CONTENTS

SHOBHIT UNIVERSITY, MEERUT

Shobhit University, notified by the Government of India as a Deemed University, under Section 3 of the University Grants Commission Act, 1956, envisaged and inspired by Babu Vijendra Kumar *ji*, an eminent agriculturist and social worker from Gangoh (Saharanpur) of U.P. The University stands for going beyond the established standards and for nurturing technocrats and managers that have a global vision and insight in their chosen field, with a special focuss on the requirement of professionals in the 21st century.

SCHOOL OF BUSINESS STUDIES

School of Business Studies (SBS) is an integral part of the Shobhit University, Meerut. It inherits the academic legacy of the NICE Management College (Estd. in 1995), and got a fresh window of autonomy in curriculum-designing and flexibility of foreign collaborations, through academic exchange, credit-transfer mechanism, and bringing in increased industry component. The SBS offers MBA programmes with numerous specialisations, like marketing, finance, human resource management, production and operations management, pharmaceuticals marketing, supply-chain management, insurance and risk management, etc., it also offers M.Phil. and Ph.D programmes in major areas of business.

NICE JOURNAL OF BUSINESS

NICE Journal of Business is a half-yearly journal, earlier published by NICE Management College, Meerut, and now brought out by the School of Business Studies, Shobhit University, Meerut. It seeks to provide a platform to academicians and practising managers in business management, commerce, economics, and allied fields, to present their research findings and share their views and experiences.

The Journal aims at disseminating research out and information about recent developments in the relevant fields, by way of research articles, book reviews, Ph.D. thesis abstracts, case studies, and bibliographies, on topics related to business and allied areas.

Original contributions received for publication in the Journal are subjected to a blind review by experts in the relevant fields.

The present issue of *NICE Journal of Business* contains research papers, a comment, and book reviews on topics of common interest in business and allied areas.

The research papers and the note pertain to varied areas of business: *Marketing* ('Role of marketing-mix in creating customer value', 'Marketing strategies in plastic money industry', 'Influence of product attributes on consumer satisfaction and repurchase intention', 'Customer satisfaction in organised retail outlets', and 'Customer attitudes and perception towards shopping malls'), *Finance* ('Customers' bank-switching behaviour', 'Performance appraisal of commercial banks', and 'Testing the overreaction hypothesis in Indian equity market'), *International Business* ('India's exports, imports, FDI, and economic growth'), and *Taxation* ('Direct Taxes Code Bill, 2009').

The rapid growth in the FDI in India since 1991 has increased the importance of the relationship between the FDI inflow and export and import of goods and services, and their effect on the economic growth. Professor Jita Bhattacharyya and Dr. Mousumi Bhattacharya investigate, through causal analysis, whether the FDI inflow, exports, and imports have contributed positively towards the economic growth. While bi-directional causality has been observed between the FDI inflow and economic growth and between exports and economic growth, uni-directional causality has been found to exist from exports to the FDI inflow.

In an exploratory study, Dr. R. Makgosa investigates the perceptions of value-creation between a food and groceries distributor and his business customers, namely, the retail stores, in Botswana (Africa). The study has revealed that high product quality, broad product range, wide product-assortment, discounted prices, financial and personal support in promotion, flexible and timely delivery are the essential elements in the creation of value by food and groceries distributors and retail stores.

In order to maintain and increase their market share, firms seek to retain their customers. For that purpose, it is necessary to understand the factors which prompt the customers to switch to other brands. Professor R.D. Sharma, Dr. Gurjeet Kaur, and Ms. Neha Mahajan, seek to identify the major determinants of customers' bank-switching behaviour. Based on the responses collected from 150 bank customers, the study has revealed that inconvenience, service-failure, and prices are the major reasons for bank-switching by customers.

While estimating their profit prospects, investors tend to over-weight the recent market information and under-weight the older information. Professor Sultan Singh and Mr. Kapil Chaudhary examine whether the overreaction hypothesis matters for the Indian stock market. By using the monthly stock prices of 460 scrips listed on the National Stock Exchange of India, the authors have adduced empirical evidence which affirms that the extreme movements in stock prices were not followed by subsequent price movements in the opposite direction, resulting in the winners earning higher returns on their investment in shares. The losers, however, continued to lose.

Dr. Ved Pal and Mr. Parveen Chauhan seek to appraise the performance of commercial banks in India in the light of the CAMEL framework. Through a large sample of 63 commercial banks, the authors have found that the foreign banks and the new private banks were the best achievers in terms of the various components of the CAMEL framework.

Banks issuing plastic money in India offer service differentiation, which has implications for regulating the way the banks issue and operate these cards. A study of 27 banks in the three sectors issuing debit/ATM and credit cards, by Dr. Savita Hanspal and Dr. Deepti Kumra, has revealed that while the banks claimed that they followed the RBI Guidelines, the reality was different. The study suggests that the banks in all the sectors need to be more transparent and socially responsible in issuing and operating such cards and the public-sector banks, in particular, need to improve the quality of services offered and to become more customer-centric.

In the face of stiff competition in the two-wheelers industry in India, companies endeavour to win the customers' favour by providing a better product and accompanying services. Dr. H.C. Purohit seeks to ascertain the influence of product attributes on consumer satisfaction and repurchase intention among the buyers of scooters. It is found that while the product attributes, including the colour, load capacity, height, and body weight, were not very important for the consumers, as they did not reflect the aesthetics of the consumers, the stylist, self-starting, and gearless models were preferred by the buyers.

Dr. J.M. Badiyani examines the extent of consumer satisfaction and the influence of socio-economic factors on the buyers' decision to buy from the organised retail outlets in Gujarat. Based on a survey of 339 respondents, the results may help the organised retailers to pay additional attention to certain socio-economic groups of buyers.

Mr. Rajan Yadav develops a framework to appreciate the factors that shape the customers' attitude and perception towards the modern retail formats, like the shopping mall. Based on the proposition that attitude and perception towards an object are determined by the presence or absence of certain factors, the author identifies six factors, which significantly affect the customers' attitude and perception towards mall. The author analyses the inter-relationships between income, frequency of visits, time-spending pattern, and the merchandise preference in shopping at the mall. He suggests certain measures for marketers, policy-makers, and mall managers to develop suitable strategies that not only enhance the value for money for the customer but also increase the profit for the firm.

The direct taxes law, probably the most complicated piece of legislation in India, is proposed to be replaced by another simple and integrated law. The proposed Direct Taxes Code Bill, 2009, is before the Parliament for discussion and debate. Dr. Indu Jain has attempted a critique of the Code.

In the section on book reviews, we have four reviews written by experts in the relevant fields. The books reviewed pertain to subjects as diverse as technology and competitive strategy, investment management, management accounting, and business statistics.

I express my indebtedness to the authors and books reviewers for their valuable contribution to the Journal.

Several experts made available their expertise in assessing the articles and making critical comments and suggestions for improving their quality and standard. I owe a word of gratitude to each one of them.

Mr. Shobhit Kumar, Chancellor; Kunwar Shekhar Vijendra, Pro-Chancellor; and Professor Anoop Swarup, Vice-Chancellor of Shobhit University, took keen interest in this academic endeavour. I express my profound gratitude to the three visionaries.

D.P.S. Verma
Editor

INDIA'S EXPORTS, IMPORTS, FDI, AND ECONOMIC GROWTH AFTER LIBERALISATION
A Causal Analysis

Jita Bhattacharyya* and Mousumi Bhattacharya**

Abstract

Market-oriented reforms and economic liberalisation in India since 1991 led to stronger economic relations between India and her trading partners, resulting in increased trade and the FDI. The rapid growth in the FDI has given added importance to the relationship between the FDI inflow and export and import of goods and services, and their effect on the economic growth of the country. The present study seeks to investigate, through causal analysis, whether the FDI inflow, exports and imports have contributed positively towards the economic growth. The methods employed include Co-integration Analysis and Multi-variate Granger Causality Test. The period of the study is 1996-97 to 2007-08. Multi-variate Granger Causality Test has been conducted in the VECM framework to examine the causal linkages. Co-integration Test has revealed that a long-run relationship exists among the variables. A bi-directional causality has been observed between the FDI inflow and economic growth and between exports and economic growth. A unidirectional causality has been observed from export to the FDI inflow.

Key words: *FDI, Economic growth, Multi-variate Granger Causality Test, Vector Error Correction Method (VECM), Co-integration analysis*

INTRODUCTION

An economy gains momentum with the FDI inflow through the inflow of valuable technology and know-how, which, alongwith the efforts of the local firms, have a positive effect on the host country's economic activities and developmental efforts. International trade helps in economic growth by facilitating efficient production of goods and rendering of services. On the one hand, a country could gain by shifting production to the countries that have a comparative advantage in such production along with optimal distribution of resources and productivity. On the other hand, another country gains in terms of raw materials and equipments that it did not have.

Depending upon the parameters, such as the level of human capital, domestic investment,

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infrastructural development of the host country, macroeconomic stability, and the trade and institutional policies initiated by the government of the host country, the impact of FDI inflow and trade on the economic growth of the host countries differs. After World War II, most countries adopted protectionist import-substitution policies and were experiencing declining growth rate by the 1970s. Only a few East-Asian countries considered international trade as part of their overall economic policy.

In India, during the pre-liberalisation period, the foreign trade policy had a different socio-political orientation, coupled with rigid bureaucratic control. There were increased tariffs on practically all imports and the economy was almost at an "autarky" stage. The economy began to stifle because of lobbying of some of the powerful interest groups, and regressive attitude and politics of safe playing by some of the influential political parties and leaders. All these, followed by the first Gulf War, brought India close to a major defaulter in repaying international debts, which certainly prompted the government to go for the much-needed market liberalisation. Significant reforms have been brought about in the Indian economy since 1993-94, focussing on liberalisation, globalisation, and transparency. Efforts are on to create export-friendly environment and to come out with simplified procedures with a view to enhancing the exports and strengthening the Indian economy. The erstwhile licensing system has given way to simplified import licensing procedures along with reduction in tariff rates and customs duties on the import of a large variety of items. Even certain measures have been taken to de-license imports and the exchange rates are no longer controlled. The globalisation era, supported by liberalisation of policies and advancements in telecommunications and information technology, has virtually made all commercial services tradable across borders and this has led to steady growth in international investment and services trade.

Export of goods and services as a percentage of GDP has increased from 5.8 per cent in 1990-91 to 15.1 per cent in 2008-09. The rapid export growth has, to some extent, mitigated the balance of payment difficulties, i.e., being forced to compress imports through import restrictions or deflationary actions. Increasing exports permit and encourage a more liberal trade regime with all the benefits associated with exploitation of comparative advantages. Till the 1960s, India largely followed the import substitution policy. However, such a policy has not worked well or generated the expected results, ultimately leading India to shift towards an export- oriented strategy.

LITERATURE REVIEW

Studies have revealed that the host countries, having high savings rate, open trade regime and high technological products, would benefit from the increased inflow of FDI. Michaely (1977) found a strong positive correlation between economic growth and international trade. Balassa (1978) applied simple regression analysis to a sample of 10 countries and found that export trade volumes were positively related to a country's rate of economic growth.

Feder (1983), Ram (1985), Salvatore and Hatcher (1991) examined the export-led economic growth hypothesis and argued that exports were likely to alleviate foreign exchange constraints and, thereby, facilitate import of better technologies and production methods.

Grossman and Helpman (1991) observed that open trade regimes go hand in hand with good investment climate, technology externalities and learning effects, and lead to economic development of a country. Tong (1995) explored the relationship between economic growth and import and recognised that import at different times contribute to the economy differently but, on the whole, there was a positive correlation between import and economic growth.

Balasubramanyam, Salisu, and Sapsford (1996) found that in developing countries,

pursuing outward-oriented trade policies, FDI inflows were associated with faster growth than in those developing countries, pursuing inward-oriented trade policies. Ahmad and Harnhirun (1996) examined causality between exports and economic growth for five countries of the Association of South East Asian Nations (ASEAN).

Dutt and Ghosh (1996) studied causality between exports and economic growth for a relatively large sample of countries, using the Error Correction Model (ECM) for the countries in which they found cointegration. Then Vector-Error Correction Model (VECM) was used and tests for Granger Causality were performed.

According to Goldberg and Klein (1998), direct investment may encourage export promotion, import substitution, or greater trade in intermediate inputs, especially between the parent and the affiliate producers. Blomstrom, Globerman, and Kokko (2000) argued, along the same lines, that the beneficial impact of FDI is only enhanced in an environment, characterised by an open trade and investment regime and macroeconomic stability, where FDI can play a key role in improving the capacity of the host country to respond to the opportunities offered by global economic integration.

Chakraborty and Basu (2002) examined FDI and trade function as engines of growth and concluded that liberalisation of the trade and FDI policies, which began in India in the late 1980s and were widened in the 1990s, has significantly increased growth in India.

Love and Chandra (2004) confirmed this conclusion and further suggested that trade and economic growth exhibits a feedback relationship. For China, Tian, Shuanglin, and Vai (2004) pointed out that provinces, with a higher FDI to GDP ratio, had experienced rapid economic growth and observed that FDI should be encouraged in the LDCs to accelerate technological change and economic growth.

The interrelationship among exports, imports and FDI inflow and interpretation of the importance of these activities *vis-à-vis* economic growth have always been considered as important topics for discussion. However, the empirical works on such relationship are relatively limited. Most of the studies conducted so far have not addressed the issue of causality among these three variables and the existing literature on the Indian situation is still inadequate insofar as this important aspect of business is concerned.

OBJECTIVE OF THE STUDY

The study seeks to examine the causal relationship, if any, between India's exports, imports, FDI inflow, and economic growth (GDP), in a Vector Auto-regression (VAR) framework, during the post-liberalisation period, and to ascertain the implications of such causal relationship.

THE DATA

The quarter-wise data relating to all the variables, covering a period of 12 years (first quarter of 1996-97 to the fourth quarter of 2007-08), comprising 48 observations, have been used. The quarter-wise data relating to exports and imports of goods and services, FDI inflow, portfolio investments, and the GDP (at 1999-00 market prices), were collected from various publications of the Reserve Bank of India (RBI), including the RBI Bulletins and Annual Reports.
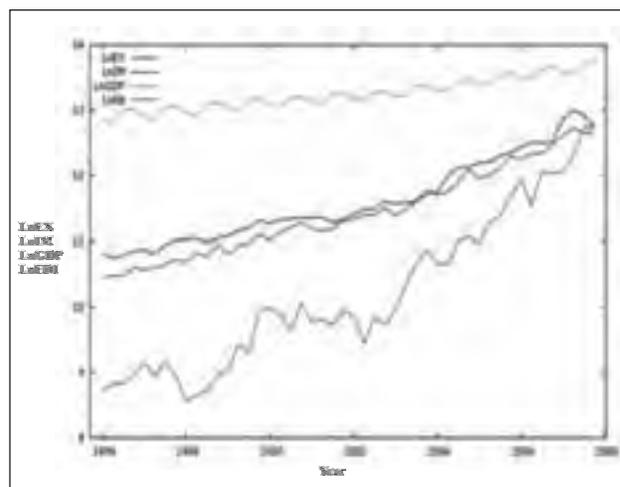

Figure 1: Logarithmic Values of FDI inflow, Export, Import and GDP

METHODOLOGY

We used the Granger-Causality Test in a multi-variate Vector Auto-regression (VAR) framework to examine the causal links between the FDI inflows and the GDP, export and import of goods and services, over the period 1996-97 to 2007-08 (see Figure 1). The period corresponds with the post-liberalisation period of market-oriented reforms in a wide range of sectors, with special emphasis on liberalising trade and investment regime, with a view to making the Indian economy increasingly integrated with the global economy.

