. & Gilbraith, J., 2002. The problem of solutions: Balancing

clients and capabilities. Business Horizons, Volume 2, pp. 3-12.

[21] Mittal, V., Ross, W. T. & Baldasare, P. M., 1998. The Asymmetric Impact of Negative and Positive Attribute-Level Performance on Overall Satisfaction and Repurchase Intentions. Journal of Marketing, Volume 62(January), pp. 33-47

[22] Nazare, M., 2012. Prioritizing the Effective Factors of Customer's Satisfaction. International Journal of Business and Management, 7(2), pp. 236-242.

[23] Oliver, R. L. & Winer, R. S., 1987. A Framework for the Formation and Structure of Consumer Expectations: Review and Propositions. Journal of Economic Psychology, Volume 8 (December), pp. 469-499.

[24] Oloka, M., 2012. Influence of Relationship Marketing on Performance of Commercial Banks in Keneya. Education Research Journa, 2(2), pp. 37-42.

[25] Paul, T., 2012. A Study on level of Expectation of Mutual Fund Investors and the Impact of Demographic profile on Period of Investment. International Journal of research in Commerce and Management, 3(7), pp. 136-139.

[26] Paul, T., 2012. An Assessment of Gap Between Expectation an Experience of Mutual Fun Investors. International Journal of Marketing, Financial Services an Management Research, 1(7), pp. 10-21.

[27] Paul, T., 2014. Paul, Tarak, Retail Investors Participation in Indian Mutual Fund Industry - A Matter of Concern. [Online] Available at: http://ssrn.com/abstract=2395728 [Accessed 21 2 2014].

[28] Paul, T. & Bajaj, S., 2012. A Study on level of Expectation of Mutual Fund Investors & Impact of Demographic Profile on Period of Investment in Mutual Fund. International Journal of Research in Commerce & Management, 3(7), pp. 136-139.

[29] Perreaualt, W. D. & McCarthy, J. E., 1999. Basic Marketing: A Global Managerial Approach. Boston: McGraw-Hill.

[30] Rafiq, M. & Ahmed, P. K., 1995. Using 7Ps as a Generic Marketing Mix: An Exploratory Survey of UK and European Acaemics. Marketing Intelligence & Planning, 13(9), pp. 4-15.

[31] Rosann, L. S., Stanton, W. J. & Greg, A., 2002. Rosann L Spiro, William J Stanton (2002), Greg A. Rich Management of a Sales Force. Irwin: McGraw-Hill.

[32] Rousey, S. P. & Morganosky, M. A., 1996. Retail Format Changes in US Markets. International Journal of Retail & Distribution Management, 24(3), pp. 8-16.

[33] Rust, R. T., Inman, J. J., Jia, J. & Zahorik, A., 1999. Rust, Roland T., Jeffrey J. Inman, Jianmin Jia, and Anthony Zahorik (1999), "What You Don't Know About Customer-perceived Quality: The Role of Customer Expectation Distributions. Marketing Science, 18(`), pp. 77-92.

[34] Sawhney, M., 2004. Going Beyond the Product: Defining, Designing and. [Online].

[35] Seth, J. N. & Mittal, B., 1996. A Framework for Managing Expectation. Journal of Market Focused Management, Volume 1, pp. 137-158.

[36] Sheth, J. N. & Shah, R. H., 2003. Till death o us part...but not always: Six antecedents to a customer's relational preference in buyer-seller exchanges. Industrial Marketing Management , 8(32), pp. 627-631.

[37] Shimp, A. T., 2000.. Advertising Promotion and Supplemental Aspects of Integrated Marketing Communications. Forth Worth: The Druden Press.

[38] Tellis, G. J., 2006. Modeling Marketing Mix. [Online] Available at: http://www-bcf.usc.edu/~tellis/ mix.pdf [Accessed 2011 July 12].

[39] Vignali, C. & Davies, B. J., 1994. The Marketing Mix Redefined and Mapped-Introducing the MIX MAP Model. Management Decisions, 32(8), pp. 11-16.

[40] Wolcott, R. C. & Arroniz, I., 2006. The 12 Different Ways for Companies to Innovate. The 12 Different Ways for Companies to Innovate MIT Sloan Management Review, Volume 47 (Spring), pp. 75-81.

