

JIM QUEST

Journal of Management and Technology

A Bi-annual Referred Research Journal of Jaipuria Institute of Management, Vasundhara, Ghaziabad

An Empirical Analysis of the Relationship between Characteristics and Corporate Social Disclosures in the Indian Banking Sector

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Jaipuria Institute of Management
Vasundhara, Ghaziabad

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JIM QUEST

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From the Desk of the Chief Editor

It gives me great pleasure to welcome you to the latest issue of the JIM QUEST; a bi-annual referred research journal for disseminating the knowledge between academics and management practitioners regarding theories, methods and applications related with new perspectives in the field of management. The journal contains 10 outstanding research papers that disseminate knowledge in different spectrum of management. Present issue has covered diverse issues like corporate social responsibility, gender inequality, customer preference in retail and banking industry, human development and economic development and strategic HRM.

Corporate social responsibility has emerged as a major area of concern not only for the governments but also for the corporates, because of concern for climate change and societal needs impact on business. First paper by Mistry Isan attempt to examine the association between a bank's characteristics (such as profitability and size) and the extent of corporate social disclosure and motives behind them.

We are bringing out the next issue of Quest at a time when business environment in India has just started looking up. Business is expected to enjoy a stable strong policy with single party majority after more than two decades. Private banks have played a major role in the new liberalized economy and have a major role ahead as Prime Minister Modi has augmented "Jan Dhan Yojna". Second paper by Smirithi Ashokan and Sandhya Menon paper covers the performance of new private sector banks in India and to give the reasons and suggestions for the same. Third paper by Prerna Garg also deals with the private banks where the study is on the preference of customers towards nationalized and private sector banks (PNB & ICICI) in Delhi region.

Fourth paper by Nilesh Arora primarily aims at understanding the consumer purchase intentions towards the modern form of retailing and the impact that consumer's perception has on his preference for the organized retailing in the state of Rajasthan.

Women continue to enter managerial and professional jobs in increasing numbers in India yet they continue to face gender inequality at work. Next Paper by Adela Kazmi focuses on four facets of gender inequality: dysfunctional organizational culture, occupational segregation, sexual harassment, and pay differential at work. Next paper by Neetu Sharma talks about the crisis, represent a new institution to improve the design, implementation and modification of financial regulation.

Human Resource Management has now acquired a new strategic perspective in the present complex, dynamic and competitive global scenario. They are the key drivers of success in today's successful organization. Our next paper by Joshua o Miluwi presents a model and talks about strategic HRM as the driver of organizational success.

Next paper by Lamia Ben Amor and Sami Khammam studies relationship between economic growth, environment and human development which are the fundamental pillars of sustainable development. Study by Pradeep Kumar Panda discusses how micro finance impacts domestic violence in the society.

At last I take this opportunity to thank the people who made the publication of JIM QUEST possible especially the authors of papers without whose contribution the journal would not be a reality. I hope that readers will find the content of JIM QUEST informative and valuable.

Prof (Dr) Daviender Narang
Chief Editor

An Empirical Analysis of the Relationship between Characteristics and Corporate Social Disclosures in the Indian Banking Sector

Dr. Dharmendra S. Mistry*

Abstract

Conduct of social activities depends upon firms' characteristics and attributes. Financial soundness and profitability of the firms play significant role in undertaking social activities. The present study is an attempt to examine the association between a bank's characteristics (such as profitability and size) and the extent of corporate social disclosure and motives behind them. The study found that a significant positive relationship exists between the size of the selected public and private sector banks and the extent of corporate social disclosures. It is also found that a significant positive relationship exists between the return on assets and the level of corporate social disclosure of the selected public and private sector banks under the study.

Keywords: Corporate Social Disclosure, Profitability, Size.

Introduction

Society plays significant role not only in creation but also survival of the firms. It also provides continuous support to the firms. Therefore, firms have responsibility to undertake social activities and report such activities to the society so that it can judge their performance. Conduct of such activities depends upon firms' characteristics and attributes. Financial soundness and profitability of the firms play significant role in undertaking social activities. The larger the size of a firm, the more they will be willing to invest on resources and corporate environmental technologies that are environmentally friendly. Larger firms are more vulnerable to inquiry from stakeholders since they are highly visible to external groups and more vulnerable to adverse reactions from them. Similarly, profitable firms tend to disclose more social issues as compared to less profitable ones and hence such firms are more likely to unveil social accountability information when their financial statements indicate favorable financial performance.

The present study is an attempt to examine the association between banks' characteristics (such as size and profitability) and the extent of corporate social disclosure and motives behind them.

With a view to accomplish the objective of the study, the frequency of disclosure of corporate social responsibility has been analyzed and then a dichotomous procedure known as the Kinder Lydenberg Domini social environmental performance rating system was used to measure the total disclosure score. The association between banks' characteristics (such as size and profitability) and the extent of corporate social disclosure has been examined.

It is hypothesized for the study that there is no significant relationship between banks' characteristics (such as size and profitability) and the level of corporate social disclosures among selected public and private sector banks in India.

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This study is organized as follows: the next section following introduction discusses the review of relevant literature. Third section throws light on methodology. The details of the results and analysis of the available data are described in fourth section and the final section presents the main findings and conclusion.

Literature Review

The study by (Abbott & Monsen, 1979) found that a significant positive relationship does exist between firms' profitability and the level of corporate social disclosure.

Outcome of the study by (Auperle et al., 1985) showed that the cost of being socially responsible forces the firm into an unfavorable financial position versus firms that are not socially responsive.

Result of the study by (Carrol, 1991) also revealed that corporate social disclosure is seen as a mechanism whereby companies disclose the social and environmental aspects of their corporate activities to their stakeholders. It is further seen as an organization's commitment to operate in an economically and environmentally sustainable manner while recognizing the interests of all its stakeholders.

The result of the study by (Ng & Koh, 1993) showed a positive relationship between auditor and voluntary disclosure.

The study by (Hackstone & Milne, 1996) revealed that the content analysis method of data analysis is the most commonly used method of measuring a firms' corporate social responsibility disclosure.

Study by (Agrawal, 1997) revealed that business scandals and fraud cases have also contributed to the increasingly importance of corporate social reporting practices.

Result of the study by (Logsdon & Yuthas, 1997) revealed that the success of any organizations' corporate social disclosure is dependent upon its corporate social orientation, values, and largely, on its ethical orientation.

Study by (Ite, 2004) divulged that business scandals have shaken public confidence in both business leaders and the economy; creating concern about business ethics and governance. In responding to these scandals and social responsibility issues, a number of studies on corporate social responsibility have been documented in developed economies; however, in developing countries the same is not true.

Outcome of the study by (Mohamed & Janggu, 2006) did not find any support of a relationship between the audit firm and disclosure relationship in Malaysia.

Result of the study by (Dutta & Bose, 2007) revealed that corporate social disclosure is seen as a mechanism whereby companies disclose the social and environmental aspects of their corporate activities to their stakeholders. It is also seen as the process of communicating information (both financial and non-financial) about the resources and social performance of the reporting entity.

Outcome of the study by (Juliette, 2007) showed that there has been a growing awareness of the impact of corporate behavior, not just on shareholders, but on other stakeholders.

Outcome of the study by (Dutta & Bose, 2008) showed a positive relationship between corporate social responsibility and company's size.

The study by (Pramanik & Shil, 2008) was based on twenty (20) content category items within four (4) testable dimensions of corporate social disclosure.

From the above review of empirical works, it is clear that different authors have approached corporate social disclosures in different ways in varying levels of analysis. These different approaches helped in the emergence of more and more literature on the subject over time. It gives an idea on extensive and diverse works on corporate social disclosures. It has been noticed that the studies on corporate social disclosures in various aspects provide divergent results relating to the study period overlap or coincide. The main reason for divergence in the results is use of different method for the measurement of corporate social disclosures. All the studies aimed to analyze the corporate social disclosures in India & abroad with number of factors. The survey of the existing literature reveals that no specific work has been carried out to examine the association between a bank's characteristics (such as profitability and size) and the extent of corporate social disclosure. and motives behind them. The present study is an attempt in this direction and therefore, aims to enrich the literature of comparative study of corporate social disclosures.

Study Methodology

Objectives of the Study

This study basically investigates whether there is a significant relationship between banks' characteristics and the level of corporate social disclosures among selected public and private sector banks in India or not:

The present study aims:

1. To examine the association between a bank's characteristics (such as profitability and size) and the extent of corporate social disclosure and

- To find the motives behind the corporate social reporting practices.

Hypothesis of the Study

With the mixed results provided by prior researches and the dearth of literature in this area, the following hypothesis is stated below in the null form:

H₁ : There is no significant relationship between banks’ size and the level of corporate social disclosures among selected public and private sector banks in India.

H₂ : There is no significant relationship between banks’ profitability and the level of corporate social disclosures among selected public and private sector banks in India.

Sample and Sampling Techniques

Looking to the objectives of the present study, there was the need to take a sample covering both the sectors and hence a sample of ten banks has been selected using convenient sampling method, stratified into public and private sector companies as under:

Public sector banks are:

- Bank of Baroda
- Indian Overseas Bank
- State Bank of India
- Syndicate Bank
- UCO Bank

Private sector banks are:

- HDFC Bank Ltd.
- ICICI Bank Ltd.
- Kotak Mahindra Bank Ltd.
- The Karur Vysya Bank Ltd.
- YES Bank

Period of the Study

The study has been undertaken for the period of one year 2013-2014.

To measure the relationship between the banks’ size and profitability and the level of corporate social disclosures among selected public and private sector banks, a linear regression model was developed as shown below in functional form:

$$----- (1)$$

Methodology

To accomplish the objective, the following steps were carried out. First, the frequency of disclosure of corporate social responsibility has been analyzed using content analysis in the selected 10 banks from public and private sectors in India disclosed in annual reports. For the purpose of the study; ten (10) content category items within two (2) testable dimensions of corporate social disclosure was developed for coding. They include: human resource and community development category. Moreover, a dichotomous procedure known as the kinder Lydenberg Domini (KLD) social environmental performance rating system was used to measure the total disclosure score. A score of one (1) was awarded if an item was reported; otherwise a score of zero (0) was awarded. Consequently, a bank could score a minimum of 0 and a maximum of twenty (10) points. The formula for calculating the total reporting score by using these 10 attributes is expressed below:

$$CSD = \frac{\sum_{i=1}^{10} D_i}{10}$$

Where, CSD = Corporate social disclosure
 D_i = 1, if the item d_i is disclosed and 0 if the item d_i is not disclosed
 I = 1, 2, 3 ----- 10

However, using accounting based measures; size of bank as an independent variable in this study was measured by the natural logarithm of banks’ total assets, while profitability as an independent variable was measured by return on assets. On the basis of literature review, predicted sign of the association between firms’ characteristics and corporate social disclosures in the Indian banking sector is shown in Table 1:

$$\text{CSD} = (b_0 + b_1\text{SIZE} + b_2\text{ROA}) \quad \text{----- (2)}$$

Where, CSD - Corporate Social Disclosure
 SIZE - Bank's size
 ROA - Return on Assets

Based on the hypotheses earlier identified in this study, findings from the correlation analysis result is presented in Table 2, clearly showing a positive association existed between the dependent variable (CSD) and the independent variables that is (SIZE and ROA). These results further provide an insight to the fact that to a very large extent, banks attributes such as size of banks and profitability do play a very significant role in or has a strong influence on the level of disclosure among the selected public and private banks in India.

Result and Analysis

Table 2: Correlations

	CSD	SIZE	ROA
CSD	1		
SIZE	0.083926	1	
ROA	0.475019	0.054478	1

Table 3: Model Summary

R	R Square	Adjusted R Square	Std Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
0.478563	0.229022	0.008743	0.819666	0.229022	1.039691	2	7	0.402389098

Predictors: (Constant), SIZE, ROA

Also, the result of coefficient of determination as reflected in Table 3 indicates that 0.22 of the variation noticed in corporate social disclosure can be explained by the independent variables. This means that about 78% of variations in corporate social disclosure (CSD) noticed among the selected banks are accounted for by other factors not captured by the model.

Similarly, the result on the Goodness of Fit test as depicted in Table 3, complements the coefficient of determination result indicates clearly that the value of the dependent variable can be explained or predicted by about 22% of the independent variables.

Table 4: ANOVA

	df	SS	MS	F	Significance F
Regression	2	1.397037	0.698518	1.039691	0.402389098
Residual	7	4.702963	0.671852		
Total	9	6.1			

Predictors: (Constant), SIZE, ROA
 Dependent Variable: CSD

However, the F-test result as presented in Table 4 indicates clearly that the model as specified explains the variations in the level of corporate social disclosures. It in essence shows

simultaneously that the independent variables altogether are associated with the dependent variable.

Table 5: Coefficients

	Coefficients	Standard Error	t Stat	P-value
Constant	7.162086	4.673658	1.532437	0.169278
SIZE	0.102063	0.582647	0.175171	0.865905
ROA	0.675021	0.475481	1.419658	0.198671

Dependent Variable: CSD

Consequently, a quick review of the of the regression analysis as depicted in Table 5 reveals that consistent with the prior expectation (predicted signs) a significant positive relationship exists between the size of banks (financial sector) and the level of corporate social disclosure and hence first null hypothesis is rejected. It is also revealed that consistent with prior expectation (predicted sign) a significant positive relationship exists between the Return on Assets (profitability) and the level of corporate social disclosure and hence second null hypothesis is also rejected.

Findings and Conclusion

The study found that a significant positive relationship exists between the size of banks and level of corporate social disclosures. It implies that the larger the size of banks, the more there will be motivation to invest on resources and environmentally friendly technologies. They are concerned with their corporate environmental reputation and image because they are more visible to external stakeholders. They are more vulnerable to inquiry from stakeholder groups because they are more vulnerable to adverse reactions from external stakeholders. It is also found that a significant positive relationship exists between the return on assets and the level of corporate social disclosure. It implies that profitable banks tend to unveil more social issues. Such banks are more likely to undertake social activities and disclose social responsibility information in their financial statements. The coefficient of determination result indicates clearly that the value of the dependent variable can be explained or predicted by about 22% of the independent variables. This means that about 78% of variations in corporate social disclosure noticed among the selected banks are accounted for by other factors not captured by the model. Hence, it can be concluded that more attributes like liquidity and solvency may be added for future research

It is suggested that the management should set up a social environmental reporting framework in order to improve the level of corporate social disclosures among the selected public and private sector banks. Findings from the study suggest that there is a positive relationship between banks' size and the level of corporate social disclosure among selected public and private sector banks in India. A similar association was also found between profitability and the level of corporate social disclosure. It is concluded that corporate social disclosure among selected public and private sector banks in India can be increased and thereby prediction or explanation of corporate social disclosure can be increased by size and profitability which depend on social and environmental goals into business plans. It will also be beneficial to the employees and the community at large.

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Analysis of Financial Performance of New Private Banks in India

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Abstract

Recently the Indian economy has witnessed the emergence of many banks in the private sector. There are several reasons behind the increasing number of commercialization of banks. The growth of such banks is not possible unless they witness some success in the context of customer satisfaction or may it be the net assets held by these banks, efficiency of their management or the networks of each bank both in private as well as the public sector bank. The following paper covers the performance of new private sector banks in India and to give the reasons and suggestions for the same.

The data is collected from Financial Statements Analysis of Financial Sector issued by Reserve bank of India. The sample size consists of new Private commercial banks of India. We used regression analysis and correlation technique in order to address the issue. Bank size and Operational Efficiency is negatively related with ROA. While, Bank size is positively related with Interest Income and Operational Efficiency is negatively related with Interest Income.

Keywords: Financial Performance, Efficiency, Banking, India.

Introduction

Financial sector is imperative for economic growth and industrialization via channeling funds, providing proficient financial system, sociable investor's treatment, and optimal utilization of resources. Banking sector in any economy is performing the major role in these regards. Banking sector plays a significant role in channeling funds to industries and contributing towards economic and financial growth and stability. A well-established banking sector can absorb major financial crisis in the economy and can provide a platform for strengthening the economic system of the country.

Though the founding of the commercial banks started with the emergence of the Bank of Calcutta later renamed the Bank of Bengal in the year 1806, thus making it the oldest commercial bank in the Indian subcontinent, but with its merger with the Bank of Madras, Imperial Bank of India which in turn became State Bank of India emerged. Pursuant to the provisions of the

State Bank of India Act, 1955, the Reserve Bank of India, acquired a controlling interest in the Imperial Bank of India thus on 1 July 1955, the Imperial Bank of India became the State Bank of India. Today State Bank of India enjoys a privilege of a position of preeminence as an agent of RBI. It is the only bank which has the largest network of 48 overseas offices spread over 28 countries. In a period of 5 years from July 1951 to 1955, State Bank of India was able to provide banking facilities to the rural areas through its across 400 branches. With the merger of 'New Bank of India' with 'Punjab National Bank' in 1993, the number of nationalized banks rose upto a level of 19 and the number of public sector banks reached 27. The number of branches of public sector banks, which was 6,669 in June 1969, increased to 41874 by March 1990 and further increased to 46,752 by March 30, 2003. The public sector banks thus occupy a predominant position in the Indian banking industry. It resulted in the creation of public sector banking with a market share of 76.87 per cent in deposits and 72.92 per cent of assets in the banking industry at the end of March 2003.

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State Bank of India is a multinational banking and financial services company in India having 20% market share in deposits and loans among Indian commercial banks. As on December 2013, its assets were valued at US\$388 billion and a total of 16,000 branches, including 190 foreign offices spread over 34 countries, which makes it the largest banking and financial services company in India by assets. SBI had 14,816 branches in India, as on 31 March 2013, out of which 9,851 (66%) are in Rural and Semi-urban areas. In the financial year 2012-13, its revenue was INR 200,560 Crores (US\$ 36.9 billion), wherein domestic operations contributed to 95.35% of revenue, also, domestic operations contributed to 88.37% of total profits.

The objective of this study is to analyze the financial data of Indian private banks for the financial periods 2005-2013. In addition, to study the relationships among measures such as bank's size, operational efficiency, asset management, return on assets, interest income, and to discuss their influence on the bank's performance.

Literature Review

Tarawneh (2006) found that the banks having high total capital, deposits, credits, or total assets does not always means that has healthier profitability performance. The operational efficiency and asset management, in adding to the bank size, positively influenced the financial performance of these banks. In the light of his empirical study he concluded that the operational efficiency and asset management, in addition to the bank size, strongly and positively influenced financial performance of the banks.

Jha and Sarangi (2011) analyzed the performance of seven public sector and private sector banks for the year 2009-10. They used three sets of ratios, operating performance ratios, financial ratios, and efficiency ratios. In all eleven ratios were used. They found that Axis Bank took the first position, followed ICICI Bank, BOI, PNB, SBI, IDBI, and HDFC, in that order.

Ahmad, (2011) in his study of the financial performance of seven Jordanian commercial banks used ROA as a measure of banks' performance and the bank size, assets management and operational efficiency as three independent variables affecting ROA. He concluded that there is a strong negative correlation between ROA and bank size and with operational efficiency, while, find positive correlation between ROA and asset management ratio.

Khizer et.al. (2011), in his study about profitability indicators of banks in Pakistan for the period of 2006-2009 find that profitability is directly and positively affected by operating efficiency, assets management ratios, and size when using ROA

as profitability indicator. The association between profitability and other indicators is different, when using ROE as profitability indicator. ROE is positively related with assets management and negative association is find with size and operating efficiency.

Pat (2009) made an assessment of the RBI's Report on "Trend and Progress of Banking' in India, 2007-08, which reported a relatively-healthy position of the Indian banking system. He noted that the various groups of banks reported improvements in net profits, return on assets and return on equity. Two basic indicators of sound banking system, namely, capital to risk weighted assets and quality of assets, also revealed considerable improvements over the years.

Research Methodology

The secondary data is collected from various journals, reports and annual reports have been collected from various websites of reserve bank of India.

Research Design: This present study is conducted by following a Descriptive Design.

Sample Size: For the in-depth analysis of the return on assets and interest income, seven new private sector banks are selected from the year 2005 to 2013.

Objectives of the study:

- a) To review the performance of the new private sector banks.
- b) To study the relationships among measures such as bank's size, operational efficiency, return on assets, interest income, and to discuss their influence on the bank's performance.

Privatisation of banking sector Until 1991-92, all Public sector banks were owned by government. After the reform was initiated, the Governments stake was permitted to be reduced to 51 per cent. The reduction in government stake in Public sector banks amounted to partial privatization of banks. There has been a tremendous improvement in the banking sector reforms by lowering pre-emotions and to strengthen the banking system through institution of capital adequacy norms, in addition to income recognition, asset classification and provisioning requirements in line with the international standards. Competition was also promoted through the entry of new private sector banks and more liberal entry of foreign banks. Public sector banks had to make lot of improvement in their work culture and in their services in order to be able to compete with the new entrants with aggressive marketing practices.

Data

Data has been collected from Financial Statement Analysis of Financial Sector 2005-2013 issued by Reserve bank of India.

Table 1: Explanation of Variables

Type	Variable	Proxy	Sign
Dependant	Return on Assets	Net Income /Total Assets	ROA
Dependant	Interest income	Interest received – Interest Paid	IN
Independent	Size	Total Assets	BS
Independent	Operational Efficiency	Operating expenses / Interest Income	OE

Results and Discussion

Descriptive Statistics

Table 2: New private sector banks

	ROA	IN	BS	OE
Mean	0.062399737	624391.5509	8455582.577	2.356130189
Standard Error	0.008788923	118634.3607	1381261.065	0.190486436
Median	0.062555948	623089.742	7954641.803	2.19977565
Standard Deviation	0.026366769	355903.082	4143783.195	0.571459307
Sample Variance	0.000695207	126667003807.67	17170939170373.70	0.32656574
Kurtosis	-1.026040705	-0.148661664	-0.629745886	2.95819029
Skewness	0.075531124	0.551812273	0.406011709	1.642721763
Range	0.078080659	1102434.299	12601657.9	1.860893472
Minimum	0.022346946	163154.391	2849046.007	1.787376626
Maximum	0.100427605	1265588.69	15450703.9	3.648270098
Sum	0.561597633	5619523.958	76100243.19	21.2051717
Count	9	9	9	9

The mean value of ROA is 0.062399737; this shows that percentage of ROA is 6 % which is very low while the standard deviation is 0.026366769. The mean value of Interest income (IN) is 62.43915, this shows that percentage is more than 100 which indicate the very high value of Interest income while the standard deviation is 35.59030. Bank size (BS) measured as Ln

(explain) of total assets registered a very high mean of 84.555825 while standard deviation is also high 1.167736. The mean of Operational Efficiency (OE) is 2.356130189 and its standard deviation is 0.571459307.

Correlation Analysis

Table 3: New private sector banks

	ROA	IN	BS	OE
ROA	1	0.934396	0.968891	-0.84197
IN	0.934396	1	0.989734	-0.84383
BS	0.968891	0.989734	1	-0.84325
OE	-0.84197	-0.84383	-0.84325	1

The value of correlation between ROA and Bank size (BS) 0.968891. The result of correlations indicates a very strong correlation between dependent variable (ROA) and independent variable (BS), which is 96.8 percent. It is also clear from correlation test there is a strong correlation between dependent variable (ROA) and Business Size (BS) which is 96%. While the relationship between dependent variable (ROA) and

independent variable is -84 percent which shows high negative correlation. This result of correlation between Interest Income (IN) dependent variable and Bank size (BS) shows a strong positive correlation, which is 98%. The test indicates the negative correlation between dependent variable Interest Income (IN) and independent variable Operational Efficiency (OE) that is - 84%.

Results of Regression Analysis (Dependant Variable ROA)

Regression Statistics	
Multiple R	0.97000277
R Square	0.940905373
Adjusted R Square	0.921207165
Standard Error	0.007401168
Observations	9

ANOVA									
	df	SS	MS	F	Significance F				
Regression	2	0.005232988	0.002616494	47.76603701	0.000206369				
Residual	6	0.000328664	5.47773E-05						
Total	8	0.005561652							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
Intercept	0.02357818	0.029049706	0.811649518	0.447986865	-0.04750389	0.09466025	-0.04750389	0.09466025	
BS	5.70162	1.17481E-09	4.853237994	0.002842289	2.82697	8.57627	2.82697	8.57627	
OE	-0.0039849	0.008518796	-0.46777737	0.656451584	-0.02482964	0.016859843	-0.02482964	0.016859843	

Bank Size

Bank size shows positive relationship with ROA with a coefficient of 5.70162. This result indicates that with a 1 percent increase in the firm's bank size, there is 5.70162 Percent increase in ROA of a firm. There is a significant relationship between ROA and bank size. Thus we accept our first hypothesis about ROA and Bank size.

Asset Management

According to the results, Asset Management is positively related with ROA with a coefficient 0.005504. The regression

co-efficient is also found to be statistically significant with the level of significance of 0%. Therefore we confirm our second hypothesis is accepted.

Operational Efficiency

According to the results, Operational Efficiency found to be negatively related with ROA with coefficient -0.0039849. However the relation in this study proves to be statistically significant with 0% level of significance, which makes the third hypothesis to be accepted.

Results of Regression Analysis (Dependant Variable IN)

Regression Statistics	
Multiple R	0.989882827
R Square	0.97986801
Adjusted R Square	0.973157347
Standard Error	58310.19131
Observations	9

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	9.92936	4.96468	146.0165678	8.15944
Residual	6	20400470466	3400078411		
Total	8	1.01334			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-27954.3852	228868.4516	-0.12214171	0.906775033	-587975.310	532066.5402	-587975.310	532066.5402
BS	0.082693192	0.009255731	8.934269641	0.000109711	0.060045236	0.105341149	0.060045236	0.105341149
OE	-19894.1388	67115.43627	-0.29641674	0.776904415	-184119.694	144331.4172	-184119.694	144331.4172

Bank Size

It has been observed that Bank size (BS) is positively related with Interest Income (IN) with a coefficient of 1.146757. There is a strong significant relationship between Interest income and bank size at 0% level of significance. Thus we reject our fourth hypothesis about Interest income and Bank size.

Asset Management

The result indicates that Asset Management is negatively related with Interest Income with very high coefficient - 6.239817. However, the regression co-efficient is found to be statistically insignificant.

Operational Efficiency

According to the results, Operational Efficiency is negatively related with Interest Income with coefficient -0.370711. The relation in this study proves to be statistically significant which confirms that the sixth hypothesis is accepted.

Conclusion

This study examines the impact on the financial performance of new private commercial Banks. All new Private commercial banks were taken as a sample for the purpose of analysis of financial performance. Returns on asset and interest income were taken as dependent variables while bank size, asset management and operational efficiency were taken as independent variables. Results showed that the ROA of the banks were strongly and positively influenced by the bank size. Operational efficiency is negatively related with the ROA and results also showed that it was statistically significant so third hypothesis is also accepted. Other dependent variable interest

income of the banks was strongly positive influence by the bank size and is statistically significant. Interest income showed negative relation with the operational efficiency and results were also statistically significant. On the practical dimension, this study is helpful for bankers in their decision making to increase the bank financial performance.

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Customer Preference Across Age Groups: A Study on Public v/s Private Bank in Delhi Region

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Abstract

A successful market, marketing and product strategy is critical in today's scenario. The research study was commissioned to study the preference of customers towards nationalized and private sector banks (PNB & ICICI) in Delhi region. The sample size of the respondents taken for the study was 103 employing the use of convenience sampling technique. The primary data for the study was collected using self designed standardized questionnaire. The hypothesis used in the study to identify the variance between customer preferences across various age groups was tested by using ANOVA for both the banks separately. To check if safety in banking is the most significant variable of customer preference for banks was analyzed by the help of Mean & Standard Deviation. The study revealed that there is significant difference in customer preference towards across different age groups for private and nationalized banks because of factors like attitude of the personnel, ambience of the bank & other factors. Moreover, for customers of PNB, Safety in investment is one of the most important variables contributing to customer preference and for ICICI; staff attitude towards customers is one of the most important variables. There were certain shortcomings of the study which was covered in the limitation of the study. The study tried to explore the future scope for further study. The study finally focused on some beneficial recommendation for both the banks which would help the management to focus on certain areas in order to retain the customers and attract new customers.

Keywords: Banking, CRM, Customer preference, Private & Public Banks.

Introduction

Banking in India originated in the first decade of 18th century with The General Bank of India coming into existence in 1786. This was followed by Bank of Hindustan. Both these banks are now defunct. After this, the Indian government established three presidency banks in India, the first of three was the Bank of Bengal, which obtains charter in 1809, the other two presidency bank, viz., the Bank of Bombay and the Bank of Madras, were established in 1840 and 1843, respectively. The three presidency banks were subsequently amalgamated into the Imperial Bank of India (IBI) under the Imperial Bank of India Act, 1920 - which is now known as the State Bank of India. A couple of decades later, foreign banks like Credit Lyonnais started their Calcutta operations in the 1850s. At that point of time, Calcutta was the most active trading port, mainly due to the trade of the British Empire, and due to which banking activity took roots there and prospered. The first fully Indian owned bank was the Allahabad Bank, which was established in

1865. By the 1900s, the market expanded with the establishment of banks such as Punjab National Bank, in 1895 in Lahore and Bank of India, in 1906, in Mumbai - both of which were founded under private ownership. The Reserve Bank of India formally took on the responsibility of regulating the Indian Banking sector from 1935. After India's independence in 1947, the Reserve Bank was nationalized and given broader powers. The growth in the Indian Banking Industry has been more qualitative than quantitative and it is expected to remain the same in the coming years. The banking industry in India is facing certain challenges i.e. challenges of quality service, customer satisfaction, customer retention, customer loyalty. Quality service plays a major role in achieving customer satisfaction and creating brand loyalty in banking sector. One of the most momentous of such initiatives was the substitution of private ownership by public ownership, through the medium of an ordinance of the largest commercial banks in the private sector on 19 July 1969. This has popularly come to be known as nationalization of these banks without which it would not have

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been possible to transform the class banking into mass banking and align bank credit to serve the planned priorities and social needs. Currently, overall banking in India is considered as fairly mature in terms of supply, product range and availability even though reach in rural India still remains a challenge for the private sector and public sector banks.

The banking system is facing the challenges with stiff competition and advancement of technology, the services provided by banks have become easy and convenient, the competitive character has been promoted by facilitating the entry of foreign banks and their ATM stations. Efforts are being put to give a satisfactory service to customers. Phone banking and net banking are introduced. The entire system has become more convenient and swift. Time is given more importance than money. The Indian banking industry is passing through a phase of customers market. The customers have more choices in choosing their banks. A competition has been established within the banks operating in India. The new age IT (Information technology) is bringing about sweeping changes in the banking industry, forcing them to re-engineer many of their basic processes and systems. For the same reasons, the researcher has explored the preference of customers with respect to two major players each from public & private banks (PNB & ICICI) & attempted to derive suggestions to improve upon.

Punjab National Bank: It was registered on 19 May 1894 under the Indian Companies Act with its office in Anarkali Bazaar Lahore. Since its humble beginning in 1895 with the distinction of being the first Swadeshi Bank to have been started with Indian capital, PNB has achieved significant growth in business which as of today amounts to over Rs 7.00 lac crore. PNB is ranked as the 2nd largest bank in the country after SBI in terms of branch network, business and many other parameters. PNB is the largest nationalized Bank in the country in terms of Branch Network, Total Business, Advances, Operating Profit and Low Cost CASA Deposits. The CASA deposits share to the Total Deposits of the Bank was at 35.6% as on June 2012. The bank maintains a strong position in the Indian banking industry. The impressive operational and performance has been brought about by bank's focus on customer based business with thrust on SME, Agriculture and a more inclusive approach to banking, better asset management, improved margin management, thrust on recovery and increased efficiency in core operations of the bank.