Sims (1980) was the first to introduce the VAR methodology in econometric modelling to analyse the dynamic impact of random disturbances on the systems of variables. In a standard VAR model, each endogenous variable in the system is modelled as a function of its own past lags, and the past lags of other endogenous variables. In the VAR methodology, introduced by Sims, all the variables are treated as endogenous in order to identify and eschew spurious regressions.

Tests for Stationarity

The first step in the methodology is to test the stationarity of the variables (used as regressors in the model). Augmented Dickey Fuller (ADF), Phillips-Perron (PP) and Kwiatkowski, Phillips, Schmidt and Shin (KPSS) Tests have been conducted to investigate into the stationarity property of the series. Engle and Granger (1987) stated that a non-stationary (or unit root) series is said to be integrated of order *d*, if it can be made stationary by differencing it *d* times, expressed as X~I(d). The ADF Test consists of running of ordinary least square (OLS) regression of the first difference of the series against the series lagged once, lagged difference terms, and a constant.

The ADF regression for a time series Y_t is given below.

$$\Delta Y_t = \beta_1 + \delta Y_{t-1} + \alpha_i \sum_{i=1}^{m} \Delta Y_{t-i} + \varepsilon_t \qquad (1)$$

where Y_t is the variable of interest, Δ represents differencing operator, *t* is the time period, *m* is the number of lags, which are added to the model to ensure that the residuals, ε_t are 'white noise'. Schwarz Bayesian Information Criterion (SBIC) is used to determine the optimal lag length or *m*. In the above equation, the null hypothesis of δ=0, is tested, i.e., a unit root exists in Y (implying that Y is non-stationary) against the alternative hypothesis of δ<0. The null hypothesis is rejected if the t-test statistic from the ADF Test is significantly less than the critical value tabulated in MacKinnon (1991). While the non-rejection of the null hypothesis implies that the series is non-stationary, the rejection of the null hypothesis indicates that the time series is stationary.

PP Test is also performed to check whether a variable has a unit root. The null hypothesis is that the variable contains a unit root and the alternative hypothesis is that a stationary process has generated the variable. It is based on the OLS estimator $\hat{\alpha}$ of α in the model:

$$y_t = \mu + \alpha y_{t-1} + \varepsilon_t \qquad (2)$$

The KPSS Test is a Unit Root Test where the null hypothesis is opposite to that in the ADF Test. Under the null hypothesis, the series is stationary. The alternative is that the series is I(1). The basic assumption behind this test statistic is very simple. If y_t can be written as $y_t = \mu + u_t$ (where u_t is some zero-mean stationary process), then not only does the sample average of the y_ts provide a consistent estimator of μ, but also the long-run variance of u_t is a well-defined, finite number. Neither of these properties holds under the alternative hypothesis.

The test itself is based on the following statistic:

$$\eta = \frac{\sum_{i=1}^{T} S_t^2}{T^2 \bar{\sigma}^2} \qquad (3)$$

where $S_t = \sum_{s=1}^{t} e_s$ and $\bar{\sigma}^2$ is an estimate of the long-run variance of $e_t = (y_t - \bar{y})$. Under the null hypothesis, this statistic has a well-defined (non-standard) asymptotic distribution, which is free of nuisance parameters. H_0 is rejected if η is higher than the appropriate critical value.

Tests for Co-integration

After examining the stationarity of the variables involved in the study, an attempt is made to figure out the level of co-integration between the examined variables, i.e., tied in a long-run relationship. The Co-integration Test is conducted to determine the long-run economic relationship between the variables (Thomas, 1993). In this study, the Error-correction Co-integration technique of Johansen (1988) and Johansen and Juselius (1990) have been applied to identify the co-integration relationship between the variables. Johansen and Juselius' (1990) approach to the number of co-integrating vectors is applicable only if two variables are I(1). The Co-integration Test of maximum likelihood (based on the Johansen-Juselius Test) has been developed on the basis of a VAR approach initiated by Johansen (1988). According to Johansen (1988), a p-dimensional VAR model, involving upto k-lags can be specified as below:

$$Z_t = \alpha + \Pi_1 Z_{t-1} + \Pi_2 Z_{t-2} + \ldots\ldots\ldots \Pi_k Z_{t-k} + \varepsilon_t \quad (4)$$

where Z_t is a $(p \times 1)$ vector of p potential endogenous variables and each of the Π_i is a $(p \times p)$ matrix of parameters and ε_t is the white noise term.

Equation (4) can be formulated into an Error Correction Model (ECM) form as below.

$$\Delta Z_t = \alpha + \Pi_k Z_{t-k} + \sum_{i=1}^{k-1} \theta_i \Delta Z_{t-i} + \varepsilon_t \quad (5)$$

where Δ is the first difference operator, and Π and θ are p by p matrices of unknown parameters and k is the order of the VAR translated into a lag of k–1 in the ECM, and ε_t is the "white noise" term. Π is a vector which represents a matrix of long-run coefficients and it is of paramount interest.

The long-run coefficients are defined as multiples of two $(p \times r)$ vectors, α and β', and hence $\Pi = \alpha \beta'$, where α is a vector of the loading matrices and denotes the speed of adjustment from disequilibrium, while β' is a matrix of long-run co-efficients so that the term $\beta' Z_{t-1}$, in equation (5), represents upto $(p$–1$)$ co-integration relationships in the Co-integrating Model. The evidence of the existence of co-integration is the same as evidence of the rank (r) for the Π matrix.

Johansen and Juselius (1990) showed that the rank of r of Π, in equation (5), is equal to the number of co-integrating vectors in the system. It has full rank, i.e., $r=n$ and it is said that there are n co-integrating relationships and that all variables are I(0). Co-integrated variables share common stochastic and deterministic trends and tend to move together through time in a stationary manner even if the two variables in the study are non-stationary. There are three possible cases:

The rank of Π can be zero. This takes place when all the elements in the matrix Π are zero. This means that the sequences are unit root processes and there is no co-integration. The variables do not share common trends or move together over time. In this case, the appropriate model is a VAR in first differences involving no long-run elements.

The rank of Π could be full. In this case, the system is stationary and the two variables can be modelled by VAR in levels. In the present study, if $\Pi=4$, then all the components of Z_t are I(0), rather than I(1) or I(2), and the co-integration analysis is irrelevant.

Finally, the rank of Π can be reduced $[1 \leq Rank \ \Pi \leq (p$–1$)]$. In this case, even if all the variables are individually I (1), the level-based long-run component would be stationary. In this case, there are p–1 co-integrating vectors. The appropriate modelling methodology here is VECM.

Johansen and Juselius (1990) developed two Likelihood Ratio Tests. The first test is the Likelihood Ratio Test based on the maximal eigen value, which evaluates the null hypothesis of 'r' co-integrating vector(s) against the alternative of 'r+1' co-integrating vectors. The second test is the Likelihood Ratio Test based on the Trace Test, which evaluates the null hypothesis of, at most, 'r' co-integrating vector(s) against the alternative hypothesis of more than 'r' co-integrating vectors. If the two variables are I (1), but co-integrated, the Granger Causality Test will be applied in the framework of ECM in which long-run components of the variables obey equilibrium constraints, while the short-run components have a flexible dynamic specification.

Table 1

VAR Lag Order Selection (D.LnGDP, D.LnFDI, D.LnEx, D.LnIm)

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	131.402				3.1e-08	-5.92566	-5.86525	-5.76183
1	149.054	35.303	16	0.004	2.9e-08	-6.00249	-5.70041	-5.18333
2	199.816	101.52	16	0.000	5.9e-09	-7.61933	-7.07558	-6.14484
3	247.281	94.931	16	0.000	1.4e-09	-9.08285	-8.29744	-6.95303*
4	270.541	46.519*	16	0.000	1.1e-09*	-9.42051*	-8.39343*	-6.63535

Note: * indicates lag order selected by the criterion.

LR : Sequential Modified LR Test Statistic (each test at the 5 per cent level of significance)
FPE : Final Prediction Error
AIC : Akaike Information Criterion
HQIC : Hannan-Quinn Information Criterion
SBIC : Schwarz Bayesian Information Criterion
D. : represents the first difference of logarithmic values of the variables concerned.

Tests for Granger Causality with VECM

In order to examine the causal linkages between the variables, the Granger Causality Test has been conducted. The direction about the impact of each of the variables is also determined from the analysis. In order to capture the impact of variables observed in the past time period in explaining the future performance, the optimal lag length p (which is 4 in the present study) is chosen (see **Table 1**) and the criteria used in selecting the VAR model and optimal lag length require the combination of information criterion (minimum of AIC or SBIC or HQIC or FPE value).

The above selection criteria would guarantee that neither too short lag length is chosen to result in serially correlated errors, nor too many lags are included that might induce specification bias for having inefficient parameters (Hendry and Mizon, 1993).

If the variables contain co-integrating vector, causality exists in at least one direction. According to Engle and Granger (1987), if two series, say X and Y, are integrated of order one [i.e., I (1)] and co-integrated, then there is possibility of a causal relationship in at least one direction. The direction of a causal relationship can be detected in the Vector-Error Correction Model (VECM). Engel and Granger (1987) found that, in the presence of co-integration, there always exists a corresponding error-correction representation, captured by the error-correction term (ECT). This

means that changes in the dependent variable are a function of the level of disequilibrium in the co-integrating relationship as well as changes in other explanatory variable(s). The ECT captures the long-run adjustment of co-integration variables. As such, in addition to the direction of causality, the incorporation of ECT in the VECM allows to detect both short- and long-run causal relationship between the variables. On the other hand, if no co-integrating vector exists in the model, the standard VAR should be applied to test the causal relation between variables. As the prerequisite of causality testing, it is necessary to check the co-integrating properties of the variables, and, to examine the causal linkages, a VECM is specified, which can be expressed as follows:

$$\Delta LnFDI_t = \sum_{j=1}^{p-1} \beta_{11,j}\Delta LnFDI_{t-j} + \sum_{j=1}^{p-1} \beta_{12,j}\Delta LnGDP_{t-j} +$$

$$\sum_{j=1}^{p-1} \beta_{13,j}\Delta LnEX_{t-j} + \sum_{j=1}^{p-1} \beta_{14,j}\Delta LnIM_{t-j} + \alpha_1 ECT_{t-1} + \varepsilon_{1t}.(6a)$$

$$\Delta LnGDP_t = \sum_{j=1}^{p-1} \beta_{21,j}\Delta LnGDP_{t-j} + \sum_{j=1}^{p-1} \beta_{22,j}\Delta LnFDI_{t-j} +$$

$$\sum_{j=1}^{p-1} \beta_{23,j}\Delta LnEX_{t-j} + \sum_{j=1}^{p-1} \beta_{24,j}\Delta LnIM_{t-j} + \alpha_2 ECT_{t-2} + \varepsilon_{2t}.(6b)$$

$$\Delta LnEX_t = \sum_{j=1}^{p-1} \beta_{31,j}\Delta LnEX_{t-j} + \sum_{j=1}^{p-1} \beta_{32,j}\Delta LnIM_{t-j} +$$

$$\sum_{j=1}^{p-1} \beta_{33,j}\Delta LnFDI_{t-j} + \sum_{j=1}^{p-1} \beta_{34,j}\Delta LnGDP_{t-j} + \alpha_3 ECT_{t-3} + \varepsilon_{3t}..(6c)$$

$$\Delta LnIM_t = \sum_{j=1}^{p-1} \beta_{41,j}\Delta LnIM_{t-j} + \sum_{j=1}^{p-1} \beta_{42,j}\Delta LnEX_{t-j} +$$

$$\sum_{j=1}^{p-1} \beta_{43,j}\Delta LnFDI_{t-j} + \sum_{j=1}^{p-1} \beta_{44,j}\Delta LnGDP_{t-j} + \alpha_4 ECT_{t-4} + \varepsilon_{4t}..(6d)$$

where Δ is the first difference operator and ε_{1t}, ε_{2t}, ε_{3t} and ε_{4t} are white noise. ECT is the error correction term, and p is the order of the VAR, which is translated to lag of $p-1$ in the ECM. α_1, α_2, α_3 and α_4 represent the speed of adjustment after the FDI inflow, GDP, export and import deviate from the long-run equilibrium in Period *t-1*.

In equation (6a), the coefficients of lagged value $\beta_{12,j}$ for $j = 1,....p-1$ represent short-run effects of GDP on FDI inflow, the coefficients of lagged value $\beta_{13,j}$ for $j = 1,....p-1$ represent short-run effects of export on FDI inflow, and the coefficients of lagged value $\beta_{14,j}$ for $j = 1,....p-1$ represent short-run effects of import on FDI inflow. In equation 6(b), the coefficients of lagged value $\beta_{22,j}$ for $j = 1,....p-1$ represent short-run effects of FDI inflow on GDP, the coefficients of lagged value $\beta_{23,j}$ for $j = 1,....p-1$ represent short-run effect of export on GDP, and the coefficients of lagged value $\beta_{24,j}$ for $j = 1,....p-1$ represent short-run effects of import on GDP.

In equation 6(c), the coefficients of lagged value $\beta_{32,j}$ for $j = 1,....p-1$ represent short-run effects of import on export, the coefficients of lagged value $\beta_{33,j}$ for $j = 1,....p-1$ represent short-run effects of FDI inflow on export, and the coefficients of lagged value $\beta_{34,j}$ for $j = 1,....p-1$ represent short-run effects of GDP on export.

In equation 6(d), the coefficients of lagged value, $\beta_{42,j}$ for $j = 1,....p-1$ represent short-run effects of export on import, the coefficients of lagged value $\beta_{43,j}$ for $j = 1,....p-1$ represent short-run effects of FDI inflow on Import, and the coefficients of lagged value $\beta_{44,j}$ for $j = 1,....p-1$ represent short-run effects of GDP on Import.

FINDINGS

Time-Series Properties of the Variables

The results of the ADF and PP Tests of unit root by lag length chosen based on minimum values of SBC or SIC are shown in **Table 2**. The tests are performed on both the level and first differences of the lagged variables.