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CUSTOMER SOLUTION – IMPORTANT FACTOR FOR IMAGE GAP ANALYSIS OF LIFE INSURANCE SERVICES IN JORHAT

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ABSTRACT

Product is an important part of every industry; Life Insurance industry is not an exception to it. Daily new developments are going on with respect to Product. Industry is very dependent with a term called 'marketing' and 'sales' that spearheading the company. Besides the main things before, there are several factors that are influential in this industry. This is actually a concrete step for industry to spread its wings. Today the biggest challenge the Life Insurance companies are facing is the competition in all aspects, so the Gap study between the Expectation and Experience is of vital importance[1]. The study is conducted based on the primary data collected from Jorhat - the districts headquarters of the district Jorhat through questionnaire. Given the Empirical Research methods and specially designed Scaling technique, the study revealed that the difference between the degree of customer Solution expected from the insurance and the degree of customer Solution experienced is statistically significant.

Keywords: Image, Gap, Insurance, Life Insurance, Customer, Customer Solution, Product.

Introduction

The Customer Solution concept was proposed by Lauterborn (1990) while developing the consumer oriented 4C framework of Marketing Mix in 1993. 4C model was an attempt to replace the earlier 4Ps of Marketing Mix; here, the focus is on customer and the current chapter is all about the first C of this model i.e. Customer Solution (Product in earlier 4P model of Marketing Mix). The Customer Solution concept is based on the fact that customers are interested in the solution of their problem in the form of need rather than the products and services offered by a company. Customer solution is a better approach it believes in offering the products as per customers' requirement. On this ground, it is said that customer solution can serve customer better by designing customer oriented solution in the form of products and services.

The Customer Solution concept of 4C model has replaced the Product concept of 4P of Marketing Mix[2]. Lauterborn[3] indicated that, "Business house can't develop products and then try to sell them to a mass market; it has to study consumer wants and needs and then attract consumers one by one with something each one wants". Johanson et.al, (2003) indicated Solution as "a combination of products and services that creates value beyond the sum of its parts, it is the level of customization and integration that sets solutions above products or services or bundles of products and services."

[1] Bhowal & Bihani (2013) "Image of Life Insurance Services – An Expectation-Experience Gap Analysis", Asia Pacific Journal of Marketing and Management Review ISSN 2319 2836, online available at www.indianresearchjournal.com Volume 2 issue 4 April. 2013
[2] Goi, (2009): A review of Marketing Mix: 4Ps or More?, Vol.1 , No. 1, May 2009, http://www.ccsenet.org/journal/index.php/ijms/article/viewFile/97/1552%3Forigin%3Dpublication_detail retrieved on 11/8/2014
[3] Don E. Schullz, Stanley I. Tannenbaum, Robert F. Lauterborn (1993), "Integrated Marketing Communications," NTC Business Books, a division of NTC Publishing Group.

The Customer Solution concept considers customer's as the center of all strategic decisions. The unique feature of this concept is that it is based on customer's needs [Miller et. al, (2002); Moller, (2006)]. Schullz et. al. (1993) and Galbraith (2002) suggested that all business firms must shift their focus from traditional selling view to what a customer want to buy or Buyer view. All purchasing decisions starts with a customer's problem (Sawhey, 2006); hence there is a call of time to develop such solutions or products which helps to reduce the problems of customers. Several studies have pointed Customer Solution as more customer centric than Product concept of Marketing Mix (Jobber, 2001; Galbraith, 2002; Moller, 2006; Sawhney, 2006; Goi, 2009) and also these studies has criticized traditional Marketing Mix – 4Ps as Product Oriented, and, not Customer centric.

Narain (2009) argues that insurers may have to adopt the high pain, high gain opportunity to unlock the potential of the huge low-income consumer segment that has the exposure to risk, but also has low purchasing power. According to Narain, "*The answer lied in innovations in both products and business systems to deliver on price and make a profit".* Jose et. al, (2015) are of the view that the Life insurance industry in India saw a surge in premium income with the opening up of the industry for private players in 2001. The growth in premium was mainly fuelled by a new class of product to the Indian Insurance industry, called the Unit Linked Insurance (ULIP). With rapid growth in the stock markets, the ULIPs started delivering above market returns during the year 2004-06 the average market return was around 8%, but ULIP has delivered around 14 to 16% return. ULIPs became the poster boy of the Insurance Industry with features like, short tenure, liquidity, transparency, flexibility early surrenders and dream returns. The products soon became the favorite of Insurance advisors and were increasingly sold to customers, who did not understand the risk return profile of the product. As share markets surged further during the period of 2005-07 to all-time highs, the ULIPs were mis-sold by promising untenable returns. With major stock market crashes in India in the years 2008 & 2009, the products could not deliver the perceived returns of the customers. Customer Expectations on product performance, formed due to lack of sufficient knowledge of the product features, begun to shatter. Consequently, the Image of Life Insurance got unfavorable stigma.