ICICI Bank: ICICI Bank was originally promoted in 1994 by ICICI Limited, an Indian financial institution, and was its wholly-owned subsidiary. ICICI's shareholding in ICICI Bank was reduced to 46% through a public offering of shares in India in fiscal 1998, an equity offering in the form of ADRs listed on the NYSE in fiscal 2000, ICICI Bank's acquisition of Bank of Madura

Limited in an all-stock amalgamation in fiscal 2001, and secondary market sales by ICICI to institutional investors in fiscal 2001 and fiscal 2002. ICICI was formed in 1955 at the initiative of the World Bank, the Government of India and representatives of Indian industry. The principal objective was to create a development financial institution for providing medium-term and long-term project financing to Indian businesses. In the 1990s, ICICI transformed its business from a development financial institution offering only project finance to a diversified financial services group offering a wide variety of products and services, both directly and through a number of subsidiaries and affiliates like ICICI Bank. In 1999, ICICI become the first Indian company and the first bank or financial institution from non-Japan Asia to be listed on the NYSE. In October 2001, the Boards of Directors of ICICI and ICICI Bank approved the merger of ICICI and two of its wholly-owned retail finance subsidiaries, ICICI Personal Financial Services Limited and ICICI Capital Services Limited, with ICICI Bank. The merger was approved by shareholders of ICICI and ICICI Bank in January 2002, by the High Court of Gujarat at Ahmedabad in March 2002, and by the High Court of Judicature at Mumbai and the Reserve Bank of India in April 2002. Consequent to the merger, the ICICI group's financing and banking operations, both wholesale and retail, have been integrated in a single entity.

Literature Review

Ravi CS, Kundan Basavaraj, (2013) determined the perceptions of customers regarding the service quality in banks and to analyze and compare the service quality perceptions of the customers in public and private sector banks. The finding revealed that Occupation is a predominant factor that reveals the customer social class, life style and willingness to buy and ability to buy because occupation provides the income which influences the purchases and services. Business and vehicle loans are fast moving than other services and overall satisfaction resulted at 50%. Further, overall satisfaction on bank deposit schemes resulted positively while other services of banking still need to be given attention by focusing on customer issues. New innovative schemes, strategies to cater to non users other services have to be adopted.

Chaudhry Kajal & Sharma Monika, (2011) evaluated the performance of Banking Sectors in India. The objective was to compare the performance of public and private banks of India and to measure the customer preference. The conclusion of the study was that Public banks must pay attention on their functioning to compete private banks. Banks should be well versed in proper selection of borrower/project and in analyzing the financial statement.

Siddique Md. Nur-E-Alam, (2012) conducted a study to determine the criteria that customers consider important to select a bank and to identify the prioritized factor according to their importance given by both groups of customers of private commercial bank and nationalized commercial bank. The finding of the study revealed that effective and efficient customer services, speed and quality services, image of the bank, online banking, and bank is well managed are some of the important bank selection factors for the customers the most important bank selection factors are low interest on loans, convenient branch locations, safe investment (accountability of the govt.), variety of services offered, and low service charges.

Das. Sanjay Kanti (2012) stressed on the fact that CRM manages the relationships between a firm and its customers. Major finding of the study was that only few customers recognize that there is a change in marketing approach of Banks due to changing business environment. Majority of customers uncertain that the CRM is centered in a particular department very few of the customers have accepted that CRM is prevalent through all the levels in the Banks. CRM undertaken by employee approach to customers is found very poor. It is further observed that the CRM activities are initiated and implemented by the Banks in a serious manner, so that the customers in particular and the society in general benefited a lot.

Mehta Ronak A. (2013) studied the banking services and customer satisfaction of public and private sector banks in Navsari and to know in which service quality dimension the bank is performing well and in which dimension it needs improvement. The major finding of the study was that there was a variance between occupation and the satisfaction of customers towards public and private sectors banks.

Bhatnagar R. C, Verma Rajesh, Goel Aditi (2013) aimed to prove the significance of CRM in banking sector, with its effect on the Customer Satisfaction with reference to both Public Sector and Private Sector Banks and to study the impact of CRM as a tool in banking sector to retain customers. The major finding of the study was the CRM helps in finding out the relationship between commitment and loyalty, perception and satisfaction which underlines its importance in Indian Banking Sector. Customers mostly choose their banks on the basis of convenience of the location of bank from their homes or offices. With the introduction of innovative technologies in the banking business, such as ATM's and internet banking, nowadays customers can liberally select any bank.

Virk Nirmaljeet, Mahal. Prabhjot Kaur (2012) concluded that the private sector banks are providing better services in terms of mutual funds, query resolution through telephone, branch

facilities, services by teller and above all customer relations with manager.

Vasanthi T, Gowri D (2013) explored the customer perception towards service quality attributes among public sector banks and private sector banks. The public sector banks hold over 75% of total assets of the banking industry, with the private and foreign banks holding 18.2% and 6.5% respectively.

Shailesh Limbad (May 2013) aimed to measure the customer satisfaction and to identify the shortfall areas for improving the services of public banking sector. The results of the study shows the critical points where the limited resources of the banks should be allocated to improve satisfaction and loyalty and provides information about the weaknesses and strengths of the banks from the eyes of its customers. With getting the valuable information and found out the reason of dissatisfaction these banks can put more efforts to improving the standards of services and make the customers more satisfied.

Objectives of The Study

For the purpose of the study the researcher has formulated the following objectives:

- a. To analyze the strategies used by public and private banks to offset customer preference.
- b. To study the difference in customer preference across different agegroups for ICICI and PNB.
- c. To identify the most significant variable of customer preference for ICICI and PNB.

Methodology

The study is Descriptive in nature. A well structured self designed questionnaire was prepared for the collection of necessary primary data to know the customer preference towards private and public bank. Since the researcher has adopted a self-designed questionnaire therefore reliability testing has been conducted to calculate the value of Cronbach alpha and confirm the reliability of the questionnaire used. The value of Cronbach alpha as calculated was 0.946 which shows high reliability of scale adopted for the study.

Respondents were asked about a variety of questions regarding their reasons to choose a bank. Secondary source of information includes library resources, articles in various newspapers and magazines, product catalogs brochure and online resources like company websites, online reports and articles. Convenience sampling technique has been used to collect data from 106 valid respondents comprising of 53

respondents each of Punjab National Bank and ICICI. For the purpose of data analysis, ANOVA has been employed to study the variation in preference across different age groups. Mean & Standard deviation has been employed to identify the most significant variable contributing to customer preference while selecting public & private banks.

Data Presentation & Analysis

Responses were sought from 53 customers of ICICI & PNB each. The following table depicts the demographic profile of the respondents of both the banks in frequency & percentage.

Table 1: Demographic Profile of Respondents

Category	Frequency		Percentage (%)	
	PNB	ICICI	PNB	ICICI
Age				
25-30	7	32	12.72	58.18
30-35	18	6	32.72	10.91
35-40	5	9	9.09	16.36
Above 40	25	8	45.45	14.45
Family Type				
Joint Family	18	20	32.72	36.36
Nuclear Family	37	35	67.28	63.64
Gender				
Male	35	30	63.63	54.54
Female	20	25	36.36	45.45
Occupation				
Govt Service	22	8	40	14.55
Pvt Service	7	21	12.72	38.18
Business	12	14	21.82	25.45
Other	14	12	25.46	21.82
Income				
Less Than 1 Lac	9	10	16.36	18.18
1-3 Lac	7	7	12.73	12.73
3-5 Lac	18	15	32.72	27.27
More than 5 Lac	21	23	38.19	41.82

The table shows that majority of the respondents surveyed were Males belonging to nuclear type family and earning more than 5LPA. Respondents belonging to age group of 25-30 preferred ICICI and the middle age and old people preferred PNB.

HYPOTHESIS TESTING: To test the Hypothesis, ANOVA and Descriptive Statistics have been employed. For the purpose of fulfilling the objectives, two hypotheses have been formulated:

Hypothesis 1: There is no significant difference in the customer preference across different age groups for ICICI and PNB.

Table 2: ANOVA for difference in preference across age groups for PNB

Bank	A1 (N=21)		A2 (N=8)		A3 (N=5)		A4 (N=19)		Sig. Value	F-value
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
PNB	72.714	8.2106	82.625	5.5016	79.400	7.829	79.94	9.935	.017	3.751**

**1% level of significance

The table clearly reflects that the value of “F” is significant at 1% level of significance; therefore there is a significant difference in preference across customers of different age groups towards PNB.

Table 3: ANOVA for difference in preference across age groups for ICICI

Bank	A1 (N=31)		A2 (N=6)		A3 (N=9)		A4 (N=7)		Sig. Value	F-value
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D		
ICICI	77.064	9.9831	80.166	9.4109	78.222	6.6101	75.714	9.5518	.837 (NS)	.284

The table shows that value of “F” is not significant. This clearly indicates that there is no difference in preference across customers of different age groups towards ICICI.

For the purpose of comparing the most important variable contributing to customer preference in ICICI and PNB, the researcher undertook a Descriptive Analysis and observed the values for highest and lowest means & the corresponding values of Standard deviations.

Hypothesis 2: Safety in Investment is not the most significant variable contributing to customer preference in ICICI and PNB.

Table 4: Descriptive Statistics for ICICI & PNB

Statements of Customer Satisfaction	Mean	Std. Deviation	Mean	Std. Deviation
	ICICI		PNB	
The attitude of Bank personnel towards customers is good	4.3121	.55601	4.1321	.55601
The working of bank operation is transparent	3.8491	.74411	3.8491	.74411
The bank provides efficient services	4.0566	.74460	4.0566	.74460
The bank has effective bank resolution mechanism	3.6604	.78308	3.6604	.78308
The bank employees are honest in nature	3.8302	.77796	3.8302	.77796
The bank provides high level security for customer’s data	3.9623	.70608	3.9623	.70608
The bank provides superior quality of service.	3.7358	.76337	3.7358	.76337
The electronic services of bank are reliable and secure	3.9434	.71831	3.9434	.71831
There is ease of opening a new account	3.8491	.92811	3.8491	.92811
The bank provides ease in obtaining loans	3.6604	.78308	3.6604	.78308
There is convenience of branch location	4.0566	.94899	4.0566	.94899
There are low service charges charged by bank	3.9057	.90435	3.9057	.90435
There is an ease and simple operations of bank.	3.9811	.90915	3.9811	.90915
The investment in banks is safe	4.1308	.67293	4.3208	.67293
CRM helps the bank in retention of existing customers	3.8302	.80230	3.8302	.80230

The bank provides overall satisfaction regarding loan service	3.7170	.86330	3.7170	.86330
The loan processing time is quick	3.4528	.95204	3.4528	.95204
The bank charges low interest rates	3.6981	.77422	3.6981	.77422
The preference is as per deposit schemes	3.8302	.61193	3.8302	.61193
The bank enhances satisfaction and loyalty	3.9623	.80771	3.9623	.80771

Descriptive Analysis of PNB shows that majority of the customers feels that safety in investment in banking is one of the factor that affects their preference the most while customers of ICICI feels that the attitude of the bank personnel towards customers is most significant.

Findings of The Study

1. The study shows that there is a significant difference in customer preference towards private and nationalized banks in Delhi region because of factors like attitude of the personnel, ambience of bank, safety in investment etc.
2. The preference level varies significantly across age groups amongst customers of PNB while it is contrary in case of customers of ICICI.
3. The study further indicated that Safety in investment is one of the most important variables contributing to customer preference in case of PNB while attitude of the personnel towards customers is the most important variable in case of ICICI.
4. This research study also shows that banks do not differentiate between male and female customer i.e. the banking services are offered same irrespective of the gender. Customer feels that more emphasis should be placed on improving CRM as it helps in building a strong relationship among the customers and the bank.
5. Study further shows that ease in obtaining loans, low service charges charged by bank, low interest rates and efficient services are few factors which are affecting the customer preference.

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Understanding Consumer purchase intentions towards Organized Retailing: A comprehensive study of Rajasthan

Dr. Nilesh Arora*

Abstract

A customer is in a new era of shopping with the rise in the modern form of retailing in all parts of the world. Retailing is an activity which exists with the existence of mankind and with the growth of newer formats it foresees an impressive future ahead. The success of the newer formats of retail largely depends on the retailer's understanding of the consumer behavior and his purchase intentions. Perception being an important aspect of the consumer behavior may influence the preference of the customer i.e. his purchase intentions: to buy or not to buy a product or service and from where to buy i.e. from traditional retailer or a modern one. The present study primarily aims at understanding the consumer purchase intentions towards the modern form of retailing and the impact that consumer's perception has on his preference for the organized retailing in the state of Rajasthan. The research reveals that organized retailing is favorably perceived in Rajasthan The consumer intends to shop from a modern retail outlet also he feels traditional retailer is equally important for his shopping.

Keywords: Customer Perception, Customer Preference, Organized Retailing, Consumer Intentions.

Introduction

Every business activity revolves around a customer, a consumer or a prospective buyer. Be it a manufacturing unit, a marketing firm, a service organization or an institution, all of these look for a prospective buyer who can purchase their products or utilize their services and act as a source of revenue for the organization ultimately fulfilling the profit earning motive of the organization. Retailing is an activity which is generated because of the existence of the ultimate consumer. Had there been no customer, there would have been no retailing. So, a consumer defines the retailing activity. Consumer behavior in retailing refers to the buying behavior of the ultimate shopper or end consumer. It is all about understanding how people prefer to spend their money and time in buying and consuming various goods and service they desire.

The present research aims at understanding the shoppers' psychological aspect that influences the shopping behavior and

purchase intentions of the shopper towards organized retailing. Theories of perception mainly suggest that people make their own picture of the world. Similarly, shoppers/customers perceive brands or products and retail stores in their own ways and take decision based on their perception about them rather than objective reality. Perception in marketing influences our acquisition and consumption of goods and services through our tendency to assign meaning to such things as color, symbols, tastes and packaging. Culture, tradition, and our overall upbringing determine our perception of the world. Thus, perception is precisely the reason behind the differences in likes and dislikes, preferences and non-preferences about a product, a brand, a place, a store and people.

Organized retailing synonymously refer to the Modern retailing is the buzzword these days. Retail being one of the largest industries in the country (although not having an industry status); a huge contributor to the country's GDP and employment is growing at a rapid pace. The changing patterns

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in the retailing as well as in the customer shopping behavior have brought a sea change in the Indian retail scenario. With the loosening in the FDI norms, modern retailing foresees a positive and rapid change in the retail environment. The study tries to find out customer's perception about the organized retailing and if his perception plays any role on the purchase intentions i.e. his preference of a modern retail outlet for his shopping.

Literature Review

There have been various studies conducted on the customer patronage behavior of a retail store. Some of these were studied for the purpose of getting an idea of the various aspects of consumer behavior and perception about organized retailing. Service quality is by far the most critical determinant of merchandise quality perception. Perceived value for money depends on perceived relative price and sales promotion perceptions (Sirohi N. et al., 1998). Atmospherics has a great impact on the customer's perceptions of salespeople, as well as the salesperson's role as an atmospheric cue. (Sharma A. and Stafford T.F., 2000). Convenience and merchandise are the primary reasons behind choosing a store. Proximity of the store, store ambience and service being other reasons (Sinha P.K. et al., 2002). Both 'Product/Price' and 'Servicescape / Personnel' related criteria are critical to store-choice (Rigopoulou Irini D. et al., 2008).

'Shopping availability' and 'variety' of products are the most significant factors that determine the retail outlet preference (Mittal K.C., et al., 2010). Chinese consumers' shopping tendencies correlate highly with merchandise and store congeniality (Haiyan Hu., 2011). The buyers perceive a difference among services offered by organized and unorganized retailers (Ramanathan V. and Hari K., 2011). Variety and quality are the primary factors to shop in the organized formats (Gurusamy, M. and Prabha, N., 2011).

Research Methodology

Research Objectives

The research has been conducted with the following objectives in view:

1. To study Customer perception and attitude towards the organized retailing in Rajasthan.
2. To identify the preference level of the customers of Rajasthan towards the changing retail environment.
3. To identify if the customer preference for organized retail is dependent on perception or not.

Hypothesis Development

Based on the objectives of the research, the study attempts to investigate the relationship between customer perception and preference about organized retailing in Central Rajasthan. Therefore, the following hypothesis has been formulated:

Null Hypothesis

H₀: Customer preference is independent of customer perception of organized retailing.

Alternate Hypothesis

H₁: Customer preference is dependent on customer perception of organized retailing.

Research Design and Data Collection

The research under study is descriptive in nature as it describes the customer perception and preference for organized retailing as it exists in the market. The research basically tries to study the relationship between customer perception and their preference towards the modern form of retailing with a focus on Rajasthan. This study is confined to the residents of the Rajasthan, India. Rajasthan, for the purpose of the study, is represented by the four major cities Jaipur, the state capital of Rajasthan, Ajmer, Jodhpur and Bikaner. Primary data were collected through personally administering the structured questionnaire by intercepting customers at the exit doors of retail stores after they have finished their respective visits to the stores. The data has also been collected from the households or customers in general as every individual is a customer and a consumer. The data was collected from the customers of both organized retail stores as well as of traditional retail stores. To improve the instrument, a preliminary study was conducted and 30 respondents of Jaipur were asked to fill up the questionnaire initially. Participants of this pilot study were not included in the main study. Secondary data was collected from the various consulting firms and research organizations that are regularly into developing and generating data and periodical reports on the Indian retail industry like ICRIER retail report, RNCOS, AT Kearney, BMI India retail report, Technopak, RAI, CII, etc.

The research questionnaire was filled up from a total of 500 respondents covering different groups of customers 125 from each of the 4 cities. Finally, after the scrutiny 442 usable questionnaires were considered for the purpose of the study and the analysis of the data. This included 120 respondents from Jaipur, 102 from Ajmer, 113 from Jodhpur and 107 from Bikaner.

As far as the demographic profile of the respondents is concerned, the sample comprises of a variety of respondents belonging to different age group, gender, economic and professional backgrounds.

Findings

The demographics of the sample for the purpose of the study seem to be relatively consistent with the shopper’s profiles across the four representative cities. Slightly higher percentage of shoppers surveyed were males, and the shoppers were divided evenly on marital status. All income and educational ranges were well represented in the samples.

Table 1: Outlet Preference for Shopping

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Traditional Outlet	113	25.6	25.6	25.6
	Organized Retail Outlet	60	13.6	13.6	39.1
	Both	269	60.9	60.9	100.0
	Total	442	100.0	100.0	

26 per cent of the total 442 respondents in Rajasthan still shop only from traditional outlets and whereas only 14 per cent of the respondents shop only from organized retail outlet or a shopping mall (see Table 1). Majority of the respondents i.e. 61 per cent use both traditional as well as modern form of retailing as their shopping preferences. Thus, it can be said that shopping

trends in Rajasthan is shifting towards modern form but still a lot of people prefer the traditional form of retailing. People prefer both the shopping destinations together to fulfill their shopping needs.

Age-Shopping Preference Analysis-

Table 2

Age Group (in yrs)	Traditional Retail Outlet	Organized Retail outlet	Both
15-25	28	9	75
26-35	40	30	111
36-45	30	16	62
46-55	10	4	16
56 and above	5	1	5
Total Respondents	113	60	269

Table 2 shows that, in Rajasthan people of the age ranging from 26-35yrs prefer shopping from an organized retail outlet or a combination of the two formats the most, followed by the age group 36-45yrs.

The results of the analysis revealed that 77 per cent of the males and 72 per cent of the females prefer to shop from either a modern retail outlet or a combination of both traditional and a modern retailer. Thus, both the genders have almost similar preferences for the store type for their shopping in Rajasthan.

Table 3: Perception about Organized retailing over Traditional form

		Frequency	Percent	Valid Percent	Cum. Percent
Valid	Not At All Good	123	27.8	27.8	27.8
	Equally Good	170	38.5	38.5	66.3
	Better	149	33.7	33.7	100.0
	Total	442	100.0	100.0	

28 per cent of the total respondents perceive that organized retailing is not at all good, whereas 38 per cent people say it is as good as traditional retailing (see Table 3). 34 per cent of the respondents perceive that organized retailing is better than the traditional form of retailing. Thus, it can be interpreted that

organized retailing is favorably perceived to traditional form of retailing in Rajasthan.

**Test of Hypothesis- Chi Square analysis
Cross tabs**

Table 4: Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Preference to shop from * Perception about Organized retailing	442	100.0 per cent	0	.0 per cent	442	100.0 per cent

Table 5: Customer Preference-Perception Cross tabulation

Where do you prefer to shop from * Perception about Organized retailing over Traditional form Cross tabulation					
Count					
		CUSTOMER PERCEPTION			Total
		Not At All Good	Equally Good	Better	
CUSTOMER PREFERENCE	Traditional Outlet	107	3	3	113
	Organized Retail Outlet/ Shopping Mall	0	0	60	60
	Both	16	167	86	269
Total		123	170	149	442

Table 6: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.551E2 ^a	4	.000
Likelihood Ratio	462.678	4	.000
Linear-by-Linear Association	135.484	1	.000
N of Valid Cases	442		
a. 0 cells (.0 per cent) have expected count less than 5. The minimum expected count is 16.70.			

Interpretation: Chi-Square

In a Chi-square test, for a 95 per cent confidence level, if the significance level (p-value) is greater than or equal to 0.5, it signifies that there is no association between the two variables in the cross tabulation and if the significance level is less than 0.5, then it signifies that there is a significant relationship between the selected variables.

The results of the cross-tabulation

The Chi-square test reads a significance level (p-value) of .000 at 95 per cent confidence level (see Table 6). The lower the significance value, the less likely it is that the two variables are independent (unrelated). In this case the significance value is .000, which means that two variable i.e. Perception and Preference are indeed related. That is the null hypothesis is rejected that Customer preference is independent of customer

perception of organized retailing. Thus, it can be interpreted that customer preference for organized retailing is dependent on customer perception.

To test the degree of association or dependency between the variables, Cramer's V has been used. The value of Cramer's V can be seen in table - 7.

Table 7: Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	1.015	.000
	Cramer's V	.717	.000
	Contingency Coefficient	.712	.000
N of Valid Cases		442	

Findings

Cramer's V is a modified version of phi correlation coefficient, and is used in tables larger than 2x2. The value for V ranges from 0 to 1. A large value for V merely indicates a high degree of association. From the above analysis (see Table 7) value for V is 0.717 which is very high. Thus, from this it can be interpreted that the two variables have higher degree of association or dependency. Thus, it can be said that the customer preference in Rajasthan is **strongly dependent** on their perception about organized retailing.

Conclusions

The results of the data analysis and findings reveal the following conclusions for the said study:

- Shopping trends in Rajasthan is shifting towards the modern form of retailing as majority of the respondents prefer to shop from the modern retail outlets either fully or in combination with traditional retail stores. Thus, it can be said that people in Rajasthan like the modern form of retailing showing a sign of opportunity for the modern retailers to expand their business in the state.
- Both the genders have almost similar preferences for the store type as majority of them prefer organized retail store for their shopping either fully or in combination of a traditional outlet.
- In Rajasthan people of the age ranging from 26-35yrs prefer shopping from an organized retail outlet or a combination of the two formats the most, followed by the age group 36-45yrs. This will give an understanding to the modern retailers to focus on these set of people for using their promotional and other efforts so as to improve their business in this region of the country.

- Organized retailing is favorably perceived to traditional form of retailing in Rajasthan as majority of them perceive it to be either better than or equally good as traditional retailing.
- Also, the findings of the Chi-Square and Cramer's V analysis clearly show that the customer preference in Rajasthan is strongly dependent on their perception about organized retailing. That is, people of Rajasthan perceive organized retailing to be good for their shopping as compared to the traditional form of retailing and thus, they prefer to shop from a modern retail store. Thus, it can be concluded that people shop from an organized retail store because they perceive it to be better than a traditional retail store.

Suggestions

Following suggestions are made on the basis of the findings of the study:

- There is a section of consumers who still prefer traditional retail stores on which the retailers need to concentrate more. They need to identify the reasons why they are not moving towards the modern retail for their shopping needs and try to convince and convert them for the modern formats.
- Also, the modern retailers should work on the retail attributes that may influence the perception of the consumers positively and will encourage them to prefer a modern retail store to a traditional one.
- The retailers should feel good seeing the acceptance level of the new format of retailing in Rajasthan and should try to keep those customers intact by serving them better and reinforcing a positive perception about the organized retailing.

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Gender inequality in organisations in Ajmer district in Rajasthan State of India

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Abstract

Women continue to enter managerial and professional jobs in increasing numbers in India yet they continue to face gender inequality in management. Four facets of gender inequality: dysfunctional organizational culture, occupational segregation, sexual harassment, and pay differential at work were identified based on a review of literature. These four facets were studied through collection of data by an anonymously completed questionnaire by 153 women managers in Ajmer district of the State of Rajasthan in India. Thirteen demographic variables pertaining to women managers were studied in conjunction with four facets of gender inequality. The findings indicate that there are three demographic variables of residence place, industry and functional area that have a significant statistical relationship with gender inequality. Implications for management are discussed with reference to consequences of gender inequality and improving the situation of gender parity for women in Indian organisations. Limitations include study conducted in a restricted geographical area and convenience sampling method. The study reported is one of a kind conducted in the State of Rajasthan in India and provides interesting insights of the situation of women managers.

Keywords: Gender inequality, Gender equality, Women managers, Women in management, Rajasthan, Ajmer.

Introduction

Gender inequality is a significant sociological concept that explains the lack of parity between men and women in social situations. Popular books such as *John Gray's Men Are from Mars, Women Are from Venus* stress the innate differences between how the minds of men and women work. Men are considered as involved in objective tasks such as wage earning and women in subjective tasks such as family care and child rearing. Typically, the subjective tasks performed by women in societies, though vital, have been valued lesser than the objective tasks placing women at disadvantage in comparison with men thus creating gender inequality.

Gender inequality is a wide concept straddling several disciplines such as economics, sociology and psychology. In management, gender inequality is considered in the context of women employees and managers in organisations. Literature provides vast information on gender inequality issues.

Dominant among these are the issues of dysfunctional organisational culture creating conditions in which gender segregation takes place, occupational segregation stereotyping women managers for certain jobs and not for others, sexual harassment at work, and pay differentials based on gender discrimination.

The Indian perspective to gender inequality

India ranks 113th out of 157 countries on the Gender Development Index (GDI) according to the World Economic Forum (2011). The GDI is calculated using three variables - life expectancy, education, and estimated earned income. Though there is improvement of gender scores in recent years, India still lags far behind in terms of GDI. For instance, in the State of Kerala, women constitute 39 per cent of all organised sector workers (DGE&T). The States with a low share of women's employment in organised sector jobs are Bihar, Uttar Pradesh, West Bengal, Jammu and Kashmir and Orissa. Interesting

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statistics reveal that organised sector employment constitutes a small share of total employment in India and women's share of organised sector employment is only 17%. Even within the organised sector, most women are located in the lower steps of the hierarchy (Joseph & Prasad, 1995). Very few are managers, bosses or decision-makers (Agrawal & Rao, 2004; Menon - Sen & Kumar, 2001).

Amartya Sen discusses gender inequality in his book *The Argumentative Indian: Writings on Indian History, Culture and Identity*. He points out that the social movement for Indian women had been, until recently, primarily focused on achieving better treatment and well-being for women: "In the course of the evolution of women's movement [...] women are not passive recipients of welfare-enhancing help brought about by society, but are active promoters and facilitators of social transformations. Such transformations influence the lives and well-being of women, but also those of men and children-boys as well as girls. This is a momentous enrichment of the reach of women's movement" (Sen, 2005)

The dichotomy between the pathetic condition of women and of boasting of an ideology of equality and objectivity and of performance being given more importance rather than sex, caste, class or race in India comes across in a sociological study by Maliye (2011) on women managers in the city of Hyderabad. The study *Gender Inequality at the Workplace* by Sharma & Sharma (2012) revealed interesting factors for gender inequality at the workplace. The prominent among them were sociologically-driven role specifications that are prevalent in India, patriarchal form of social structuring which is also reflected at workplace and stereotyping image of female, confined to family roles and which directly leads to role conflict if they opt for employment. The sex-role orientation of women managers in India comes into sharp focus in the study by Buddhapriya, 1999. The significance of gender is heightened in the case of women as the usual perception of managerial positions is masculine in nature. Thus, women managers too tend to conform to the perceived roles in the belief that the adoption of such roles would lead them to more effective managers.

One could expect women in white-collar jobs to fare better than their less fortunate sisters in blue-collar jobs. But the study by Sinha & Prabha (1988) makes an interesting insight into the kinds of gender differences that prevail in organizations. The restrictions imposed on working women were found to be more pronounced in white collar jobs. Majority of women working in white collar jobs come from upper castes and belong to nuclear families. But the trend shows that men with non-urban background and non-English medium background can also make it in the managerial position, whereas in case of women,

they should have better schooling, education and exposure to the professional culture, to make it to the same level. Therefore; women seemingly have to work much harder than men to fulfil their aspirations. It can reasonably be expected that attaining the status of working women may lessen the stress placed on women. But it may not be so. Sethi (1988) comments that the employment of women does not necessarily lead to a change in her work patterns at home. The traditional role of a woman as home-maker and carer of children remains unaltered despite her new role as an economic earner.

Sector and profession studies on gender inequality in India offer useful insights. Jha and Tiwari (2011) examined gender inequality in three sectors of health care, information technology and defence where an assessment whether or not differences exist in mixed gender environment in organizations with respect to nature of tasks and related issues was studied. The results revealed remarkable results that linked gender differences and team work. There are significant gender differences in terms of views about ability and inclination to do a job in selected sectors. There are differences among men and women in taking up different tasks and that the capacity and potential of men and women differ from each other - at least in their general belief. A high concentration of men exists in software exporting firms whereas women are present in a higher proportion of domestic low-end and IT-enabled services (Suriya, 2003). This indicates towards the trend that at the entry level itself there is a marked gender differential in access to employment in this sector.

A profession-specific study on women in administrative services in India by George (2011) notes that women were banned from recruitment to Indian Police Service (IPS) till 1971 and in the year 1972 this discriminatory rule was removed and the first woman entered into the IPS. The data in the Police Lists published by the Department of Home Affairs shows the low representation of women in IPS. Similar to this kind of a situation, the entry of women into the Indian Foreign Services (IFS) also was very late. It was only in the year 1980 that the first women got into the service. The Indian Forest Service Civil Lists, the Ministry of Environment and Forest, and the Government of India show that the number of women in these services is also very low.

Some studies have explored the experiences of women faculty members in Institutes of Science and Technology, to understand the nature of the dual complexity faced by women. A study notes three major problems faced by female academic scientists were: general male dominance in the work environment; feelings of isolation; and feelings of conflict between being a woman and a scientist. (Gupta & Sharma,

2003). It is revealing how the Indian educational institutions too are not able to offer gender parity to women.

Singh (2003) examined the socio-cultural determinants of the low representation of women in top managerial positions in Asian organizations. Findings revealed that both male and female respondents perceived that societal culture has an important bearing on both thought processes and nature. The study concluded that if effective work-life policies are adopted, which support dual-earner couples, employers would get benefits in turn.

Khandelwal, in his study on *Gender Stereotypes at Work: Implications for Organizations* has discussed the stereotypes and perceptions of Indian women in the workplace. They appear to have a significant negative impact on the position of women managers. Women in Indian organizations felt that such stereotypes result from not being given challenging assignments. Yet, male managers saw women as being treated more leniently than men when making mistakes (Khandelwal, 2002).