The variable FDI inflow is stationary in the first difference form according to the ADF Test

Table 2

Test of Unit Root Test Hypothesis
(1996-97 Q1 – 2007-08 Q4) Without Trend

Series		ADF Statistic		PP Test		KPSS	
		Test Statistic	Lags	Test Statistic	Lags	Test Statistic	Lags
LnFDI	Level	-0.991855	1	-0.998159	1	2.28313***	1
	First Difference	-8.589257***	0	-8.589257***	0	0.154411	0
LnGDP	Level	1.814128	4	4.537799	4	1.05762***	4
	First Difference	-2.4390559	3	-61.16498***	3	0.471521	3
LnExport	Level	3.339452	3	2.990932	3	1.27038***	3
	First Difference	-8.355006***	2	-9.308704***	2	0.145462	2
LnImport	Level	-0.402917	0	0.402917	0	4.48278***	0
	First Difference	-5.282765***	0	-5.282765***	0	0.171958	0

Note: (a) The critical values are those from McKinnon (1991)
   1 % ADF-Critical Value = -3.581152; 5% ADF-Critical Value = -2.926622; 10% ADF-Critical Value = - 2.601424 in case of LnFDI (logarithmic Value of FDI)
   1 % ADF-Critical Value = -3.592462; 5% ADF- Critical Value = -2.931404; 10% ADF- Critical Value = - 2.603944 in case of LnGDP (logarithmic Value of GDP)
   1 % ADF- Critical Value = -3.588509; 5% ADF- Critical Value = -2.929734; 10% ADF- Critical Value = - 2.603064 in case of LnEX (logarithmic Value of Export)
   1 % ADF- Critical Value = -3.577723; 5% ADF- Critical Value = -2.925169; 10% ADF-Critical values = - 2.600658 in case of LnIM (logarithmic Value of Import)
   1 % PP- Critical Value = -3.577723; 5% PP- Critical Value = -2.925169; 10% PP- Critical Value = -2.600658 in case of LnGDP, LnEX, LnIM and LnFDI (logarithmic Values of GDP, Export, Import and FDI)
   1 % KPSS- Critical Value = 0.739; 5% KPSS - Critical Value = 0.463; 10% KPSS- Critical Value = 0.347 in case of first difference of LnFDI, LnGDP, LnEX and LnIM.
   (b) *** represents the rejection of null hypothesis at the 1 per cent level of significance.

(the null hypothesis of unit root can be rejected at the 1 per cent level of significance). The PP Test (the null hypothesis of unit root can be rejected at the 1 per cent level of significance) also confirms that the variable is stationary in first difference form. The KPSS Test also gives the same result and confirms that the FDI inflow variable is an I(1) process and the null hypothesis cannot be rejected at the 1 per cent level of significance.

The variable Export is stationary in the first difference form according to the ADF Test and PP Test (where the null hypothesis of unit root can be rejected at the 1 per cent level of significance) and the KPSS Test (the null hypothesis of stationarity cannot be rejected at 1 per cent level of significance). Import variable is also stationary in the first difference form according to the ADF Test and the PP Test (where the null hypothesis of unit root can be rejected at the 1 per cent level of significance) and the KPSS Test (where the null hypothesis of stationarity cannot be rejected at the 1 per cent level of significance). GDP is stationary in the first difference form at the 1 per cent level of significance according to the PP Test and the KPSS Test but is an I(2) process according to the ADF Test. Based on the three types of Unit Root Tests, it can be concluded that the FDI inflow, Export and Import variables are I(1) process and the GDP variable is an I(2) process according to the ADF Test and an I(1) process based on the PP Test and the KPSS Test.

Johansen Co-integration Test

The Johansen Co-integration Test results for the co-integration rank, r, are presented in **Table 3**.

Going by the results of the PP Test and the KPSS Test, it is observed that the variables have the same order of integration, i.e., I(1), and the Johansen Co-integration Test has been employed to find out the co-integration rank and the number of co-integrating vectors. The possibility of co-integration between the variables included in the model has been examined by estimating the co-integrating regression in Equations 6a, 6b, 6c, and 6d. The null hypothesis is rejected, thus, suggesting that there is, at least, one co-integrating vector in each sample to exhibit a stable long-run relationship between these

variables. The null hypothesis of $r = 0$, (there is no co-integration) is rejected against the alternative hypothesis of $r - 1$ at the 5% level of significance in case of the Max-Eigen value statistic. Similarly, going by the result of the Trace statistics, the null hypothesis of r-0 is rejected against the alternative hypothesis of $r \geq 1$. As shown in the table, the number of statistically significant co-integration vectors is equal to one for the Trace statistic and also for the Max-eigen value statistic. This suggests that there is a long-run relationship among the variables considered for the study.

Table 3

Johansen-Juselius Co-integration Test Results [No Deterministic Trend (Restricted Constant)]

H_0	H_1	λ_{trace}	$CV_{(trace,5\%)}$
r = 0	r ≥ 1	71.84275*	54.07904
r≤1	r ≥ 2	29.70414	35.19275
r≤2	r ≥ 3	14.97334	20.26184
r≤3	r ≥ 4	4.281173	9.164546
H_0	H_1	λ_{max}	$CV_{(max,5\%)}$
r=0	r=1	42.13861*	28.58808
r≤1	r=2	14.73080	22.29962
r≤2	r=3	10.69217	15.89210
r≤3	r=4	4.281173	9.164546

Note: (a) r is the number of co-integrating vectors.
(b) Trace test indicates 1 co-integrating equation at the 5 per cent level of significance.
(c) Max-eigen value test indicates 1 co-integrating equation at the 5 per cent level of significance.
(d) *denotes rejection of the null hypothesis at the 5 per cent level of significance
(e) The critical values (CVs) are taken from Mackinnon-Haug-Michelis (1999).

To test whether each coefficient in a co-integrating equation was statistically zero and can be excluded from the set of co-integrating relations, restrictions can be imposed on the co-integrating vector (elements of the β matrix). The number of rows of the β matrix corresponds to the number of selected co-integration equations. Restrictions may be placed on the coefficients β (r, k) of the *r*th co-integrating relation:

β (r,1)*LNEX + β (r,2)*LNFDI + β (r,3)*LNGDP + β (r,4)*LNIM

The statistical significance of these restrictions is provided by the Chi-square statistic, with degrees of freedom equal to the number of restrictions. In **Table (4a)**, the null hypothesis that coefficient of LNIM is not significantly different from zero cannot be rejected as there is a high probability value of 0.667172. However, in **Table (4b)**, the null hypothesis states that the coefficient of LNEX is not significantly different from zero. The null hypothesis can be rejected because of the low probability value of 0.000023.

In **Table (4c)**, the null hypothesis, that the coefficient of LNFDI is not significantly different from zero, can also be rejected because of the low probability value of 0.000143.

In **Table (4d)**, the null hypothesis that the coefficient of LNGDP is not significantly different from zero, can be rejected because of the low probability value of 0.000036.

From the above observations, it can be said that the restriction imposed on LNIM cannot be rejected by using the LR test statistic. The test result suggests that although the linear combination of all variables is co-integrated, not all variables are equally influential.

So, it can be concluded that the coefficient of the variable LNIM is not statistically different from zero and the variable can be eliminated for subsequent VECM and Causality test.

Table (4a)
VEC Coefficient Restrictions

Restrictions:				
B(1,4) = 0				
Tests of Cointegration restrictions:				
Hypothesized No. of CE(s)	*Restricted Log-likelihood*	*LR Statistic*	*df*	*Probability*
1	287.8811	0.184928	1	0.667172
2	295.3390	NA	NA	NA
3	300.6851	NA	NA	NA
NA indicates that the restriction is not binding.				

Table (4b)
VEC Coefficient Restrictions

Restrictions:				
B(1,1) = 0				
Tests of Cointegration restrictions:				
Hypothesized No. of CE(s)	*Restricted Log-likelihood*	*LR Statistic*	*df*	*Probability*
1	279.0316	17.88391	1	0.000023
2	295.3390	NA	NA	NA
3	300.6851	NA	NA	NA
NA indicates that the restriction is not binding				

Table (4c)
VEC Coefficient Restrictions

Restrictions:				
B(1,2)=0				
Tests of Cointegration restrictions:				
Hypothesized No. of CE(s)	*Restricted Log-likelihood*	*LR Statistic*	*df*	*Probability*
1	280.7429	14.46139	1	0.000143
2	295.3390	NA	NA	NA
3	300.6851	NA	NA	NA
NA indicates that the restriction is not binding.				

Table (4d)
VEC Coefficient Restrictions

Restrictions:				
B(1,3)=0				
Tests of Cointegration restrictions:				
Hypothesized No. of CE(s)	*Restricted Log-likelihood*	*LR Statistic*	*df*	*Probability*
1	279.4311	17.08508	1	0.000036
2	295.3390	NA	NA	NA
3	300.6851	NA	NA	NA
NA indicates that the restriction is not binding.				

Analysis of VECM

Johansen's λ_{max} and λ_{trace} statistics (as per **Table 3**) reveal that the variables under study stand in a long-run relationship between them, thus, justifying the use of ECM for showing short-run dynamics. Going by the definition of co-integration, the Granger Representation Theorem (Engle and Granger, 1987) states that if a set of variables is co-integrated, then there exists a valid error correction representation of the data.

The test result of the vector error correction model are summarised in **Table 5**.

Table 5
Test Results of Vector Error Correction Model

Vector Error Correction Estimates			
Included observations: 43 after adjustments			
Standard Errors in ( ) & t-statistic in [ ]			
Cointegrating Eq:	*CointEq1*		
LNEX(-1)	1.000000		
LNFDI(-1)	-0.106817		
	(0.01604)		
	[-6.65971]		
LNGDP(-1)	-2.364623		
	(0.08578)		
	[-27.5660]		
C	20.99270		
	(0.97445)		
	[21.5430]		
Error Correction:	*D(LNEX)*	*D(LNFDI)*	*D(LNGDP)*
CointEq1	-1.337559	5.033756	0.234143
	(0.43327)	(1.67219)	(0.10173)
	[-3.08712]*	[3.01028]*	[2.30167]**
D(LNEX(-1))	0.688507	-4.271204	-0.175968
	(0.37549)	(1.44919)	(0.08816)
	[1.83362]	[-2.94730]*	[-1.99597]**
D(LNEX(-2))	0.422177	-3.132867	-0.169461
	(0.29908)	(1.15428)	(0.07022)
	[1.41160]	[-2.71414]*	[-2.41327]**
D(LNEX(-3))	0.106451	-2.722702	-0.078828
	(0.25465)	(0.98280)	(0.05979)
	[0.41803]	[-2.77034]*	[-1.31843]
D(LNEX(-4))	0.496957	-1.193357	0.061816
	(0.18375)	(0.70919)	(0.04314)
	[2.70449]	[-1.68272]	[1.43281]
D(LNFDI(-1))	-0.063641	0.045125	0.041786
	(0.04853)	(0.18729)	(0.01139)
	[-1.31143]	[0.24094]	[3.66743]*
D(LNFDI(-2))	-0.129212	0.408525	0.021894
	(0.05650)	(0.21807)	(0.01327)
	[-2.28685]**	[1.87338]	[1.65038]
D(LNFDI(-3))	-0.126202	0.515850	0.007420
	(0.06213)	(0.23980)	(0.01459)
	[-2.03111]**	[2.15113]	[0.50859]
D(LNFDI(-4))	-0.077606	0.287420	0.010275
	(0.05306)	(0.20478)	(0.01246)
	[-1.46263]	[1.40356]	[0.82477]
D(LNGDP(-1))	-0.512384	11.21161	0.272229
	(0.79210)	(3.05706)	(0.18598)
	[-0.64687]	[3.66745]*	[1.46378]
D(LNGDP(-2))	-0.123299	7.034882	0.164078
	(0.60454)	(2.33319)	(0.14194)
	[-0.20395]	[3.01513]*	[1.15597]
D(LNGDP(-3))	1.107239	4.702799	0.061405
	(0.41813)	(1.61376)	(0.09817)
	[2.64806]**	[2.91419]*	[0.62548]
D(LNGDP(-4))	1.519107	1.971907	0.803638
	(0.39465)	(1.52313)	(0.09266)
	[3.84927]*	[1.29464]	[8.67302]
R-squared	0.743147	0.477750	0.984925
Adj. R-squared	0.640406	0.268850	0.978895
Sum sq. resides	0.099838	1.487118	0.005504
S.E. equation	0.057688	0.222645	0.013545
F-statistic	7.233201	2.286978	163.3401

Note: * and ** denote statistical significance at the 1per cent and 5 per cent levels of significance, respectively.

In Table 5, the co-integrating equations are given along with the equation for changes in Export (first column), changes in the FDI (second column), and changes in the GDP (third column). The coefficients of Error Correction Term contain information about whether the past values affect the current values of the variable under study. A significant coefficient implies that past equilibrium errors play a role in determining the current outcomes. The information obtained from the ECM is related to the speed of adjustment of the system towards a long-run equilibrium. The short-run dynamics are captured through the individual coefficients of the difference terms. The adjustment coefficient on ECT_{t-3} in Equation (6c) is negative and statistically significant at the 1 per cent level of significance, indicating that, when deviating from the long-term equilibrium, the error correction term has an opposite adjustment effect and the deviation degree is reduced. The significant error term also supports the existence of a long-term relationship between the independent variables and Export. The lagged coefficient of ΔGDP_{t-3} is statistically significant at the 5 per cent level of

significance and ΔGDP_{t-4} is statistically significant at the 1 per cent level of significance, indicating a unidirectional causality, running from GDP to Export. The lagged coefficients of ΔFDI_{t-2}, ΔFDI_{t-3} are negative and statistically significant at the 5 per cent level of significance, implying that more FDI inflows have a negative effect on export in the short run. In case of Equation (6a), the estimate of ECT_{t-1} is positive and statistically significant at the 1 per cent level of significance, which means that the error term contributes in explaining the changes in the FDI inflow and a long-term relationship exists between the independent variables and FDI inflow. The estimates of lagged coefficients ΔEX_{t-1}, ΔEX_{t-2}, ΔEX_{t-3} are negative and statistically significant at the 1 per cent level of significance, implying that higher export has a negative impact on the FDI inflow in the short run. The estimates of the lagged coefficients ΔGDP_{t-1}, ΔGDP_{t-2}, ΔGDP_{t-3} are statistically significant at the 1 per cent level of significance, indicating a unidirectional causality running from GDP to the FDI inflow.

The estimate of ECT_{t-2}, in Equation (6b), is positive and statistically significant at the 5 per cent level of significance, which means the error term contributes in explaining the GDP changes and a long-term relationship exists between the independent variables and the GDP. The estimates of lagged coefficients ΔEX_{t-1}, ΔEX_{t-2} are negative and statistically significant at the 5 per cent level of significance, implying that higher export has a negative impact on the GDP in the short run. The estimate of lagged coefficients ΔFDI_{t-1} is statistically significant at the 1 per cent level of significance, implying causality running from the FDI inflow to the GDP.

Causality Test with VECM

The details of the Causality Test with VECM are given in **Table 6**. It is noted that there is a long-run relationship between FDI inflow and economic growth (GDP), i.e., there is the bi-directional causality between the FDI inflow and the GDP. A bi-directional causality can also be observed between the export and economic growth (GDP).

Uni-directional causality can also be seen between the export and the FDI inflow.