Insurance industry is well known for complex product, and that's the reason the players of the industry are more vibrant towards developing new customer friendly, easy to understand and simple products. The Insurance sector has witnessed a significant growth ever since its liberalization in the year 2000. Even while the Insurance penetration has increased to 3.9%, the number of policies has gone to over 43 crores in this period (IRDA Journal Feb; 2015)[4].

Objective of the study:

The objective of study is to ascertain the gap between the "Degree of Customer Solution Dimension Expected" and the "Degree of Customer Solution Dimension Experienced" of 4C based Marketing Mix with respect to Life Insurance in Jorhat.

Hypotheses of the Study:

H01- There is no significant difference between the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced' of Marketing Mix with respect to Life Insurance in Jorhat.

HA1- There is significant difference between the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced' of Marketing Mix with respect to Life Insurance in Jorhat.

[4] T S VIJAYAN, Editor, IRDA Journal; Volume XIII, No. 2, February, 2015

Gap Analysis between the degree of Customer Solution Dimension Expected and the degree of Customer Solution Dimension Experienced

For the purpose of gap analysis the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced' were measured. The analysis and interpretation are discussed in the following sections:

a) Description of items for measuring Gap Analysis on Customer Solution Dimension:

A list of items was identified to measure the 'degree of Customer Solution Dimension Expected' and the 'degree of Customer Solution Dimension Experienced'.

Table No. 1 Items used for questionnaire

Item. No.	*Description*
1	I have knowledge about the investment in life insurance products
2	The Information handouts for the life insurance Products are easily available
3	Awareness of complex rules and regulations of Life Insurance
4	Easy to enter into an insurance contract for life coverage by Downloading Application form
5	The Online submission of proposal form facility is very good
6	The Status checking of Application form online is very easy
7	The KYC (Know Your Customer) documents guidelines are readily available
8	Information required for issuance of the policy are readily available for submission to LIC
9	Understanding about the complex rules and regulation of Life Insurance investment
10	Awareness about the various tax benefits offered by my Life Insurance Policy
11	I faced problems when I sign the form in vernacular language
12	Understanding the form which was being used for buying the policy
13	Awareness of the 15 days free look period
14	Understanding about how to select a Life Insurance company for investment in life insurance
15	Nil or Low maturity for surviving beyond the term period is the main disadvantage of Term plan
16	The restriction regarding age at entry point is the biggest bar for Term Plan
17	Steady Maturity Value of Endowment Plans
18	Assured maturity value of Endowment Plans
19	Understanding about how to calculate the maturity value from the investment of Endowment Plans
20	Understanding about how to calculate the return from the investment of Endowment Plans
21	The Form of Endowment Plan is easy to understand
22	Endowment plan can easily assigned to other as collateral security for loan
23	The maximum possible period of coverage of life under Endowment Life Insurance Plans is its advantages
24	The Whole Life type of Endowment Plans are the most popular plans amongst the types of Endowment Plans
25	The short payment type of Endowment Plans in Life Insurance is popular.

Item. No.	Description
26	The Money Back type of Endowment Plan in Life Insurance is of my likings.
27	Guarantee of return of the invested sum in respect of ULIP.
28	The Maturity Value which depends on the NAVs (Net Assets Value) are not certain in respect of ULIP.
29	Guarantee of Maturity Value in respect of ULIP.
30	Uncertainty about the return of the invested sum in respect of ULIP.
31	Time required to track and daily monitoring of NAV in respect of ULIP.
32	Knowledge of how to utilize NAV related market information for investment decision making in respect of ULIP.
33	Knowledge of how to select a fund for investment in respect of ULIP.
34	Knowledge of how to monitor the financial and non financial performance of the fund in respect of ULIP.
35	Understanding the selling price fixation mechanism in respect of ULIP.
36	Confidence about the appropriate selling-time in respect of ULIP.
37	Confidence about the appropriate selling price in respect of ULIP.
38	I have seen suffering losses by others in ULIP rather than amassing money
39	It is very easy to compare insurance plan online
40	Complexity in rules & regulations in claim settlement
41	Difficulty in claim settlement
42	Unnecessary delay in claim settlement
43	Dispute with the amount of the claim
44	My investment needs fulfilled by LI Products
45	I am aware of and can distinguish the types of the Term Plans

b) Reliability statistics of Expectation and Experience on Customer Solution Dimension:

Reliability denotes the consistency and stability of an instrument. Cronbach's Alpha test was used to measure the reliability of the scales used for measuring the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced'. The test (Cronbach's Alpha) was calculated using SPSS 20.0 and the results are shown below in Table No. 2. The Cronbach's Alpha coefficient values with respect to all the 45 items (as mentioned in Table No. 2) relating the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced' were found to be above 0.70 (Table No. 2). Therefore, the scales used in this study to measure the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced' were considered as reliably and internally consistent (Nunnaly, 1978; Zikmund, 2008).

Table 2: Reliability Statistics of Customer Solution Dimension Expected and Experienced

District Headquarter		Jorhat	Decision
Cronbach's Alpha	Degree of Customer Solution Dimension Expected	.857	Acceptable
	Degree of Customer Solution Dimension Experienced	.769	Acceptable

Source: Compiled from survey data (Using SPSS 20.0) N= 45.

Further, the descriptive scale statistics in estimating the Cronbach's Alpha on the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced' denotes the mean value, Variance and Standard Deviation as shown in Table No. 3.

Given the Descriptive Statistics of Mean, it may be observed that the sampled population had expected overall (-12.63) Negative Image of Life Insurance from the perspective of Customer Solution. Similarly, the sampled population had overall Negative Image too of Life Insurance from the perspective of Customer Solution (- 9.05). But interestingly the perception of Negative Image is less in Experience than that of the Expectations.

Table 3: Overall Scale statistics of Customer Solution Dimension Expected and Experienced

District Headquarter		Jorhat
a		b
Degree of Customer Solution Dimension Expected	Mean	-12.7240
	Variance	418.639
	Std. Deviation	20.46067
Degree of Customer Solution Dimension Experienced	Mean	-9.7109
	Variance	286.843
	Std. Deviation	16.93644

Source: Compiled from survey data (Using SPSS 20.0) N= 45.

c) Instrument Validity of Expectation and Experience on Customer Solution Dimension

Validity is the measure of the accuracy of an instrument used in a study. For the purpose of study 45 items in relation to the Customer Solution dimension of 4C based Marketing Mix were developed (as described in Table No. 1).

Normality Test of data of Expectation and Experience Customer Solution Dimension

One Sample KS test was used to test the Normality of Distribution of the data relating to the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced'. The results of one sample KS test are shown in Table 4. The test revealed that the data distribution does not support the Normality of sample distribution.

Table 4: One Sample KS Test of Customer Solution Dimension Expected and Experienced

			Total of Customer Solution Expected	Total of Customer Solution Experienced
N			384	384
Normal Parameters[a,b]	Mean		-12.72	-9.71
	Std. Deviation		20.46	16.94
Most Extreme Differences	Absolute		0.08	0.08
	Positive		0.08	0.08
	Negative		-0.05	-0.07
Kolmogorov-Smirnov Z			1.59	1.55

Asymp. Sig. (2-tailed)			0.01	0.02
Monte Carlo Sig. (2-tailed)	Sig.		.010[c]	.014[c]
	99% Confidence Interval	Lower Bound	0.01	0.01
		Upper Bound	0.01	0.02

Computation of Test Statistics and Decision with respect to Customer Solution Dimension

Since the data in consideration do not follow normal distribution, Wilcoxon Sign-rank Test was applied to test the hypothesis considered in this Chapter – "There is no significant difference between the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced' of Marketing Mix with respect to Life Insurance in Jorhat".

Wilcoxon Signed-rank test revealed that the null hypothesis i.e., "There is no significant difference between the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced' of Marketing Mix with respect to Life Insurance in Jorhat" is rejected (This is discernable from the Table No. 5), Stating differently there is a significant difference in the population between the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced'.

Given the methodology, it may be concluded that Unfavorable Customer-Solution-Driven Image Gap exists in Life Insurance Service. And, it calls for better Customer Solution Management.