Many firms had a gender-free performance management and reward structure, still many women interviewees in a study reported that they had to work very hard to prove their worth. Their personal drive to achieve and build on their strengths along with their ability to adapt to the environment and stay focused played an important role in their success. (Nath, 2000)

Barriers to career progression for women have also to do with the exclusion of women from informal networks (Gupta et al., 1998). These networks are male domains and women's virtual exclusion from their membership prevents them from developing the ability to handle the dynamics of organizational politics. The incidence of such politics arises more in a diverse, multi-lingual, and ethnic and caste based Indian society.

The study by Gupta et al., (1998) highlighted the generally weaker position of women in management. Some of the findings included: fewer male managers believed that women are capable of acquiring the required managerial skills than did female managers; fewer male managers believed that women managers possess the required objectivity for evaluating business situations properly and possess the requisite self-confidence; a significant percentage of male managers and a third of female managers believed that women managers would let their emotions influence their managerial behaviour.

Bhatnagar & Nair (1988) investigated women managers' perceptions about different aspects of the working of their organizations and also their expectations from them. These women managers were working in different functional areas in

both public and private sector organizations. The study indicated that women managers expected challenging assignments, more involvement in policy and decision making, creation of healthy work environment, equal workload, and recognition by bosses.

Some of the interesting observations about gender differences reveal that there are often complaints from women graduating from premier educational institutions that boys are preferred to girls in academic placements despite girls having better educational attainments (Chadha, 2002). Women managers in India have also to deal with the male ego, which is viewed as a serious barrier to women moving up the managerial ladder. When women managers give orders, men in general and older men in particular, feel emotionally challenged. (Budhwar et al., 2005) The social stereotypes, gendered role expectations, individual prejudices and social forces which promote the image of women as secondary to that of men also discourage women to aspire for top positions (Kulkarni, 2002).

The study by Sharma & Sharma (2012) made some very relevant suggestions to tackle gender inequality. Some of them are gender equality in its true sense can only be attained when more career options are created and institutional regulations are exercised in the proper way, which eventually reduces the gap between perception and reality. As an emerging economy, India does provide an opportunity for government to design policies pertaining to this area. Also, importantly, the technological proliferation in the education sector is making a difference to the perceptions of a younger generation that might perpetuate equality in a real sense. Constitutionally, increasing awareness about legal aspects may help to achieve gender equality.

Overall, gender inequality in Indian organisation compares well with the international situation. At the same time, there are some unique factors such as the deeply entrenched caste system that permeates into the organisations affecting the status of working women. Besides the social structure of Indian society there are several demographic factors such as type of industry or sector, professions, functional areas women managers work in and pay disparities that seem to affect gender inequality. Thus, gender inequality could be manifested in terms of the under-mentioned four factors.

- a. **Dysfunctional organisational culture:** Gender inequality may arise from several different sources. Among these, a dysfunctional organisational culture could often be a root cause. A culture where men managers, owing to prior socialisation or inherent biases, may treat women managers as not worthy of important assignments, difficult

tasks, or higher positions is dysfunctional in the sense that it is not realistic.

- b. Occupational segregation:** Perceptions about women fitting better into certain occupations or functional areas in organisations may limit them in realising their full potential. Thus, occupational segregation, as an offshoot of gender segregation, may be a potential cause for gender inequality.
- c. Sexual harassment at work:** Women managers might be subjected to sexual harassment at work by chauvinistic male managers who may be pre-conditioned to treat women as objects of derision. This may be a cause of gender inequality as it places women managers on a different and lower level than men managers.
- d. Pay differential:** Unequal pay for equal pay is a fact that is present in many situations. Thus, discrimination may be based on gender by paying women managers lesser than their male counterparts even though they may be performing quite similar tasks. Many research studies point out to pay disparities as an important aspect of gender inequality.

Context for Research: Ajmer District

This research study is geographic concentrating on the district of Ajmer in the State of Rajasthan. Ajmer is quite a typical region that could be representative of the culture and society in Northern India. It is known for its educational institutions preparing aspiring men and women who often have to move to other parts of India to seek employment. Local employment, especially for women, is available on a highly competitive basis mainly in the services such as education, health, and financial services and in the government sector. Rising family expenditures, higher level of educational qualifications attained by women and rising aspiration levels have motivated higher number of women to take up jobs that hitherto were not looked upon as desirable in the deeply conservative society of Rajasthan.

The district of Ajmer is divided into six administrative subdivisions of Ajmer, Beawer, Masuda, Nasirabad, Kekri and Kishangarh. According to the Directorate of Census Operations in Rajasthan figures, the total population of Ajmer district was 25.85 million in 2011 of which women were 12.6 million making up about 48.75% of the total population. A majority of 60% of the population is rural. The sex ratio for Ajmer district was 951 per 1000 male. The district had a population decadal growth rate during 2001-2011 of 18.5 per cent. Ajmer district cover an area of 8481 sq. km. with a population density of 305 persons

per sq. km. The total literacy rate is 69.33 % with the female literacy just at 55.68% trailing far behind the male literacy rate of 82.44%.

In Ajmer district 8 medium scale industries and 17663 small scale and cottage industries were registered up to March, 2011. The main industries of the district are textile, food products, leather and leather products, wood products, feldspar and quartz grinding, marble, asbestos and cement. A brief industrial profile of Ajmer District related to its micro, small and medium enterprises is available at the website of the Ministry of Micro, Small and Medium Enterprises, Government of India, at http://dcmsme.gov.in/dips/DIPR_Ajmer.pdf

Research objectives and hypotheses

This paper reports findings on gender inequality among women managers in Ajmer district. It is a part of a broader doctoral work that included two other issues of work-life balance and glass ceiling. The broad research question envisaged for the study is: How does gender inequality relate to the demographic variables of women managers in Ajmer district? The proposition arising out of the broad research question is: Gender inequality relates to the demographic variables of women managers in Ajmer district.

The present research studies gender inequality on the sample of women managers in Ajmer district. Gender inequality has been assumed as being manifested in four components namely, dysfunctional organisational culture, occupational segregation, sexual harassment at work, pay differential. There are 13 demographic variables covering various relevant aspects of women managers. Thus, there is a large canvas of exploring relationships between the study variables and their respective components with the demographic variables. The independent variable in each case of testing of relationship is the demographic variable (e.g. age). The dependent variable in each case of relationship testing is the study variable or one of its components (e.g. gender inequality or occupational segregation). The hypotheses framed attempts to establish a relationship of the dependent variable with the independent variable. It is in this complex scenario that Chamberlin's idea of multiple working hypotheses is relevant as can be observed below.

H1 - 13: Gender inequality syndrome is significantly related to each of the 13 demographic variables of women managers in Ajmer district.

Each of the hypotheses can be divided into sub-hypotheses in terms of the components of the gender inequality syndrome and 13 demographic variables will result in a set of 13 sub-

hypotheses. An example of sub-hypothesis for gender inequality syndrome and demographic variable of educational attainment is stated as. Gender inequality syndrome is significantly related the level of educational attainment of women manager in Ajmer district. An example of sub-hypothesis for a component of gender inequality syndrome and demographic variable of educational attainment is stated as: Dysfunctional organisational culture is significantly related to the educational attainment of the women manager in Ajmer district.

Method

Data collection was done through female surveyors appointed by the researcher from among her ex-students. A short informal training session was conducted with each of the surveyor. The data collection was done during the period mid-June 2013 through mid-September 2013 a period of about 4 months. The surveyors started data collection in the city of Ajmer approaching female employees in various organisations consisting of government offices, educational institutions, hospitals, banks, insurance companies and factories situated in the industrial estates. It was possible to collect data in satisfactorily completed questionnaires from 153 respondents all of which were included in the study for the purpose of analysis.

Alongside the collection of data through surveyors, the use of social networking sites of Facebook and LinkedIn was made to post the questionnaire on pages that were pertinent to the educated and internet savvy class of Ajmer district. The use of Google docs was made to place the online survey questionnaire. The responses were also sought through emails from people who could be approached in the towns and other smaller habitations within Ajmer district besides approaching them through snowball contacts. Thus, it was possible to collect data from Kishangarh, Beawer and Nasirabad towns besides Ajmer city.

Results and Discussion

1. Gender Inequality in Ajmer district

This section presents the results and discussion based on the analysis of composite scores of gender inequality and its four sub-variables of dysfunctional organisational culture, occupational segregation, sexual harassment at work, and pay differential.

The literature review indicated several aspects such as sociologically-driven role specifications that are prevalent in Indian society, patriarchal form of social structuring which is also reflected at workplace and stereotyping image of female, confined to family roles. The significance of gender is also heightened in the case of women as the usual perception of managerial positions is masculine in nature. Often, women managers too tend to conform to the perceived roles in the belief that the adoption of such roles would lead them to be more effective managers. The social stereotypes, gendered role expectations, individual prejudices and social factors which position the image of women as secondary to that of men also often discourage women to aspire for top positions. Gender inequality is a significant concept that had gained a lot of attention in research. It is a complex construct and has several sociological, psychological and organizational aspects related to it.

Table 1 indicates that gender inequality was found to be significantly related to residence, industry and functional area. Gender inequality is more of an organizational factor and less of an individual factor. So the four factors namely, dysfunctional organisational culture, occupational segregation, sexual harassment at work and pay differential are studied in the light of the organizational factors namely sector and industry working in.

Table 1: Summarised results of ANOVA: Gender Inequality on demographics

Demographic variables related to composite scores of gender inequality	Value of F	Significance	Critical values of F	Inference
Age group	0.63	0.64	2.44 ($\alpha = 0.05$)	Not significant
Residence place	4.13	0.04	3.91 ($\alpha = 0.05$)	Significant at $\alpha = 0.05$
Highest level of educational attainment	0.10	0.96	2.67 ($\alpha = 0.05$)	Not significant
Area of specialisation in education	1.57	0.16	2.17 ($\alpha = 0.05$)	Not significant
Sector working in	0.82	0.48	2.67 ($\alpha = 0.05$)	Not significant
Industry working in	3.30	0.00	2.95 ($\alpha = 0.01$)	Significant at $\alpha = 0.01$

Functional area working in	2.96	0.01	2.78 ($\alpha = 0.01$)	Significant at $\alpha = 0.01$
Total working experience	0.85	0.52	2.67 ($\alpha = 0.05$)	Not significant
Working experience in present organisation	0.93	0.45	2.44 ($\alpha = 0.05$)	Not significant
Title/role in organisation	1.10	0.35	2.67 ($\alpha = 0.05$)	Not significant
Marital status	1.21	0.31	2.67 ($\alpha = 0.05$)	Not significant
Number of children	1.36	0.26	2.67 ($\alpha = 0.05$)	Not significant
Family size	0.18	0.91	2.67 ($\alpha = 0.05$)	Not significant

A one-way between subjects ANOVA was conducted to compare the effect of 13 demographic variables on gender inequality. Table 1 represents the results which are as mentioned below.

- There was a significant effect of the residence place of the women manager on gender inequality at the $p < .05$ level for the three conditions [$F(1, 151) = 3.91, p = 0.04$].
- There was a significant effect of the industry the women manager works in on gender inequality at the $p < .01$ level for the three conditions [$F(6, 146) = 2.95, p = 0.00$].
- There was a significant effect of the functional area the women manager works in her organisation on gender inequality at the $p < .01$ level for the three conditions [$F(7, 145) = 2.78, p = 0.01$].

The context for gender inequality for women managers is the sector, industry and the organisation she works in. So it is instructive to check whether these demographic variables have any relationship with gender inequality. For each of the four components of gender inequality that are analysed in the four sub-sections that follow, the results pertaining to the probable relationship are explored.

2. Analysis of dysfunctional organisational culture

Organisational cultures vary in their functionality in terms of contributing to or detracting from organizational performance and effectiveness. A dysfunctional organization culture is defined as one that constrains or limits individual- and group-level capabilities and/or that actually encourages and rewards mediocre individual- and group-level performance. An organization's leadership is likely to help create and perpetuate such cultures. (Van Fleet & Griffin, 2006)

Analysing the figures of respondents we find that dysfunctional organisational culture does not seem to contribute much to gender inequality as a majority of 58% of respondents feel that there is very low or low culture dysfunctionality in their organisations. One third, about 32% of the respondents, however report experiencing moderate level of cultural dysfunctionality. Just 10% consider the cultural dysfunctionality to be high or very high. As evident from Table 2, we find that cultural dysfunctionality is not seen across different sectors and there does not seem to be much difference in the perception of women managers working in either government, private or NGO sectors.

Table 2: Cross-tabulation of sector working in versus composite score for dysfunctional organisational culture

Sector working in	Composite score for dysfunctional organisational culture					Total
	Very low cultural dysfunctionality	Low cultural dysfunctionality	Moderate cultural dysfunctionality	High cultural dysfunctionality	Very high cultural dysfunctionality	
Government/ semi-government	14.00	28.00	25.00	6.00	1.00	74.00
Private	9.00	26.00	20.00	7.00	.00	62.00
NGO	2.00	6.00	2.00	.00	1.00	11.00
Any other	1.00	3.00	2.00	.00	.00	6.00
Total	26.00	63.00	49.00	13.00	2.00	153.00

A chi-square test of independence was performed to examine the relation between sectors the women managers work in and their opinion about the dysfunctionality in organisational culture. The relation between these variables was not significant, $X^2(24, N = 153) = 27.09, p < .0$. However, a different

picture emerges when organisational cultural dysfunctionality is seen across different industries in Table 3, where a relation between these variables is found to be significant, $X^2(48, N = 153) = 132.34, p < .01$.

Table 3: Cross-tabulation of industry working in versus composite score for dysfunctional organisational culture

Industry working in	Composite score for dysfunctional organisational culture					Total
	Very low cultural dysfunctionality	Low cultural dysfunctionality	Moderate cultural dysfunctionality	High cultural dysfunctionality	Very high cultural dysfunctionality	
Education	10.00	27.00	20.00	6.00	.00	63.00
Banking and finance	3.00	15.00	10.00	1.00	.00	29.00
Manufacturing	1.00	4.00	7.00	5.00	.00	17.00
Health services	6.00	2.00	6.00	1.00	.00	15.00
Marketing services	3.00	11.00	4.00	.00	1.00	19.00
Any other	3.00	4.00	2.00	.00	1.00	10.00
Total	26.00	63.00	49.00	13.00	2.00	153.00

Discussing the results of the sub factors of gender inequality we observe that dysfunctional organizational culture does not emerge as a very significant factor as only about 10% of the respondents experience high or very high dysfunctional organizational culture. The studies that come across in the literature review have indicated a strong presence of dysfunctional organizational culture but this may not be applicable to our area of study, Ajmer district, as a substantial number of respondents come from educational institutions and majority of them happen to be all-girls or all-women institutions.

executive jobs within the financial services industry of most developed countries. Women’s numbers and entry into senior management positions remain a major concern for banks in the developing countries (Charlesworth & Baird, 2007). This is so even when there is tremendous increase in the number of women joining the banking industry. Yet, most of these women are still clustered in clerical, teller, and support staff levels (Brizendine, 2008). The evidence is clear that just like in other countries, women’s share of the administrative and managerial positions is far less than that of their male counterparts in the banking industry. (Brizendine, 2008; Ndemo & Maina, 2007).

Table 2 depicts the relationship between organizational dysfunctionality and sector. It shows that there is not much of a difference when observed across different sectors. A possible reason for this kind of a trend could be that the respondents are working on the same kind of profile across all the sectors. However a significant relationship is established between organizational dysfunctionality and industry. Observing Table 3 we find that respondents in banking and finance, and manufacturing have indicated moderate to high presence of cultural dysfunctionality. Since these industries could be considered as being driven more by masculine values it can be said that women experience organizational dysfunctionality in these industries. To support the argument, we can quote the ILO (2007) report that stated that despite increased numbers at lower grades, women are not making breakthroughs to CEO and

3. Analysis of occupational segregation

Like dysfunctional organisational culture, occupational segregation too does not seem to be a determining contributor to gender inequality in organisations. Barely 10% of the women managers report experiencing high or very high occupational segregation while nearly two-thirds or 72% just feel low or very low occupational segregation.

Table 4: Cross-tabulation of sector working in versus composite score for occupational segregation

<i>Sector working in</i>	<i>Composite score for occupational segregation</i>					<i>Total</i>
	<i>Very low occupational segregation</i>	<i>Low occupational segregation</i>	<i>Moderate occupational segregation</i>	<i>High occupational segregation</i>	<i>Very high occupational segregation</i>	
<i>Government/semi-government</i>	27.00	23.00	15.00	6.00	3.00	74.00
<i>Private</i>	24.00	21.00	12.00	4.00	1.00	62.00
<i>NGO</i>	9.00	.00	1.00	1.00	.00	11.00
<i>Any other</i>	2.00	4.00	.00	.00	.00	6.00
<i>Total</i>	62.00	48.00	28.00	11.00	4.00	153.00

When occupational segregation is examined across sectors (Table 4) there again emerges no significant relation and the Chi-square analysis does not support the relationship, $X^2 (21, N = 153) = 18.09, p < .01$. When occupational segregation is examined across the various industries in which the women managers work in then a meaningful picture emerges as observed in Table 5. The Chi square analysis shows up a significant relationship in occupational segregation across different industries, $X^2 (42, N = 153) = 73.65, p < .01$. Research studies do indicate that there is a relation between occupational segregation and industry one works in. There are a lot of interesting researches on gender differences that have studied the correlation between these two factors. In one of the

studies by Jha & Tiwari (2011) they state that gender differences exist in terms of ability and inclination to do a particular kind of a job. Studies also reveal that there are significant differences among men and women in taking up the same kind of tasks. At the global level, Beyer & Bowden (1997) in their study also state that the most common hypotheses for the gender disparity are discrimination and gender differences in abilities and in preferences for types of jobs in certain industries. Behavioural perspectives suggest that women and men differ in their self-perception of ability in many domains. This means that there will be certain kinds of industries where women managers are likely to be found more suitable.

Table 5: Cross-tabulation of industry working in versus composite score for occupational segregation

<i>Industry working in</i>	<i>Composite score for occupational segregation</i>					<i>Total</i>
	<i>Very low occupational segregation</i>	<i>Low occupational segregation</i>	<i>Moderate occupational segregation</i>	<i>High occupational segregation</i>	<i>Very high occupational segregation</i>	
<i>Education</i>	30.00	24.00	5.00	3.00	1.00	63.00
<i>Banking and finance</i>	8.00	11.00	8.00	2.00	.00	29.00
<i>Manufacturing</i>	4.00	5.00	4.00	3.00	1.00	17.00
<i>Health services</i>	8.00	1.00	5.00	1.00	.00	15.00
<i>Marketing services</i>	7.00	5.00	5.00	2.00	.00	19.00
<i>Any other</i>	5.00	2.00	1.00	.00	2.00	10.00
<i>Total</i>	62.00	48.00	28.00	11.00	4.00	153.00

Previous researches in the area of gender inequality support the findings that there are stereotypes that women managers face at work. For instance, Khandelwal (2002) opines that stereotypes and perceptions of Indian women in the workplace appear to have had a significant negative impact on the position

of women managers. This study suggests that Indian male managers are viewed, stereotypically, as working in the areas of sales, marketing and production; being good leaders, decision makers and bosses; and handling challenging assignments. On the other hand, Indian women are viewed as working in PR, HR

and administrative positions at low to junior levels, and in fields such as fashion and beauty.

Maliye (2011) found occupational segregation in the managerial field. This occupational segregation is at the horizontal as well as vertical levels. She observed that that in the departments of personnel management and industrial relations, a majority of women managers performed the perceived 'soft' functions such as health, insurance, welfare and training while men were allotted the 'tough' job of managing industrial relations.

Elaborating further on occupational segregation an observation was made by Gupta et al., (1998). While liberalisation of the Indian economy has created considerable employment opportunities for many, including women, who possess marketable skills and talent, women are seen mainly in HR and Information Technology (IT) departments and servicing activities. Their presence in hardcore production or marketing is less than men's and still lower at strategic policy-influencing levels. This is despite claims that women in India have played significant roles in social organisations, politics and administration.

4. Analysis of sexual harassment at work

Sexual harassment at work is reported to be very low or low as a majority of women manager of about 69% feel highly or very highly protected from sexual harassment in their organisations. About 15% report moderate protection while about 16% sense that they have low or very low protection from sexual harassment. Even these low figures of a sense of not feeling protected from sexual harassment should be alarming as ideally there should not be any sense of fear on account of being subjected to sexual harassment at work.

A question of interest could be whether women managers' perception about sexual harassment could differ across sector or industry. When the differences are examined across different sectors (Table 6) there does not arise any significant differences as seen by the Chi square analysis, $X^2(12, N = 153) = 12.78, p < .01$. When the perception about sexual harassment at work is analysed across industries (Table 7), no significant differences shows up, $X^2(24, N = 153) = 22.97, p < .01$.

Table 6: Cross-tabulation of sector working in versus composite score for sexual harassment in organisation

<i>Sector working in</i>	<i>Composite score for sexual harassment in organisation</i>					<i>Total</i>
	<i>Very high protection from sexual harassment</i>	<i>High protection from sexual harassment</i>	<i>Moderate protection from sexual harassment</i>	<i>Low protection from sexual harassment</i>	<i>Very low protection from sexual harassment</i>	
<i>Government/semi-government</i>	41.00	7.00	16.00	4.00	6.00	74.00
<i>Private</i>	35.00	8.00	6.00	5.00	8.00	62.00
<i>NGO</i>	9.00	.00	.00	1.00	1.00	11.00
<i>Any other</i>	3.00	2.00	1.00	.00	.00	6.00
<i>Total</i>	88.00	17.00	23.00	10.00	15.00	153.00
	57.52%	11.11%	15.03%	6.54%	9.80%	100.00%

The third component of gender inequality is sexual harassment (also commonly referred to in India as 'eve-teasing'). There is no significant relationship of sexual harassment with sector and industry respectively. Approximately 16% of women managers have indicated that they face low protection from sexual harassment at work. To look at it as a percentage might be small but still it is a fact that cannot be not be ignored and suggests

that it does exist in some form and at some level. Another fact that has to be taken into account is the reluctance of women to accept or admit sexual harassment at the workplace for various reasons such as threat to employment. The research context Ajmer district is generally a conservative place with regard to sexual mores unlike bigger cities and women are likely to keep quiet.

Table 7: Cross tabulation of industry working in versus composite score for sexual harassment in organisation

<i>Industry working in</i>	<i>Composite score for sexual harassment in organisation</i>					<i>Total</i>
	<i>Very high protection from sexual harassment</i>	<i>High protection from sexual harassment</i>	<i>Moderate protection from sexual harassment</i>	<i>Low protection from sexual harassment</i>	<i>Very low protection from sexual harassment</i>	
<i>Education</i>	37.00	4.00	7.00	6.00	9.00	63.00
<i>Banking and finance</i>	13.00	7.00	8.00	1.00	.00	29.00
<i>Manufacturing</i>	9.00	2.00	3.00	1.00	2.00	17.00
<i>Health services</i>	8.00	2.00	3.00	1.00	1.00	15.00
<i>Marketing services</i>	15.00	1.00	1.00	1.00	1.00	19.00
<i>Any other</i>	6.00	1.00	1.00	.00	2.00	10.00
<i>Total</i>	88.00	17.00	23.00	10.00	15.00	153.00
	57.52%	11.11%	15.03%	6.54%	9.80%	100.00%

Another facet of the result is that the sample represents a majority of women working in institutions that may be female only ones. The results that indicate towards a low significance of sexual harassment as a component of gender inequality can be justified to an extent that the organizations where the respondents come have a majority of workers are women. The presence of other factors like corporate culture, late working hours, distances between the workplace and the home, that encourage this kind of a phenomenon in organizations is less prevalent in Ajmer district. Table 7 shows 17% & 15% respondents from manufacturing and health services. When talking about these industries the female doctors practice at home in the evenings and in the manufacturing sector the women have assistance of their husbands in this industry that might be keeping them safe from this phenomenon which is otherwise very much existent in organizations.

These results can be seen in conjunction with some other sources of reference such as the National Commission for Women survey of 1998 that said at least 50 per cent of working women alleged mental or physical harassment at the workplace. (NCW, 2005) Another survey published in November 2010 by the Centre for Transforming India found that more than 80 percent of the female employees of information

technology and business process outsourcing companies had been subjected to some form of workplace sexual harassment. (Dhar, 2010) Compared to these high figures, the present research study finds a very low percentage of women reporting low protection from sexual harassment. In fact, the percentage of women reporting high protection from sexual harassment is encouragingly very high and high at 69 per cent.

5. Analysis of pay differential

A majority of women managers of about 86% in the survey reportedly suffer a high to very high level of pay differential as compared to their male colleagues doing similar work. Thus, pay differential rather than dysfunctional organisational culture, occupational segregation or sexual harassment at work seems to be the cause of gender inequality in organisations.

Pay differential also seems to be felt uniformly across the sectors (Table 8) that the women managers work in. Notably, in the NGO sector, the pay differential seems to be the highest with all 11 respondents experiencing very high pay differential. However, a Chi-square analysis does not yield statistically significant differences in pay differential across different sectors, $X^2(6, N = 153) = 14.80, p < .01$.

Table 8: Cross tabulation of sector working in versus composite score for pay differential

<i>Sector working in</i>	<i>Composite score for pay differential</i>			<i>Total</i>
	<i>Moderate pay differential</i>	<i>High pay differential</i>	<i>Very high pay differential</i>	
<i>Government/semi-government</i>	10.00	20.00	44.00	74.00
<i>Private</i>	9.00	23.00	30.00	62.00
<i>NGO</i>	.00	.00	11.00	11.00
<i>Any other</i>	2.00	3.00	1.00	6.00
<i>Total</i>	21.00	46.00	86.00	153.00

Pay Differential may have been expected across different industries (Table 9) such as banking and finance or manufacturing but the analysis does not show up any significant differences, as the Chi square analysis demonstrates, that there is any significant relationship in the pay differential experienced

across different industries the women managers work in, $\chi^2 (12, N = 153) = 12.50, p < .01$. There seems to be uniform sentiment among women managers across industries that pay differential indeed exists.

Table 9: Cross-tabulation of industry working in versus composite score for pay differential

<i>Industry working in</i>	<i>Composite score for pay differential</i>			<i>Total</i>
	<i>Moderate pay differential</i>	<i>High pay differential</i>	<i>Very high pay differential</i>	
<i>Education</i>	6.00	23.00	34.00	63.00
<i>Banking and finance</i>	7.00	10.00	12.00	29.00
<i>Manufacturing</i>	4.00	4.00	9.00	17.00
<i>Health services</i>	1.00	4.00	10.00	15.00
<i>Marketing services</i>	3.00	3.00	13.00	19.00
<i>Any other</i>	.00	2.00	8.00	10.00
<i>Total</i>	21.00	46.00	86.00	153.00

The existence of a differential payment between men and women is taken as a universal phenomenon in almost all countries regardless of the nature and structure of the economic systems. Pay differential is one component of gender inequality that has a lot of research work to its credit. Literature on women managers notes pay differentials based on gender, as well as employment inequity in terms of opportunities for higher earnings in future. There is also linkage between pay differential and occupational segregation as women managers tend to be concentrated in occupations that minimise their chances of having managerial authority and job autonomy thus preventing them from reaching positions that pay well.

The last component of gender inequality i.e. pay differential attracted the maximum attention among the participants. As observed almost 86% of the respondents have indicated that there does exist high to very high pay differential. The cross

tabulation analysis does not establish any significant relationship between the sector and industry as is evident in Table 8 and 9 respectively indicating that the sentiment of feeling aggrieved at being discriminated against in terms of pay is more or less even and widespread among the respondents in the sample.

The study by Sinha & Prabha (1998) makes an interesting insight into the kinds of gender differences that prevail in organizations. The restrictions imposed on working women were found to be more pronounced in white collar jobs. The issue of gender inequality is also prevalent in the form of promotion of women managers to higher positions in organisation, as well as being paid lesser than their male counterparts. A study by Nath (2000) stated that many firms had a gender-free performance management and reward structure, still many women interviewees reported that they

had to work very hard to prove their worth. Their personal drive to achieve and build on their strengths along with their ability to adapt to the environment and stay focused played an important role in their success. Many studies have confirmed the fact that women have to work more than men for the same amount of credit received and to prove their worth. The social stereotypes, gendered role expectations, individual prejudices and social forces which promote the image of women as secondary to that of men also discourage women to aspire for top positions limiting their chances of higher earnings. Several studies have noted the widening gap between pay for men and women in India despite globalisation and market reforms (see for example, Reilly & Dutta, 2005 and Menon, 2008).

Practical implications of the study

Based on the research study, certain practical implications for women managers as well as the organisations they work in could be stated as below.

Fostering gender equality by women managers

- Women managers should make conscious efforts to sensitize themselves and others to treat gender differences as natural.
- Women managers should not expect and also discourage receiving favour and preference at workplace because of their gender.
- Women managers should be conscious about their legal rights and should always insist on being treated fairly as the situation demands.
- A professional forum should be made where women managers can register themselves, organize as a group and share their personal and professional experiences.

Fostering gender equality in the organization

- Organisations need to continually monitor their policies and practices to ensure they are free of gender bias.
- Organisations need to have affirmative policies in recruitment and selection of personnel providing fair access to prospective women managers at all levels.
- There could be regular monitoring to ensure adequate participation of women managers in training programmes and access to mentorship.
- Sensitivity training of employees can go a long way in ensuring gender equality within organisations and helping develop empathy towards women managers.
- Organisations need to strictly adhere to current laws, regulations, norms and practices in ensuring that sexual harassment does not occur at workplace and if it does then action is taken to bring offenders to book.

Limitations of the study

The results of the study are based on data collected through a survey questionnaire. Essentially, responding to a questionnaire is self-reporting and the credibility of the findings depends entirely on the way respondents prefer to self-report their experiences. Secondly, the sampling of the study was essentially convenience and thus the research findings are based on 'what respondents were available to answer the survey'. The researcher has however made all efforts to include other means such as purposive, judgemental, snowballing and quota sampling so as to ensure objectivity as far as possible.

Thirdly, the reliability of two study variables of gender inequality and glass ceiling effect in the questionnaire turned out to be on the lower side affecting the confidence that one could have on the findings emerging out of the analysis based on those responses. Finally, there could be unintended, in-built bias in the present study. The study is on women, done by a woman, and data were collected by women. Most of the references quoted incidentally are also from writings by women.

Directions for Future Research

Research interest in women in management in Indian context has yet to pick up. There are but a few academic research projects reported in women in management studies. Our literature review noted that these are mostly in the area of entrepreneurship, management, human resource management, and marketing. This is a clear indication that research in Indian context has yet to move up from the exploratory level.

Four broad issues identified under gender inequality namely, dysfunctional organisational culture, occupational segregation, sexual harassment at work and pay differential could be major areas for research. Gender inequality in business organisations in the western Indian states, gender inequality in rural-based non-governmental organisations in India, gender inequality in public sector enterprise are some of the examples of topics that can be researched in this area.

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The governance of financial regulation: reform lessons from the recent crisis

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Abstract

There was a systemic failure of financial regulation: senior policymakers repeatedly enacted and implemented policies that destabilised the global financial system. They maintained these policies even as they learned of the consequences of their policies during the decade before the crisis. The crisis does not primarily reflect an absence of regulatory power, unclear lines of regulatory authority, capital account imbalances, or a lack of information by regulators. Rather, it represents the unwillingness of the policy apparatus to adapt to a dynamic, innovating financial system. A new institution is proposed to improve the design, implementation and modification of financial regulations.