Table 6

VEC Granger Causality/Block Exogeneity Wald Tests (Sample: 1 to 48)

Dependent variable: **D(LNEX)**

Excluded	Chi-square	df	Probability
D(LNFDI)	5.532642	4	0.2369
D(LNGDP)	30.99566	4	0.0000
D(LNIM)	1.470850	4	0.8318
All	36.15694	12	0.0003

D(LNGDP) −−−−→ **D(LNEX)**

Dependent variable: **D(LNFDI)**

Excluded	Chi-square	df	Probability
D(LNEX)	7.840922	4	0.0976
D(LNGDP)	12.14081	4	0.0163
D(LNIM)	2.978191	4	0.5615
All	27.79588	12	0.0059

D(LNEX) −−−−→ **D(LNFDI)**
D(LNGDP) −−−−→ **D(LNFDI)**

Dependent variable: **D(LNGDP)**

Excluded	Chi-square	df	Probability
D(LNEX)	17.77448	4	0.0014
D(LNFDI)	12.66548	4	0.0130
D(LNIM)	3.107946	4	0.5399
All	31.39411	12	0.0017

D(LNEX) −−−−→ **D(LNGDP)**
D(LNFDI) −−−−→ **D(LNGDP)**

Dependent variable: **D(LNIM)**

Excluded	Chi-square	df	Probability
D(LNEX)	2.072430	4	0.7224
D(LNFDI)	2.710085	4	0.6075
D(LNGDP)	5.5875666	4	0.2321
All	16.05655	12	0.1887

CONCLUSION

A bi-directional causality can be observed between FDI inflow and economic growth (GDP). Development and improvement in infrastructure (roads, railways, ports, etc.), both in terms of quantity and quality, is going on in the country. A considerable reduction in the

transaction cost, incurred by foreign investors due to corruption, strikes and lockouts in the host country and unnecessary regulatory requirements, has taken place. The tariff barriers, which affect the FDI inflows and also the economic growth (GDP), have been reduced. With the initiation of financial sector reforms in 1991, integration of the different segments of India's financial market is on track. Financial integration brings in equality in returns and leads to flow of funds from the less-returns market to the high-returns market. Similarly, opening of current accounts and significant liberalisation of capital accounts have increased capital flow to the country. The countries are increasingly relying on savings of other nations to supplement their domestic savings. The sharp increase in the inflows of foreign private capital into India in the 1990s has increased the cross-border financial integration and led to the economic development of the country.

With liberalisation, the Indian economy witnessed a favourable export promotion policy, which led to high export-earnings through reduction in foreign exchange constraints and enhanced ability to import more industrial raw materials and capital goods, which, in turn, enabled India to expand its productive capacity. The export-led growth hypothesis puts forward trade as the main engine of growth and claims that outward-oriented policies and exports improve productive capacity of a host country through various means. India followed a policy of adoption of foreign technologies that resulted in greater capital utilisation through comparative advantage and economies of scale. This, in turn, helped in creating a stable macroeconomic environment through increase in employment and productivity, leading to overall economic growth of the country. Economic growth also leads to export growth as gains in productivity give rise to comparative advantage in certain sectors that lead naturally to export growth. The Indian government has started giving more attention to developing infrastructure which will have positive impact on exports and FDI, and eventually on the economic growth (GDP).

A causal positive link is also observed between export and FDI, showing that a high rate of economic growth (GDP), directly or indirectly through its effects on export, has played a role in FDI inflow in the country. Moreover, the new Export-Import (EXIM) Policy 2002-07, recent reforms, and trade and investment liberalisation have helped to create a more open trade environment and generate positive spillover effects of FDI inflow.

The new EXIM policy has given a major thrust to agricultural export and removed all quantitative restrictions on exports, such as registration requirement, minimum export price or the requirement of export through the state-trading set-up. Transport assistance has been made available for export of fresh and processed fruits, vegetables, floriculture, poultry and dairy products, and products of wheat and rice. This has lead to diversification of agricultural activities. Keeping in line with the export focus, the then Union Minister of Commerce and Industry, Mr. Murasoli Maran, launched the Focus Africa Programme which has given a boost to India's trade with the Sub-Saharan African Region. A rich variety of WTO-compatible measures have been introduced to facilitate the export of new and improved products, including those in the services sector. At the same time, there was a steady reduction in import tariffs from an average of 37 per cent in 2001-02 to 18 per cent by the end of the Tenth Five-Year Plan period. The two major objectives of the EXIM policy of 2002-2007 were to double the percentage share of the global merchandise trade within the Plan period and to act as an effective instrument of economic growth by giving a thrust to employment generation.

No causal relation has been observed between import and the other three variables [export, FDI inflow, and economic growth (GDP)]. In general, the imported products are expected to encourage domestic enterprises to improve product quality and production efficiency and promote an overall development of the host country's industrial structure and lead to economic growth. But such

effect has not been observed in the case of the Indian economy during the period of study.

Had the monthly data of the GDP been available, the test results would have been more precise. Some other macro-economic variables, such as the government spending, employment, output of the manufacturing sector, and their effect on trade, investment and economic growth, have not been considered in the present study, thus, leaving a scope for further research in this significant area.

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ROLE OF THE MARKETING-MIX IN CREATING CUSTOMER VALUE
A Study of Business-to-Business Relationships in Botswana

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Abstract

This paper presents an exploratory study on the role of the marketing-mix on customer value-creation in Botswana's business markets. While studies conducted earlier in this area are based on manufacturer-business customer relationship. The present study provides insight into customer value-creation in business markets, using distributor-business customer relationship in Botswana, which has not been studied before. It seeks to investigate how a food and groceries distributor operating in Botswana uses the marketing-mix in creating customer value. For this purpose, semi-structured interviews with a sales manager representing the food and groceries distributor and ten managers representing business customers were used. Overall, business customers revealed that the food and groceries distributor create customer value by offering them in-store promotional assistance and good price in the form of discounts. The study also reveals that strong and good relationships with the distributor's salespeople are essential in value-creation. Although this study is exploratory in nature, it is critical for business marketers since it highlights the major aspects of the marketing-mix that could be employed in creating value for business customers. In addition, the findings could be used by business marketers in making decisions on the selection of manufacturers', price determination, and in developing promotional and distributional strategies.

INTRODUCTION

The concept of customer value and how it is created has attracted a great deal of attention among marketing practitioners and researchers alike in the literature pertaining to business-to-business marketing. This is important because the creation of customer value is beneficial to both the supplier and the business customer.

For instance, suppliers are more likely to enjoy competitive advantage and superior performance when they create and deliver value to business customers better than their competitors (Day, 1994; Guenzi and Troilo, 2006).

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Business customers also rely on the products and services they purchase from their suppliers to improve their marketing offerings and increase their overall profitability (Anderson, *et al.*, 1992; Ulaga, 2001).

Consequently, researchers have proposed several definitions, characteristics and types of marketing capabilities that organisations could utilise in creating customer value (Blois and Ramirez, 2006; Day 1994). Although, existing studies on the subject of customer value creation in business-to-business marketing have played an important role in the understanding of customer value creation, there are some significant gaps that need to be addressed. For instance, research into customer value creation has concentrated on manufacturer-business customer relationships in Europe (Guenzi and Troilo, 2006, Wagner and Hoegl, 2006) and United States (Moore and Fairhurst, 2003; Ulaga, 2003). Another general feature of the available research on customer value creation strategies is that it relies heavily on desk reviews that are not based on empirical evidence (Blois and Ramirez, 2006; Day, 1994; Golfetto and Gibbert, 2006; Moller, 2006).

The purpose of the present paper is to explore the role of the marketing mix in creating customer value in a business-to-business relationship between a food and groceries distributor and his business customers, in Botswana. This study introduces a different perspective and is particularly relevant in the context of Botswana, since there are very few manufacturers in the country (*Enterprises and Establishments Register Digest*, 2005). In other words, most organisations within the country heavily rely on South African manufacturers for the production of goods while their major role is to act as distributors. Specifically, this study seeks to address the following key research questions:

Q1: H*ow does the food and groceries distributor and his business customers perceive value?*

Q2: *What specific role does the marketing-mix play in creating customer value in business-to-business relationships in Botswana?*

LITERATURE REVIEW

The Concept of Customer Value

Major environmental changes in the form of globalisation, the dramatic rise of competition, advancement in technology and increased customer empowerment have presented a great challenge to business marketers and markets. In keeping with these changes, many organisations are forced to adopt effective ways for delivering customer value (Day, 1994; Flint, *et al.*, 2002; Ulaga, 2003). For instance, some organisations specialise in a narrow set of competences in response to global competition while others acquire more knowledge because of advancing technology (Moller, 2006). Changes in internet services, mobile services and other technologies also lead to more empowered business customers who may independently perform certain service processes (Heinonen, 2004). Similarly, changes in customer demands and other changes in the macro environment drive change in the customers' desired value in business markets (Flint, *et al.*, 2002).

Table 1

Conceptualisation of Customer Value in Business Markets

Studies Measure	Eggert and Ulaga (2001)	La, Patterson, and Styles (2009)
'Compared to the price we pay, we get reasonable price'.	√	√
'Compared to the quality we get, we pay a reasonable price'.	√	
'The purchasing manager's relationship delivers us superior net value'.	√	
'The company delivered what we wanted and expected'.		√
'We got what we paid for'.		√
'Considering the price we paid and what the company delivered, overall we receive good value for money'.		√
'Overall, the company provides better value compared with other firms offering similar products'.		√

Customer value is commonly defined as a trade-off between the benefits and the costs

in business markets (Guenzi and Troilo, 2006; Ulaga, 2003). Business markets consist of all organisations that purchase goods and services to use in the creation of their goods and services. Customer value is also often conceptualised as a uni-dimensional concept, using the measures listed in **Table 1**.

Although some measures of customer value have been provided in earlier studies, researchers have suggested that there are some concerns that need to be addressed about its measurement. For example, Guenzi and Troillo (2006) argued that the measurement of customer value was in its infancy and a sound conceptualisation based on managerial practice was missing. Ulaga (2001) also identified a number of questions that needed to be addressed in relation to the conceptualisation of customer value in business markets: How to combine monetary and non-monetary benefits? How to distinguish value creation through products and services from the surrounding relationship between a supplier and his customer? What is the difference between relationship value and product value?

Moreover, the characteristics and the various typologies of customer-value contribute to the difficulties that researchers' faced in its conceptualisation. Previous studies (e.g., Eggert and Ulaga 2002; Moller, 2006; Ulaga, 2003) have cited the following key characteristics of customer value:

(i) It is a subjective concept, i.e., the value could be perceived in terms of different aspects;

(ii) Benefits and sacrifices can be multi-dimensional; and

(iii) Perceptions of value are relative to competition. For instance, consumers could perceive value differently in terms of the price they are willing to pay for a product offering or in terms of the performance and reliability of the product. Benefits are also a combination of physical attributes, economic attributes, service attributes and technical support available in relation

to a particular situation. Furthermore, delivering a better trade-off between the benefits and costs in a product or service means that the organisation is capable of offering better value than competition.

'Customer value' has also been classified into two types: exchange and relational value (Ulaga, 2003). Exchange value contends that a particular supplier can provide core value offerings to its specific customers and relational value denotes that a supplier can pursue business offerings improvements through collaborative relationships with specific customers. Moller (2006) also classified value into three types: (i) exchange, (ii) relational, and (iii) propriety. Exchange value means that the supplier through his or her activities develops an offering which is consumed by the buyer. Relational value refers to the value which is created through the interrelated activities of the buyer and the supplier. These two types of value are similar to those addressed by Ulaga (2003). The additional type of value proposed by Moller (2006), referred to as the propriety value, is concerned with the value which is provided by the company for its own benefit.

An investigation into the creation of customer value in distributor-business customer relationships, as in the case of the present study, is based on the notion of 'exchange value'. However, exchange value has received some criticism in the business-to-business marketing literature. As noted by Moller (2006), (i) It emphasises the business customer's perspective; (ii) It is silent about joint value creation; and (iii) It does not offer guidance on supplier-business customer's activities which create value.

Despite its criticisms, the notion of exchange value has been widely accepted in marketing (Kotler and Keller, 2009) because all parties involved expect to gain value in the exchange (Eggert and Ulaga, 2002; Ulaga, 2003). Similarly, customer value may be perceived differently by parties involved in the exchange. For instance, a supplier tends to focus on the level of products whereas a business customer is more concerned with supplier's competencies, such as availability

of his product, the efficient delivery of the product and his expertise in the customer's own business (Moller, 2006). Thus, an investigation of exchange value helps in providing insights into the different perspectives that suppliers and business customers have about what is value and how it is created.

Perspectives of Value Creation

There are different perspectives about value-creation strategies in the business-to-business marketing literature. Nonetheless, Golfetto and Gibbert (2006) have summarised the perspectives into four categories. According to these authors, the traditional perspective of value creation, which is mostly inspired by the Resource-based view, tends to be concerned with how a set of market-based assets can be directly deployed in the marketplace to create or maintain the competitive advantage. The Resource-based view recognises that value is determined by the market context within which the organisation is operating (Moller, 2006). It also emphasises that organisations compete on the basis of their capabilities (Blois and Ramirez, 2006).

Market capabilities also play a significant role in value-creation, since they may be rare, difficult to duplicate, and their value can be appropriated by the firm (Hooley, *et al.*, 2005). Thus, the traditional perspective widely assumes that market-related capabilities, such as customer relationships, brands, market-orientation, and supplier distribution play an instrumental role in creating value (Day, 1994; Moller, 2006). Additionally, traditionally research on value in business markets has concentrated on how business customers perceive value in a supplier's offering as well as how suppliers create value (Ulaga, 2001).

In the second perspective, creation of value is based on the agreement between buyers and suppliers to share and mutually develop competencies. This perspective stresses that the key competences of both parties, such as supplier-business customer collaboration in product development, partnership and network formation, are critical in the creation of value. In other words, in order to create value there is need for joint exploitation and creation of resources by the supplier. Consequently, there has been a growing academic interest on relationship issues, such as value in manufacturer-business customer relationships (Ulaga, 2001; 2003; Ulaga and Eggert, 2006); supplier involvement in product development (Wagner and Hoegl, 2006) as well as how supplier-business customer relationships are developed and managed (Narayandas and Rangan, 2004; Rese, 2006).

The third perspective is referred to as competence-based marketing. This perspective is concerned with how a supplier could market his competencies so as to create customer value. Blois and Ramirez (2006) suggested that capabilities can be marketed alone or as part of a broader package, where a product is a bundle of attributes. The fourth perspective is concerned with how a supplier could create value in the future. These two perspectives are still under-studied and require further development.

Although different perspectives generate valuable insight into value creation, this study utilises the traditional perspective, which stresses that in order for an organisation to deliver customer value it must succeed in building and using capabilities that support market strategies (Moore and Fairhurst, 2003; Ulaga, 2003).