Table No. 5: Wilcoxon Signed Rank Test

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of differences between Total of Customer Solution EXPECTED and Total of Customer Solution Experienced equals 0.	Related-Samples Wilcoxon Signed Rank Test	.036	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Source: Compiled from survey data using SPSS 20.0

Conclusion

Given the Objectives, Hypothesis, and Methodology considered in this Chapter, It may concluded that there is significant difference between the 'Degree of Customer Solution Expected' and the 'Degree of Customer Solution Experienced' with respect to Life Insurance from the perspective of 4C based Marketing Mix. The area wise analysis also revealed similar results with respect to the each of the area considered in the study. In addition, Wilcoxon Signed-rank test revealed that the null hypothesis i.e., "There is no significant difference between the 'Degree of Customer Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced' of Marketing Mix with respect to Life Insurance in Jorhat" is rejected. Stating differently there is a significant difference in the population between the 'Degree of Customer

Solution Dimension Expected' and the 'Degree of Customer Solution Dimension Experienced'. The findings of the current chapter suggest that the Customer focused products development, the Customer Solution (Product) must be developed as a solution to the customer's need, i.e. the Actuary must develop the Product based on the Gaps (Positive/ Neutral/ Negative) of investors.

References:

- Allen, R Derek and Tanniru R. Rao, (2010), "Analysis of Customer Satisfaction Data", New Age Publications, New Delhi.
- Ansari, H. (2006), "Insurance Reforms", IRDA Journal,Vol.IV,No.3, published by C.S.Rao on behalf of Insurance Regulatory and Development Authority.
- Bajpai G.N. (2005) "Insurance Industry India's Quest for cover", The Journal of Insurance Institute of India,Vol.No.XXXII, July- December, S.J.Gidwani Publication.
- Banerjee, T.K (2004) "Insurance Regulations in India and Future Directions", The Journal of Insurance Institute of India, Vol. No.XXX, July- December, S.J.Gidwani Publication.
- Babakus, E. and Mangold, W.G. (1989), "Adapting the SERVQUAL scale to hospital services: an empirical investigation", *Health Service Research*, Vol. 26 No. 6, pp. 767-80.
- Babakus, E., Pedrick, D.L. and Inhofe, M. (1993), "Empirical examination of a direct measure of perceived service quality using SERVQUAL items", unpublished manuscript, Memphis State University.
- Bolton, R.N. and Drew, J.H. (1991), "A Longitudinal analysis of the impact of service changes on customer attitudes", *Journal of Marketing*, Vol. 55 No. 1, pp. 1-9.
- Bouman, M. and Van Der Wiele, T. (1992), "Measuring service quality in the car service industry: building and testing an instrument", *International Journal of Service Industry Management*, Vol. 3 No. 4, pp. 4-16.
- Bhat, Ramesh (2005), "Insurance Industry in India: Structure, Performance, and Future Challenges", Insurance Industry in India, Vikalpa, Volume 30 , No 3, July – September 2005.
- Chopra, P.N(2009), "Managerial Economics", Kalyani Publishers, New Delhi.
- Das, S.C (2007), "Cost Management Practices in Non-Life Insurance Companies: A Comparative Study", www.insurance.com, dated 04-09-2007,January-June 2007.
- Dhanam(2008), "Insurance", Business Magazine, June, Reg.no. KL/EKM/ 032/2006-08 RN 44620/87.
- Economic and Political Weekly (1971), "General Insurance Room for More Efficiency — and Honesty", 15 May 1971, Vol.VI, No.20.
- Economic and Political Weekly (1994), "Letters to Editor- Privatisation of Insurance Industry", 9 July1994,Vol.XXIX,No.28.
- "Financial Sector" (2009), www.Ministry of Finance, Government of India.com dated 14-05-2009.
- Gronroos, C. (1984), "A service quality model and its implications", *European Journal of Marketing*, Vol 18, No 4, pp 36-44.
- Goswami, Paromita (2007), "Customer satisfaction with service quality in the life insurance industry in India", *ICFAI Journal of Services Marketing*, Vol. 5 No. 1, pp. 25-30.
- Lautherborn, B. (1990). New Marketing: 4ps passes: C takes over. Advertising Age, 61(41), 26.
- Oliver, R.L. (1993), A conceptual model of service quality and service satisfaction: compatible goals, different concepts, in Swartz,
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multiple item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 12-37.