Keywords: financial institutions, regulation, policy, financial crisis

Introduction

The first objective of this paper is to document that the collapse of the global financial system reflects a systemic failure of the governance of financial regulation - the system associated with designing, enacting, implementing and reforming financial policies. Senior policymakers repeatedly designed, implemented - and most importantly - maintained policies that destabilised the global financial system. They maintained these policies even as the regulatory authorities acquired information that their policies were increasing financial system fragility. Moreover, the authorities acquired this information during the decade before the crisis, when they had ample time to adjust their policies under relatively calm conditions. Yet, financial policymakers did not adjust, advertising weaknesses in the underlying governance of financial regulation.

In contrast to common narratives, my analyses, and those of Barth, Caprio, and Levine (2011), indicate that the crisis does

not only reflect unsustainable global macroeconomic imbalances, the proliferation of toxic financial instruments, a lack of supervisory power, and unclear lines of regulatory authority. These factors played a role, but only a partial role. Rather, bad policy choices created perverse incentives that encouraged financial institutions to take excessive risk and divert society's savings toward unproductive ends. Failures in the governance of financial regulation helped cause the global financial crisis.

In documenting deficiencies in the financial regulatory system, I stress the fatal inconsistency between a dynamic financial sector and a regulatory system that failed to adapt appropriately to financial innovation. Financial innovations, such as securitization, collateralized debt obligations, and credit default swaps, could have had primarily positive effects on the lives of most citizens. Yet, the inability, or unwillingness, of the governance apparatus overseeing financial regulation to adapt to changing conditions allowed these financial innovations to

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metastasise and ruin the financial system. A better functioning system for establishing financial policies could have captured the benefits, while avoiding the pain, associated with these new financial tools.

This conclusion - that systemic governance failures contributed to the crisis - has material implications for reforming financial regulation. There are several policy proposals to increase the power of financial regulatory agencies, reduce regulatory gaps, develop better crisis management tools, and consolidate the regulation of all systemically important institutions in the hands of a single entity. Yet, if technical glitches and regulatory gaps played only a partial role in fostering the crisis, then these proposed reforms represent only partial and thus incomplete steps in establishing a sound financial system. This is not an argument against the reforms that have been proposed and adopted. It is an argument for improving the governance of financial regulation. It is an argument for creating institutions that promote transparency, timely and informed debate, and hence the implementation of socially beneficial policies.

The second objective of the paper is to propose a new institution, which I label the "Sentinel," to act as the public's sentry over financial policies and thereby improve the governance of financial regulation. Its sole power would be to demand any information necessary for evaluating the state of financial regulation. Its sole responsibility would be to continuously assess and comment on financial policies, delivering a formal report to the legislative and executive branches of government annually. Critically, and uniquely, the Sentinel would be both politically independent and independent of financial markets. Senior members would be appointed for staggered terms to limit political influence. To shield it from market influences, senior staff would be prohibited from receiving compensation from the financial sector after completing public services for a timely period. The goal is to create an institution in which the personal motives, ambitions, and prestige of its employees are inextricably connected to accurately assessing the impact of financial regulations on the public.

The Sentinel would improve the entire apparatus for writing, enacting, adapting and implementing financial regulations. As an extra group of informed, prying eyes, it would reduce the ability of regulators to obfuscate regulatory actions and would instead make regulators more accountable for the societal repercussions of their actions. As an additional group of experts reviewing and reporting on financial regulations, it would reduce the probability and costliness of regulatory mistakes and supervisory failures. As a prominent institution, the Sentinel's reports to legislators would help reduce the influence of special

interests on the public's representatives. As an entity whose sole objective is to evaluate the state of financial regulation from the perspective of the public, it would help inform the public and thereby augment public influence over financial regulation.

Given the existing myriad of regulatory agencies, quasi-regulatory bodies, and other oversight entities, do we really need another regulatory institution? Yes. No other existing entity currently has the incentives, power, or capabilities to perform the role of a public sentry over the full constellation of financial sector policies.

First and foremost, unlike any existing institution, the Sentinel would be independent of both political and market influences. Incentives matter in regulation too. In capitals around the world, lobbyists shape legislation and the revolving door between industry and regulatory agencies spins rapidly. While there are good reasons for having highly skilled individuals with private sector expertise help in regulating the financial sector, there are equally good reasons for worrying about conflicts of interest.

Second, no existing entity has the prominence, information and expertise to challenge major regulatory agencies on financial policy matters. A monopoly on regulatory power and information is dangerous. Such a monopoly is particularly dangerous when it is housed in a central bank or other entity that is designed to be independent of the public and elected representatives. A monopoly on financial information, regulatory expertise, and regulatory power in the hands of publicly unaccountable officials breaks the democratic lines of influence running from the public to the design and execution of policies that determine the allocation of capital. The Sentinel would shine an illuminating, and potentially disinfecting, light on the financial system that would enhance the governance of financial regulation. Moreover, although the Sentinel would not set any policy, it would provide an objective, independent assessment of policy. This would have been enormously valuable during the decade-long series of policy gaffes that contributed to the current crisis.

While no panacea, the Sentinel would improve the regulatory apparatus. We face the complex, and consequential, challenge of creating a regulatory regime that adapts to incentivize financiers to provide the financial services necessary for economic growth. Incorporating the voice of a "Sentinel" would help.

Systemic Policy Failures

Introduction

In this section, I argue that the collapse of the global financial system was partially caused by a systemic failure of financial regulation. To make this case, I focus on four policy failures. Though these examples focus on the United States, they have clear international connections. It should be remembered that while the bulk of toxic assets were made in the USA, financial institutions around the world readily purchased them, abetted by systemic regulatory failures in their home countries. Moreover, although I choose four policies, there are many examples that illustrate how financial regulators, with frequent help from their political overseers, did not act in the long-term interests of the public. Barth, Caprio and Levine (2011) provide both more examples from the United States and from around the world in a book-length treatment of these themes. But, since the major objective of this paper is to recommend changes in the institutions associated with governing financial regulations, I keep this section brief.

The credit rating agencies

As a first example of how regulatory actions - and inaction - helped trigger the crisis, consider credit rating agencies, which were central participants in the global financial crisis. To appreciate their role, consider the securitisation of mortgages. Mortgage companies routinely provided loans to borrowers with little ability to repay those debts because (i) they earned fees for each loan and (ii) they could sell those loans to investment banks and other financial institutions. Investment banks and other financial institutions gobbled up those mortgages because (i) they earned fees for packaging the mortgages into new securities and (ii) they could sell those new mortgage-backed securities (MBS) to other financial institutions, including banks, insurance companies and pension funds, around the world. These other financial institutions bought the MBS because credit rating agencies said they were safe. By fuelling the demand for MBS and related securities, credit rating agencies encouraged a broad array of financial institutions to make the poor investments that ultimately toppled the global financial system. Thus, an informed post-mortem of the financial system requires a dissection of why financial institutions relied on the assessments of credit rating agencies.

How did credit rating agencies become so pivotal? Until the 1970s, credit rating agencies were insignificant institutions that sold their assessments of credit risk to subscribers. Now, it is virtually impossible for a firm to issue a security without first purchasing a rating.

In 1975, the US Securities and Exchange Commission created the Nationally Recognized Statistical Rating Organisation (NRSRO) designation, which it granted to the largest credit rating agencies. The SEC then relied on the NRSRO's credit risk assessment in establishing capital requirements on SEC-regulated financial institutions.

The creation of - and reliance on - NRSROs by the SEC triggered a global cascade of regulatory decisions that increased the demand for their credit ratings. Bank regulators, insurance regulators, federal, state, and local agencies, foundations, endowments and numerous entities around the world all started using NRSRO ratings to establish capital adequacy and portfolio guidelines. Furthermore, given the reliance by prominent regulatory agencies on NRSRO ratings, private endowments, foundations and mutual funds also used their ratings in setting asset allocation guidelines for their investment managers.

Unsurprisingly, NRSROs shifted from selling their credit ratings to subscribers to selling their ratings to the issuers of securities. Since regulators, official agencies, and private institutions around the world relied on NRSRO ratings, virtually every issuer of securities was compelled to purchase an NRSRO rating if it wanted a large market for its securities.

There are well known conflicts of interest associated with credit rating agencies selling their ratings to the issuers of securities. Issuers have an interest in paying rating agencies more for higher ratings since those ratings influence the demand for and hence the pricing of securities.

Nevertheless, credit rating agencies convinced regulators that reputational capital reduces the pernicious incentive to sell better ratings. If a rating agency does not provide sound, objective assessments of a security, the agency will experience damage to its reputation with consequential ramifications for its long-run profits. Purchasers of securities will reduce their reliance on this agency, which will reduce demand for all securities rated by the agency. As a result, issuers will reduce their demand for the services provided by that agency, reducing the agency's future profits. From this perspective, reputational capital is vital for the long-run profitability of credit rating agencies and will therefore contain any short-run conflicts of interest associated with "selling" a superior rating on any particular security.

Reputational capital will reduce conflicts of interest, however, only under particular conditions. First, the demand for securities must respond to poor rating agency performance, so that decision-makers at rating agencies are punished for issuing

bloated ratings on even a few securities. Second, decision-makers at rating agencies must have a sufficiently long-run profit horizon, so that the long-run costs to the decision-maker from harming the agency's reputation outweigh the short-run benefits from selling a bloated rating.

These conditions do not hold, however. First, regulations weaken the degree to which a decline in the reputation of a credit rating agency reduced demand for its services. Specifically, regulations induce the vast majority of the buyers of securities to use NRSRO ratings in selecting assets. These regulations hold regardless of NRSRO performance, which moderates the degree to which poor ratings performance reduces the demand for NRSRO services. Such regulations mitigate the positive relation between rating agency performance and profitability. Second, financial innovation in the form of securitization dramatically changed the incentives of decision makers at credit rating agencies, inducing them to sell bloated ratings at the expense of a loss in the long-run reputation of the agency.

The explosive growth of securitized and structured financial products from the late 1990s dramatically intensified the conflicts of interest problem. Securitization and structuring involve the packaging and rating of trillions of dollars worth of new financial instruments. Huge fees associated with processing these securities flowed to banks and NRSROs. Impediments to this securitization and structuring process, such as the issuance of low credit ratings on the securities, would have gummed up the system, reducing rating agency profits. In fact, the NRSROs started selling ancillary consulting services to facilitate the processing of securitized instruments, increasing NRSRO incentives to exaggerate ratings on structured products. Besides purchasing ratings from the NRSROs, the banks associated with creating structured financial products would first pay the rating agencies for guidance on how to package the securities to get high ratings and then pay the rating agencies to rate the resultant products.

By the early 2000s, it was well known that the boom in securitization was encouraging credit rating agencies to inflate their ratings for huge profits. Moreover, regulators had seen the accounting debacle of 2001–02, when corporations paid accounting firms both to structure and then to audit financial statements. So, when banks started paying the NRSROs both to structure and then to rate securities, this should have been a grim – and familiar – warning. The short-run profits associated with greasing the flow of structured products with optimistic ratings were mind-bogglingly large and made the future losses from the inevitable loss of reputational capital irrelevant. For example, the operating margin at Moody's between 2000 and 2007 averaged 53%. This compares to operating margins of 36%

and 30% at Microsoft and Google, or 17% at Exxon. It was good to be an NRSRO.

But the global regulatory community did not respond to these well publicised developments. Regulatory agencies around the world protected NRSROs by continuing to rely on their ratings. While the global financial crisis does not have a single cause, the behaviour of the credit rating agencies is a defining characteristic, and it is difficult to imagine the behaviour of the credit rating agencies without the regulations that created and protected those agencies.

Credit default swaps and bank capital

Next, consider the role of complex derivative contracts, including credit default swaps. A credit default swap (CDS) is an insurance-like contract written on the performance of a security or bundle of securities. For example, purchaser A buys a CDS from issuer B on security C. If security C has a predefined "credit-related event," such as missing an interest payment, receiving a credit downgrade or filing for bankruptcy, then issuer B pays purchaser A. While having insurance-like qualities, CDS are not formally insurance contracts. Neither the purchaser nor the issuer of the CDS needs to hold the underlying security, leading to the frequently used analogy that CDS are like buying fire insurance on your neighbour's house. Moreover, since CDS are not insurance contracts, they are not regulated as tightly as insurance products. CDS are financial derivatives that are transacted in unregulated, over-the-counter (OTC) markets.

In principle, banks can use credit default swaps to reduce both their exposure to credit risk and the amount of capital held against potential losses. For example, if a bank purchases a CDS on a loan, this can reduce its credit risk: if the loan defaults, the counterparty to the CDS will compensate the bank for the loss. If the bank's regulator concludes that the counterparty to the CDS will actually pay the bank if the loan defaults, then the regulator typically allows the bank to reallocate capital to higher-expected return, higher-risk assets.

The Fed made a momentous decision in 1996: it permitted banks to use CDS to reduce capital reserves (Tett, 2009, p 49). Regulators treated securities guaranteed by a seller of CDS as having the risk level of the seller – or more accurately, the counterparty - of the CDS. For example, a bank purchasing full CDS protection from American International Group (AIG) on collateralized debt obligations (CDOs) linked to subprime loans would have those CDOs treated as AAA securities for capital regulatory purposes because AIG had an AAA rating from an NRSRO, ie from an SEC-approved credit rating agency.

In the light of this decision, banks used CDS to reduce capital and invest in more lucrative, albeit more risky, assets. For

example, a bank with a typical portfolio of \$10 billion of commercial loans could reduce its capital reserves against these assets from about \$800 million to under \$200 million by purchasing CDS for a small fee (Tett, 2009, p 64).

The CDS market boomed following the Fed decision. By 2007, the largest US commercial banks had purchased \$7.9 trillion in CDS protection, and, at a broader level, the overall CDS market reached a notional value of \$62 trillion in 2007 according to Barth et al (2009).

There were, however, serious problems associated with allowing banks to reduce their capital via CDS. Given the active trading of CDS, it was sometimes difficult to identify the actual counterparty legally responsible for compensating a bank if an “insured” security failed. Furthermore, some bank counterparties developed massive exposures to CDS risk. For example, AIG had a notional exposure of about \$500 billion to CDS (and related derivatives) in 2007, while having a capital base of about \$100 billion to cover all its traditional insurance activities as well as its financial derivatives business. The growing exposure of AIG and other issuers of CDS should have – and did – raise concerns about their ability to satisfy their obligations in times of economic stress.

The Fed was aware of the growing danger to the safety and soundness of the banking system from CDS. For instance, Tett (2009, pp 157–163) recounts how Timothy Geithner, then President of the New York Federal Reserve Bank, became concerned in 2004 about the lack of information on CDS and the growing counterparty risk facing banks. Barth et al (2009) demonstrates through the use of internal Fed documents that it knew by 2004 of the growing problems associated with subprime mortgage-related assets, on which many CDS were written. Indeed, the FBI publicly warned in 2004 of an epidemic of fraud in subprime lending. In terms of the sellers of CDS, detailed accounts by Lewis (2009) and McDonald (2009) illustrate the Fed’s awareness by 2006 of AIG’s growing fragility and the corresponding exposure of commercial banks to CDS counterparty risk.

Yet, even more momentously than the original decision allowing banks to reduce their capital reserves through the use of CDS, the Fed did not adjust its policies as it learned of the growing fragility of the banking system due to the mushrooming use of increasingly suspect CDS.

The key question is why the Fed maintained its capital regulations. Bank purchases of CDS boomed immediately after the 1996 regulatory decision allowing a reduction in bank capital from the purchase of CDS. Why didn’t the Fed respond by demanding greater transparency before granting capital

relief and conducting its own assessment of the counterparty risks facing the systemically important banks under its supervision? Why didn’t the Fed adjust in 2004 as it learned of the opaque nature of the CDS market and as the FBI warned of the fraudulent practices associated with the issuance of the subprime mortgages underlying many CDS securities, or in 2006 as information became available about the fragility of AIG, or in 2007 when hedge funds warned the Fed, the Treasury and G8 delegates about the growing fragility of commercial banks (Tett, 2009, pp 160–3)? Why didn’t the Fed prohibit banks from reducing regulatory capital via CDS until the Fed had confidence in the financial viability of those selling CDS to banks?

The Fed’s decision to maintain its regulatory stance toward CDS was neither a failure of information nor a shortage of regulatory power. Based on a review of internal Fed documents, Barth et al (2009, p 184) note that “even if the top officials from these regulatory agencies did not appreciate or wish to act earlier on the information they had, their subordinates apparently fully understood and appreciated the growing magnitude of the problem.” And, even in 2004, the Fed issued Interpretive Letter 998 that reiterated its capital regulatory policy with respect to CDS. To more comprehensively reform the financial regulatory system, we need to examine why these types of decisions were made and undertake institutional reforms to make these systemic mistakes less likely.

Transparency vs the FED, SEC and Treasury

As a third example, consider how powerful regulators and policymakers thwarted efforts to make the CDS market more transparent. The Fed (under Alan Greenspan), the Treasury (under Robert Rubin and then Larry Summers), and the SEC (under Arthur Levitt) squashed attempts at the end of the 1990s by Brooksley Born of the Commodity Future Trading Commission (CFTC) to shed light on the multi-trillion dollar OTC derivatives market, which included credit default swaps.

Incidents of fraud, manipulation and failure in the OTC derivatives market began as early as 1994, with the sensational bankruptcy of Orange County and court cases involving Gibson Greeting Cards and Procter & Gamble against Bankers Trust. Numerous problems, associated with bankers exploiting unsophisticated school districts and municipalities, plagued the market. Further, OTC derivatives played a dominant role in the dramatic failure of Long-Term Capital Management (LTCM) in the summer of 1998. Indeed, no regulatory agency had any warning of LTCM’s demise, or the potential systemic implications of its failure, because it traded primarily in this opaque market.

In the light of these problems and the lack of information on the multi-hundred-trillion dollar OTC derivatives market, the CFTC

issued a “concept release” report in 1998 calling for greater transparency of OTC derivatives. The CFTC sought greater information disclosure, improvements in record keeping, and controls on fraud. The CFTC did not call for draconian controls on the derivatives market; it called for more transparency.

The response by the Fed, Treasury and SEC was swift: they stopped the CFTC. First, they obtained a six-month moratorium on the CFTC’s ability to implement the strategies outlined in its concept release. Second, the President’s Working Group on Financial Markets, which consists of the Secretary of the Treasury, the Chairman of the Board of Governors of the Federal Reserve System, the Chairman of the SEC, and the Chairman of the CFTC, initiated a study of the OTC derivatives market. Finally, they helped convince Congress to pass the Commodity Futures Modernization Act of 2000, which exempted the OTC derivatives market and hence the CDS market – from government oversight.

Senior regulators and policymakers lobbied hard to keep CDS and other derivatives in opaque markets. A comprehensive assessment of the causes of the crisis must evaluate why policymakers made choices like this. Indeed, Nick Timiraos and James R. Hagerty argued in

The Wall Street Journal on 9 February 2010,

“Nearly a year and half after the outbreak of the global economic crisis, many of the problems that contributed to it haven’t been tamed. The U.S. has no system in place to tackle a failure of its largest financial institutions. Derivatives contracts of the kind that crippled American International Group Inc. still trade in the shadows. And investors remain heavily reliant on the same credit-ratings firms that gave AAA ratings to lousy mortgage securities.”

Investment bank capital, risk-taking and the SEC

As a final example, consider the SEC’s oversight - or lack thereof - of the five major investment banks, all of which experienced major “transformations” in 2008. Only a few days after the SEC Chairman expressed confidence in the financial soundness of the investment banks, a failed Bear Stearns merged with the commercial bank JP Morgan Chase. Six months later, Lehman Brothers went bankrupt, and a few months later, at the brink of insolvency, Merrill Lynch merged with Bank of America. In the autumn of 2008, Goldman Sachs and Morgan Stanley were “pressured” into becoming bank holding companies by the Fed and arguably rescued from failure through an assortment of public programs.

The SEC’s fingerprints are indelibly imprinted on this debacle, as reflected in three interrelated SEC decisions. First, the SEC in

2004 essentially exempted the broker-dealers of the five largest investment banks from using the traditional method for computing capital in satisfying the net capital rule, which was a 1975 rule for computing minimum capital standards at broker-dealers. The investment banks were permitted to use their own mathematical models of asset and portfolio risk to compute appropriate capital levels. The investment banks responded by issuing more debt to purchase more risky securities without putting commensurately more of their own capital at risk. Leverage ratios soared from their 2004 levels, as the bank’s models indicated that they had sufficient capital cushions.

In a second, coordinated 2004 policy change, the SEC enacted a rule that induced the five investment banks to become “consolidated supervised entities” (CSEs): the SEC would oversee the entire financial firm. Specifically, the SEC now had responsibility for supervising the holding company, broker-dealer affiliates and all other affiliates on a consolidated basis. These other affiliates include other regulated entities, such as foreign-registered broker-dealers and banks, as well as unregulated entities such as derivatives dealers (Colby, 2007). The SEC was charged with evaluating the models employed by the broker-dealers in computing appropriate capital levels and assessing the overall stability of the consolidated investment bank. Given the size and complexity of these financial conglomerates, overseeing the CSEs was a systemically important and difficult responsibility.

Third, the SEC neutered its ability to conduct consolidated supervision of major investment banks. With the elimination of the net capital rule and the added complexity of consolidated supervision, the SEC’s head of market regulation, Annette Nazareth, promised to hire highly skilled supervisors to assess the riskiness of investment banking activities. But the SEC didn’t. In fact, the SEC had only seven people to examine the parent companies of the investment banks, which controlled over \$4 trillion in assets. Under Christopher Cox, who became chairman in 2005, the SEC eliminated the risk management office and failed to complete a single inspection of a major investment bank in the year and a half before the collapse of those banks (Labaton, 2008). Cox also weakened the Enforcement Division’s freedom to impose fines on financial firms under its jurisdiction.

In easing the net capital rule, adopting a system of consolidated supervision, but failing to develop the capabilities to supervise large financial conglomerates, the SEC became wilfully blind to excessive risk-taking. The SEC purposely eliminated supervisory guardrails, while simultaneously arguing to Congress in 2007, and hence to global financial markets, that it had a “successful consolidated supervision program”. (See the SEC Deputy Director’s testimony before the US House of

Representatives Financial Services Committee, 25 April 2007, [http://www.sec.gov/news/testimony/2007/ts042507rc .htm.](http://www.sec.gov/news/testimony/2007/ts042507rc.htm)) This forceful statement by the SEC provided these major investment banks with an official stamp of approval, weakening market monitoring of these enormously complex and highly leveraged conglomerates. These policy choices point inexorably toward the SEC as an accomplice in causing the global financial crisis.

Final points on systemic policy failures

In example after example, the financial regulatory authorities:

- (i) were aware of the problems associated with their policies,
- (ii) had ample power to fix the problems, and
- (iii) chose not to.

As noted by Senator Carl Levin, “The recent financial crisis was not a natural disaster; it was a man-made economic assault. It will happen again unless we change the rules.”

The Financial Regulatory Commission: the “Sentinel”

Preamble

In the light of the evidence presented above, I sketch a proposal for a Sentinel to improve regulatory governance: the system for selecting, interpreting, and implementing and adapting regulations. One might accept the desirability of rethinking the governance of financial regulation and yet reject the specific Sentinel proposal. I simply offer the Sentinel as one potential strategy for improving the governance of financial regulation. Furthermore, in describing the Sentinel, I do not address a range of key questions, such as (i) which are the right regulations for achieving desirable outcomes, such as stability and growth and (ii) what are the right trade-offs among these potentially competing outcomes? Rather, the goal of the Sentinel is to improve the process through which these decisions are made. Finally, I sketch the Sentinel from the perspective of somebody most familiar with the institutional contours of the United States. While many of the general principles – such as transparency and checks and balances – translate to other political and cultural contexts, some elements will not. I emphasise key attributes of the Sentinel that are crucial to its proper functioning.

The Sentinel

The only power of the Sentinel would be to acquire any information that it deems necessary for evaluating the state of financial regulation over time, including the rules associated with the corporate governance of financial institutions. Any information collected by the Sentinel would be made publicly available, potentially with some delay. Transparency is

necessary; thus, the law establishing the Sentinel must clearly and unambiguously assert that the Sentinel should be granted immediate and unencumbered access to any information it deems appropriate from any and all regulatory authorities and financial institutions. Sentinel demands for information must trump the desires of regulatory agencies for discretion, secrecy and confidentiality. This “sunshine” regulatory approach has a long and promising history, as discussed in McCraw’s (1984) impressive book. This approach is also fully consistent with the notion of checks and balances incorporated into the political philosophies of several countries. In other words, the basic power of the Sentinel is quite conventional, not radical.

The only responsibility of the Sentinel would be to deliver an annual report to the legislative and executive branches of government assessing the current and long-run impact on the public of financial regulatory and supervisory rules and practices. The Sentinel would have no official power over the central bank, the regulatory agencies, or financial markets and institutions. To emphasise this point, the Sentinel would not affect the power and responsibilities of the central bank or financial regulatory agencies. But, the Sentinel would have broad responsibilities for assessing the impact of the overall constellation of regulatory and supervisory practices on the financial system, not just the impact of a single regulatory agency. The Sentinel would look across all segments of the financial system, from banks and securities markets, to derivatives and rating agencies, to insurance companies and executive compensation etc, and produce a detailed evaluation of the functioning of the entire financial policy apparatus.

The major design challenges are to create a Sentinel that is (i) politically independent, (ii) independent of financial markets, and (iii) sufficiently staffed so that it can deliver a message to a nation’s policymakers, with sufficient prominence and prestige to ensure that it is not ignored. These are the essential ingredients. While elected officials should ultimately set public policies, creating a Sentinel that is independent of narrow political and market influences would help in providing impartial, expert advice to politicians and the public. The goal is to create an institution in which the professional ambitions and personal goals of its staff are aligned with its mission of boosting the degree to which financial regulations reflect the public interest. Given this goal and the Sentinel’s responsibility of examining the complete financial system, it must have the staff and resources to deliver on these ambitious goals and responsibilities. While the objectives are the same, the precise organisational mechanisms for achieving such a Sentinel will necessarily differ across countries.

Here are a few design suggestions, using the United States as a point of reference. First, the most senior members of the Sentinel would be appointed by the President and confirmed by the Senate for staggered and appropriately long terms. As with the Board of Governors of the Federal Reserve System, the goal is to limit the short-term influence of politics on the evaluations of the Sentinel. Second, the senior members of the Sentinel would also be prohibited from receiving compensation from the financial services industry, even after completing their tenure at the Sentinel. Third, Sentinel salaries would have to be market-based and the Sentinel would have to be large, including financial economists, lawyers, experts with supervisory experience, and – critically – senior professionals with private financial market experience. Since exactly those individuals with sufficient expertise to achieve the goals of the Sentinel would also have lucrative opportunities in the private sector, staffing the Sentinel with sufficiently talented, motivated individuals will require a different compensation schedule than currently contemplated in public sector jobs. While problematic, a more lucrative compensation plan is necessary for limiting conflicts of interest while attracting excellent people to the Sentinel. At the same time, the Sentinel would be a prominent entity. Those working for the Sentinel could achieve a wide-array of professional ambitions and attain considerable prestige and influence by accurately assessing financial regulations. The opportunity to improve financial sector policies and achieve these career aspirations would work to attract talented individuals to the Sentinel.

Impact and desirability of the Sentinel

The Sentinel would materially enhance the governance of financial regulation along several dimensions. At the most general level, creating an independent Sentinel with an informed and expert staff would enhance the analysis and review of financial policies, improve the design and implementation of those policies, and increase the probability that governments would select financial policies that promote the interests of the public at large, not only the special interests of a few. While the Sentinel would neither eliminate crises nor perfect financial system operations, it would improve the functioning of financial markets, lower the likelihood of systemic crises, and reduce the severity of future crises. It would accomplish these goals in several ways.

First, the Sentinel would have the power to demand information, the expertise to evaluate that information, and both the prominence and independence to make its judgments heard. It would be difficult for policymakers and the public to ignore the Sentinel's views. While regulators and others could refute the Sentinel's analyses and persuade policymakers to reject its recommendations, the Sentinel would provoke an informed debate.

By breaking the monopoly that regulatory authorities too frequently have over information and expertise, the Sentinel would enhance the analysis – and hence the design – of financial policies. Just as monopoly breeds inefficiencies in production, a monopoly on financial market and regulatory information by regulatory agencies breeds inefficiencies in the governance of financial policies. If the public and its representatives do not have the information and expertise to assess and challenge the decisions of the regulatory agencies, then this will hinder the effective design, implementation and modification of financial sector policies. For example, while the Fed was aware of the destabilising effects of its capital policies many years before the onset of the crisis, the public, Congress and the Treasury would have found it difficult to obtain this information and discuss alternative policies with the Fed. A Sentinel would have reduced the probability that US regulatory authorities would make the types of systematic mistakes over many years that helped trigger the 2008 global financial crisis.

Critically, although the Sentinel would eliminate the monopoly by regulatory agencies on information and expertise, it would not limit the de jure power of these regulatory agencies. The Sentinel would force the regulators to defend their analyses, decisions and actions, but it would not create another agency with regulatory power. The Sentinel would promote transparency and informed debate, but it would not diminish the role or responsibilities of existing regulatory agencies in promoting the safety and soundness of the financial system.

Second, in creating an informed, expert institution that is both independent of short-run political forces and independent of the private profit motives of financial markets, the Sentinel would push the policy debate toward focusing on the general welfare of the public and away from the narrow interests of the powerful and wealthy.

This cannot be stressed enough. As emphasised by a vast literature, financial institutions pay virtually unlimited sums to shape financial policies, regulations and supervisory practices to serve their private interests. As emphasised by an equally vast literature, narrow political constituencies work tirelessly on tilting the financial rules of the game so as to collect a greater share of the economy's resources.

Thus, it is vitally important to have an independent, expert, capable and informed group to provide an objective assessment of financial policies. Such an institution does not exist in most countries, certainly not in the United States. While the Sentinel itself is imperfect, it is an improvement; it would help induce authorities to focus more on the public interest in selecting, implementing and reforming financial policies.

Third, the Sentinel would examine the entire financial system. It would look beyond the narrow confines of any particular regulatory agency's purview and assess how the full constellation of financial policies fits together in shaping the incentives provided to private financial institutions. Again, no existing – or proposed – institution has both the independence and resources to perform this function effectively.

Fourth, the Sentinel would promote healthy financial innovation by continuously reassessing how regulatory and supervisory practices affect the incentives faced by the financial system. Since financial systems are dynamic, it is vital to relentlessly re-evaluate the incentives shaping the behaviour of financial market participants. As the latest crisis suggests, a regulatory system that worked well before structured financial products emerged did not work as well afterwards. By constantly assessing the impact of financial policies, the Sentinel would reduce the likelihood that financial policies become obsolete and thereby dangerously distort the incentives that shape financial market decisions.

Fifth, by (i) having responsibility for examining the entire financial system, (ii) being politically independent and independent of financial markets, and (iii) not having regulatory responsibilities, the Sentinel would be uniquely positioned to improve the performance of existing regulatory agencies. At the simplest level, knowing that the Sentinel is going to scrutinise its actions would increase the performance of regulatory agencies, reducing complacency. The mere existence of the Sentinel might have reduced the dubious actions and inactions of several regulatory bodies during the most recent crisis.