Marketing Capabilities

The available research on how market capabilities encouraged customer value has suggested several definitions of marketing capabilities. Marketing capabilities are commonly defined as "interactive processes designed to apply collective knowledge, skills and resources of the firm to market-related needs of the business, enabling the business to add value to its goods and services, adapt to market conditions, take advantage of market opportunities and meet competitive threats" (Vorhies, 1998). Market capabilities are also referred to as repeatable patterns of action in the use of assets to create, produce and deliver offerings (Blois and

Ramirez, 2006). Additionally, Day (1994) noted that marketing capabilities are complex bundles of skills and accumulated knowledge that are manifested in such typical business activities as order-fulfillment, new product development, and service delivery.

Different types of marketing capabilities have also emerged in the business-to-business marketing literature. For example, according to Golfeto and Gilbert (2006), marketing capabilities consist of three processes: (i) The alignment of supplier competencies with the customer's business processes; (ii) The experiential communication of supplier competencies; and (iii) The delivery of competencies to the buyer's business processes. Marketing capabilities have been further divided into market-based resources and marketing-support resources (Hooley, *et al.*, 2005). According to this study, market-based resources are those that are directly deployed in the marketplace to create or maintain competitive advantage, whereas marketing-support resources support marketing activities and contribute indirectly to competitive advantage.

Blois and Ramirez (2006) have identified four types of capabilities. The first type of capabilities is internal to the supplier and enables customers to enhance their value-creating activities. For instance, a supplier could create customised products so that business customers could purchase products in the form they wanted them and at lower costs, which in turn would enable them to lower the prices charged to the end-users. The second types of capabilities are external to the supplier and enable customers to enhance their value-creation activities, such as the co-ordination of activities of external networks. The third are internal to the supplier and relieve the customer of activities required as part of their value-creating functions. For instance, a supplier chooses to perform a function on behalf of a customer, such as management training or developing a number of innovative programmes on behalf of the customer. The fourth type of capabilities are external to the supplier and relieve customers of activities required as part of their value-creating

functions. For instance, a supplier could assist business customers by identifying the buyers for products that the supplier does not usually deal in.

Considering that there are different perspectives about marketing capabilities, the present study conceptualises the marketing capability as the ability of a supplier to co-ordinate product, price, promotion and place, to ensure customer-value delivery. For instance, Ulaga (2003) has identified the following elements of the marketing-mix as important in value-creation in manufacturer-business customer relationships: (i) product quality, (ii) delivery, (iii) time to market, (iv) service support, (v) direct product costs, (vi) supplier know-how, (vii) personal interaction, and (viii) process costs.

OBJECTIVES OF THE RESEARCH

This paper seeks to examine the role of the marketing-mix in creating customer value in a business-to-business relationship between a food and groceries distributor and his business customers in Botswana. Specifically, this study seeks to investigate:

1. The perception of the food and groceries distributor and his business customers about what customer value is; and

2. The specific role that the marketing mix plays on the creation of customer value in business-to-business relationship in Botswana.

RESEARCH METHODOLOGY

In order to address the objectives developed in the study, a qualitative approach of research was employed. This approach was considered to be the best to achieve the objectives of the study, because there is a general concern among scholars that the measurement of customer-value in supplier-business customer relationships is still in its infancy and a sound conceptualisation, based on managerial practice, is missing (Guenzi and Troilo, 2006; Ulaga, 2003). In addition, to the best

of our knowledge, no research has been conducted on customer-value-creation based on business markets in Botswana. Thus, a qualitative approach is commonly used by researchers (Flint, *et al.*, 2002; Ulaga, 2003; Wagner and Hoegl, 2006), when the objective of the study is to gain an understanding of the existing phenomena that little is known about.

The data were collected from a local distributor and his business customers. This context was selected for the current study since the particular distributor is one of the largest distributors of food and groceries in Botswana. The business customers were the food and groceries retail stores. A decision to select a single distributor and its business customers was also a necessary step for ensuring a better understanding of exchange value. Additionally, perspectives of both the customers and the distributor were highly relevant, as business customers and distributors often hold different perspectives of what is customer value.

As perspectives of both the food and groceries distributor and the retail stores were inquired in

this study, the data were collected in two phases. In the first phase, the data were gathered from the managers of retail stores located in the capital city of Gaborone in Botswana. In particular, through the distributor, managers of the retail stores whose main responsibilities included purchasing were identified and invited to participate in the study. After securing an agreement from the retail store managers, a semi-structured interview was scheduled and conducted with each of them. An interview guide which covered the two key research questions was used. Interviews were successfully conducted with ten managers of retail stores. This sample size was deemed appropriate for an exploratory investigation of value-creation, which was consistent with other previous related empirical studies (e.g., Ulaga 2003; Ulaga and Eggert, 2006; Guenzi and Troilo, 2006; Wagner and Hoegel, 2006). The major characteristics of the sample used in the study are summarised in **Table 2**.

In the second phase, the data was collected from the food and groceries distributor and the

Table 2

Major Characteristics of the Respondents

Respondent	Job Position	Position Duration	Responsibilities
1	Branch Manager	1 year	Overseeing that all activities were taking place between the food and groceries suppliers and the retailer as the customer.
2	Purchasing Manager	5 years	Ensuring that there was stock at the right place and was merchandised properly.
3	Branch General Manager	4 years	Overseeing and monitoring all the orders that took place between food and groceries suppliers and the retail store.
4	Sales Manager	6 months	Ordering and ensuring that merchandising of products was done in the exact manner
5	Branch Manager	5 years	General management of the store, including buying and receiving of stock and selling ensuring profitability for the retail store.
6	Branch Manager	2 years	Ensuring availability of stock in the retail store. Making suggestions on the order together with the relevant Sales representative. Monitoring position of stock-outs and expiries.
7	Branch Manager	2 years	Carrying out all the necessary work relating to purchasing, right from negotiating price deals to making the final purchase decision. Also to ensure proper merchandising of the stock, taking out expiries and damages and ensuring no stock -outs.
8	National Buyer	4 years	Conducting all work relating to purchasing, i.e., negotiating deals and discounts. Ensure availability of products
9	Branch Manager	1 year	Management of the retail store, in terms of order-making, stock monitoring and ensuring that the right price is charged by food and groceries suppliers.
10	Regional Buyer	9 months	Managing seven retail stores in Botswana from the operations and buying perspectives.

key respondent was the national sales manager who was mainly responsible for every transaction taking place between the distributor and his retail stores. As in the case of the business customers, the interview with the national sales manager focussed on his perceptions of customer value as well as the role of the elements of the marketing-mix in creating value for business customers.

RESEARCH FINDINGS

As with any qualitative research, the data obtained from interviews were content-analysed. The findings are presented below:

Perception of Value According to Retail Store Managers

The retail store managers perceive value in terms of the benefits they received from the marketing-mix, namely product, price, promotion, and place. Overall, business customers mentioned good price that enabled them to sell and to be more competitive, excellent product quality, easy accessibility and efficient communication with the distributor's sales personnel, reliable and timely delivery performance as essential elements of value. However, the perception that value was about good prices that facilitated sales and competitiveness emerged from most of the respondents. The quotations below represent the views of the business customers:

"To me, value is the right product, received at the right time, for the right price" (Respondent 2).

"Value, to me, means good prices that help us sell more" (Respondent 6).

"I perceive value as offering excellent price to allow us to be competitive in the market" (Respondent 5).

"I value pricing. I want good quality product, with reasonable prices" (Respondent 8).

"Personal calls by representatives and sales manager are critical. Their presence brings value to us, they either have to be here or we need to be able to get hold of them. Whenever there is a problem with the representative we would call the sales manager. I

don't recall anytime when we had a problem and it was not solved. … whenever there was going to be a price increase, they would advise us, say guys, there would be a price increase as from this date and we would stock up" (Respondent 3).

Perception of Value According to Food and Groceries Distributor

The food and groceries distributor perceived value in terms of the ability to offer good customer service to the retail stores. The service offered included merchandising and helping with promotion which in turn helped business customers to add value to their customers as well. The distributor also mentioned after-sales services, such as delivery outside their normal agreed time as part of the value added to their business customers. The distributor also stressed that value needs to be emphasised from the moment a product was sold to the customer until the time the product was sold to the final customer or the end-user. As the national sales manager pointed out:

".. we also do deliveries even if it's outside our normal cycles. For instance, we cannot say to a customer, we delivered to you on Wednesday so we can't deliver again on Friday even though our schedule say we deliver to them Wednesday only…. we take responsibility of stock until it is actually sold, making sure there was no expiry and damages on the sales floor."

Value-Creation through Marketing-Mix: Retail Store Managers' Views

As already mentioned, the findings based on both the business customers and distributor's perspectives indicate that the distributor create value for business customers through various marketing elements. Specifically, the respondents were asked to specify how the food and groceries distributor's product, price, promotion efforts, and distribution strategies helped them to achieve value.

Product: Three elements of value were identified by the retail store managers at the product level:

the quality of the product, product assortment and range, and after-sales services. They described the quality of the product that the food and groceries distributor supplied to them as good, excellent or the best. There was a feeling among the retail store managers that the food and groceries distributor was able to offer and ensure better quality because it selected reputed manufacturers.

> *"The food and groceries distributor offer excellent quality products which show they are very careful when selecting manufacturers"* (Respondent 9).

> *"All the products that the food and groceries distributor offers and which are also offered by other suppliers are of the best quality. For example, in the toilet paper product line, the food and groceries distributor offers the best"* (Respondent 1).

Although the retail store managers also showed a great appreciation of the product range and assortment offered by the food and groceries distributor, there were some concerns that sometimes the food and groceries distributor failed to supply the range and assortment required, especially when the products were out of stock. The following quotations from some of the respondents revealed their perception of the distributor:

> *"The food and groceries distributor has and give us good product range and assortment but sometimes not so during the out-of-stocks"* (Respondent 1).

> *"The food and groceries distributor does offer good range and assortment when there is stock and they are fast-selling lines"* (Respondent 4).

In addition to these, assistance with merchandising and damaged and data-expired goods were described as instrumental in adding value at the product level.

> *"We get personal calls from the food and groceries distributor's personnel who help us with returns, damages and expiries. They also provide us with merchandisers to assist in packing their products"* (Respondent 5).

> *"Merchandising…. sales managers do call on us as well and check if their guys are doing their job"* (Respondent 3)

Price: Regarding the role of price in adding customer value, most respondents described the prices offered by the food and groceries distributor as generally good. The good prices were associated with the amount of discounts offered by the distributor as well as lower prices that offered the retail stores a competitive advantage in the market. Low prices were generally obtained through negotiation.

> *"Prices are normally good. And yet we always negotiate. The problem is prices are played off in the markets depending on the sales manager you are dealing with. You will find one sales manager will go to a position offering better and hence you will buy more….its' really about the personal relationship with these people and it's often a problem"* (Respondent 10).

> *"The prices that the food and groceries distributor offers are reasonably low and hence it helps us give our customers low prices as well* (Respondent 8).

Nonetheless, there were some respondents who had negative perception about the price offered by the food and groceries distributor. The quotations below highlight some of the respondents' negative viewpoints regarding prices of the products:

> *"I strongly feel the food and groceries distributor can give us better discounted price, which we are not getting at the moment"* (Respondent 2).

> *"I am not really happy with the prices; there is a chance the food and groceries distributor can give us something better than what we are getting because our competitor can give a lower price than us, hence not making us competitive in the market….. The price is high when I compare it with what the competitor is selling at"* (Respondent 5).

Promotion: In response to how promotion helps retail stores create customer value, some respondents agreed that the distributor provided promotional assistance. The respondents described various promotional types provided by the food and groceries distributor, including the price reduction on specific products, in-store promotion, advertisement made on behalf of the

retail store, payment of promotional activities undertaken by the business customer, and the supply of promotional material.

> *"We do monthly promotions in our retail store. The food and groceries distributor gives us price reductions and hence our top lines and most lines in the promotions come from the key supplier… They buy space to advertise or highlight their lines"* (Respondent 1).

> *"The food and groceries distributor provides advertisement or promotional materials such as hangers, stands and boards. They also hire independent promotional companies to do in store promotions for us"* (Respondent 8).

> *"We use pamphlets to advertise and they do help us achieve a competitive advantage in the market as information reaches our customers"* (Respondent 5).

However, the other respondents noted that the food and groceries distributor offered the same promotional support to all retail stores, regardless of their specific needs. Given that the type of promotion the distributor provided was not associated with the needs of the retail stores, some of them did not feel that they were enjoying any benefits. The following quotations testify to this position:

> *"Yes, the supplier engages in advertising for us but it is not competitive because everyone else gets it, it is not something unique that we are getting"* (Respondent 2)

> *"We believe sales representatives are the ones who arrange in-store promotions…they also visit the store and distribute free samples…but hardly help us by providing us solution or alternatives in promoting slow-moving products* (Respondent 9).

Place: The study has revealed that the distributor delivered value through place by meeting the delivery requirements, responding to changes in delivery schedules, responding accurately to the orders placed, and providing accurate invoices. Delivering the right product in terms of the size and quantity and accurate invoicing saved time and effort and even lowered the costs to the customer. This is illustrated by the following quotations:

> *"The food and groceries distributor deliver to us every Wednesday and yes their truck will come Wednesday. Sometimes, there are certain things we need urgently for a different day and they will help even if we take them out of their schedule. But, of course, it depends on whether they have the trucks or not, but normally they will assist……... I don't take back orders anymore; I just re-order whenever the product is in stock again...*

> *"I am very happy with the food and groceries distributor's delivery frequency, actually that is one part that we are more than pleased with. There are no projected delivery dates. We get the stock whenever we send the order"* (Respondent 2).

> *"Very happy with the delivery frequency of the food and groceries distributor, they deliver to us all days (every day, if we order). They are very flexible if we demand the products"* (Respondent 8).

> *"The food and groceries distributor's delivery is good…giving accurate projected delivery dates"* (Respondent 5).

> *"The food and groceries distributor make accurate orders and invoicing..."* (Respondent 1).

Nonetheless, some participants expressed dissatisfaction with the back-order system. Although they said the backorders were generally not average, they seemed to be increasing due to increasing stock-outs. Some respondents even sad they had resorted to not taking back orders as they sometimes lead to over-stocking in their shop.

> *"I have encountered problems with back orders before, some how they lead to over-stocking"* (Respondent 3).

> *"They respond accurately about the order. There are sometimes human errors here or there"* (Respondent 2).

Value Creation through Marketing-Mix: Food and Groceries Distributor's Views

Product: The distributor's perception in terms of the role of product in creating value indicated

that it is important to select reputed manufacturer on the basis of product quality and delivery performance. The respondent further claimed that making suggestions about the product to the manufacturer was very limited although it was not a problem as these manufacturers conducted market research to know what the customer wanted.

> *"The one thing that you have to understand is that we have a limited role in terms of our agreement; as the middlemen we do not make certain decisions that could probably influence the market. In matters of product formulation, we do not get involved because we are only concerned with sales and not the design of the product. We do not even conduct market research. So we find that at times whether the customer likes it or not, we cannot assure him that the product can be changed or cannot be changed. We can only tell them that we can take their concern to the manufacturer. There is no guarantee that anything can be done because they are the ones in control in terms of manufacturing of the product. However, we try to represent the manufacturer with very high reputation in terms of the product quality… the criteria that we use is that before we can dash to represent any manufacturer, we go out to the customer with the product and get their opinion because they are the people who at the end of the day purchase the product on behalf of their consumers and then on the basis of that (and obviously price) consider if it is worth our while to represent such a manufacturer… and again we also evaluate the size of the company (manufacturer) in terms of whether it is in the position to deliver consistently over time. We do not want to represent a company that will be telling us its machine was broken when we have to deliver the product to our customer".*

The sales manager also noted that offering a wide product range is another crucial element of enhancing customer value in respect of the product. In particular, through this, the food and groceries distributor is in a better position to respond to the customers' tastes and preferences and changing needs. Probing further to find out how involved was the distributor in the life-cycle of a product, especially after selling to their business customers;

the respondents reported that they were involved throughout the product lifecycle. In particular, the distributor took responsibility of the stock from the time it was sold to business customers to the time when it was sold to the end-user. This is achieved through providing transport to deliver on time, merchandising of the goods when they reached the business customer, taking back the damaged, non-moving and date-expired stocks.

> *"We also offer a wide range of products to our customers and we do respond to the customer's changing preferences. Say we've sold a product to one of our customer and he comes back to us say he's struggling to sell the product because the customer want a different, maybe improved, version, we do take back from him and give him what his customers want."*

Price: The national sales manager noted that their firm was committed to price reductions, especially within long-term relationship. Furthermore, the respondent added that they had attractive bulk packages for their business customers where basically the more you buy the better the price.

> *"Like I said before, we don't set prices, they are set by the manufacturer and believe they look at various factors; the manufacturing costs, transportation costs, and all other relevant costs........Nonetheless, to help our customers achieve competitive advantage in the market, we offer them the opportunity to negotiate the price to get discounts (as and when determined by the manufacturer) and hence get a price that give them a competitive advantage next to those who buy from our competitors."*

Promotion: To help their business customers sell more, the food and groceries distributor engages in value-added promotion, sales promotion contests, and in-store promotion, to push the sales of product.

> *"We do what we call below and above the line promotions… we do discounting on products (obviously as and when determined by the manufacturer)… we do value-added promotion, for example, buy 100gm of toothpaste and get 25gm free… we do competitions, where customers can*

win cash, car, etc… we do in-store promotion, where we give out product samples."

Place: Delivery performance emerged as the most important element for adding value to business customers at the place level. If customers demand a product, the distributor knows they are expected to adjust to these modifications; this could be termed as delivery flexibility. In response to order-processing and order-inquiry, the distributor mentioned accuracy of delivery that is minimising the delivery of a wrong product, wrong pricing, and even out-of-stocks, one of the most important things in deliveries. This is illustrated by the respondents remarks quoted below:

"It's very difficult to say how frequent we deliver to each customer…. But I can say, on an average, we deliver at least once a week. In certain instances, we have set dates, but it doesn't mean we can't deviate from those when they demand the product either earlier or later……our deliveries are very flexible. We do have a few queries about the order, such as prices not matching, wrong product being delivered, at times delays in delivery, out-of-stocks. But due to human errors, we can only try by all means to make sure our personnel minimise such errors."

Table 3

Key Dimensions of the Marketing-Mix that Add Customer-Value Creation

Elements of Marketing-Mix	Key Dimensions
Product	High quality products Wide variety of products Broad range of products Assistance in merchandising
Price	Discounted prices Competitive prices Negotiated prices
Promotion	Financial support Personal support Support through materials such as pamphlets and brochures
Place	Delivery requirements met Flexibility in meeting delivery schedules Timeliness and accuracy in order processing Timeliness and accuracy in preparing invoices

The key dimensions of the marketing-mix that add to the customer-value creation that emerged from this study are summarised in **Table 3**.

CONCLUSION

Although generalisation should be taken with caution, since the research covered only one distributor, the findings of the study show that the customers and the distributors perceive value along differing dimensions of the marketing mix. In particular, business customer perceive value in terms of the benefits received from the various elements of the marketing-mix, especially good product quality, low prices, as well as good interaction with sales representatives. The distributors viewed value in terms of the provision of customer service. The study has also demonstrated that there are certain elements of the marketing-mix that customers perceive to be instrumental in value creation. These include: (1) product quality, continuous provision of product range and assortment, and after-sales services which were viewed as important elements at the level of the product; (2) discounted and competitive prices were perceived as important elements at the price level; (3) promotional assistance was the core elements as far as promotion was concerned, and (4) meeting delivery schedules, adapting to changes in delivery requirements, accuracy in invoicing and meeting orders were considered important at the place level. Findings of this study also correspond to the literature in business-to-business marketing (Moller, 2006; Ulaga, 2003; Ulaga and Eggert, 2006). In particular, according to Moller (2006), suppliers do not always agree on what constituted value. Similarly, Ulaga (2003) demonstrated that product quality, delivery, personal interaction and direct price were important marketing capabilities in business-to-business relationships.

The study has a number of theoretical and practical implications. In fact, this study is one of the very few empirical investigations of distributor-buyer relationships in a developing country (Botswana). The only notable study conducted on Africa investigated marketing practices in business markets, based on samples from Ghana and Ivory Coast (Dadzie and Johnson, 2009). By tackling a cultural context that has not been studied before, the study extends the body of knowledge of supplier-business customer relationships. While the focus of the previous

studies was on manufacturer-business customer relationships in the US and Europe, most of the available researches on customer value relied on the perspectives of business customers only (Guenzi and Troilo, 2006; Moore and Fairhurst, 2003). The study also extends the existing body of literature on customer value by investigating the perspectives of both the business customers and the distributor. The study also highlights the need for distributors to focus on providing good quality products, right product range and assortment, competitive prices, promotional assistance and be flexible and consistent in delivering the product, since these are valued by business customers. Moreover, distributors need to offer their sales personnel training since the customers expect a certain level of expertise from them. This will even reduce the number of returned non-performing products since the sales personnel will be able to provide meaningful advice to business customers when the stock was not moving.

The study, however, has some limitations which provide the avenues for future research. For instance, this study is a preliminary study of the role of the marketing-mix on customer value in Botswana's business markets. Thus, future research could investigate the impact of the various elements on customer value and firm performance, using quantitative methods. Other relationships that could be examined include the relationship between customer value and related concepts, such as trust, loyalty, and customer satisfaction, in both the consumer marketing and the business marketing in Botswana.

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CUSTOMERS' BANK-SWITCHING BEHAVIOUR

R.D. Sharma*, Gurjeet Kaur** and Neha Mahajan***

Abstract

Bank-switching among consumers has gained importance in recent years. If it is not managed effectively, it can damage the bank's market share and profitability. Its importance in service sector cannot be under-estimated. However, still the research on customers' switching behaviour in retail banking remains inadequate. This paper seeks to identify the major determinants of customers' bank-switching behaviour. The data was collected from 100 respondents selected randomly through a structured questionnaire. The findings supported the hypotheses, which are consistent with both the theoretical framework and literature direction. The study has revealed that inconvenience, service failure and pricing are the major reasons for bank-switching by individual customers.

Key words: *Consumer banking, Bank-switching, Brand loyalty, Switching intentions, Switching costs, Switching barriers*

INRODUCTION

In a competitive world, a critical issue for the success of a firm is its capacity to retain its existing customers and make them loyal towards the brand (Aydin and Ozer, 2005). Reicheld and Aspinall (1994) stressed the importance of satisfying as well as retaining the best customers because they are the only sustainable source of growth. Moreover, in order to maintain their market share, firms focus on customer retention by understanding the factors leading to customer switching (Lee, Lee, and Feick, 2001) and, accordingly, keeping their offerings responsive to market.

Traditionally, customers were retained by focussing solely on their satisfaction. Bowen and Chen (2001) established a non-linear and asymmetric relationship between customer satisfaction and customer loyalty. Capraro, Broniarczyk, and Srivastava (2003) noted that even high satisfaction level did not guarantee long-term customer stay. Thus, it is necessary to look beyond satisfaction to other new customer considerations. It is in this context, that customer value, being a trade-off between quality and price, enhances not only repurchase intentions but discourages the switching behaviour (Liu 2006). Moreover, while Hart and Johnson (1999) found true customer

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loyalty to be one of the factors negatively related to switching intentions, Bansal. Irving and Taylor (2004) noted commitment to be more important factor preventing customer switching.

In spite of the companies' efforts for customer retention, customers often switch from one seller to another. Basically, customers' switching or customer defection, refers to the decision a customer makes to stop purchasing a particular product or service or patronising a service firm completely (Colgate and Hedge, 2001) and this defection is due to various reasons, like pricing, inconvenience, service encounter failures, negative employee responses to service failures, attraction by competitors, ethical problems, or even involuntary switching (Gerrard and Cunningham 2004). However, service failures, pricing and denied services have figured as the most important factors of customer switching, especially in the banking sector (Colgate and Hedge, 2001*)*. For customer retention, firms carry different programmes on customer satisfaction, customer loyalty, complaint management and service quality, but only a few firms focus on the role of switching costs (Lee, Lee, and Feick, 2001*)*. Fornell (1992) was the first to examine the role of switching cost along with satisfaction and loyalty. Burnham, Frels, and Mahajan (2003, p.110) defined switching cost as "the one-time cost that customer associates with the process of switching from one service-provider to another". Thus, it includes not only those costs that can be measured in monetary terms, but also the psychological effects of becoming a customer of a new firm and time and efforts involved in buying a new service (Aydin, Ozer, and Arasil, 2005).

However, a comprehensive study of switching behaviour must examine why consumers switch. Switching cost is just one of the factors which may prevent a customer from switching. Other factors include: relational investments, service recovery, and attractiveness of alternatives (Colgate and Lang, 2001). In fact, switching barriers help in retaining customers even if they are dissatisfied. On the whole, the study of customer switching behaviour includes switching incidents, switching costs and switching barriers.

REVIEW OF LITERATURE

Lam, *et al.* (2004) in their B2B study found that satisfaction plays a mediating role in determining the impact of customer value on customer loyalty. Aydin and Ozer (2005) found that trust was the most influencing factor that affected customer loyalty in service setting, viz., mobile phone. In another study in a telecommunication company, conducted by Gustafsson, Johnson, and Roos (2005), commitment and satisfaction were found to be positively related to customer retention. Further, Bennet and Rundle-Thiele (2004) found in a B2B context that satisfaction and loyalty too had different constructs, although positively related. Similarly, Walsh, Dinnie, and Wiedmann (2006) confirmed strong relationship between customer satisfaction (regarding core services) and customer switching intentions.

Thus, switching behaviour has been studied by various authors differently. Keaveney (1995) was the first to introduce the model of customer switching behaviour containing eight main casual variables, being critical to switching behaviour. These factors are pricing, inconvenience, core service failures, service encounter failures, failed employee responses to service failures, competitive issues, ethical problems, and involuntary factors. Colgate and Hedge (2001) revealed that pricing problem was the most influential factor for switching decisions followed by service failures and denied services especially in banking. Gerrad and Cunningham (2004) found that pricing, service failures, and inconvenience were the main incidents causing switching, which accounted for 90 per cent of bank switching. Anton, Camarero, and Carrero (2007) noted that price changes and critical incidents exerted a much stronger influence on the customer switching intentions as compared to service quality and commitment.

Burnham, Frels, and Mahajan (2003) studied two industries – credit card and long-distance industry and confirmed that switching costs including procedural, financial and relational costs significantly influenced customer stay with their service providers. Similarly, Lee, Lee, and Feick (2001) found that mobile users with high

switching costs were more loyal than those with low switching costs.

Ranaweera and Prabhu (2003) observed that switching barriers were positively affecting customer retention. Further, Colgate and Lang (2001) found apathy and negativity as the most important factors that prohibited bank customers from switching their service providers. In another study, Yanamandram and White (2006) found dissatisfied customers staying with the service providers due to the impact of alternate providers, switching costs, inertia, investment in relationship, and service recovery.

RESEARCH GAP AND OBJECTIVES

Thus, the present study participates in the ongoing research endeavours in switching behaviour, which is characterized by high competitive intensity, market turbulence and technological up-gradation. Although these studies appear to have pursued the research work towards understanding customer switching behaviour, hardly any study has analysed together the switching incidents, switching costs and switching barriers, along with other dimensions, such as customer value, trust, and commitment. Thus, the present paper seeks to examine all the components of customer-switching behaviour in consumer banking which is facing cut-throat competition not only from banking but also from non-banking institutions.

The study is expected to be helpful to researchers and policy-makers in understanding the customer switching behaviour from customers' perspective (Keaveney, 1995). The study is likely to provide appropriate suggestions for checking customer defection and, thus, enhancing returns on investment for the firm.

HYPOTHESES

Gerrard and Cunningham (2004) found pricing, inconvenience and service failures as the dominant factors which influenced customer switching. Similarly, Colgate and Hedge (2001) observed that pricing was the most influential factor in the

switching behaviour. Thus, the first hypothesis for the present study emerges as:

H_{01}: Inconvenience, higher prices, and service failure, significantly influence the customers' switching behaviour.

Burnham, Frels, and Mahajan (2003) found that the switching cost drove customers' intentions to stay with their current service-provider. Moreover, Lam, *et al.* (2004) too concluded that switching cost helped service-providers in retaining their customers. This led us to formulate the following hypothesis:

H_{02}: Higher the switching costs (viz., financial, relational and procedural costs) lower shall be the customer intention to switch from one service provider to another.

Colgate and Lang (2001) concluded that the switching barriers led to the reduction in customer switching from one service provider to another. Further, Ranaweera and Prabhu (2003) observed that the switching barriers helped in retaining not only the satisfied but also dissatisfied customers. Hence, our third hypothesis is:

H_{03}: Higher the perceived switching barriers lower shall be the customer switching intentions.

RESEARCH DESIGN AND METHODOLOGY

Sources of Data

The study is based on both primary and secondary data. Primary data was gathered from 100 randomly selected bank customers through a structured questionnaire for the study based on 7-point Likert's scale. The secondary data was collected from various journals, like Journal of Services Marketing, Journal of Marketing, International Journal of Bank Marketing, and Journal of the Academy of Marketing Science.

Generation of Scale Items

The items within the framework of research domain for the data collection were generated from the existing literature and after discussion

with the experts in both the areas of marketing and banking. Initially, the questionnaire consisted of 140 items, six queries pertaining to demographic profile, ten to general information, eight to switching incidents, 108 items to various underlying dimensions of customer switching behaviour and eight items pertaining to overall measurements. Items of switching behaviour were kept on a 7-point Likert's scale ranging from 'completely disagree'(1) to 'completely agree'(7), with a neutral point (4) in between. Items of switching incidents (Keaveney 1995, and Gerrad and Cunningham 2004); *i*tems of service quality (Zeithaml, Parasuraman, and Berry (1996); customer value (Lam, *et al.*, 2004); trust and commitment (Bansal, Irving and Taylor 2004, Gustafasson, Michael and Roos 2005, and Aydin, Ozer and Arasil 2005); customer satisfaction (Capraro, Broniarczyk and Srivastava 2003, and Bennett and Rundle-Thiele 2004); and items of customer loyalty (Lee, Lee and Feick 2001), and (Ganesh, Arnold and Reynold 2000) were finalized after the review of different relevant studies. Similarly, items of switching costs (Burnham, Frels and Mahajan, 2003, and Aydin, Ozer and Arasil 2005); switching barriers (Olgate and Lang, 2001); and some items of overall measurements (Bansal, Irving, and Taylor, 2004, and Mittal and Lassar, 1998) were formulated.