Furthermore, by having no official power over either the regulatory agencies or financial markets and institutions, the Sentinel would be less constrained in its assessments than an organisation with direct supervisory and regulatory responsibilities. For example, if a regulator gives the OK on a particular practice, the regulator might later find it difficult to reverse or adjust its decision as new information becomes available. The regulator might have the very human fear of losing credibility with the regulated entity. While a regulator might avoid taking actions against a regulated financial institution because such an ex post action implies an ex ante failure of regulation, the Sentinel would face fewer such conflicts. Thus, the Sentinel would make it more likely that bad policies are identified and changed. Similarly, while one regulatory agency (for example, the Fed) might steer clear of criticising another agency's actions (such as the SEC's) to avoid triggering cross-agency battles, the Sentinel would be less reticent. Indeed, it would have the responsibility of commenting on the performance and policies of all regulatory

institutions, with positive implications for the governance of financial regulation.

Conclusions

The financial crisis was not simply the result of too little regulatory power, unclear lines of regulatory authority, or the unpredictable consequence of massive, unsustainable capital flows in conjunction with toxic financial innovations. All of these were contributing factors. But, they are incomplete explanations of the collapse of the global financial system.

A systemic failure of financial regulation contributed to the crisis. The major financial regulatory agencies repeatedly designed, implemented, and maintained policies that increased the fragility of the financial system and the inefficient allocation of capital. The financial policy apparatus maintained these policies even as they learned that their policies were distorting the flow of credit toward questionable ends. They had plenty of time to assess the impact of their policies and adapt, but they frequently failed to change their policies. Thus, the institutions responsible for maintaining the safety and soundness of the global financial system made systematic mistakes. Thus, a comprehensively effective financial reform package must address the systemic failure of the governance of financial regulation – the system associated with evaluating, enacting, and implementing financial policies.

The Sentinel is a suggestion for addressing this fundamental cause of the global financial crisis. Unlike existing institutions, the Sentinel would be independent of both political and market influence. Supervisory and regulatory officials in many countries move readily from politically connected jobs, to lucrative jobs in the private sector, to senior positions in official financial supervisory agencies. While the vast majority of regulators surely act in the best interests of the public, it is nevertheless valuable to have an informed, expertly staffed institution – without potential conflicts of interest – assessing the performance of official agencies and the efficacy of financial policies. While existing regulatory agencies frequently have internal auditing departments, the Sentinel would play a much different role. These auditing departments assess whether the particular regulatory agency adhered to particular rules. Instead, the Sentinel would conduct an independent evaluation of the impact of the full array of financial regulations and supervisory practices on the economy.

Unlike existing institutions, the Sentinel would have the prominence, information and expertise to question existing regulatory agencies. It is anti-democratic, and economically dangerous, for a group of unelected regulatory officials to have a monopoly on the information and expertise necessary for

making financial regulatory decisions. This gives to unelected, and potentially unaccountable, officials too much power over the rules governing the allocation of capital. The Sentinel would shine a cleaning light on the processes associated with making financial policy decisions, enhancing financial regulation. The Sentinel would provide an independent, expert assessment of financial sector policies that would inform the debate on these highly complex policy considerations. The absence of such an institution was clearly evident in the design, implementation and evolution of financial policies during the last decade.

Although not impervious to mistakes and corruption itself, the Sentinel would enhance the governance of financial regulation. It would increase the probability of creating a regulatory system that adapts to a dynamic, innovating economy and incentivises financiers to provide the financial services necessary for sustaining economic growth.

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Human Resources Model to Achieve Organization Objectives in The 21st Century

Dr. Joshua O. Miluwi*

Abstract

Strategic human resource management (strategic HRM, or SHRM) may be regarded as an approach to the management of human resources that provides a strategic framework to support long-term business goals and outcomes. The approach is concerned with longer-term people issues and macro-concerns about structure, quality, culture, values, commitment and matching resources to future need. Human performance as a strategic driver of organizational results has been debated in theory and practice for decades, reflected by numerous published works, with the debate establishing that there is no model directly linking staff actions to organizational strategy. The model is grounded in social science and tested in practice guiding team leaders: (1) To better identify the ideal actions that enable the best possible result; (2) to engage staff minds with the ideals; (3) to increase staff professionalism so that the ideals are acted out more often, more precisely, which establishes HR as a strategic driver of organizational success.

Keywords: SHRM, performance management, personnel psychology, leadership, coaching, learning and development.

Introduction

Strategic human resource management is a complex process that is constantly evolving, with theory in this area a subject of ongoing discussion by academics and other commentators. Its definition and relationships with other aspects of business planning and strategy is not absolute and opinion varies between writers. The issue of strategic HRM initially came to prominence during around the early 1990s, at which time academics developed definitions of strategic HRM as:

- The undertaking of all those activities affecting the behaviour of individuals in their efforts to formulate and implement the strategic needs of business.
- The pattern of planned human resource deployments and activities intended to enable the organization to achieve its goals.

Organizations usually pride themselves in being sustainable and to deliver effective returns to their stake holders, irrespective of

operating in the profit or nonprofit sectors. It is, however, often overlooked that organizational theory and ensuring that personnel are optimally motivated and committed to the aims of the organization, and is pivotal to its success (Ulrich 1998). Should personnel be guided to their best possible performance potential then the results would be greater for organizations than is generally believed. This is the value of an effective SHRM model enabling managers and team leaders to achieve better results with their teams than they would otherwise have been able to achieve. Contrary to some popularly held views, personnel are ultimately divorced from the “organization as an entity” and thus the outputs to be achieved, because personnel are only a resource amongst many, albeit the most critical. The objective of organizations is to satisfy the demands of stakeholders, be it profit, market leader, survival or whatever.

The Concept of Strategy/ Strategic HRM

Strategy determines the direction in which the organization is

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going in relation to its environment. It is the process of defining intentions (strategic intent) and allocating or matching resources to opportunities and needs (resource based strategy), thus achieving strategic fit between them. Business strategy is concerned with achieving competitive advantage. The effective development and implementation of strategy

depend on the strategic capability of the organization, which will include the ability not only to formulate strategic goals, but also to develop and implement strategic plans through the process of strategic management. Strategy is about implementation, which includes the management of change, as well as planning.

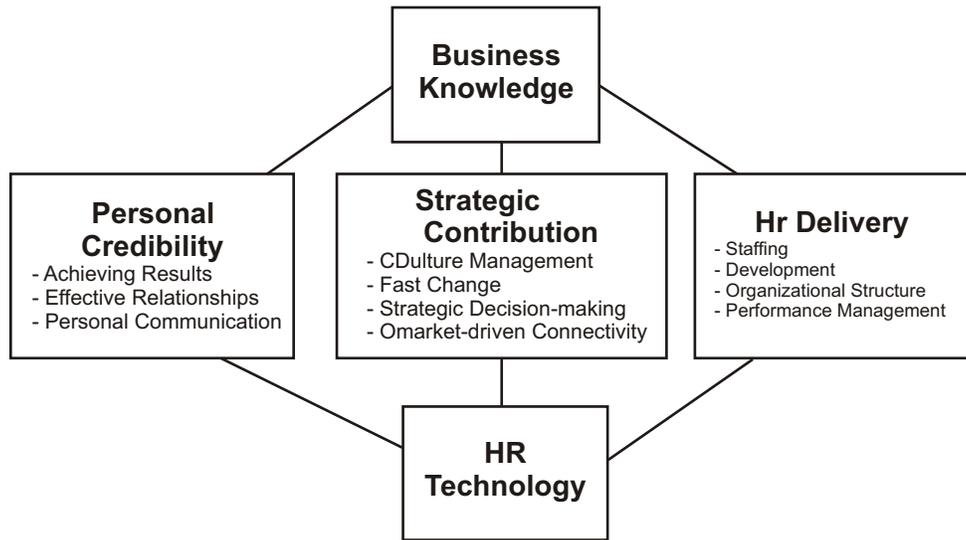


Figure 1: The Concept of Strategy/ Strategic HRM

Source: Miluwi (2010)

The concept of strategy is not a straightforward one. There are many different theories about what it is and how it works. Strategy can have a number of meanings, namely:

- A plan, or something equivalent a direction, a guide, a course of action;
- A pattern, that is, consistency in behaviour over time;
- A perspective, an organization's fundamental way of doing things;
- A ploy, a specific 'manoeuvre' intended to outwit an opponent or a competitor.

The formulation of corporate strategy can be defined as a process for developing and defining a sense of direction. It has often been described as a logical, step by step affair, the outcome of which is a formal written statement that provides a definitive guide to the organization's long term intentions. Many people still believe that this is the case, but it is a misrepresentation of reality. In practice the formulation of strategy is never as rational and Linear A process as some writers describe it, or as some managers attempt to make it. Strategy formulation is not necessarily rational and continuous. In theory, strategy is a systematic process: first we think, then we act; we formulate then we implement. But we also 'act in

order to think'. In practice, 'a realised strategy can emerge in response to an evolving situation' and the strategic planner is often 'a pattern organiser, a learner if you like, who manages a process in which strategies and visions can emerge as well as be deliberately conceived.' Strategy has always been emergent and flexible. It is always 'about to be', it never exists at the present time. Strategy is not only realized by formal statements but also comes about by actions and reactions. Strategy is a description of a future oriented action which is always directed towards change. The management process itself conditions the strategies that emerge.

Strategic HRM Defined

Strategic HRM is an approach to making decisions on the intentions and plans of the organization concerning the employment relationship and its recruitment, training, development, performance management, reward and employee relations strategies, policies and practices. The key characteristic of strategic HRM is that it is integrated. HR strategies are generally integrated vertically with the business strategy and horizontally with one another. The HR strategies developed by a strategic HRM approach are essential

components of the organization's business strategy.

Concerns of strategic HRM

Strategic HRM is concerned with the relationship between human resource management and strategic management in the firm. Strategic HRM refers to the overall direction the organization wishes to pursue in order to achieve its goals through people. It is argued that, because intellectual capital is a major source of competitive advantage, and in the last analysis it is people who implement the strategic plan, top management must take these key considerations fully into account in developing its corporate strategies. Strategic HRM is an integral part of those strategies.

Strategic HRM addresses broad organizational issues relating to organizational effectiveness and performance, changes in structure and culture, matching resources to future requirements, the development of distinctive capabilities, knowledge management and the management of change. It is concerned with both meeting human capital requirements and the development of process capabilities, that is, the ability to get things done effectively. Overall, it will consider any major people issues that affect or are affected by the strategic plan of the organization. 'The critical concerns of HRM such as choice of executive leadership and formation of positive patterns of labour relations are strategic in any firm.'

The focus of strategic HRM

Strategic HRM focuses on actions that differentiate the firm from its competitors. It develops declarations of intent which define means to achieve ends, and it is concerned with the long term allocation of significant company resources, and with matching those resources and capabilities to the external environment. Strategy is a perspective on the way in which critical issues or success factors can be addressed, and strategic decisions aim to make a major and long term impact on the behaviour and success of the organization.

The meaning of strategic HRM

Strategic HRM has four meanings:

- The use of planning;
- A coherent approach to the design and management of personnel systems, based on an employment policy and manpower strategy, and often underpinned by a 'philosophy';
- Matching HRM activities and policies to some explicit business strategy;
- Seeing the people of the organization as a 'strategic resource' for the achievement of 'competitive advantage'.

Aims of Strategic HRM

The fundamental aim of strategic HRM is to generate strategic capability by ensuring that the organization has the skilled, committed and well motivated employees it needs to achieve sustained competitive advantage. Its objective is to provide a sense of direction in an often turbulent environment, so that the business needs of the organization, and the individual and collective needs of its employees, can be met by the development and implementation of coherent and practical HR policies and programmes.

Strategic HRM Models

There are three models: high performance management (high performance working), high commitment management and high involvement management. Within the framework of the concept of strategic HRM, these describe various approaches to its development and implementation.

High performance management

High performance working involves the development of a number of interrelated processes that together make an impact on the performance of the firm through its people in such areas as productivity, quality, levels of customer service, growth, profits, and ultimately the delivery of increased shareholder value. This is achieved by 'enhancing the skills and engaging the enthusiasm of employees'. The starting point is leadership, vision and benchmarking to create a sense of momentum and direction. Progress must be measured constantly. He suggests that the main drivers, support systems and culture are:

- Decentralized, devolved decision making made by those closest to the customer so as constantly to renew and improve the offer to customers;
- Development of people capacities through learning at all levels, with particular emphasis on self management and team capabilities to enable and support performance improvement and organizational potential;
- Performance, operational and people management processes aligned to organizational objectives to build trust, enthusiasm and commitment to the direction taken by the organization;
- Fair treatment for those who leave the organization as it changes, and engagement with the needs of the community outside the organization this is an important component of trust and commitment based relationships both within and outside the organization.

High-performance management practices include rigorous recruitment and selection procedures, extensive and relevant training and management development activities, incentive pay systems and performance management processes. The

strategy may be expressed as a drive to develop a performance culture in an organization, and the following is an example of the performance strategy formulated recently by a large local authority:

- The fundamental business need the strategy should meet is to develop and maintain a high performance culture. The characteristics of such a culture are:
- A clear line of sight exists between the strategic aims of the authority and those of its departments and its staff at all levels.
- Management defines what it requires in the shape of performance improvements, sets goals for success and monitors performance to ensure that the goals are achieved.
- Leadership from the top which engenders a shared belief in the importance of continuing improvement.
- Focus on promoting positive attitudes that result in a committed and motivated workforce.
- Performance management processes aligned to the authority's objectives to ensure that people are engaged in achieving agreed goals and standards.
- Capacities of people developed through learning at all levels to support performance improvement.
- People provided with opportunities to make full use of their skills and abilities.
- People valued and rewarded according to their contribution.

A model constituting two halves integrate organization ideals (defined as actions to achieve goals) via goals, strategy and HR-KPIs with the necessary and sufficient psychological factors that result in clarity and commitment (Human Resources Key Performance Indicators) including self discipline and professionalism. These aspects in the context of an integrated business and HR model form the focus of this paper.

Review of The Literature

A lack of clear direction prevails in global HR research which is expressed by scholars and practitioners across a wide front as a concern for the profession, including the resultant role personnel ought to play in organizations' objective achievement (Goshal 2005; Hendry 2003; Holbeche 2006; Morris, Snell & Lepak 2005; Meisinger 2005).

Various researchers have pointed out during the last few years (Browning & Edgar 2004; Becker, Huselid & Ulrich 2001; Birchfield 2002; Brewster, Dowling, Grobler, Holland & Warnich 2000; Mayrhofer & Brewster 2005; Nel 2007; Ruona & Gibson 2004; Storey 2001) that a revised approach to Human Resources Management (HRM) is evolving. This includes the strategic role and functions of the HR profession as business

partners in organizations and the way they ought to direct personnel to optimise their contributions to the organization. Transformational leadership expressed in terms of the high-level capabilities and management skills are also assuming a significant place in the future of the HR profession in organizations as well as the ability to add value.

Researchers increasingly emphasize that the theory of HRM should more comprehensively address current demands businesses face globally, which includes enhancing performance and obtaining more positive returns from the factors shaping behaviour (Rousseau 1995; Peel & Boxall 2005). A search for applicable theory and models is therefore of the order of the day. Furthermore there appears to be conflicting signals in terms of what the research literature recommends should happen in practice and what actually happens. Various approaches regarding HR theory and practice thus exist (Becker et al. 2001; Birchfield 2003; Jayne 2002; Storey 2001; Wright, Snell & Dyer 2005). There is also the notion that HRM has not been functioning significantly in the areas of strategic management, performance management in the boardroom or in a "real" leadership role (Boxall & Purchell 2003; Redman & Wilkinson 2006).

Various voices have also been raised that HR personnel should be held accountable concerning the following. First, how can human resources management add value? Secondly, who has the skills of a strategic partner? Thirdly, how can HR managers ensure personnel remain committed during times of turbulence? (Larsen & Brewster 2003). The aforementioned limitations, suggest that organizations' strategic planning process ought to be revisited in terms of how personnel contribute to achieving the required outputs as part of an overall strategic objective achievement (Holbeche 2004).

Birchfield (2003) suggests leadership, performance and culture as themes that are interrelated components of HR practice. HR professionals should display a high level of sensitivity with regard to performance management and the development of leadership in particular, as these are key drivers for an organization's future objective achievement. Performance management impacts significantly on leadership and culture, which are interdependent but crucial components to achieve objectives. It is also of cardinal importance that personnel should function optimally by means of effective and focused development and skills to execute jobs in the way that objectives are competently achieved (Auluck 2007).

Wright et al. (2005) makes the statement that broadening the influence of HR should be the adoption of HR systems and practices on a more appropriate basis in organizations. More progress along these lines would improve opportunities for

theoreticians and practitioners to find common ground in terms of trend identification to sharpen the focus on how to achieve the best performance and commitment of HR personnel in organizations to meet objectives. Personnel utilization approaches should therefore become a subject to focus attention on concerning organization's objective achievement as far as research for improvement is concerned. Limited acknowledgment exists regarding the effects of the link between an organization's strategy and personnel behaviour and the effects it has on the organization. These issues are highlighted in the next section.

Revisiting The Essentials of HR in Organisation Strategic Context

It is conventional wisdom that HR practices are only effective if they are aligned with the strategic direction of the organization and are focused on business operations and executed professionally. The utilization of personnel must, however, be an integral part of the organization's strategic planning and implementation thereof which will have a huge effect on its performance. As HRM is taking on a more strategic focus, the roles and activities must also change. HRM should therefore become more accountable for adding value to the organization's output, which implies that human resources strategies (including policies and procedures) with the business strategies and the execution thereof should also be aligned and researched more intensively (Nel, Werner, Haasbroek, Poisat, Sono, & Schultz 2008).

Hunger and Wheelen (2007) also provide a reminder that strategy is a comprehensive plan stating how the organization will achieve its mission and objectives by maximizing competitive advantage and minimizing competitive disadvantages. Cascio and Aguinis (2005) point out that strategic and tactical business plans serve as the basis for HR strategy and that SHRM is a practical step towards more comprehensive personnel planning and development to achieve objectives and set outputs of the organization.

Hill, Jones, Galvin and Haidar (2007, p. 5) also state that: 'Strategy is the outcome of a formal planning process and that top management plays the most important role in this process. Strategic planning thus shapes the resource allocation within the organization'. Strategic HR planning and strategic business planning must therefore not be neglected by organizations to be successful and the two should not be separated to avoid the failure of an organization.

Delahaye (2005) also comments that Strategic Human Resources Management (SHRM) compels managers and supervisors to adopt a strategic mind set or a way of looking at

and thinking about the management of personnel. SHRM as a process is driven by planning, foresight and analytical decision making which is focused on long-term, top-level management decisions and actions. This is usually performed in a way that is totally integrated with the overall general strategic management of organizations. It entails the synchronizing and integrating the organization's strategic business needs and plans with all those aspects stemming from and relating to managing its personnel (Härtel, Fujimoto, Strybosch & Fitzpatrick 2007; Kearns 2003).

Being strategic therefore means being involved in productivity and not focusing on being an "employee champion". However many HR traditionalists still see HR's role as being focused on the primary customer being personnel. Being an employee champion is in fact an antithesis of being strategic. It is therefore important for HR personnel to begin to accept responsibility and accountability for increased personnel productivity in conjunction with the above issues to enhance the bottom-line and add value as was already pointed out by Ulrich (1997) some time ago and that to add value is being the focus in future. This was again confirmed by Ulrich and Brockbank (2005) that adding value is pivotal to the role of HR in an organization. The process thus includes building a performance culture and empowering personnel themselves, although noting that HR personnel often do not have control, because the actions of managers and personnel are dependent on many other factors which impact on the ability to produce results (Du Plessis, Nel, Struthers, Robbins & Williams 2007).

According to the literature review a shortcoming in the previous analysis is identified. It appears that a lack of overview of the link between SHRM and personnel behaviour and the effect it has on an organization's achieving of its goals exist. The link between personnel actions and strategy needs to be focused on and contextualized as a contribution to more successful organizations and its bottom-line. The model developed by Little (2003) addresses this issue and is outlined below.

The Central Questions of Strategic Human Resource Management

SHRM is defined by Little (2003) as the process of achieving the best possible alignment of personnel behaviour with the organization's strategy and hence align with the profit and loss in the short and long term. The personnel behaviour-strategy relationship is dynamic because it changes as the environment changes and as the precise goal and performance requirements of the strategy emerge.

Little (2003) claims that the organization is independent of personnel, and it then follows that the central questions are:

First, since the organization is separate from personnel, then what are the factors intrinsic to the organization that can be identified as most influencing the behaviour of personnel? Second, once the intrinsic organization factors have been identified, how do they link to influencing behaviour? Third, once identified, how can the factors intrinsic to the organization that most influence behaviour then be better managed to improve human performance and so improve alignment of personnel behaviour with the goals and aim of the organization? Fourth, what are the intrinsic psychological factors personnel bring to the organization that will impact management's effort at improving the alignment of behaviour

with organization goals and aims? For the purpose of this article the focus for the model is on questions one and two only.

The Factors Intrinsic to The Organisation That Impact on Personnel Behaviour

The intrinsic aspects are outlined in Figure 2.

The analysis including discussion of the conceptual tools used was developed by Little (2003) where the presentation of this model and its full implications evolved while consulting as a performance improvement specialist in large and small organizations over a number of years.

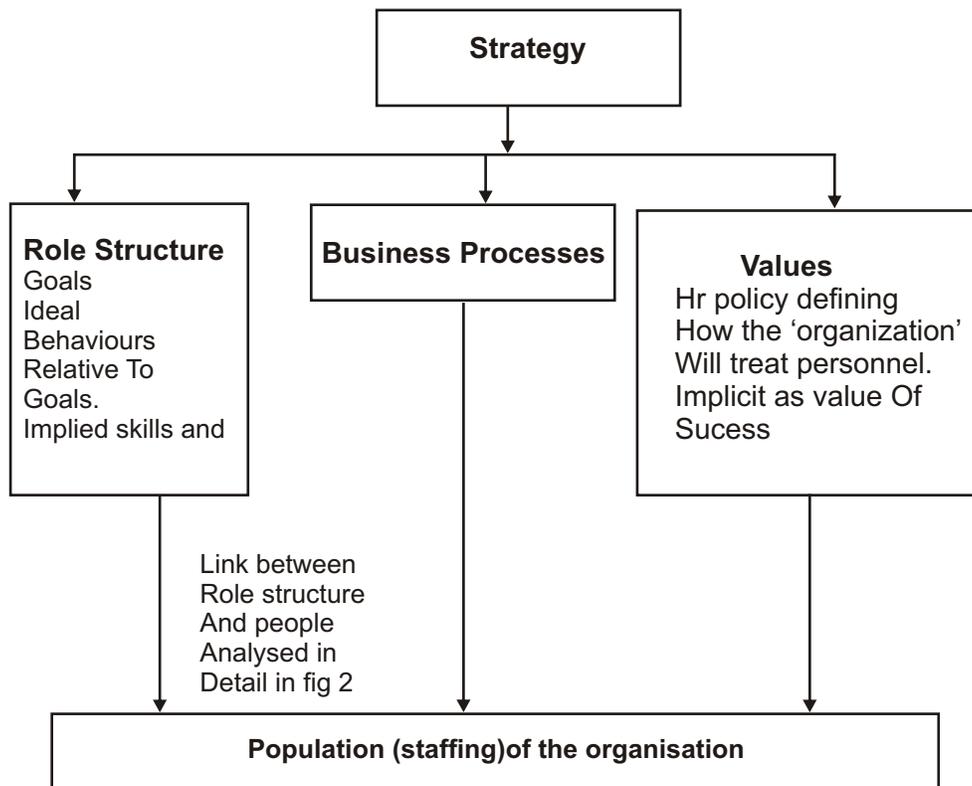


Figure 2: Structure of the organization by identifying those elements that influence the behaviour of personnel populating the organization

Key issues arising from the model

First, the role structure is the main performance aspect of the model and has the greatest impact on the performance actions of personnel. Second the organizational structure is derived by identifying the goals implicit in the strategy and then grouping together goals that are similar. This has the result of producing the organizational structure. Third, business processes represent how business operations are conceptualized and will influence the role structure, so the two are not fully independent. Fourthly, the key aspects of values are: The HR policy which is accepted as describing how the organization as

an 'entity' will treat personnel is quite independent from the views and opinions of supervisors/managers and every organization is formed with the intent of the founders to succeed. This is a value implicit in the very existence of the organization and becomes the most significant demand within the culture of all organizations. Fifth, the role structure and business processes constitute the architecture of the organization into which personnel are located by assigning roles; personnel so assigned are then said to so-called 'populate' the organization.

The link between the factors intrinsic to the organization and personnel psychology Extensive analysis of the psychological contract between personnel and the organization exists and is reported by Rousseau (1995) as well as Peel and Boxall (2005). These analyses, however, do not go far enough in that they do not link the organizational factors mostly influencing behaviour with core elements of human psychology. Human behaviour is shaped by what personnel think namely the intellectual and cognitive elements of mind (thoughts) and what personnel feel, the affective elements of the mind often associated with thoughts (emotions).

Thoughts and emotions are influential in shaping the conduct of personnel and these two factors are the psychological targets

within the Little model (Little 2003) and lead to the three measurable psychological performance factors namely clarity of goals, clarity of ideal actions derived from the goals and the level of commitment to deliver the ideals as and when needed. Little (2000a) provides a full discussion of these factors as well as the analysis of causality (Little 2000b), theory creation in social systems (Little 2000c) and the definition and integrity of scientific progress (Little 2000d). The model is thus based on the aforementioned work as the backdrop, since 'management theory' and 'organization theory' cannot stand separate from issues in social science (Little 2003). Analysis of the key performance factors and their link to personnel behaviour. The model in Figure 3 presents a conceptualizing of the role structure to definite psychological targets.

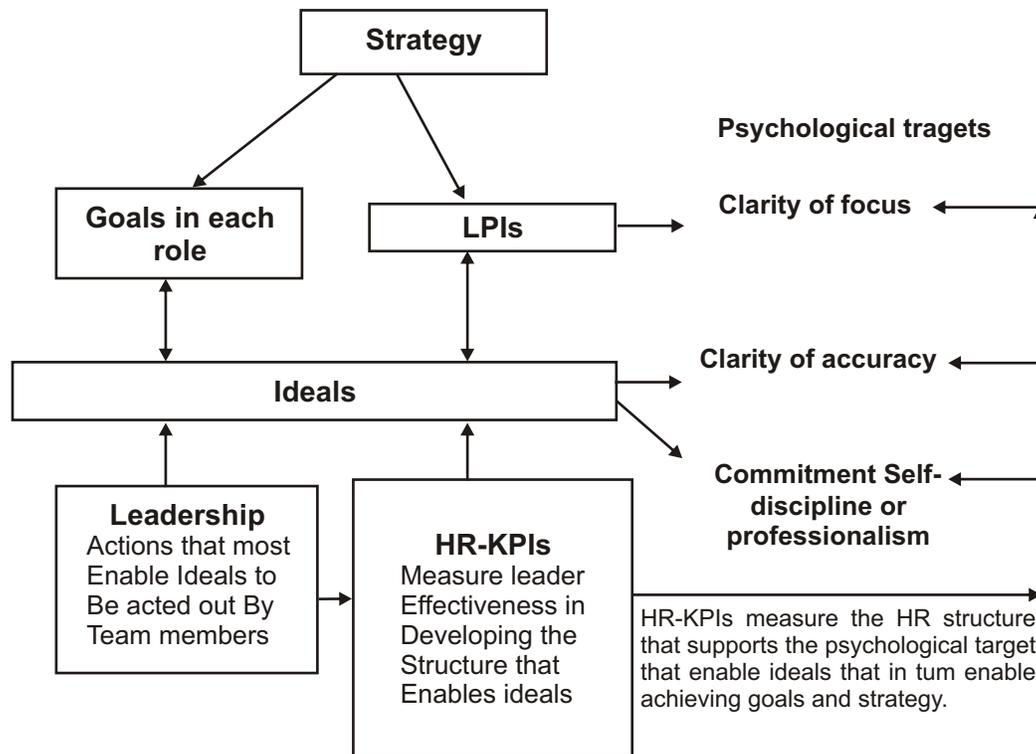


Figure 3: Linking the details of the role structure to definite psychological targets

The model is a detailed analysis of the role structure (left side of Fig. 3) of the organization from Figure 2 with definite psychological targets (right side of Fig.3). A review of the model reveals the following:

The Architecture. The organizational structure defined in the role analysis of goals, KPIs and ideals are as follows: First, strategy gives rise to goals and both give rise to KPIs. Second, goals and KPIs give rise to ideals as those actions that need to be delivered if the goals or KPIs are to be achieved (Little 2003).

Third, since the ideals are derived as those actions that offer the best chance of the best success, it follows that if ideals are acted out with commitment then goals/KPIs and strategies will be achieved. Fourth, the key aspects of clarity of architecture are clarity of focus (the goals and KPIs) and clarity of accuracy (clarity of ideals relative and derived from goals and KPIs).

Clarity as Immediate Psychological Target. The clarity of architecture is in the minds of team leaders (supervisors/managers) which are then carried over to team members

(personnel) as well. People act very much in accord with what they 'see'. It follows that if a manager is not clear on what personnel are expected to do, then the team will not perform well. Secondly, if personnel are not clear, then they will not perform well. Hence it is of cardinal importance that clarity should emerge as it is crucial in linking the action of personnel to the needs of the organization via the management role of team leaders.

Leadership Actions. It is defined in this paper as those steps taken by team leaders that enable clarity of ideals in architecture and clarity in the minds personnel as team members.

Human Resources Key Performance Indicators (HR-KPIS)

It refers to measuring the extent managers are implementing the critical HR processes that result in clarity in the minds of personnel and their engagement with the identified ideals.

Professionalism and the key cultural demand

Any organization has the implicit value of success as derived from the intent of the founders, because every organization is formed with the intent to succeed (Little 2003). Personnel are then asked by managers to decide if they wish to be successful in their work life. They are then introduced to clarity of focus and clarity of accuracy. Thereafter they choose to attach positive or negative emotions with the images in their minds of them acting according to the requirements of the goals and KPIs they accept. If they choose to be successful, then the result is the cultural request to be self-disciplined and to conduct themselves at work according to the demand of the job, and not according to the demand of their inherent psychological factors. The commitment to self-discipline at work is defined as professionalism (Little 2003).

Separation of performance and success

A review of some literature (Browning & Edgar 2004; Nel et al. 2008) reveals that there is not a clear distinction between performance and success, with both tending to relate to goals and goal achievement. With the model presented in Figure 2, there is a clear and precise distinction, namely that success is achieving the set organizational targets and performance is the committed delivery of the ideals. So, for example, a sales person may act out the ideals with energy and commitment, but because of the economy, product or competition which they have no control over, they cannot achieve the results. The sales person may thus have performed very well, but success was not achieved. This distinction has numerous practical implications for performance management and performance based remuneration.

Engagement as visualization

Little (2003) proposes a new definition of 'engagement' based on the model presented in Figure 2 which entails personnel visualizing themselves as acting according to the ideals and preferably associating positive emotions with the images of them acting out the ideals. This activity is commonly recognized in the general psychological literature and is termed "visualization". This technique is also commonly used in sport in particular and emerges here as equally critical in personnel performance in organizations where it could be utilized to improve their overall performance.