Respondents' Profile

The primary data was collected from 100 bank customers residing in Trikuta Nagar area of Jammu city. With the help of abridged random number table (Churchill 1979), 100 respondents were selected randomly from a household list obtained from the office of Public Health Engineering (PHE).

A huge majority of respondents were male (94 per cent), falling in the age-group of 30-40 years (41 per cent). About 41 per cent respondents were graduate, followed by 34 per cent holding professional degrees. 49 per cent respondents were in government jobs, with 41 per cent falling in the income group of Rs 2,00,000-3,00,000, p.a. All these indicate that maximum target market for

consumer banking confines to male, young, qualified and government job holders.

Statistical Tools and Data Analysis

The statistical tools such as arithmetic mean, standard deviation and logistic regression were used to draw meaningful inferences. Two multivariate statistical techniques – factor analysis and cluster analysis – were used. Factor analysis summarised the information from a large number of variables into a smaller number of factors (Hair, Bush and Ortinau, 2006) and cluster analysis helped in classifying the respondents into homogeneous groups. In fact, both the hierarchical and the non-hierarchical types of cluster analyses were used to identify the final clusters (Nargundkar, 2003).

Reliability and Validity

The reliability of the data i.e. examining if the variation in both the halves remained within the range of sampling error (Churchill 1979), has also been examined through split-half test by dividing the respondents into two equal halves. Further, Cronbach's alpha was also applied to check the internal consistency of the data. To check the measurement errors, convergent validity was used to measure the extent to which the scale correlates positively with other measures of the same construct (Malhotra, 2007).

Data Purification

After proper adjustments, the raw data was reduced through factor analysis on the SPSS software. As the number of variables (100) and respondents (100) were reasonably high, principal component analysis along with Varimax rotation was applied (Stewart, 1981).

Initially, first exercise failed to provide any stable factorial framework even within 25 iterations. In the first round of second exercise, 19 items were dropped due to factor loading below 0.5. After 31 iterations, 26 factors emerged with 80.89 per cent variance explained. Further, in the second and the third rounds, 13 and 3 items respectively had to be ignored due to factor

loading less than 0.5. However, the last factor contained only one variable due to which the variables with factor loading equal to or above 0.55 were kept in next nine rounds and in total 17 items got dropped step by step. Thereafter, 2, 1, 3, 2, and 2 items, respectively, got deleted in the next five rounds due to loadings less than 0.6. Further, in next two rounds, 2 items got deleted having factor loading less than 0.65. Finally, 20th and 21st rounds were carried out in order to delete the items having factor loading less than 0.7, which resulted in the deletion of 12 more items in total. The last round, i.e., 22nd

one led to the extraction of 9 factors, with about 80 per cent variance explained. Factor analysis confined to the rounds resulting into maximum variance explained. Thus, the process finally got completed within 6 iterations.

After recognising the relative importance of each and every aspect of the domain, items with factor loading less than 0.7 were ignored and factors with eigen value equal to or above 1 were retained. Factors finally came up with self-explanatory headings. Thus, out of the 100 statements, 24 got combined into 9 factors, viz., commitment (12.42 VE), customer satisfaction

Table 1

Brief Factorial Design

Factor no.	Factors and their dimensions	Mean	Factor loading	Percentage of variance
F1	*Commitment*	3.07		12.242
A	'Sense of obligation'	3.05	.858	
B	'Resentment to leave bank'	2.87	.811	
C	'Emotionally attached'	2.89	.783	
D	'Strong sense of belongingness'	3.48	.753	
F2	*Customer Satisfaction*	5.37		12.201
A	'Satisfactory handling of problems'	5.36	.854	
B	'Bank meets expectations'	5.29	.815	
C	'Quick and effective responses to service failure'	5.24	.794	
D	'Sincere promises'	5.60	.786	
F3	*Monetary Charges*	5.487		9.740
A	'Reasonable charges'	5.46	.841	
B	'Most competitive rates'	5.52	8.26	
C	'Reasonable interest rates and other charges'	5.48	.825	
F4	*Switching Costs*	2.797		9.372
A	'Switching results into bad services from elsewhere'	2.99	.890	
B	'Other banks may not fulfil expectations'	2.78	.869	
C	'Negative financial outcomes on switching'	2.62	.757	
F5	*Advertisements*	4.28		7.754
A	'Frequent and effective advertisements'	4.39	.934	
B	'Attractive advertised messages'	4.17	.896	
F6	*Loyalty*	3.42		7.528
A	'Continuous dealings even at less competitive rates'	3.54	.892	
B	'Resistance to switch'	3.30	.877	
F7	*Encounter Failures*	3.945		7.029
A	'Multiple service encounter failure'	5.59	.889	
B	'Single-service encounter failure'	2.30	.870	
F8	*Relational Investments*	5.30		6.946
A	'Staff knows you'	5.30	.873	
B	'Good relations with employees'	5.31	.846	
F9	*Location*	6.05		6.803
A	'Convenient location'	6.03	.877	
B	'Availability of service'	6.07	.857	

(12.20 VE), monetary charges (9.74 VE), switching costs (9.37 VE), advertisements (7.75 VE), loyalty (7.528), encounter failures (7.03 VE), relational investments (6.95 VE), and location (6.802 VE) (**Table 1**).

FINDINGS

General Information

About 35 per cent respondents had the Jammu and Kashmir Bank (JKB) as their prime bank, followed by the State Bank of India (25 per cent) and HDFC Bank (8 per cent), indicating JKB as the most preferred bank. Along with prime banks, customers do have alternate accounts. About 20 per cent of respondents have alternate accounts in the SBI, 17 per cent in the JKB and 9 per cent in the Axis bank. After the JKB, the SBI came up as the next preferred prime bank. Almost half of the respondents maintained savings bank account with their prime bank, whereas 24 per cent had FDRs along with savings account Only 11 per cent operated the current accounts with their prime bank, indicating that the respondents preferred their prime bank mainly for saving bank deposit schemes. About 36 per cent customers took loans from the SBI, followed by the JKB (21 per cent). Thus, a public sector bank was more preferred for loans in comparison to its private-sector counterparts. The majority of respondents visited their bank at least once and at the most five times a month.

It has been observed that 55 per cent of respondents have actually switched their prime banks, out of which 29 per cent have switched from the SBI and 20 per cent from the JKB, primarily due to official reasons (30 per cent), poor services (26 per cent), or inconvenient location (19 per cent). Thus, more respondents had switched from the public-sector banks. About 50 per cent of the respondents had low probability of switching their present prime bank and 33 per cent do not want to change their prime bank at all. Thus, the majority of respondents had low intentions to switch their prime bank. Surprisingly, about 78 per cent of the respondents did not even advise others for switching their prime bank.

Among various factors influencing switching from one service-provider to another, inconvenience figured to be the most significant factor (38 per cent), followed by core service failures (30 per cent), pricing (12 per cent), denied services (7 per cent) and responses to service failures (5 per cent). This indicates that inconvenience and core service failures accounted for about 70 per cent of customer defection. Hence, hypothesis 1 is accepted.

Switching Incidents

Pricing related switching incidents occurred primarily due to unfair dealings (30 per cent), followed by high charges (27 per cent) and deceptive charges (21 per cent), while switching due to core service failures occur mainly because of service mistakes (68 per cent). Further, majority of respondents (58 per cent) experienced 'long wait for service' as the main reason for switching on account of inconvenience, followed by inconvenient location (34 per cent). Customers changing their bank due to service encounter failures acknowledge inefficient staff as the main reason. Switching on account of ethical problems occur due to cheating (50 per cent) and conflict between institutional and employee interest (24 per cent). In case of involuntary switching, 61 per cent respondents found customer's transfer whereas for denial of services 41 per cent opined non availability of advice and 31 per cent found denial of loans as main factors for switching.

Measurement of switching behaviour in Indian consumer banking

Various factors measuring switching behavior in consumer banking, which got extracted through factor analysis (Table 1) are discussed as under:

Commitment

'Commitment' obtained the mean value of 3.07. Individually also, all the items under commitment obtained below average level of agreement (in the range of 2-4) among bank customers. One of the items, viz., 'resentment to leave bank' scored lowest mean score (2.87), as compared to others,

but this item has quite a high factor loading (0.812) on commitment. Another variable, viz., 'emotionally attached' obtained the mean of 2.89. This statement did not affect commitment as strongly as others (factor loading 0.756). Thus, the customers did not feel any commitment towards their prime bank.

Customer Satisfaction

The overall mean score for 'customer satisfaction' arrived at 5.37. This factor consists of four items and all have secured above-average level score, ranging from 5 to 7. Thus, the banks were providing services according to the expectations of the customers and hence building and maintaining customer satisfaction.

Monetary charges

The overall mean score for 'monetary charges' came up as 5.49. All the three statements contained in this factor received mean scores, ranging from 5 to 7, thus, indicating that almost all the banks charged the same rates from their customers.

Switching Costs

The 'switching cost' has the mean value of 2.79. This factor consisted of 3 items, viz., 'switching results into bad service' (2.99), 'other banks may not fulfill expectations' (2.78) and 'negative financial outcomes on switching' (2.62). Out of these, 'switching results into bad service' has quite a high factor loading (0.890) on switching cost. Thus, they do not find switching to a new bank involving a huge cost.

Table 2

**Customers falling under three Regions of
Likert Scale: Switching Cost and Switching
Intentions-wise**

Switching Cost	*Switching Intentions*			*Total*
	No	*Perhaps*	*Definitely*	
Disagree	25	32	15	72
Neither agree nor disagree	1	6	0	7
Agree	5	8	3	16
Total	31	46	18	95

Table 2 also shows that when switching costs are high, very few people are likely to switch their bank, only 11 (8+3). Thus, higher the switching cost, lower is the customer intention to switch (Hypothesis 2 stands proved).

Advertisements

The mean value of 'advertisement' arrived at 4.28. The two statements, viz., 'frequent and effective advertisements' and 'attractive advertised messages' obtained mean scores ranging from 4 to 5, indicating banks advertising their schemes through not much effective media.

Customer Loyalty

Respondents attributed a mean score of 3.42 to 'customer loyalty'. Both the items in this factor, viz., 'continuous dealings even at competitive rates' and 'resistance to switch', obtained mean scores less than 4, which is below the cut-off level. The above analysis reflects customers being usually attracted towards higher interest rates on deposits and cheaper loans.

Encounter failures

The overall mean assigned to 'encounter failures' is 3.95. This factor consists of two variables, out of which 'multiple service encounter failures' has higher factor loading (0.889) with its mean score of 5.59, which reflects that the customers had a low intention to switch from their bank to another bank.

Relational investments

The mean score ascribed to 'relational investments' arrived at 5.30. Both the items under the factor have revealed an above level of agreement with mean values falling within 5-7, thus, indicating banks maintaining healthy relations with their customers.

Again, as shown in **Table 3**, 22 per cent respondents showed their intentions to switch due to high switching barriers. Thus, hypothesis 3 is accepted.

<div style="text-align:center">

Table 3

Customers falling under three Regions of Likert Scale: Switching Barriers and Switching Intentions

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Switching Barriers	Switching Intentions			Total
	No	Perhaps	Definitely	
Disagree	15	25	16	56
Neither agree nor disagree	2	4	0	6
Agree	14	20	2	36
Total	31	49	18	98

Location

The study reflects the above a average level of agreement towards the factor of location (6.05). Statements, viz., 'convenient location' and 'availability of service' obtained mean value of 6.03 and 6.07, respectively. The factor loading of both items towards the factor is almost equal, i.e., 0.877 and 0.857, respectively, that indicating customers usually prefer those banks that are near to their places.

Cluster Analysis

In order to identify the number of clusters existing in the study, hierarchical cluster analysis was performed with the help of agglomeration schedule using the average linkage method. Thereafter, K-means, also known as quick cluster output, was used with the pre-determined number of clusters.

Stage 1

The agglomeration schedule gives information on the objects being combined at each stage of hierarchical clustering process. The schedule from the top to the bottom (Stage 1 to 91) indicates the sequence in which cases get combined into one cluster at the last stage, i.e., stage 91. Therefore, stage 91 represents a 1-cluster solution; stage 90 represents a 2-cluster solution, and so on, going up from the last row to the first row. In order to identify the number of clusters in the data, the difference between the rows in a measure called coefficient was used. Ignoring the first difference of 17.089 (60.221- 43.132), which represents only 1-cluster solution, the difference between row

2 and row 3 from the bottom is 2.737 (43.132 to 40.395), indicating two-cluster solution. Almost the same difference exists between stage 89 and stage 88, i.e., 1.59, representing a 3-cluster solution. The difference between stage 88 and 87 is not so significant, thus, stopping the process at the 3-cluster solution.

Stage 2

K-means procedure gives more stable clusters as it is an interactive procedure compared to the single pass hierarchical method. This gives cluster membership and final cluster centres as its important output. Cluster membership indicates which case belongs to which cluster. It reveal as to that cluster 1 contains 7 cases, cluster 2 contains 37, and cluster 3 contains 48 cases. The mean values of each variable for each of the three clusters are given in **Table 4**.

<div style="text-align:center">

Table 4

Results of Cluster Analysis

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Factors	Clusters		
	1	2	3
Commitment	2.07	3.64	2.61
Customer satisfaction	5.57	5.40	5.30
Monetary charges	5.62	5.44	5.43
Switching costs	1.76	3.42	2.35
Advertisements	2.71	3.26	5.28
Loyalty	1.86	4.74	2.47
Encounter failures	6.36	5.18	6.00
Relational investments	3.79	5.59	5.27
Location	3.14	6.18	6.42

Table 4 indicates the cases falling in Clusters 1 and 3 not having any commitment towards the bank against Cluster 2 respondents who are slightly committed to their banks. The respondents of all the three clusters are satisfied with their banks. Moreover, they have also shown their satisfaction towards the bank charges. The clusters significantly differ on advertisement factor, Cluster 1 completely disagreeing, Cluster 2 remaining neutral, and Cluster 3 completely agreeing, i.e., their banks are advertising their schemes through effective channels. Further, Clusters 1 and 3 respondents do not feel any loyalty towards

their bank, while the respondents of Clusters 2 are somewhat loyal. Moreover, presence of relational investments is not felt by cases of Cluster 1, but Clusters 2 and 3 do recognise relational investments. Lastly, Cluster 1 respondents do not find their bank's location advantageous, whereas Clusters 2 and 3 respondents found their bank's location convenient.