Tightened definition of key organizational factors

The model results in much clearer insight and tighter definitions of key business factors which are perceived as follows. Coaching emerges as the process of establishing clarity in the minds of personnel and guiding their mental engagement with the ideals. Training is the process of improving the skills (and developing competencies) of personnel to act out the ideals. Motivation is guiding personnel to commit to success in their work life and accept the necessary consequence of that which is needed for self-discipline to act out ideals as and when needed in their job. Development in the first instance is the process of guiding personnel to adopt greater self-discipline at work then guiding their intellectual development enabling them to deal effectively with a broader range of commercial situations.

Conclusion

SHRM emerges as a crucial and decisive factor in organizational success. Thus, the HR-KPIs measure whether managers are implementing the necessary and sufficient strategic HR Processes within their team. If these are fully implemented only then would the essential Architecture and psychological structure be in place to ensure that the organization's strategy is achieved. If the HR-KPIs are fully implemented and the organization is not successful, then the senior leadership is assured that the problem originates from the market or economy or product selection, etc. The failure is not due to leadership or personnel performance implying that 'personnel trying harder' will not achieve a better result.

The major advantage of using the model in organizations is that the HR-KPIs measure manager actions because it is not the HR manager or personnel implementing the respective processes. It is rather the role of HR departments to ensure that supervisors and managers have the skills to implement strategic HR processes and to monitor that the processes are being applied. If the SHRM processes are not being applied, then the HR Department should provide reports to the divisional managers enabling them to take the corrective action and so ensure ongoing success. HR then emerges in the crucial role of

overseeing management of human performance as a strategic driver of business results. The model has been tested in practice and clearly provides business leaders with a definite structure within which to successfully manage personnel performance throughout the business. It can be regarded as the way of the future to effectively manage personnel in order to optimally achieve an organization's objectives.

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Sustainable Development and Economic Growth: The case of Tunisia

"There was first or will to do oneself good with the bio, then to think of others with the ethical, and now to save the planet with sustainable development"

Caroline Castets, (2007)

Lamia Ben AMOR*
Sami HAMMAMI**

Abstract

The aim of this paper is to study the relationship between economic growth, environment and human development which are the fundamental pillars of sustainable development. In an empirical validation, we attempt to test the relation between economic growth based on the main components of sustainable development, taking the case of our country, Tunisia, during the period 1980-2012. The overall findings identify a positive and significant relationship.

Keywords: Economic Growth, Environment, Human Development, Sustainable Development.

Classification JEL: F43, O13, O15, Q01.

Introduction

Since the 1970s, industrialized countries have recognized that growth was based on an intensive use of natural resources omitting economic, social and environmental aspects. For some analysts, the model of "industrial development" does not lead to a long-lasting development.

The reasons which are put forward are: the exhaustion of natural resources (raw materials, energy, fossils, etc); the destruction of ecosystems, the biodiversity loss that reduces the resilience of the planet and the climatic change caused by greenhouse emissions of greenhouse gases.

However, the concern about the future is enhanced by the beginning of the growth slowdown, the oil shocks of 1974 and 1981 as well as the serious accidents affecting the environment such as mercury pollution in Minamata in Japan in 1955, oil spill, the Torry Canyon in the English Channel in 1967 and the

emergence of disaster industries such as Chernobyl, Seveso, Bhopal, Exxon Valdez, etc.

From now on, a development process that balances the environmental, economic and social sectors has to be implemented. Indeed, various organizations, such as the World Wide Fund for Nature (WWF), literally, the Worldwide Fund for Nature, Friends of the Earth and other stakeholders from different sectors, have called for the adoption of a more responsible, more effective and more relevant method, called "sustainable development."

It is in this context of research on mediation between economic growth and the main components of sustainable development that this work fits. The question to which we seek to provide some response refers to the characterization of the nature of the relationship between growth and the components of sustainable development.

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Our empirical investigation is based on the previous work of Valeria Costantini and Salvatore Monni (2008) in order to test the relation between the economic growth and sustainable development for Tunisia from 1980 to 2012.

The Conceptual Framework of Sustainable Development

Definitions

Different definitions of sustainable development were cited in literature.

The concept of sustainable development was defined for the first time in 1987 by the World Commission on Environment and Development (WCED) in the report Brundtland (the name of the president of the commission, Gro Harlem Brundtland). In this report: *"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*

Actually, this definition contains two concepts:

- The concept of 'needs', particularly the essential needs of the needy who should be given the highest priority, and
- The idea of the limitations imposed by the state of technology and of our social structure on the environment's capacity to meet the current and future needs.

Three aspects essential to sustainable development result from the previous definition. These are:

- The economic aspect is considered here through the concept of need. That is to say that sustainable development must meet everyone's basic needs (in an intergenerational as well as in an intra-generational way (that is universal, by particularly reducing the differences between the south and north);
- The environmental aspect which means the preservation of the natural heritage for future generations ;
- Taking this aspect into account requires the study of the biosphere, its regulatory mechanisms and its ability to accept or reject our human activity;
- The societal aspect includes equity, intra-generational justice issues (access to health care and education, equality between men and women ...) and intergenerational social responsibility of business and the study of the relationship between people, the company and nature;

In fact, sustainable development represents a balance between these three components, sustainable development is the consensus between economic, environmental and social aspects. This new vision integrates all components of our

society and our environment. This vision can be schematically displayed in the following figure:

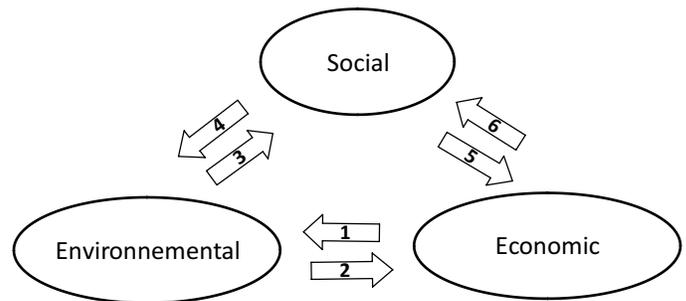


Figure 1: The main dimensions of sustainable development

Source: OECD, (2004)

The above graph highlights the following ideas:

1. The effects of economic activity on the environment (for example the use of resources, the discharge of waste).
2. The services provided by the environment to the economy (e.g. natural resources, "well" functions, contributions to economic efficiency and employment).
3. The Services provided by the environment to the society (8) (e.g. access to resources, contributions to health, to living conditions and to working conditions).
4. The effects of social variables on the environment (e.g. demographic changes, consumption patterns, education and information in environmental, institutional and legal frameworks).
5. The effects of social variables on the economy (e.g. structure of the labor force, and households, education and training, consumption levels, institutional and legal framework).
6. The effects of economic activity on the society (eg, income levels, equity, and employment).

Furthermore, sustainable development is not only an ecological or environmentalist concept, but rather a strong concept that also includes the social economic sphere.

In the same context, Ignacy Sachs, (1978), has considered sustainable development as a development approach aiming at the harmonization of the social and economic objectives as well as the relevant resource management on the ecological level.

In a spirit of solidarity with the future generations, he suggested an approach based on the principle of autonomy, the satisfaction of the basic needs and on a new association between man and his earthly universe. Another qualitative growth form that would be neither zero growth nor negative growth.

Similarly, Pearce (1989) has defined sustainable development as whole set of policies for the next generation to have as much wealth as the present generation.

In addition, Pearce and Walford (1993) have proven that sustainable development is a process in which we do not allow the deterioration of natural resources. In fact, they stressed the popular role of environmental quality in the process of increasing of real income and living standards.

Moreover, Dally (1996) suggested that the value of the concept of sustainable development comes from the realization that the contemporary level of consumption per capita in U.S and Western Europe cannot be generalized for future generations without destroying the ecological resources on which rests the economy itself.

Yet, Pezzy and John (1989) identified more than 60 definitions for sustainable development. They defined sustainability and development in the form of mathematical models. Hence, they indicated that sustainable development requires a wellbeing superior to the minimum extent of environmentally sustainable growth.

However, Redclift (1987) concluded that sustainable development is nothing but a mere compromise between natural environment and continued economic growth; it is rather a development which recognizes that the sustainability limits have a structural and natural origin.

According to this author, the different perceptions of the environment are socially constructed and carried by groups with various degrees of power and conflicting economic interests.

We may also mention the definition of Rees, (1989), who showed that sustainable development should be considered through cumulative decisions. He added that this has been adopted by several authors, providing the best policy framework for the allocation and management of environmental resources.

Finally, Barbier (1987) showed that the primary objective of sustainable development is to ensure a healthy environment, a prosperous economy and a cohesive society by reducing the exhaustion of natural resources, environmental degradation, cultural disruption and social instability.

The founding assumptions

In the late 1960s, the work of the «Club of Rome» is cited as a starting point of reference. Indeed, the "Massachusetts Institute of Technology," in a Meadows report entitled "Limits

to Growth", challenged the danger of exponential demographic and economic growth in terms of exhaustion of natural resources, over exploitation of ecosystems and pollution. So, the report suggests moving towards a nil growth in countries and limiting the increase in population.

In 1972, the United Nations organized the first international conference in Stockholm on the environment, leading to the creation of the United Nations Environment Programme (UNEP). On this occasion appears the concept of "eco-development" which seeks to reconcile two apparently conflicting approaches, that of development and that of the environment. Also, it helps to challenge the patterns of development in the North and South.

Nevertheless, the concept of eco-development did not persist long as it was officially condemned by "Henry Kissinger" and taken out of the institutional vocabulary at the international conference in Cocoyoc in 1974. The concept of eco-development has been taken back by the Anglo - Saxons who replaced it with the concept of "Sustainable Development".

The latter, translated from English first by "developpement soutenable" then today by "sustainable development", appears for the first time in 1980 in the "World Conservation Strategy", a publication of the International Union for the Conservation of Nature (IUCN).

A few years later, it spreads in the wake of the publication "World Commission on Environment and Development" (WCED) entitled "Our Common Future" (also known as the Brundtland report). The report recognized that it is: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

In 1992, the United Nations (UN), arranged the second conference in Rio on Environment and Development, also known as the "Earth Summit". 173 country leaders agreed on four main points:

- The Rio Declaration on Environment and Development;
- The Convention on Climate Change;
- The Convention on Biological Diversity;
- The Declaration of Principles on Forests.

Thus, the leaders at Rio also signed a document of proposals called, "Agenda 21". The latter actually determines the merit of the responsibilities incumbent upon each player in the civil society in the implementation of the principles of sustainable development. This program is the result of four separate areas: economic, social, environmental and ethical.

In 1997, the Convention on Climate Change signed in Rio was complemented by the "Kyoto Protocol", which requires industrialized countries to reduce, in 2012, their emissions of greenhouse effects gas of at least 5% on average compared to the level 1990.

In fact, this broad concept of sustainable development is taken up again by the World Trade Organization (WTO), the World Bank and the European Union. Thus what confirmed at the World Summit in Johannesburg in 2002. It is preferred to consider this concept as a means of reconciling growth, equity and environmental protection.

Economic growth and sustainable development: an empirical approach

The economic literature generally considers that economic growth is a quantitative and economic concept. It is a phenomenon that can be measured in time and space. It is the increase of a country's wealth, measured by Gross Domestic Product (aggregate GDP), while qualitative factors such as education, scientific knowledge, access to natural resources, environmental quality, distribution of wealth or living conditions are all elements that characterize the development. These factors lead to potential economic improvement.

An ambiguous relationship between the environment, economic growth and human development

Developed countries do not stop promoting increased production to counter scarcity, the thing which contributes to improvement or at least maintaining their standard of living. However, developing countries, often backed up by international institutions (the International Monetary Fund, the World Bank), adopt the same attitude to fight mass poverty and emerge from underdevelopment. The growth theory dominates the news. However, it is becoming increasingly clear that the continuation of this global program is not indefinitely achievable, given the limitations imposed by ecosystems.)

The negative effects of high economic growth

High growth can lead to the depletion of natural resources: Energy, water, soil. Here, one must distinguish between non renewable resources (petroleum) and renewable ones (air, water). The depletion of non-renewable resources such as oil and coal raises issue of intergenerational equity: the present generation "looting" the world without taking into account the needs of future generations (Hotelling (1931). Renewable resources (for example fish stocks) may recover, but sometimes slowly, not to harm many future generations.

We must be attentive to the ecological foot print (estimated surface of the earth needed to meet our needs that is to say, the

average area per capita necessary to produce the resources people consumes and to treat their waste and pollution).

If Western lifestyles spread to the entire world population, this would require between 5 and 6 planets to meet the needs of humanity, which reflects the unsustainable nature of the current growth (Hartwick (1977)).

- High growth generates multiple pollutants (asbestos, oil spills, acid rain, etc.). These pollutants are often cumulative: beyond a threshold, they are not absorbed by the environment.
- High growth may constitute a danger to biodiversity. The disappearance of plant and animal species deprives future generations not only of a natural and symbolic heritage (eg; bears), but also of biological resources that could be useful to them (species used as medicines eg.)
- Given the human and economic consequences of global warming and given the low reversibility of the temperature rise, this is where the main threat to the sustainability of development lies.

Thus, if the means of production (and consumption) in developed countries are challenged today by the scarcity of energy resources and the damage that they cause to the natural, environment and the biosphere, one may wonder if a zero growth rate, could not be a solution to the environmental problem of humanity.

Zero economic growth: a solution to the environmental problem of humanity?

Under the theories of growth, the stable condition of an economy is characterized by the fact that the per capita variables are constant over time (characteristic of a steady country), and so are the variables in level.

The stable condition is a special case of a steady state (long-term) of the economy where the growth rate of the product, which is determined by the value of the growth rate of the population, is zero (Arrous, 1999).

Under these conditions, a steady state is accompanied by a null growth rate. In fact, it is zero growth. The economic system is reproduced identically, without accumulation of capital per capita. This is what Marx called simple reproduction. An economic stationary state is an unchangeable state, stable or "static".

The origins of the stationary state

The first major economists were much concerned about the "stationary state", probably because, since they lived in a society where economic growth was still (24) in its infancy, they

feared a return to the old order. They looked at growth fragility more than at its strength, while today the view is inverted: that of a blind force, which weakens the company and its future.

Adam Smith (1776) and David Ricardo (1819) explained economic growth as a result of the accumulation of capital available to workers. However, a conventional shared and a rather pessimistic view of the long term growth is intended to gradually disappear, in a "stationary state".

The reason for this lies in the evolution of the distribution of national income induced by the accumulation of factors. The dynamics of the system can be summarized as follows: capital accumulation increases in demand for workforce. Thus, wages are higher until the adjustment occurs for demographics. A larger number of workers induced a greater demand for grains, which justifies the cultivation of new lands, less productive than the old ones: hence, an increase in the price of grain and therefore that of the land rent as well as the salary corresponding to the minimum subsistence. As a result, wages and rents increase at the expense of the profit which continues to drop to the point where investment stops.

Stopping the accumulation of capital means stopping population growth and, later on, the stabilization of the entire economic system: this is the stationary condition. This hypothesis is dictated by several classical economists, like, Malthus, who gives a further reason for a blockage towards the economic system: the lack of consumer demand and investment because of the concentration of wealth and the lack of opportunities.

Likewise, with Ricardo and Malthus, we feel regret of having made this observation. However, John Stuart Mill (1848) says: "I sincerely hope that posterity will only concentrate on the stationary condition for some time before it is forced by necessity."

Yet, Mill separated human progress from economic growth. He criticized the unlimited development of agriculture and assigned a target to the industry to reduce working time.

So, political economy, from the outset, is crossed by the contradictions brought about the development of capitalism.

Economists who dared to question the benefits of growth, as John Kenneth Galbraith (1975) did, and the relevance of the GDP indicator, as Bertrand de Jouvenel (1968) did, were rare.

The idea of supporters of zero growth in the 1970s

In the 1970s, a challenge to growth appeared for the first time with the concept of "zero growth" to mean the need to consider

the ecological limits of the earth. Zero growth is a theory that all economic activities should aim at a state of equilibrium, a steady state.

A mention should be made to the Club of Rome report prepared by a team of Researchers from Massachusetts Institute of Technology led by Dennis Meadows, (1972). Published in France under the title "Limits to Growth", the report asserted the physical limits of the planet and it came out in favor of a comprehensive and stable equilibrium state after the richer countries have stopped their growth and the poor countries have satisfied their basic needs.

Thus, world scenarios, made from a model that covers the economic, demographic and environmental field, indicate that growth of industrial production will ultimately lead to a collapse of income per capita, of food intake and consequently of the global population. This production actually uses more raw materials and natural resources and is accompanied by a growing pollution. The only way to avoid a catastrophic evolution would be to stabilize the population, the industrial output per capita and food share.

Since 1972, technological progress and environmental science have led to revise some of these assumptions and the proposed strategies; the existence of natural limits to growth was confirmed by the risk assessment related to climate change. But the inconsistency of the steady state with the settlement of environmental issues such as waste accumulation or samples of resources is presented in various works.

Several reasons can be put forward. First, the problem of the steady state is the finiteness of the environment not so much in terms of stock but from the point of view of the quality of resources for the operation of the production process.

Second, a process in the steady state cannot do without a continuous flow of energy and material, the stock of capital employed cannot remain constant indefinitely. In fact, the generalization of the law of entropy to material makes it impossible for a system to produce mechanical work indefinitely at a constant rate.

Finally, as nature is not able to reproduce itself identically, it is difficult to envisage that an economic process open to nature can be maintained permanently in a stable condition. Therefore, the constant stationary condition cannot be a solution to the entropic problem raised by economic activities. The disappearance of the material in the economic process makes it impossible to maintain a constant capital stock in time. It should be noted that this is about the denial of major assumptions approaches on which sustainable development is

based. It should be noted that this constitutes the denial of one of the major hypotheses on which are based the approaches to sustainable development.

However, these observations do not challenge the development as a phenomenon rooted in non-stationary processes where qualitative changes take place, such as innovations, new productive combinations, new energy sources. Considering the teachings of thermodynamics, development cannot be considered in a context of decline. The steady state then gives way to a state of decline.

From the bio economy to the decrease

The "organic economy" is an economic theory developed mainly by Nicholas Georgescu Roegen using in particular the principle of entropy to analyze economic processes. Nicholas Georgescu-Roegen highlights the contradiction between the second law of thermodynamics and the law of entropy (that is to say the degradation of energy and material resources useful to humanity and economic growth without limits). He personally called for an economic decrease. He associates the economic process not with an intangible value but matter and energy that degrades irreversibly from low entropy to high entropy at different processing. Just like an ice cube having melted in a glass will never turn again into an ice cube, a computer can never go back to the raw material that was used to create it besides, the energy used to build it can no longer be used.

The concept of decay is used to challenge the idea that the economic growth initiated in the industrial revolution could be sustainable partly because of the depletion of natural resources and the environmental, climatic and ecological damage that it generates.

The origin of this concept and the accompanying theories are based on the observation that economic indicators such as GDP do not measure the environmental cost of exploitation of natural resources and do not take into account the finiteness of amounts of non-renewable resources (oil, minerals). This concept has gained some notoriety in the oil crisis context, or in the global warming early 21st the century.

On the economic level, the decrease is very marginal in the current economic theories and is represented and defended by only few economics researchers.

This idea of a radical questioning of the primacy of growth emerged in the early 1970. Decline also designates anti-productivity movements (ecologists and altermondialists) that propose a political and social project which takes into account the energetic issue.

While the main event of economic growth, in its current form and in rich countries, is the increasing accumulation of the consumer goods by households, the movements about decline, which are in line with the critics of the consumer's society, believe that the continual increase in consumption does not necessarily improve the welfare and better living. They call for a radical change in the production systems of the richest countries through a wise and controlled decrease in the consumption of natural resources believing that it is the only solution to the environmental and social challenges facing humanity.

So, they wish to reduce the ecological footprint of these nations, but also intend to solve, through this very "decline" of the rich countries, the North / South split divide, then reduce inequalities and help the southern countries resolve the phenomena of extreme poverty.

Decrease is a priori neither a political dogma, nor an economic model. Thus, for Paul Aries (2007), "It is neither an ideology nor an additional economic model, but rather a bombshell word which pulverizes the dominant economic thinking."

Similarly, Serge Latouche thinks that it is a "happy rhetoric discovery" and prefers the term increase. The word "degrowth" is sometimes supplemented by adjectives: "sustainable or "friendly 'degrowth'".

The degrowth concept has its theoretical basis in various writers and thinkers of the 20th century. It is not considered the opposite of growth; it is the idea of producing only what is truly useful and finding methods of production consistent with the needs.

Among the fathers of the degrowth, we can find Nicholas Georgescu-Roegen, Jean Baudrillard (1968), Andre Groz (1975) and Ivan Illich (1971), who suggest quite similar ideas to those offered by contemporary economists like Serge Latouche.

In addition, Georgescu-Roegen involves considering the qualitative changes localized in the production process. The concept of irreversibility is fundamental in the analysis of any economic process as it contains the qualitative change of the elements involved in the production, according to the law of entropy.

The law of entropy and economy: the contribution of Georgescu-Roegen

The work of Nicholas Georgescu-Roegen is at the origin of the bio-economy, connecting economic sciences and biological sciences. He put forward such laws of thermodynamics and their consequences on the life and economic process. He

criticized the excessively mechanistic classical economic approach.

He argued in particular that the thermodynamics and biology are essential torches to illuminate the economic process. He criticized thermodynamics because it shows that natural resources are being irrevocably exhausted, biology because it reveals the real nature of the economic process and he stated that the economic process is but an extension of the biological evolution. Therefore, the most important problems in the economy should be considered from this point of view.

He explained that the decline is a natural consequence of the limitations imposed by nature and demonstrated that economic development cannot proceed without deep restructuring and reorientation of economic thought. The latter must abandon its traditional mechanism to become trans-disciplinary and integrate such thermo dynamic principles that establish a link between techno-economic development, biological evolution, global ecology and cosmology. Indeed, the process of unidirectional industrial economy fits poorly in the cyclic operation of the biosphere.

He particularly emphasized the role of natural resources (energy and material) in the biophysical process of economic development. It must be shown that there can be no question in the world of "sustainable growth" or even "zero growth" or steady state, but that the decline is now inevitable to ensure the long-term survival of mankind in the biosphere of our planet. He criticized the capitalist market economy which he said was unable to hold account of the needs of future generations, or even of poor contemporary population to express a demand. Thus, he showed that no technology will succeed in completely eliminating the entropic aspect.

Entropy can be seen as a measure of the energetic disorder in a system. At the entrance, energy is of low entropy (free energy), these are valuable natural resources. At the exit, energy is of high entropy (related energy-), these are worthless waste.

In a closed or nearly- closed system like the earth, free energy falls irreversibility can be defined as any change preventing the process of returning once for all to its starting point and related energy increases irreversibly. So entropy increases continuously. Free energy is scarce; its main external source is solar energy. Any recycling or reuse of material requires material the use of additional free energy and is therefore not neutral. The main problem of man is that he has access only to the earth free energy (closed system) and to the sun.

As a result, the entropy of a closed system increases continuously (and irrevocably) to a maximum; that is to say that the usable energy is continuously converted into unusable energy until it disappears completely. He argued that the solution cannot be reached without solar energy but he showed that this must also go through a limitation of comfort.

The limits of the thesis of decline

If the word was applied indiscriminately and without limit to all types and to all populations in the world, two essential elements were omitted: demographic trends and human needs. According to Naess, (1973), reducing the world's population is imperative. But the question that arises: how far?

In this context, Latouche. S, (2006), stated that the number of inhabitants was 3 billion in 1960, the date when humanity would have exceeded an ecological footprint of 100%.

Proponents of decay also remain evasive about how far we should make production decrease. However, Latouche. S, (2006), advances the idea of returning to a material production equivalent to that in the 60s-70s.

If this is the level reached at that date by the rich countries, this means that poor countries have the right to join them at this level. However, this author refuses the principle of this imitation, which is according to him synonymous with acculturation. Not to mention that it is the unbridled productivity engaged during the Thirty Glorious for which we are paying the price to-day. In addition, if decline globally intervened in rich countries, the deadlocked would be made on the labor instability which occurred during the last thirty years and on the rise of mass poverty.

Finally, although GDP can be characterized as an indicator of well-being, it contains the non-market product (education, health, etc.), vector of a socialization of part of the wealth produced and redistribution, even if it is modest about the value of income. In this framework, some economists consider disconnecting the growth development. On the contrary, getting out of the monetary economy, as some proponents of decline suggest, could only lead to a decline in collective solidarity and a refuge in the assistance of the individual, family or community, while insurance companies would thrive amid a socialization of wealth.

The relation between economic growth and pillars of sustainable development: An empirical investigation

Econometric methodology and results

Model overview

According to the Framework of this study, we consider a transformed linear log function Cobb-Douglas of the following production :

$$Y_t = \alpha + \beta X_t + \varepsilon_t$$

Based on the work of Valeria Costantini and Salvatore Monni (2008) to characterize the dynamics of economic growth, we did a study on our country, Tunisia, with temporal data over the period 1980 to 2013.

Thus, we define :

Y_t : is the growth rate of GDP / per capita of Tunisia,

X_t : is the matrix of explanatory variables which are: the opening Commercial (Trade), Foreign Direct Investment, Human development index (HDI), Life expectancy, Literacy rate, the rate of population and natural resources.

ε_t : Residual term.

In addition, we tend to test the relationship linking economic growth based on three essential pillar of sustainable development (economic, social and environmental).

In this research, we show that the economic pillar can be represented by two key variables including trade openness (Trade) and foreign direct investment (FDI). For the environmental pillar, we presented the variable of the natural resources. We have identified the variables of the Human Development Index (HDI), life expectancy, literacy rates and population as key indicators of social pillar.

In this attempt of empirical study, we want to know if there is a correlation between the main pillars of sustainable development (social, economic and environmental) and the rate of economic growth in Tunisia.

Estimation results and interpretations:

We used the method of Ordinary Least Squares (OLS) to estimate the model. In order to examine the relationship between economic growth (measured by GDP / per capita) and the indicators of sustainable development (we used in this study (**7 indicators**)), we chose the correlation coefficient "Bravais-Pearson" as shown in the table below:

Table 1: Test of correlation

	Trade	FDI	LR	HDI	POP	LE	NR
GDP/Per	0.2159	0.2712	0.3472	0.3469	0.3454	0.285	- 0.0665
Capia	(0.0435*)	(0.0600*)	(0.0557*)	(0.0559*)	(0.0570*)	(0.1199)	(0.7721)

Note: The value at the top indicates the correlation coefficient between GDP / per capita and the variable considered, and the value in parentheses indicates the probability of critical test of significance of the correlation coefficient.

Through this table, we note the following conclusions:

The OLS results suggest that trade, FDI, LR, HDI and the POP that have significant positive contributions to the rate of economic growth.

First, we note that the trade has a positive impact on the GDP. This implies that this factor induces a positive effect on economic growth. This is explained by the increase in the effects of export with respect to import. Therefore, trade is beneficial in terms of employment for various sectors in Tunisia. This gain is related to the gain of competitiveness provided by the implementation of the Structural Adjustment Programme (SAP) and upgrading of Tunisian enterprises.

This shift towards employment can also be explained by the increased efforts made by the Tunisian government to restructure and upgrade the industrial fabrics.

Second, improving the competitiveness of Tunisian companies and adopting the strategy of promoting exports improved employment in several sectors. The net effect depends on the situation of competitiveness of domestic producers and the country's ability to exploit new opportunities in foreign markets through increased addressed demand and in the local market through changes in habits consumption that can occur following the opening. In addition, we find that the investment has a positive and significant effect reflecting the assumption that our country pays more emphasis on direct investment

abroad, since this is one of the main factors of economic growth.

Thus, the Tunisian economy has completely changed in recent years. It operates in an environment where free trade, free movement of capital and goods become the key words and where FDI is more qualified as a new way of financing economic growth. These results imply that the economic integration influences economic growth through its effects on the volume of trade, the pace of economic growth and the productive structure of the economy through adequate transmission channels. In this regard, we have demonstrated the existence of a positive relationship between the growth rate and the economic pillar of sustainable development.

While education, population and Human Development Index (HDI) act positively and significantly on economic growth, this significance is in our opinion explained by the adequacy of the education system to the labor market allowing the development of the human being psychologically and intellectually. Indeed, education is seen as an engine of economic growth and not as a simple engine for social mobility. Thus, a density of high population has a significant effect directly on the long-term development.

This fact is associated with a greater population density at a level of higher human capital and greater adaptability and ingenuity. So we must implement an educational strategy that involve educators, publishers, creators and media programs producers capable of responding to new needs and allowing the emergence of new practices.

Similarly, the Human Development Index (HDI) influences economic growth positively and significantly. This effect is mainly due to the promotion of access to education and the implementation of literacy campaigns together with the conduct of progressive health policies. Moreover, this indicator can qualify strictly economic progress approaches by reviving its social dimensions.

In this regard, the Tunisian government is obliged to strengthen efforts in social fallout of economic dynamism and above all, the public State must seek to establish a sensitive and sustainable gender equality.

However, the coefficient on life expectancy is positive but not significant. This is explained by the expansion of the classes of pensioners which weakens productivity influenced by the decrease in the number of active people following the program Planned Parenthood applied by Tunisia. Ultimately, empirical results help validate the possibility of a positive relationship

between human and social development and economic growth.

As for the coefficient associated with the environmental pillar, represented here by the Natural resources, is negative and insignificant. This insignificance is mainly due to the scarcity and fragility of natural resources in Tunisia. Obviously, their use reduces the stock that will be available for future generations. However, it is essential to take into account the critical importance of the resource, the availability of techniques for minimizing fatigue and the possibility of finding alternatives.

Otherwise, one should monitor the rate of exploitation and exhaustion and introduce methods of recycling and economizing so as to ensure that resources do not disappear before we have found suitable substitutes. This would bring about optimistic projections for the future, macroeconomic policies that are too lax, premature entry into new industries and greater tolerance of "rent-seeking". It is in this perspective that comes the "sustainable development", sounding the alarm about the depletion of non-renewable resources which must not impair the future in any way.

Conclusion

Tunisia has translated its good business performance not only in terms of economic growth but also in terms of the well-being of its population. Thus, the positive change was referred to the indicator of Human Development states: our country has recorded the strongest growth in achieving an ideal indicator during the period 1980-2000.

Following the awareness of global environmental problems and the influence production methods on our lives, the concept of sustainable development appeared in the late 1980s. An essential condition for sustainable development is accounting between the economic growth and the environment.

In this regard, a sustainable development strategy opted by our country should be a winning strategy from a triple point of view: economic, social and environmental. A policy referring to sustainable development integrates "social" into the economic and the environment, not by addition but by construction: less over exploitation of any natural resources and better use of human resources, redistribution of activities to optimize the life cycle of products, the role of services related to the environment to strengthen solidarity and social cohesion. In addition, it is a development respectful of natural resources and ecosystems, a support of life on Earth, that ensures economic efficiency, but without losing sight of the social purposes (human and societal) the fight against poverty, against inequality, exclusion and search for equity.

Ultimately, empirical results in this research tend to validate the possibility of a positive relationship between economic growth and the three main pillars of sustainable development (economic, environmental and social). We note that the coefficient of determination is equal to 0.75 %. Therefore, we can conclude that the variability of explanatory variables in our model explains 75 % of the variability in economic growth. Under these conditions, developed countries will be required to help developing countries especially with regard to technology transfer, building governance and institutional capacity. It is mainly for this reason that several international agreements on sustainable development include important and appropriate measures for the transfer to developing countries.

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Role of Micro Finance in Reduction of Domestic Violence against Women and Women Empowerment: An Economic Analysis

Pradeep Kumar Panda*

Abstract

Violence is a reflection of power inequalities in society and comparably more women than men continue to be targets. The impact of micro finance on the women in terms of reduction of domestic violence has been examined in the study. The study revealed that Microfinance institutions very strongly felt that, with the use of micro-finance, there can be a reduction in domestic violence. 80% of these institutions feel that micro-finance can lead to reduction in domestic violence. It has also been seen that, in many cases, micro-finance has contributed to changes in attitude about women's contribution to and role in economic and social development. Specifically, micro-finance has resulted in increased recognition of women's productive role and women empowerment. It has also been observed that, women in particular face significant barriers to achieving sustained increases in income and improving their status, and require complementary support in other areas, such as training, marketing, literacy, social mobilization, and other financial services (e.g., consumption loans, savings).

Keywords: Domestic Violence, Micro Finance, Socio-economic Upliftment, Women Empowerment

Introduction

Violence is a reflection of power inequalities in society and comparably more women than men continue to be targets. It includes any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life. Violence against women manifests itself in many ways and is one of the most pervasive forms of human rights abuse in the world today. While all women may experience violence, it intersects with other social and identity-based constructs like caste, religion, ethnicity, disability, and sexual orientation to make specific groups vulnerable to different and particular forms of violence. Thus, the nature of the violence and how it manifests itself may differ because of social location.

Violence against women affects the health and economic stability of women, families and communities. A violent

environment - within and outside the home - discourages women from participating in the social, economic and political life of their communities. According to a World Health Organisation (WHO) survey, in India, each incidence of violence against women costs an average of 7 working days.

In India on the whole, one-third of women aged 15-49 have experienced physical violence and about 1 in 10 have experienced sexual violence. In total, 35 percent have experienced physical or sexual violence. This figure translates into millions of women who have suffered, and continue to suffer, at the hands of husbands and other family members. NFHS-3 collected information from married and unmarried women aged 15-49 about their experience of physical and sexual violence. Married women were also asked about their experience of emotional violence. NFHS-3 findings underscore the extent and severity of violence against women in India, especially married women.

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Putting Women First: Ethical and Safety Recommendations for Research on Domestic Violence against Women

Research on violence against women raises important ethical and methodological challenges in addition to those posed by any research. The nature of the topic means that issues of safety, confidentiality and interviewer skill and training are even more important than for other areas of research. It is not an exaggeration to say that the physical safety and psychological well-being of both the respondents and the research team can be put in jeopardy if adequate precautions are not taken. All research on domestic violence against women needs to prioritize women's safety, and build into the study design plans on how to protect the safety of all participants and to ensure that the research is conducted in an ethical and appropriately sensitive manner.

In order to guide future research in this area, the World Health Organization has developed the following recommendations regarding the ethical conduct of domestic violence research which have been adopted in this research on 'the impact of micro-finance in reduction of domestic violence'. They are:

- a) The safety of the respondents and the research team was paramount and guided all project decisions. The physical safety of respondents and interviewers from potential retaliatory violence by the perpetrator or perpetrators is of prime importance. For women experiencing violence, the mere act of participating in a survey may provoke further violence, or place the respondent or the interview team at risk. Full informed consent, was taken from the women. During the course of the interview, the interviewers introduced the section enquiring about violence carefully, forewarning the respondent about the nature of the questions and giving her the opportunity to either stop the interview, or not to answer these questions.
- b) Confidentiality was protected. It was essential to ensure both women's safety and data quality. All interviewers received strict instructions about the importance of maintaining confidentiality. This was also addressed in their training.
- c) All research team members were carefully selected and received specialized training and on-going support. All the research team members involved in violence against women were given specialized training and support over and above that normally provided to other research staff. This training included a basic introduction to domestic violence issues and the training provided an opportunity for the research staff to come to terms with their own experiences with abuse.

- d) The study design included actions aimed at reducing any possible distress caused to the participants by the research. Active efforts were made to minimize any possible distress caused by the research. Domestic violence is a sensitive and stigmatized issue, and women are often blamed for the violence they experience. Care was taken to ensure that all questions about violence and its consequences were asked in a supportive and non-judgemental manner. In addition, it was also ensured that the language of the questionnaire cannot be interpreted as being judgemental, blaming or stigmatizing. Interviewer training was also given on how to terminate an interview if the impact of the questions becomes too negative.
- e) Fieldworkers were trained to refer women requesting assistance to available local services and sources of support. The researchers were trained to anticipate and be prepared to respond appropriately to women who may need additional assistance during or following an interview.
- f) Violence questions were only incorporated into the survey designed for other purposes when ethical and methodological requirements were met.

Violence against women is one of the major public health and human rights problem in the world today. Domestic violence is one of the forms of violence against women. It refers to violence emanating from the household and within relationships covered by familial or emotional (former or present) attachment. It covers physical, sexual and psychological violence occurring in the domestic sphere. (1) It was identified as a major contributor to the global burden of ill health in terms of female morbidity and mortality leading to psychological trauma and depression, injuries, sexually transmitted diseases, suicide and murder. (2) The global health burden from violence against women in reproductive age group is about 9.5 million disability adjusted life years (DALYs). (2) The mental health consequences of domestic violence are alcohol and drug abuse, depression and anxiety, eating and sleeping disorders, feelings of shame and guilt, phobias and panic disorders, physical inactivity, poor self-esteem, post-traumatic stress disorder, psychosomatic disorders, smoking, suicidal behavior and self-harm and unsafe sexual behavior. (3) One of the important obstacles in the prevention of violence against women is the lack of gender sensitive health research and reliable data on the magnitude of the problem and its consequences. This study was conducted with an aim to assess the consequences of violence on the mental health of women.

Defining Domestic Violence

Women as an independent group constitute 48% of the country's total population as per the 2001 Census. The importance of women as an important human resource was recognised by the Constitution of India which not only accorded equality to women but also empowered the State to adopt measures of positive discrimination in their favour.

Domestic violence is one of the crimes against women which is linked to their disadvantageous position in the society. Domestic violence refers to violence against women especially in matrimonial homes.

It is a largely invisible crime and goes unrecognized, especially since "Domestic violence is considered as a family matter having an unspoken sanction in patriarchal society" (NCW).

Domestic Violence is a term that is difficult to define as the violence occurs against women in intimate relationships. A victim of domestic violence tends to shield the perpetrator of violence in keeping with her socio cultural psyche and value system.

Domestic violence can be addressed by use of criminal provisions on cruelty within marriages (Section 498A) or the newly enacted Protection of Women from Domestic Violence Act 2005 ("PWDVA") which is aimed at providing support and relief to women in all domestic relationships.

Under the protection of women from domestic violence act, domestic violence is defined in the following circumstances:

- (a) harms or injures or endangers the health, safety, life, limb or well-being, whether mental or physical, of the aggrieved person or tends to do so and includes causing physical abuse, sexual abuse, verbal and emotional abuse and economic abuse; or
- (b) harasses, harms, injures or endangers the aggrieved person with a view to coerce her or any other person related to her to meet any unlawful demand for any dowry or other property or valuable security; or
- (c) has the effect of threatening the aggrieved person or any person related to her by any conduct mentioned in clause (a) or clause (b); or
- (d) otherwise injures or causes harm, whether physical or mental, to the aggrieved person.

Adding a gender dimension to the definition amplifies it to include violent acts perpetrated on women because they are women. With this addition, the definition is no longer simple or obvious. Understanding the phenomenon of gender violence requires an analysis of the patterns of violence directed towards

women and the underlying mechanisms that permit the emergence and perpetuation of these patterns.

Scope of the Problem

The family is often equated with sanctuary - a place where individuals seek love, safety, security, and shelter. But the evidence shows that it is also a place that imperils lives, and breeds some of the most drastic forms of violence perpetrated against women and girls.

Violence in the domestic sphere is usually perpetrated by males who are, or who have been, in positions of trust and intimacy and power - husbands, boyfriends, fathers, fathers-in-law, stepfathers, brothers, uncles, sons, or other relatives. Domestic violence is in most cases violence perpetrated by men against women. Women can also be violent, but their actions account for a small percentage of domestic violence.

Violence against women is often a cycle of abuse that manifests itself in many forms throughout their lives (see Table 1). Even at the very beginning of her life, a girl may be the target of sex-selective abortion or female infanticide in cultures where son preference is prevalent. During childhood, violence against girls may include enforced malnutrition, lack of access to medical care and education, incest, female genital mutilation, early marriage, and forced prostitution or bonded labour.

Violence against Women and the Millennium Development Goals

Violence against women undermines efforts to realize the Millennium Development Goals (MDGs), which 189 Heads of State and Government have committed to achieve by 2015. While ending violence against women is a strategic priority for achieving gender equality and the goals overall, it remains a missing target of the MDGs.

Gender inequality and violence hamper countries' efforts to reduce poverty- Women and girls are half of the human capital available to reduce poverty and achieve development. Yet gender-based violence undermines human rights, social stability and security, public health, women's educational and employment opportunities, and the well-being and development prospects of children and communities - all fundamental to achieving the MDGs.

Violence against women reduces productivity and drains public budgets- Violence against women has enormous direct and indirect costs for survivors, employers and the public sector in terms of health, police, legal and related expenditures as well as lost wages and productivity.

The costs and consequence of violence against women last for generations- Children who witness domestic violence are at increased risk of anxiety, depression, low-self esteem and poor school performance, among other problems that harm their well-being and personal development.

Sexual violence deprives girls of education- School-related violence limits the educational opportunities and achievements of girls.

Violence harms reproductive, maternal and child health - Gender-based violence severely restricts women's ability to exercise their reproductive rights, with grave consequences for sexual and reproductive health.

Violence limits women's *access to family planning*, which can potentially decrease maternal mortality by an estimated 20 to 35 percent by reducing women's exposure to pregnancy-related health risks. Women who experience violence tend to have more children than they themselves want. This not only shows how little control they have over decisions affecting their sexual and reproductive lives, but also reduces the potential demographic benefits of reproductive health, estimated to reduce poverty by 14 percent.

Literature Review

Several studies have been conducted to analyse impact of micro finance on domestic violence. **Vonderlack-Navarro (2010)** cites that microloans always create a clear and unobstructed path toward financial autonomy for women, since the unanticipated consequences of participation in microcredit can often increase women's dependence on other family members to manage the debt. Vonderlack - Navarro suggests three recommendations for gender equality to be a fundamental building block of product and program designs. First, future research needs to include the men's perceptions. Second, saving products may be more beneficial than debt for families. Third, microfinance interventions, while beneficial and often the favored intervention in neoliberal-based approaches to economic development, are not a cure-all for people's dependence on an often-unpredictable and unstable informal economy. **Goetz and Sen Gupta (1996)** employ a five point index of "managerial control" over loans as their indicator of empowerment. At one end as their index are women who are described as having "no control" over their loans; these are women who either had no knowledge of how their loans were used or else had not provided any labor into the activities funded by the loan. At the other end are those who were considered to have exercised "full" control, having participated in all stages of the activity funded by the loan, including the marketing of produce. The study found that the majority of women, particularly married

women, exercised little or no control over their loans by this criterion. Interpreting this as evidence of widespread loss of control by women over their loans to men, Goetz and Sen Gupta go on to suggest three possible repayment scenarios, all with negative implications for women. In the first, the male family member using the loan takes responsibility for its repayment, a satisfactory outcome from the woman's point of view but one which the author believe negates the developmental objectives of lending to women. In the second, men are unable to supply the requisite repayment funds and women loanees have to substitute funds from other sources, drawing on their savings, cutting back on consumption, selling off utensils and other assets. They have responsibility without control. In the third, men are unwilling to repay the loans, leading to an intensification of tensions within the household, often spilling over into violence. **Cattaneo (2012)** argues that microfinance work as a means for poverty reduction and for sustainable economic and social development. Moreover, it works against it. Furthermore, actual system of microfinance, connected to the informal and subsistence economies of client microenterprises, has not led to effective investments, growth or indeed an increase in overall production. Cattaneo infers from Bateman that microfinance is no more than a myth and it does not support income-generating activities, nor empowers poorer people or women. A key reason is that new-wave microfinance has applied interest rates at too high a level. Also, one reason why lenders manage to pay back loans is not related to the success of their micro enterprise- as commonly believed- but because of extra work done in these informal sectors. **Hoque, Itohara (2009)** explain women empowerment as looking at five principles which are welfare, access, awareness-raising, participation and control. The study illustrates level of having welfare benefits of women, level of equality of access to resources such as educational opportunities, land and credit is essential for women to make meaningful progress, gender role or gender inequalities from inherent structural and institutional discrimination, women participation in decision-making process and mobilization of women and women's control over loans to manage in their ways. According to results, actively involved women to micro-credit programs, their status relatively are better than the individual housewives. Microcredit programs have significant impact in empowering the rural women in Bangladesh. **Amin, Becker and Bayes (1998)** claims that women's membership in NGO-promoted credit programs their residence in an NGO program area and in non-southern and non-eastern regions, their higher socio-economics status and their age tend to be positively associated with women's empowerment. The findings of the study tell that women who have become members of NGO-credit programs are more confident assertive, intelligent, self-reliant, and conscious of their rights, that they value NGO membership for its advancement of their welfare, autonomy, and self-

confidence, and their credit need are adequately met by the NGOs. **Pitt, Khandker, Cartwright (2003)** analyze the empowerment in Bangladesh as bargaining power with women's husbands, control over loans, management loans in their ways and decision-making in their family. The study concludes that, credit program participation has positive effects women's role in household decision-making, accessing to financial and economic resources, and increasing spousal communication in general about family planning and parenting concerns. **Garikipati (2012)** found that women's loans are mainly used to improve households' productive assets and because these are typically owned by men, women's loans ultimately benefit them. Garikipati put forward that men with wives in the credit program spend significantly more time in self-employment and less time in wage work when compared to others. It is only when the focus shifts to how women use their loans that the impact of microcredit on their time use becomes apparent. In particular women who use their loans to start or enhance businesses that they operate- in other words, enhance their ownership of productive assets- are seen to spend significantly more time in self-employment. **Haile, Bock and Folmer (2012)** have explored whether the differences in formal and informal rules, socio-cultural institutions and economic contexts, explains why the degree of empowerment achieved by women's participation in microfinance programs differ between regions and between microfinance organizations. It relates women's empowerment to four key indicators, namely, (i) women's ability to influence expenditure outcomes, (ii) their ownership of assets and savings, (iii) shared division of domestic labor, and (iv) reduction in marital conflict. The study compares the experiences of borrowers of the Amhara Credit and Saving Institution (ACSI) and the Omo Microfinance Institution (OMFI) which employ different strategies and work in different socio-cultural economic contexts in Ethiopia. According to their findings, microfinance programs empower women in three of the four dimensions of empowerment: expenditure decisions, ownership of assets (jointly or independently) and reduction of domestic conflict. **Kabeer (2001)** claims that the small enterprise development project in Bangladesh shows that women participants' mobility and social status have increased even the strong cultural barriers like purdah and gender contradictions, enhancing self-worth and perceived economic contribution, increasing women voice in family and effectiveness in decision-making, decreasing domestic violence and control over loans in family expenditures.

Data, Methodology and Coverage of the Study

The study is carried out covering 1960 women using simple random sampling technique for field survey across 11 states viz. Andhra Pradesh, Tamil Nadu, Odisha, Bihar, Rajasthan, Uttar

Pradesh, Maharashtra, Goa, Madhya Pradesh, Assam, and Tripura in 2013. The aim of the study is to assess nature and reasons of domestic violence and the impact of micro finance in reduction of domestic violence of women. Simple measures of central tendency are employed to study the impact of micro finance in reduction of domestic violence of women. The coverage of study and sampling size is shown in the table below:

Figure 1

Sr. No	Name of the States	No of Women
1	Andhra Pradesh	200
2	Tamil Nadu	220
3	Bihar	200
4	Rajasthan	280
5	Uttar Pradesh	140
6	Maharashtra	147
7	Goa	160
8	Madhya Pradesh	170
9	Odisha	143
10	Assam	160
11	Tripura	140
	Total	1960

Analysis of Findings

Demographic Profile

The interviews of microfinance beneficiaries were carried out to reveal their perception on level of domestic violence and impact of micro-finance in reduction of domestic violence. It is seen that around 80% of the beneficiaries interviewed belong to the age group of 20-40. Around 47% of the beneficiaries surveyed are illiterate. Around 73% of the beneficiaries' availed assistance are from SC, ST and OBC category. It is found that around 63% of the beneficiaries belong to BPL category. From the analysis, it is found that around 72% of the beneficiaries interviewed earn more than Rs 25,000 per annum.

Reasons for Domestic Violence against Women

The responses reveal that want for dowry has been the major reason for domestic violence wherein 41% of them have said this as the main reason. Through poverty, lack of parental support, generation gap with in-laws, and distorted women held in society are several reasons they are not that potential to cause serious levels of domestic violence. Family size to a little extent influences the violence levels in the women's house. It has been found that, there is no one single factor to account for violence perpetrated against women. Increasingly, research has focused on the inter-relatedness of various factors that should

improve our understanding of the problem within different cultural contexts. It has appeared that, several complex and interconnected institutionalized social and cultural factors have kept women particularly vulnerable to the violence directed at them, all of them manifestations of historically unequal power relations between man and woman. Factors contributing to these unequal power relations include: socioeconomic forces, the family institution where power relations are enforced, fear of and control over female sexuality, belief in the inherent superiority of males, and legislation and cultural sanctions that have traditionally denied women and children an independent legal and social status. Lack of economic resources underpins women's vulnerability to violence and their difficulty in extricating themselves from a violent relationship. The link between violence and lack of economic resources and dependence is circular. On the one hand, the threat and fear of violence keeps women from seeking employment, or, at best, compels them to accept low-paid, home-based exploitative labour. And on the other, without economic independence, women have no power to escape from an abusive relationship. The physical punishment of wives has been particularly sanctioned under the notion of entitlement and ownership of women. Male control of family wealth inevitably places decision-making authority in male hands, leading to male dominance and proprietary rights over women and girls. The concept of ownership, in turn, legitimizes control over women's sexuality, which in many law codes has been deemed essential to ensure patrilineal inheritance. Experiences during childhood, such as witnessing domestic violence and experiencing physical and sexual abuse, have been identified as factors that put children at risk. Violence may be learnt as a means of resolving conflict and asserting manhood by children who have witnessed such patterns of conflict resolution. Excessive consumption of alcohol and other drugs has also been noted as a factor in provoking aggressive and violent male behaviour towards women and children. The isolation of women in their families and communities is known to contribute to increased violence, particularly if those women have little access to family or local organizations. On the other hand, women's participation in social networks has been noted as a critical factor in lessening their vulnerability to violence and in their ability to resolve domestic violence. Lack of legal protection, particularly within the sanctity of the home, is a strong factor in perpetuating violence against women. Until recently, the public/private distinction that has ruled most legal systems has been a major obstacle to women's rights. Increasingly, however, States are seen as responsible for protecting the rights of women even in connection with offences committed within the home. In many countries violence against women is exacerbated by legislation, law enforcement and judicial systems that do not recognize domestic violence as a crime.

Nature of Domestic Violence

The experiences on nature of domestic violence as shared by the beneficiaries, reveals that physical violence is more prevalent than verbal or sexual violence. It is seen that physical violence the more prevalent one (65%) is when the victims are physically slapped, punched or kicked. It is seen from more than 32% of the beneficiaries the law is felt inadequate by they are forced for sexual intercourse. Around 25% of the beneficiaries feel they are sexually harassed frequently / subjected to sexual abuse.

Impact of micro-finance

About 73% of the respondents had borrowed from a micro-finance provider to better their economic condition. With the loan, the women had started economic activity to add to the family income and thus better the financial condition of the family. With this loan, 71% of the respondents felt that, there was a considerable change in the standard of living of the family and also led to a reduction in domestic violence.

With the impact of microfinance, 63% of the respondents said that domestic violence levels in the family had decreased. Out of this, 13% felt that domestic violence had decreased completely, 18% said it had decreased significantly and 32% said that it had decreased moderately. Thus, there was a reduction in violence as a result of the economic activities taken up by the woman. The dependency of the women on their male counterparts had also greatly gone down. Only 2% of the respondents said that domestic violence had not decreased at all.

A comprehensive definition of Micro-finance as used by World Bank and NABARD, indicates that it comprises of small savings, savings based credit (group loan mostly for consumption) bank credit for income generating activities, payment services, money transfer, insurance, linkage between credit integrated with noncredit inputs such as capacity building, back ward and forward linkages for a sustainable development. Microfinance products and services are designed matching the needs of the rural poor. In the context of the millennium goals, the focus of microfinance is definitely on the poorest and the women with a bias to rural areas where the target groups are concentrated. The social capital in the form of Self Help Group is directed for Group formation among the deserving poor households, group lending, collateral substitute, peer pressure, high level of repayments, proper end use with asset creation linkage with the banks and MFI through NGO and collective action for social, gender, and community cause are all common features associated with the micro financial initiatives through SHGs in India.

Micro-finance can be understood as a financial structure that has evolved through two branches - the informal (commission based, money lenders and credit associations) and the formal (commercial banks, multi-agency approaches, regional rural banks and private sector banks). Further, the term Micro in micro-finance reflects social sensitivities and, moral and ethical values to be observed at the bottom level of the humanity in the procedural aspects while financing to the poor community. This calls more for social and ethical engineering with the focus on the poor for accessing micro-finance package-savings, credit, insurance, and other services integrated with non financial services- to suit the needs of the demand side rather than financial engineering with sanctioning mere small credit on commercial principles from supply side.

Poverty is not created by the poor; it is created by the institutions and policies which surround them. In order to eliminate poverty all we need to do is to make appropriate changes in the institutions and policies, and/or create new ones. This is where microfinance steps in. The poor have skills which remain unutilized or under-utilised. Through microfinance, they can use these skills, which would have otherwise gone waste.

Why Women should be targeted under Microfinance?

Microfinance organizations make it a priority to serve the particular needs of women, since a staggering 70 percent of all those living in extreme poverty are female. Women are often excluded from education, the workplace, owning property and equal participation in politics. They produce one half of the world's food, but own just one percent of its farmland. The greatest opportunity for interrupting cycles of extreme poverty come from microfinance programs that target female entrepreneurs. When women improve their circumstances, they also improve the lives of their children. By investing in nutrition and education, they help to create a better future for their children and their communities.

Despite the success of life-transforming microfinance services, the World Bank says that the industry is not close to meeting the demand. Five hundred million people living in poverty could benefit from a small business loan and only one-third of the world's population has access to any kind of bank account.

According to the latest United Nations Human Development Report 2010, inequality is rising and poverty, despite high growth rate, is increasing. The report lists India at the 119th position on the Human Development Index (HDI). In the gender inequality index, India is at the poor 122nd position, among 138 countries. The disadvantages facing women and girls are a major source of inequality. All too often, women and girls are

discriminated against in health, education and the labour market - with negative repercussions for their freedoms.

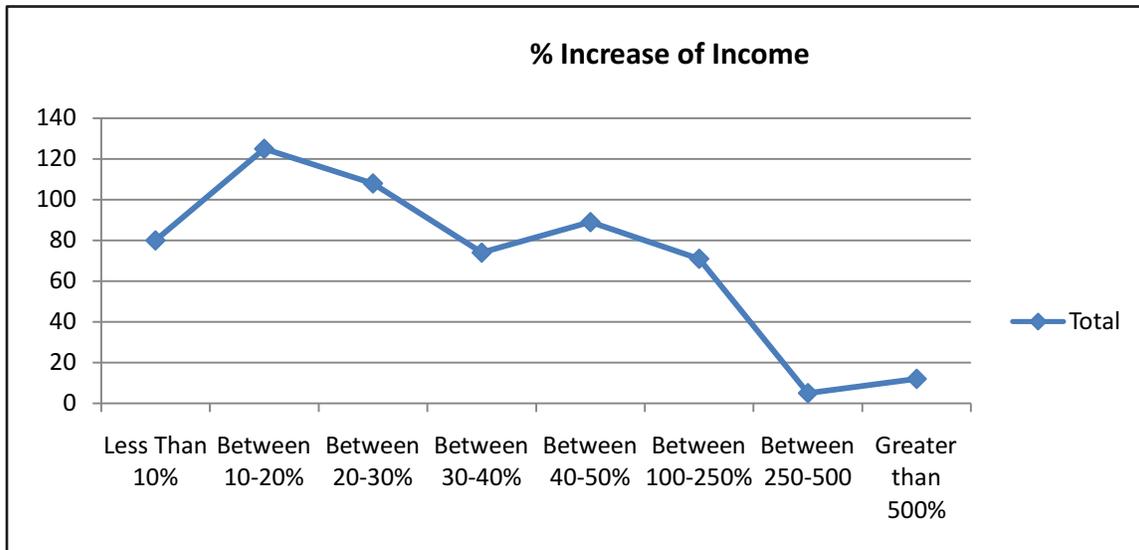
As per the World Economic Forum's index, titled "Women's Empowerment: Measuring the Global Gender Gap," India is ranked virtually at the bottom in the 53rd position out of a study in 58 nations. It is ranked 54 in economic participation, 35 in economic remuneration, 57 in education and 34 in health and well-being.

It is generally accepted that women are disproportionately represented among the world's poorest people. Women also make up the majority of the lower paid, unorganized informal sector of most economies.

In order for a woman to be empowered, she needs access to the material, human and social resources necessary to make strategic choices in her life. Not only have women been historically disadvantaged in access to material resources like credit, property, and money, but they have also been excluded from social resources like education or insider knowledge of some businesses. Access to resources alone does not automatically translate into empowerment or equality, however, because women must also have the ability to use the resources to meet their goals. In order for resources to empower women, they must be able to use them for a purpose that they choose. Naila Kabeer uses the term agency to describe the processes of decision making, negotiation, and manipulation required for women to use resources effectively. Women who have been excluded from decision making for most of their lives often lack this sense of agency that allows them to define goals and act effectively to achieve them.

This research shows that when microfinance services reach women, the benefits are particularly sustainable. Savings rates are higher; group life is more intensive; repayment rates are remarkable; enterprise growth and graduation are stronger; and there are measurable improvements in child nutrition and education, family health and household sanitation, shelter and general welfare.

Income earning power of women through micro-finance



Access to credit has shown a sharp increase in income levels of the women. Where they were totally dependent on their husbands for all needs and were deprived of exercising any kind of economic freedom, they have come a long way to reach their path of economic empowerment. The above graph shows the percentage increase in income of the women, after availing a loan from the group.

The basic theory is that microfinance empowers women by putting capital in their hands and allowing them to earn an independent income and contribute financially to their households and communities. Most of the respondents in the study joined the group two to four years back (48%) and a great number of them joined the group, less than two years back (36%). 93% of the respondents had already taken a loan to initiate some economic activity and 87% of the respondents said that their enterprise is still in operation.

The economic generating activities among the members took full force, after they became members of the self-help groups. Earlier, before joining the group, the women had tried to take loans from relatives and friends, money lenders and commercial banks. But after they became members of the self-help groups, the amounts dispersed as loans increased tremendously along with the rise in the amount of the loan. It was seen that a smaller amount (between Rs.1000 to Rs.5000) was generally taken from the other sources. But after becoming a SHG member, the women felt free to take a greater amount as loan, as there was no one to pressurise them to pay back fast and the rate of interest was also much lower, compared to what the women paid to the other sources. The loan processing time was also one determinant which made the women more comfortable with the MFI, as their loans were generally processed between 1 to 10 days, as compared to one month

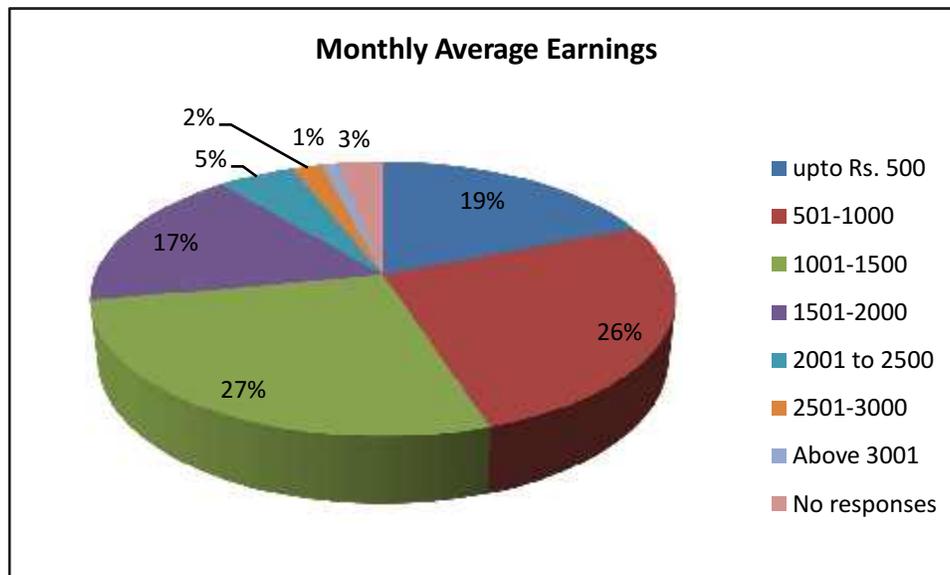
and 45 days, from other sources like commercial banks. The money lenders made them come again and again and they wasted lot of time and energy in getting a loan. 37% of the respondents also mentioned that they could approach the microfinance provider only as a member of the SHG.

Motivation and support received in setting up business venture from (in %):

External agencies	38
Friends	2
Other family members	5
Relatives	1
Spouse	27
No response	27

In the above table, the response option on External Agencies includes NGOs and their entry into the community to form a group. These ranked the highest, followed by the spouse, who also saw the benefits of being a member of the SHG and thus forced his wife to become a member. It is good to see here, the role that the husband plays in encouraging his wife to become a member, to avail of the benefits that such a group brings.

After the women joined the group, their monthly average earnings also increased. Earlier where they were only able to meet their expenses, now they are able to save a decent amount after meeting all their expenses. The break-up of their monthly savings is as follows:



This economic empowerment is expected to generate increased self-esteem, respect, and other forms of empowerment for women beneficiaries. Involvement in successful income-generating activities translates into greater control and empowerment. It has been seen that, the ability of a woman to transform her life through access to financial services depends on many factors-some of them linked to her individual situation and abilities, and others dependent upon her environment and the status of women as a group. Control of capital is only one dimension of the complex and ever-changing process by which the cycles of poverty and powerlessness replicate them. In spite of achieving economic independence, it is the man of the house which still decided how the income should be spent in the household. In 75% cases, it is the husband which still owns the ultimate authority when it comes to deciding about financial matters of the wife. In only a meager 21% of the respondents were themselves involved in taking financial decisions. It is seen that ultimate control of the purse was taken by men, regardless of who the loan had been issued to. Credit alone was not sufficient in breaking the dependency of women on their husbands. Many women believed that they had no role in making certain decisions.

After the women became members of the self help groups and bettered their economic opportunities, it was seen that 75% respondents said that their husbands would decide the means and ways of spending the income, whereas only 21% of the respondents said that, they would decide themselves about their income. 2% of the respondents said that both they and their husbands together decided about the way they should spend their income. In spite of economic up liftment, it is seen that, women are still dependent on their husbands. Women are still not able to take decisions on what is rightfully their own.

Impact on Women’s Status and Gender Relations in the Home
 Access to credit and participation in income-generating activities is assumed to strengthen women’s bargaining position within the household, thereby allowing her to influence a greater number of strategic decisions. Particularly in poor communities, men’s domination of women is strongest within the household. As Naila Kabeer points, “Many feminists recognize that poor men are almost as powerless as poor women in access to material resources in the public domain, but remain privileged within the patriarchal structure of the family.” In some societies, being seen by neighbors as in control of his family and wife is a key element of men’s social prestige-particularly in impoverished communities where men may be able to boast of few other status symbols.

Impact on Family Relationships and Domestic Violence
 Microfinance programs can strengthen women’s economic autonomy and give them the means to pursue nontraditional activities. It has been seen that participation in microfinance strengthens and improves family relationships rather than destroying them. Poverty, scarcity, and feelings of helplessness take an undeniable toll on personal relationships. Family relationships can be strengthened when the home becomes a more comfortable place to be, and when each member of the family feels secure in his or her ability to contribute productively to the family. In some cases, women who begin to assert themselves and their opinions in their households incur the wrath of angry husbands who feel their authority and sometimes their reputations are being threatened by their wives’ behavior. It has been seen that women members do not merely just take loans from the group and use the group for financial purposes. The members also share relevant issues and topics with each other.

Impact of micro-finance on the reduction of Domestic Violence and Women Empowerment

Domestic violence is anchored in deep rooted structures of power and ideological norms. Microfinance is no panacea but it does open up choices for poor women. It has been seen that access to resources plus participation in groups can create conditions for long-term improvement in status and decrease violence.

In this study, there seems to be a reduction of scarcity brought about by a rise in women’s household contribution. Subsequently women’s bargaining power has increased and they are disassociated with being an economic burden. After taking a loan amount from the group, 82% women felt that the income generated by the new activity was sufficient enough to pay their monthly installment and 86% felt that it was sufficient to meet the family requirements.

As far as improvements in living standards were concerned, majority of them felt the considerable financial difference that the loan had made in their lives. This financial difference also led to a significant social change in the lives of the women. But legally, it was felt that, there was still a long way to go before any improvement can be felt.

Improvements in living standards and empowerment (in %)

	Financially	Socially	Legally
Yes	92	75	10
No	3	1	17
No response	5	24	73

93% of the respondents also said that the loan had helped them to increase their monthly income and 90% also felt that the dependency on money lenders had considerably gone down. 78% of the respondents also mentioned that they had begun saving and could manage to keep away money every month for an emergency, or save for daughter’s marriage or for expanding the business venture.

94% women also said that the income generation activity had elevated their status in the family and 78% said that they felt freer to express their opinion in the local body meetings. Though women had become socially more active, they still felt they were not able enough to compete for any local body position. Only 41% women felt they would be able to compete for any local body position.

The knowledge of the women on protective laws was still very less. Only 29% of the women respondents said that they were aware of the protective laws/acts and further lower were the

responses when the women were asked about awareness on mechanisms that help in lodging a complaint. 16% of the respondents were only aware. The women were also asked if the domestic violence levels underwent any change as a result of their economic activities. The answers were as follows:

Changes in Violence Levels (in%):

Decreased completely	17
Decreased moderately	56
Decreased significantly	7
Not at all decreased	12
Increased	5
No responses	3

For the 5% women who said that the domestic violence levels have increased, a number of factors were attributed to this. The main reason is alcohol. The majority of the women said that, their husbands drank alcohol and would come and beat up their wives. This was the single most influential cause for an increase in domestic violence in the homes of the women. Another reason that a lot of women said was illiteracy. A lot of women felt that since they were uneducated, their husbands could do anything and they would just bear it.

Microfinance institutions very strongly felt that, with the use of micro-finance, there can be a reduction in domestic violence. 80% of these institutions feel that micro-finance can lead to reduction in domestic violence. It has also been seen that, in many cases, micro-finance has contributed to changes in attitude about women’s contribution to and role in economic and social development. Specifically, micro-finance has resulted in increased recognition of women’s productive role.

It has also been observed that, women in particular face significant barriers to achieving sustained increases in income and improving their status, and require complementary support in other areas, such as training, marketing, literacy, social mobilization, and other financial services (e.g., consumption loans, savings).

Conclusion

Violence is a reflection of power inequalities in society and comparably more women than men continue to be targets. It includes any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life. Violence against women manifests itself in many ways and is one of the most pervasive forms of human rights

abuse in the world today. While all women may experience violence, it intersects with other social and identity-based constructs like caste, religion, ethnicity, disability, and sexual orientation to make specific groups vulnerable to different and particular forms of violence. Thus, the nature of the violence and how it manifests itself may differ because of social location.

Responses of the women reveal that want for dowry has been the major reason for domestic violence wherein 41% of them have said this as the main reason. Through poverty, lack of parental support, generation gap with in-laws, and distorted women held in society are several reasons they are not that potential to cause serious levels of domestic violence. Family size to a little extent influences the violence levels in the women's house.

The experiences on nature of domestic violence as shared by the beneficiaries, reveals that physical violence is more prevalent than verbal or sexual violence. It is seen that physical violence the more prevalent one (65%) is when the victims are physically slapped, punched or kicked. It is seen from more than 32% of the beneficiaries the law is felt inadequate by they are forced for sexual intercourse. Around 25% of the beneficiaries feel they are sexually harassed frequently / subjected to sexual abuse. The same also varies from place to place. The kind of verbal harassment includes emotionally assaulting the victim, frequently. The victims are deprived of financial resources, and also unknown disposal of assets.

From the responses of the women, it is seen that 32% of them have expressed that after availing finance, domestic violence has been decreased completely. 48% of the beneficiaries have felt that there is moderate decrease in the domestic violence. However, 20% of the beneficiaries feel that there is no reduction of domestic violence even after establishing their own venture. The impact of microfinance in reduction of domestic violence against women is clearly observed in different states of the country.

The success stories of curbing violence in the states included ban on alcohol where the violence was more, provide employment opportunities, create awareness programmes on the laws, counselling the family members, improving the literacy of the women and making them self- depended to arrest any legal, verbal, financial violence.

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Tests of The FAMA French Model in Indian Stock Market

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Srishti Aggarwal**

Abstract

This paper has considered a sample of 30 stocks which are listed in Bombay Stock Exchange (BSE) SENSEX Index. The S&P BSE SENSEX (S&P Bombay Stock Exchange Sensitive Index), also-called the BSE 30, is a free-float market capitalization-weighted stock market index of 30 well-established and financially sound companies listed on BSE Ltd. Daily data allow us to more authentic data to measure stock's performance over shorter time horizons. In this paper an attempt has been made to test validity FAMA French in Indian stock market to check how far the forecasting of expected return will match the actual return. This paper concludes that though FAMA French model is an extension of CAPM and can be used for forecasting of expected return but there is significant difference between the expected return as per FAMA French Model and actual return.

Keywords: Fama-French Three Factor Model, expected return, t-test, coefficient.

Introduction

Fama-French Three Factor Model is a model designed by Eugene Fama and Kenneth French to describe stock returns. It is based on the Capital Asset Pricing Model (CAPM), which was developed independently by Sharpe, Lintner and Mossin and marks it as "the birth of asset pricing theory". It is a general equilibrium model which allows us to determine the relevant measure of risk for any asset and the relationship between expected return and risk for any asset when markets are in equilibrium. For over forty years, it is widely used in cost of capital estimation, stock selection and portfolio performance evaluation. The CAPM is an ex-ante, one-period model. The model builds on the portfolio theory developed by Harry Markowitz (1959). This traditional asset pricing model, Capital Asset Pricing Model (CAPM) uses only one variable, beta, to describe the returns of a portfolio or stock with the returns of the market as a whole. If the beta of any investment is higher than the market, then the expected return is also higher and

vice versa. Beta coefficient (β_i) is the most important part of the equation. It is the covariance of asset with the market portfolio, divided by the market portfolio's variance. High beta stocks are expected to give higher returns than low beta stocks as a result of their riskiness. The relation between the various assets' expected return and their betas is described by the Security Market Line and is linear. If a portfolio has higher beta than the market, it is expected to achieve higher returns and vice versa.

Review of Literature

Fama and French (1992) presented a different perspective to asset pricing models (CAPM). They aim to explain excess portfolio returns with three risk factors. They find that portfolios constructed to mimic risk factors related to market, size and book-to-market-equity (BE/ME) have important effects on stock returns. **Fama et. al (1993)** explained the differences between the returns on the New York Stock Exchange (NYSE) and National Association of Security Dealers (NASD). Stocks on

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the NYSE have higher average returns than the stocks of similar size on the NASD during the test period. **Daniel and Titman (1996)** test the Fama and French model on NYSE, AMEX and NASDAQ for the period 1963-1993. Their findings do not support Fama and French model. They conclude that there is no relation between expected return and Fama-French risk factors. **Connor and Sehgal (2001)** examined the Fama-French three factor model of stock returns for India using a sample of 364 companies from June 1989 to March 1999. They analysed whether the market, size and value factors were pervasive in the cross-section of random stock returns and investigated whether there were market, size and value factors in corporate earnings similar to those in returns, and whether the common risk factors in earnings translated in to common risk factor in returns. **Jan Bartholdy and Paula Peare (2002)** compared the performance using CAPM and Fama French Three Factor Model for individual stocks. First, they estimated individual stock returns based on CAPM using different time frames, data frequencies, and indexes. **Drew, Naughton and Veeraraghavan (2003)** in their study concluded that mean-variance efficient investors in china was able to select some combinations of small and low book-to-market equity firms in addition to the market portfolio to generate superior risk-adjusted returns. Moreover they found no evidence to support the view that seasonal effects could explain the findings of the multifactor model. **Aksu and Onder (2003)** compared the Capital Asset Pricing Model and Fama-French Three Factor Model on Istanbul Stock Exchange. Additionally, they find that Fama and French Model is more efficient than CAPM in explaining stock returns. **Gaunt (2004)** studied the evidences of size effect, BE/ME effect and the application of the Fama and French factor model in the Australian market. There were evidences that there was a monotonic increase in the HML factor loading from low to high BE/ME portfolios implying that the HML factor played a significant role in asset pricing. He found an improvement in the explanatory power of the three factor model over and above the one factor CAPM. **Bhavna Bahl (2006)** studied the Fama and French three-factor model of stock returns along with its variants, including the one-factor Capital Asset Pricing Model for 79 stocks listed on the BSE-100 stock market index for India and found that factor portfolios that explain the returns are the market factor, size factor (SMB) and value factor (HML). The study concluded that the Fama and French fares better in explaining the cross-section of returns in the portfolios than its variants and the CAPM. **Doganay (2006)** tested the Fama and French model on Istanbul Stock Exchange. Test period includes the months from July 1995 through June 2005. This study supports that excess market portfolio return, size and market-to-book ratio are effective on the variations of excess portfolio returns. **Vanita Tripathi (2008)** examined and concluded that the Fama-French three factor model (based on market risk premium, size premium and value premium) explains cross

sectional variations in equity returns in India in a much better way than the single factor CAPM. A study of Fama and French three factor model for the stock exchange of Thailand by **Homsud, Wasunsakul, Phuangnark and Joongpong (2009)** found that adding both factors that is the size effect and the book- to- market ratio effect can improve the efficiency of the trade-off between risk and return.

Objective & Research Methodology

Objectives of the study

1. To measure and analyse the performance of Indian Stocks listed on the Bombay Stock Exchange benchmark Index-SENSEX by using Fama French Three Factor Model.
2. To test the validity of Fama-French Three Factor Model by comparing actual rate of returns and expected rate of returns.
3. To suggest measures based on FAMA French Model

Research Methodology

The present study has considered a sample of 30 stocks which are listed in Bombay Stock Exchange (BSE) SENSEX Index. The S&P BSE SENSEX (S&P Bombay Stock Exchange Sensitive Index), also-called the BSE 30 or simply the SENSEX, is a free-float market capitalization-weighted stock market index of 30 well-established and financially sound companies listed on BSE Ltd. The 30 component companies which are some of the largest and most actively traded stocks are representative of various industrial sectors of the Indian economy. The monthly stock price data have been considered for calculating monthly returns for all stocks used in Fama and French three factors model. The data used for calculations in this report cover the period from 1st April 2012 to 31st March 2013. The closing share price data of individual stocks, Statistical tool-Regression has been used to calculate the coefficients- Beta, $R_m - R_f$, SMB and HML. The t-test statistical hypothesis was done to find out the significance level between actual and expected returns.

- i. **Fama- French Three Factor Model-** The Fama and French equation considers size and value parameters in addition to the above market factor as given below.

$E(R) = R_f + \beta(E(R_m) - R_f) + s \text{SMB} + h \text{HML}$ where,

R_f

- ii. **SMB = Size factor risk. Average return of small stocks minus the average return of large cap stocks.** The formula used for calculating SMB:-

SMB (Small Minus Big) = Average return for the smallest 30% of stocks minus Average returns of the largest 30% of stocks in a month.

- iii. **HML = Average return of high book-to-market ratio stocks minus the average return of low book-to-market ratio stocks.** The formula used for calculating HML was:

HML= Average return for 50% of stocks with highest book to market ratio minus Average return of 50% of stocks with lowest book to market ratio.

The following are the list of companies' i.e. (BSE 30 stocks) industry wise which has been used in the study.

- iv. **Actual Rate of Return:** The Actual return of the BSE 30 stocks from the period of 1st April 2012 to 31st March 2013 has been calculated to compare the actual return of the stock with its expected return which has been calculated using the formula of Fama-French Three Factor Model. The difference between the Actual return and the expected return will analyse the performance of the stocks

Table 1: List of Companies

Company	Industry
Sesa Sterlite	Mining/Minerals
Tata Power	Power
Hindalco Industries	Aluminium
Cipla	Pharmaceuticals
Tata Steel	Steel
Infosys	Information Technology
ONGC	Oil and Gas
ITC	Conglomerate
Reliance Industries	Oil and Gas
TCS	Information Technology
Maruti Suzuki	Automotive
Axis bank	Banking
SBI	Banking
Dr. Reddys Lab	Pharmaceuticals
Tata Motors	Automotive
Coal India	Metals & Mining
HUL	Consumer Goods
Hero MotoCorp	Automotive
Bajaj Auto	Automotive

M & M	Automotive
L & T	Conglomerate
NTPC	Power
Sun Pharma	Pharmaceuticals
HDFC	Consumer Finance
ICICI Bank	Banking
Wipro	Information Technology
Bharti Airtel	Telecom
HDFC Bank	Banking
GAIL	Oil and Gas
BHEL	Electrical Equipment

Data Analysis & Interpretation

Table 2: Stocks with Low to High Market Capitalization

BSE 30 Stocks	Market Cap (millions)
Sesa Sterlite	16,968
Tata Power	20,737
Hindalco	25,001
Cipla	31,491
Tata Steel	40,544
BHEL	40,676
Hero MotoCorp	41,870
Dr. Reddys Lab	41,962
GAIL	43,294
Maruti Suzuki	50,167
Bajaj Auto	56,113
Mahindra & Mahindra	58,542
Axis Bank	59,233
Larsen & Toubro	99,455
NTPC	1,15,417
Sun Pharmaceuticals	1,19,658
Tata Motors	1,21,854
SBI	1,22,126
HUL	1,22,336
HDFC	1,25,221
ICICI Bank	1,28,068
Wipro	1,28,697
Bharti Airtel	1,31,344
HDFC Bank	1,61,234
Coal India	1,78,630
Infosys	1,96,874
ONGC	2,46,255

ITC	2,51,385
Reliance Industries	2,81,816
TCS	4,04,099

As shown in the Table 1, the five companies with small market capitalization are- Sesa Sterlite, Tata Power, Hindalco, Cipla and Tata Steel. The five companies that have the largest market capitalization are- Infosys, ONGC, ITC, Reliance Industries and TCS. Now, the next step is to calculate the SMB which will be calculated by subtracting the Average monthly returns of the Large Cap stocks from the Average monthly returns of the Small Cap Stocks (The return has been calculated by using the closing share price data of an individual stock in a month). This will give us the SMB Average monthly returns. Now, taking 30 % of the sum of SMB average monthly returns, we will get Total SMB.

Table 3: Monthly SMB Average Returns

2012-13	SMB
Apr-12	-0.01097
May-12	-0.02191
Jun-12	-0.01082
Jul-12	0.013203
Aug-12	-0.08325
Sep-12	0.040707
Oct-12	-0.00428
Nov-12	0.029069
Dec-12	0.078804
Jan-13	-0.19635
Feb-13	-0.12364
Mar-13	-0.02224

The SMB factor is designed to measure the additional return investors have historically received by investing in stocks of companies with relatively small market capitalization. This additional return is referred to as the "size premium." Historically, small capitalization stocks have had both greater risk and greater returns than large capitalization stocks. In the above table SMB Average Monthly Returns has been calculated for the period of 1st April till 31st March 2013 for each month. According to the data, the large cap stocks have outperformed small cap stocks from the month of April 2012 - October 2012 and January - March 2013. The reason for this is because small cap companies are more sensitive to risk factors as a result of their relatively undiversified nature and their ability to absorb negative financial events. Small companies are more volatile and riskier than larger companies because they have less business diversification, fewer financial resources and greater uncertainty of earnings than their large counterparts. The small cap stocks have outperformed large cap stocks consistently starting from the month of July 2012 till December 2012.

Table 4: Annualized Size Premium

Rm-Rf	SMB	HML
0.015989	-0.0935	-0.0902

As points of reference, the annualized size premium from 1st April 2012 to 31st March 2013 of the total SMB factor is -0.09 as shown in the table. It means that there is a negative size premium in the 30 stocks listed in Bombay Stock Exchange and the large cap stocks have outperformed small cap stocks. This means that the small cap stocks are not providing extra premium for bearing extra amount of risk which investor receives by investing in high risk small cap stocks. Therefore, for this short term period, the investors are not getting rewarded for taking the additional amount of risk inherent in small cap stocks as the small capitalization stocks are under-performing.

Table 5: Stocks from High Book to Market Ratio to Low Book to Market Ratio

BSE 30 Stocks	Market Value	Book Value	B/M Ratio
Tata Steel	40544.32	568.46	0.0140
Maruti Suzuki	50167.04	615.03	0.0123
Axis Bank	59232.98	707.5	0.0119
SBI	122126.39	1445.6	0.0118
Dr. Reddys Lab	41961.65	458.29	0.0109
Sesa Sterlite	16968.14	149.85	0.0088
Hindalco	25000.83	174.61	0.0070
Hero MotoCorp	41870.34	250.7	0.0060
Bajaj Auto	56113.05	273.08	0.0049

Larsen & Toubro	99455.34	473.57	0.0048
ICICI Bank	128068.2	578.21	0.0045
GAIL	43293.52	191	0.0044
Mahindra & Mahindra	58541.59	238.75	0.0041
Cipla	31490.69	110.47	0.0035
Infosys	196873.67	627.95	0.0032
BHEL	40675.62	124.38	0.0031
Tata Power	20736.94	51.67	0.0025
Reliance Industries	281815.89	557.49	0.0020
HDFC	125221.04	161.67	0.0013
Bharti Airtel	131344.09	142.58	0.0011
HDFC Bank	161234.26	152.2	0.0009
NTPC	115416.81	97.49	0.0008
Wipro	128696.6	98.38	0.0008
Sun Pharmaceuticals	119658.16	75.21	0.0006
ONGC	246255.23	145.47	0.0006
Tata Motors	121853.9	59.98	0.0005
TCS	404099.4	165.86	0.0004
Coal India	178629.67	32.48	0.0002
ITC	251385.34	28.21	0.0001
HUL	122335.71	12.37	0.0001

The HML has been calculated by using the Book to Market ratio of the companies. The formula for calculating Book to Market ratio is: "Book to Market Ratio (B/M Ratio) = Book Value of the firm/Market Value of the firm" In the above table, the companies have been arranged in the order of High book to market ratio to Low book to market ratio. Therefore, the 5 Companies having High Book to Market ratio are- Tata Steel, Maruti Suzuki, Axis Bank, State Bank of India and Dr. Reddy's Lab. Similarly, the 5 companies having Low Book to Market ratio are- Tata Motors, Tata Consultancy Services, Coal India, ITC and Hindustan Unilever.

Now, the next step is to calculate the HML which will be calculated by subtracting the Average monthly returns of the stocks having the lowest B/M ratio from the Average monthly returns of the Stocks having the Highest B/M ratio (The return has been calculated by using the closing share price data of an individual stock in a month). This will give us the HML Average monthly returns. Now, taking the 50 % of the sum of HML average monthly returns, we will get Total HML.

Table 6: Monthly Average HML Returns & Annualized Value Premium

2012-13		HML
Apr-12		-0.07051
May-12		-0.02707
Jun-12		-0.02175
Jul-12		-0.02432
Aug-12		-0.08928
Sep-12		0.085585
Oct-12		0.023466
Nov-12		0.003077
Dec-12		0.04992
Jan-13		0.039831
Feb-13		-0.09995
Mar-13		-0.0494
Rm-Rf	SMB	HML
0.015989	-0.0935	-0.0902

A positive HML indicates that the Value stocks that is, the stocks which have High B/M ratio outperformed Growth stocks that is, the stocks which have Low B/M ratio. Whereas, the negative HML indicates that the Growth stocks have outperformed Value stocks. In the above table HML has been calculated for the period of 1st April till 31st March 2013 for each month. As shown in the above table, the Value stocks have outperformed growth stocks from the month of September 2012 – January 2013. And from the month of April- August 2012 and from Feb 2013- March 2013, the growth stocks have outperformed Value stocks. Over the period from 1st April 2012 to 31st March 2013, annualized value premium for value stocks is -0.09. It means for this short term period, there is negative size premium for 30 stocks. It shows that the growth stocks (low book to market ratio) are providing higher premium in Indian Stock Market and the growth stocks have performed considerably well as compare to value stocks. This negative value premium shows

that the value stocks despite having high book to market ratio are not providing enough value premium or additional reward to investors for investing in value stocks rather than growth stocks for this particular period. Growth Stocks generally have high earnings and they grow at an above average rate relative to the market and are less sensitive to economic conditions as compare to Value stocks. Growth Stocks does not pay much dividend and reinvest retained earnings in capital projects. Value Stocks on the other hand are low priced and it takes time for their price to rise. Therefore, Value stocks are more suitable for long term investors. For short term investing growth stocks is a better option as they are outperforming. After obtaining the SMB and HML, we obtain the coefficient and their expected return corresponding to $R_m - R_f$, SMB and HML for individual stocks. We obtain these coefficients by regressing $R_i - R_f$ with SMB, HML and $R_m - R_f$. The results are summarized in table

Table 7: Stocks and their coefficients & Expected Returns

Companies	Coefficients			Returns		
	Rm-Rf	SMB	HML	E (R)	Actual Return	Difference
Sesa Sterlite	0.213924	0.508807	0.402142	-0.0057	-0.1556	-0.1500
Tata Power	1.402329	0.393713	-0.53205	0.1084	-0.0575	-0.1659
Hindalco	0.289507	0.746363	0.786602	-0.0613	-0.2617	-0.2004
Cipla	0.897005	0.316733	-0.55324	0.1094	0.0522	-0.0572
Tata Steel	1.028518	0.462142	0.526162	0.0005	-0.2859	-0.2864
Infosys	0.763193	-1.03137	0.557431	0.1331	0.1187	-0.0144
ONGC	1.00439	-0.86538	0.674984	0.1109	0.0907	-0.0202
ITC	1.172449	-0.1637	-0.37148	0.1423	0.1195	-0.0229
Reliance	0.752317	-0.07654	0.291476	0.0677	-0.0143	-0.0819
TCS	0.138933	-0.43526	-0.5228	0.1648	0.1616	-0.0033
Maruti	1.629346	-0.07674	0.53655	0.0596	-0.0360	-0.0956
Axis Bank	1.121438	-0.1359	0.775227	0.0355	0.0881	0.0526
SBI	0.964795	0.267998	0.753206	-0.0028	-0.0315	-0.0287
Dr. Reddy's	0.188172	-0.11063	0.207861	0.0694	0.0132	-0.0562
Tata Motors	1.847472	0.426169	-0.39658	0.1002	0.0029	-0.0973
Coal India	1.17304	0.18005	-0.25907	0.1001	-0.1138	-0.2139
HUL	0.600375	0.399604	-0.65106	0.1057	-0.0283	-0.1340
Hero MotoCorp	1.497897	0.281512	-0.16339	0.0871	-0.2263	-0.3134
Bajaj Auto	0.677861	0.376792	0.261747	0.0268	0.0098	-0.0170
M&M	1.351478	0.191016	-0.42182	0.1166	0.0641	-0.0525
L&T	1.64861	0.246692	0.077916	0.0710	-0.0472	-0.1183
NTPC	1.098567	-0.11977	-0.43127	0.1424	-0.1148	-0.2572

ICICI Bank	1.528213	0.157559	0.344685	0.0534	0.0476	-0.0058
Wipro	0.620337	-0.27127	-0.04641	0.1142	0.0947	-0.0195
Bharti Airtel	0.535008	-0.09646	0.901298	0.0110	-0.0393	-0.0504
HDFC bank	1.211302	0.324654	-0.56756	0.1150	0.0320	-0.0829
GAIL	0.854377	0.116555	0.02818	0.0750	-0.0893	-0.1643
BHEL	1.468283	-0.0369	0.367189	0.0686	-0.2587	-0.3273

P Value= 0.000102 at 5 % significant value

The above table summarizes the results. The stocks in the above table have been sorted in the decreasing order of the difference between Actual rate of return and the Expected rate of return as per the Fama French Three Factor Model. The above results show that only 3 out of 30 stocks have performed fairly well i.e. the difference between Actual rate of return and expected Rate of Return is **Positive**. These Stocks are: Axis Bank, Sun Pharmaceuticals and HDFC. On the other hand, 27 stocks have not performed well, that is the difference between actual rate of return and expected rate of return is negative. This also means that the stock is under-priced.

11 stocks have performed terribly i.e. the difference between the expected and the actual rate of return was less than -10%. These stocks are Larsen & Toubro, HUL, Sesa Sterlite, GAIL, Tata Power, Hindalco, Coal India, NTPC, Tata Steel, HeroMoto Corp and BHEL.

Testing the Validity of Fama-French Three Factor Model using t-test

Null Hypothesis H_0 : There is no significant difference between Actual Rate of Return and Expected Rate of Return

Alternative Hypothesis H_1 : There is a significant difference between Actual rate of Return and Expected Rate of Return

After using the t-test on the expected rate of return and the actual rate of return calculated using Fama-French Three Factor Model, we found the p-value coming out to be 0.000102 which is less than the level of significance at 0.05. Therefore, we reject the null hypothesis at 5% significance level and conclude that there is high significant difference between expected rate of return and actual rate of return. The actual returns are not as per forecasted/ estimated returns calculated using Fama-French three factor model. The volatility is high between actual and forecasted returns. They are indirectly related to each other. Therefore, we can say that there is a significant difference between what the investors are expecting and what they are getting for a short term investing. Hence, we can say that the Fama-French Three Factor Model cannot be relied upon for investing in short term and is not a valid model due to high

significant relationship between Actual and Expected Rate of Return.

Findings & Conclusion

- The annualized size premium from 1st April 2012 to 31st March 2013 of the total SMB factor is -0.09. It means that there is a negative size premium and the large cap stocks have outperformed small cap stocks.
- Over the period from 1st April 2012 to 31st March 2013, the value premium for value stocks is -0.09. Therefore, there has been a negative value premium for stocks that has high book to market ratio. It also shows that the growth stocks (low book to market ratio) are providing higher premium in Indian Stock Market and the growth stocks have outperformed value stocks.
- Infosys, ONGC and Reliance Industries have positive Size premium and positive Value premium whereas ITC has negative size and value premium. Positive SMB and HML means additional premium is given for investing in small stocks with high B/M ratio.
- The results show that only 3 out of 30 stocks have performed fairly well i.e. the difference between Actual rate of return and expected Rate of Return is Positive. These Stocks are: Axis Bank, Sun Pharmaceuticals and HDFC.
- On the other hand, 27 stocks have not performed well, that is the difference between actual rate of return and expected rate of return is negative. This also means that the stock is under-priced.
- We observe that Sun Pharmaceuticals has outperformed every other stock on the index with annual rate of return of 16.66%. TCS also performed well with actual rate of return of 16%. Other than Sun Pharmaceuticals and TCS, there are 3 stocks that have performed well with an annual rate of return of more than 10%. These stocks are ITC, Infosys and HDFC.

- The average B/M ratio in case of small cap stocks is greater than the average B/M ratio for large cap stocks. The average B/M ratio for small cap stocks is 0.007 whereas for large cap stocks it is 0.001. Therefore, big size companies tend to have lower B/M ratios.
- As far as the size factor coefficients are concerned (s coefficients), they take positive values in all small cap stocks. All small stocks have highly significant, positive coefficients, whereas in Large Cap Stocks, all the SMB coefficients are negative.

This finding is consistent with Fama and French (1996) who show that small firms load positively and big firms load negatively on SMB.

- Again, the results are consistent with Fama and French (1996) who show that high B/M firms load positively and low B/M firms load negatively on HML.
- The t-test done to check the validity of Fama-French Model shows that the difference between actual rate of return and expected rate of return is highly significant. Therefore the model does not prove to be reliable and valid for a short term period.
- According to the difference between expected and actual returns, CAPM is considered to be more valid model as compare to Fama-French Three Factor Model as the stocks are the actual returns are positive and as per forecasted/expected.

The aim of this study was to analyse the performance of Small Cap and Large Cap Stocks on the BSE Index-Sensex using the Fama and French Three-Factor Model as well as to test the model and its conclusions set by Fama and French related to risk factors. For this purpose market risk factor (Beta), $R_m - R_f$, size risk factor (SMB) and Value risk factor (HML) measured by B/M ratio were used. Estimation results show that the Fama and French Three-Factor Model is not a valid model for a short term period as the difference between expected and actual rate of return is highly significant. The actual returns are not as per expected rate of return predicted by the investors. The CAPM model was found to be more effective as for most of the stocks the actual returns were more than expected returns. The empirical part of the study is based on monthly return on each stock. Statistical results show that the Large Cap Stocks outperform Small Cap Stocks on SML (size factor) as the total SMB return came out to be negative. Similarly, In case of HML factor, the growth stocks outperformed value stocks as the total HML return came out to be negative for a period of one year. We found that, SMB is not efficient for large cap stocks as these

stocks do not carry high risk, so the size premium is also negative. The third risk factor HML is found to have no effect on low B/M stocks. HML is effective on high B/M ratio stocks. Market risk factor has a wider and stronger effect on portfolio returns than the other two risk factors. This study finds less powerful results for the validity of the model than the others which have been carried out. The reason for this is that only one year time period was used in the study. Economic slowdown is also an important factor affecting the results of the studies. The slowdown affects macroeconomic variables and stock prices from different perspectives. Despite all these factors, it can be seen that the results of this study are consistent with those of other studies undertaken in India and abroad. Stocks on BSE can be divided into subsectors in order to capture the individual effects of the three risk factors more precisely on the sector base. This comparison can lead to more efficiently constructed portfolios. Although the model does not have strong power on the BSE, it is still one of the most important asset pricing models in finance. India is a very large emerging market with a growing and fast maturing equity market. A better understanding of the risk and return characteristics of this market is an important research problem.

Recommendations & Suggestions

The study has successfully checked for the efficiency of the Fama and French three-factor model in India, over and above the one factor CAPM. The results which were found using the three factor model provide a good description of the cross-section of average returns and can be used in applications like portfolio selection, portfolio performance evaluation, measuring abnormal returns in event studies, and cost of capital estimation. At the same time, there are some limitations of the three-factor model. It is a common notion among researchers that this model explains the sources of return rather than the total risk itself. The size effect exists but it is unclear as to why it exists. The value effect could be biased due to effects of data snooping and/or selection bias in the data used.

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