Logistic Regression

Before running logistic regression through SPSS, dependent variable was assigned codes, viz., '0'for 'no' and '1' for 'yes'. With the help of the step-wise method, the initial model was derived using only the constant in the regression equation (all independent variables stand omitted). The log likelihood of base-line model value of 106.260 represents the fit of the model. It reveal that 74 out of 97 respondents exhibit no intentions to switch their prime bank. On the whole, the model correctly and meaningfully classifies 76.13 per cent bank customers.

Table 5
Significant Values Indicating Significant Contribution of Barriers towards Switching Behaviour

Variables	Score	Df	Sig.
Switching cost	1.292	1	.256
Switching barriers	5.991	1	.014
Switching incidents	1.408	1	.235
Barriers*incidents	5.897	1	.015
Barriers*costs	2.681	1	.102
Cost*incidents	2.333	1	.127
Overall statistics	7.817	6	.252

Table 5, labelled as 'variables not in equation', shows that the coefficients for the variables not in the model are significantly different from zero, i.e., addition of 'switching barriers' will significantly affect its predictive power.

The overall fit of the new model has been studied through log likelihood statistics. At this stage of analysis, the value of log likelihood is 100.168 (earlier it was 106.260). This reduction of 6.254 (106.260-100.168) indicates that the new model is better in predicting the switching behaviour. Finally, at the end of the output

it indicates 74 respondents not intending to change their prime bank. Overall accuracy of this classification has also increased from 76.3 per cent to 78.4 per cent with the inclusion of 'barriers' as a predictive variable.

Thus, logistic regression makes clear that 'barriers' have a significant impact on switching behaviour. Further, **Table 6** reveals none of other variables making a significant contribution towards the customer switching behaviour.

Table 6
Significant Values Indicating Insignificant Contribution of Variables towards Switching Behaviour

Variables	Score	Df	Sig.
Switching cost	0.266	1	0.606
Switching incidents	0.316	1	0.574
Barriers*incidents	0.749	1	0.387
Barriers*costs	0.303	1	0.582
Cost*incidents	0.684	1	0.408
Overall statistics	3.097	6	0.685

Overall Validity and Reliability

Convergent validity confirms the relationship between various factors of switching behaviour and responses towards one statement, viz., 'continuous dealing with the bank'. The scores obtained with respect to this statement were classified into 3 groups, viz., 'below average' (1-3) coded as 1, 'average' (4) as 2 and 'above average' (5-7) as 3. The overall score of switching behaviour which comes to 4.37 has, thus, been proved convergently valid as the majority of respondents fall under the above-average region of 'continuous dealing with the bank', by assigning 4.6 mean score (mean scores: below average 3.94, average 4.05, and above average 4.6).

Measurement of differences in the scores of bank customers has done through the split-half reliability. The data has been proved reliable as both the groups have accorded similar mean scores (group1: 4.70 and group 2: 4.66). Further, in order to check the internal consistency of the entire data, Cronbach's alpha values have been computed. The reliability stands established as

the alpha values of all the factors came above 0.70, which is a widely acceptable criteria for demonstrating internal consistency (Kennedy, Lassle, and Goolsby, 2002) (F1 0.866; F2 0.863; F3 0.819; F4 0.818; F5 0.871; F6 0.854; F7 0.809; F8 0.750, and F9 0.731).

STRATEGIC ACTION

The identification of the aspects securing 'below average' values requires immediate attention of the bankers to check further defection. The following strategic efforts are required to be taken by the bankers:

1. Successful service recovery is the ultimate solution to all the major problems in service settings. It can bring back the customers to a satisfied and even to a delighted level. The managers need to concentrate their efforts on the core service delivery and recovery to maintain a competitive advantage (Ranaweera and Prabhu, 2003).

2. Convenience can act as a proactive barrier prohibiting defection especially in more standardised and comparatively less personalised services, like consumer banking. Banks need to expand their branch network to reach the door steps of the customers. The study also reveals the necessity of quick services so that customers' waiting time is reduced.

3. For a strong and sustainable customer commitment, the banks need to develop strong social service relations with their customers, so that whenever they think of switching, they may not find a better service-provider. Moreover, the banks are required to deliver the 'delight-provoking' services that, install high trust and commitment, thereby enhancing customer loyalty.

4. The banks have to determine the range of interest on deposits and charges acceptable to the consumers. This prevents the customers from experiencing negative incidents and checks the banks' failure to resolve these problems after such incidents have occurred. The customer today is much enlightened rational and demanding.

5. As switching barriers were found to be the most important factor for predicting switching behaviour, banks have to take action that increase switching barriers for their customers. In fact, customer-preferred products contribute a lot in building and maintaining customer satisfaction and loyalty.

6. Switching cost has emerged as an efficient managerial tool to enhance customer loyalty, reduce price elasticity and increase profitability, provided it is used in an appropriate manner. Thus, the banks need to increase the switching costs in a way that adds value to their customers. This can be done by helping customers learn how to better use the services, by identifying unique features offered, by offering valuable bonus points, and by encouraging customers in a more meaningful relationships (Burnham, Frels, and Mahajan, 2003).

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We invite academicians and others to write reviews of books on management and allied subjects.

The book reviewers are requested to follow the guidelines given below:

1. The reviewer should begin with a listing of the bibliographical details of the book, comprising the names of the authors, full title and sub-title as they appear on the cover, details of the place and name of the publisher, year of publication, the number of pages in the book, and the price, if mentioned.

2. The review can range from 1000-3000 words, depending upon the topic and the importance of the book.

3. The length of the review should engage with the issues, problems, and themes articulated in the book and make a rigorous attempt to identify and assess the main set of arguments that have been put forth by the author. It should, in other words, have a strong engagement with the conceptual structure of the book and should bring out its strengths and weakness.

4. The book under review should have been published recently, preferably in the current or the previous year.

5. The reviewer may also include comments on the stylistic aspect and the literary presentation of the book.

6. References should be avoided altogether. If references are considered altogether essential, the citation style, adopted by *NICE Journal of Business*, should be used.

The review should be an objective assessment of the book, indicating its specific strengths and weaknesses, and overall assessment.

TESTING OVERREACTION HYPOTHESIS IN INDIAN EQUITY MARKET
A Study of Contrarian Investment Strategies

Sultan Singh* and Kapil Choudhary**

Abstract

The studies in experimental psychology have suggested that investors tend to over-weight the recent information and under-weight the past information in revising their prospects, thus, violating the Baye's Theorem. This raises the question whether such overreaction hypothesis matters in the equity market. The present study tested this phenomenon in the Indian stock market, by using the monthly stock prices of 460 scrips of the National Stock Exchange, for the period January 1996 to December 2007. Inconsistent with the overreaction hypothesis, the portfolios of prior winners were found to outperform the prior losers. Twelve months after the portfolio formation, the winner stocks earned about 22.4 per cent. The empirical evidence exhibited that the extreme movements in stock prices were not followed by subsequent price movements in the opposite direction. Thus, the winners got higher returns and the losers continued to be losers. We documented the non-existence of the overreaction hypothesis, while the abnormal returns were exhibited by momentum investment strategies of one-year holding period in the Indian equity market. Furthermore, the study revealed the significant difference between average price-earning ratios and book-to-market price ratios of the winner and the loser stocks. On the whole, the results did not support higher contrarian profits than the momentum and the farther (less) the investors look at the stock prices in the past, the less (more) they overreact to them, creating lower (higher) long- term reversals.

Key words: *Overreaction hypothesis, Contrarian investment strategies, Winner and loser portfolios, Indian equity market, Efficiency*

INTRODUCTION

One of the well-researched phenomena in the literature on finance is the Market Efficiency Hypothesis, which asserts that the price of a stock efficiently reflects all the information that is available to public, and can, therefore, be considered an accurate estimate of the true value of an investment at any given moment. On the other hand, the financial academics and practitioners have held that the average stock

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returns are related to past performance and are predictable. In this regard, a sanguine investment school has emerged – the Contrarian Investment School. In finance, a contrarian is one who attempts to earn profit by investing in a manner that differs from the conventional wisdom when the consensus opinion appears to be wrong. Contrarian investing assumes that the financial instruments which have been rising steadily will reverse and start to fall, and vice versa, with falling. The contrarian trader buys an instrument which has been falling or short-sells a rising one with the expectation that the trend will change. In essence, the contrarian investments strategy claims that "today's losers are tomorrow's winners and today's winners are tomorrow's losers", and hence, the investment strategy based on buying today's losers and selling today's winners should generate superior returns. In the finance literature, the impetus behind the contrarian investment strategies is the fundamental valuation and prior returns. The profitability of the contrarian investment strategies is now one of the well-established empirical facts in the finance literature.

LITERATURE REVIEW

One of the most influential research works on this topic, that of DeBondt and Thaler (1985), exhibits significant changes in the direction of the returns, over longer period of times. Specifically, portfolios of past losers found to be outperforming the past winners by 25 per cent more during the test period of 3 to 5 years. They interpret their evidence as the result of the irrational behaviour of the investor and based it on the findings of Kahneman and Tversky (1982) in the field of cognitive psychology, which suggests that when the investors revive their prospects, they tend to over-weight the recent information and under-weight the past information, thus violating Bayes' Theorem. This leads to excessive optimism about the good news and extreme pessimism over the bad ones. Such a situation can cause stock prices to stray temporarily from their fundamental values. This potential violation of the efficiency hypothesis is known as "over-reaction hypothesis" and implies

that if the stock prices systematically overshoot, then their reversal should be predictable from the past return data alone, with no use of any accounting information, such as earnings.

Apart from this hypothesis, some studies have offered a few other alternative or complementary explanations for out-performance of the contrarian strategies such as risk and size differential between the winners and the losers, and micro structural biases. In this regard, Zarowin (1990) suggested that the tendency of the losers to outperform the winners was not due to overreaction, but rather due to the fact that the losers were generally stocks from smaller companies than those of the winners. Regarding the explanation, DeBondt and Thaler (1987) and Chopra, Lakonishok, and Ritter (1992) exhibited evidences of an economically significant overreaction effect after having adjusted for both differentials (size and risk).

Conrad and Kaul (1993) and Ball, Kothari, and Shanken (1995) attributed the out-performance of loser stocks to winner stocks to an upward bias in returns of the former. The successful performance of contrarian strategies is not confined to only the U.S. market. However, the results of DeBondt and Thaler (1985) are also supported by Power, Lonie and Lonie (1991), MacDonald and Power (1991) and Campbell and Limmack (1997) in the United Kingdom; Alonso and Rubio (1990) in Spain; and Da Costa (1994) in Brazil. On the other hand, momentum strategies led by Jegadeesh and Titman (1993) found that a strategy bought past six-month winners and sold past losers earned approximately one per cent per month over the subsequent six months.

Rouwenhorst (1998) obtained very similar results by focussing on the medium-term international return continuation within markets and across markets at the individual stock level, using a sample of 2190 stocks from 12 European countries during the period 1978 to 1995. Consistent with the psychological phenomenon, known as conservatism, the abnormal returns associated with the momentum strategies could be due to underreaction by the prices to recent information.

Donovon, *et al*. (2000) examined the presences of overreaction in the Australian stock market over the period 1980-1997. The results indicated that the winners experienced a reversal and the losers continued to be losers. Further, the study examined the reversal behaviour at an aggregate industry level and disaggregated the sector level and found sector reversal which was time-varying. Ryan and Donnelly (2000) provided some evidence of long-term returns reversal, and, hence, the evidence against weak-form efficiency in the Irish equity market. By focusing purely on the past price information, the study showed that abnormal returns could be earned. The magnitude of overreaction varied with the length of the horizon period examined. While these results were statistically insignificant, they were economically significant over the longer period.

Antoniou, *et al*. (2005) investigated the existence of contrarian profits and their sources for the Athens Stock Exchange (ASE). The empirical analysis decomposed contrarian profits to sources due to common factor reactions, overreaction to firm specific information, and profits not related to the previous two terms, as suggested by Jegadeesh and Titman (1993). Pepelas (2008) supported the overreaction hypothesis in the inter-industry and the intra-sector environment of the UK stock market. The results were opposite to those of Ball, *et al*. (1995) that long-term reversals were due to the survivorship bias.

OBJECTIVES OF THE STUDY

The prime objective of the present study is to explore the presence of overreaction hypothesis by examining the contrarian investment strategies in the Indian equity market. If the overreaction hypothesis is correct, which suggests that the investors, while reviving their prospects tend to over-weight the recent information and under-weight the past information, consequently buy loser stocks and sell winner stocks, then the ensuing two well-known consequences should be observed:

1. Any extreme movement in stock prices will be followed by a subsequent price movement in the opposite direction; and

2. The greater the initial movement, the greater will be the subsequent adjustment.

RESEARCH METHODOLOGY

The present study employs the methodology used by De Bondt and Thaler (1985). Typically, testing of the semi-strong form of market efficiency starts, at time=0, with the formation of portfolios on the basis of some announcement or event that affects all the securities in the portfolio. Later on (t>0), the investigations are carried out whether the estimated residual portfolio return (μ_{pt}) measured relative to the single period the capital asset pricing model equals zero. Statistically significant departures from zero are interpreted as evidence against semi-strong form of market efficiency. In the present study, the primary concern is to assess the extent to which non-zero residual return behaviour in the period (t>0) after portfolio formation is associated with the same in the pre-formation period (t<0). In pursuance of this, the focuss is on the stocks that have experienced extreme capital gains or extreme losses over the period upto three years. The winner and loser portfolios are formed conditional upon the past excess returns, rather than some informational variable, such as earning announcement or event. The empirical analysis is based on the market-adjusted excess returns (residuals). The residuals are estimated as follows:

$$\mu_{it} = R_{it} - R_{mt}$$

R_{it}= return on share at a given time

R_{mt}= return on market index at a given time.

Monthly stock-prices data for 460 scrips, which have complete (non-missing) data for the period of January 1996 to December 2007, listed on the National Stock Exchange of India as compiled by PROWESS of the Centre for Monitoring Indian Economy (CMIE) were used. CNX NIFTY50, the nation-wide barometer of the stock market, was

used as the benchmark market index. The close-to-close returns on the sample scrips and the market index were calculated as follows:

$$R_i = LN\left(\frac{R_i}{R_{i-1}}\right)$$

R_i= natural log of return on share.

R_t = current price of share.

R_{t-1} = previous price of share.

$$R_m = LN\left(\frac{R_i}{R_{i-1}}\right)$$

R_m= natural log of return on market index.

R_t= current level of index.

R_{t-1} = previous level of index.

For every share of the sample, the market-adjusted excess return is $\bar{\mu}_{it}$, computed for the period of January 1996 to December 2007. Starting in December 1996, the cumulative excess returns $(C\bar{\mu}_{it} = \sum_{t=-12}^{t=0} \mu_t)$ for the prior 12 months (the portfolio formation period, months 1 to 12) is computed for each share of the sample. This step is repeated 6 times for all non-overlapping one-year periods (3 times and 2 times for all non-overlapping two-year and three-year periods, respectively), from January 1996 to December 2007. On each of the six (one-year periods) relevant portfolio formation dates, the $C\bar{\mu}_{it}$'s are ranked from high to low and the portfolios are formed. Firms in the top 46 shares (top decile) are assigned to the winner portfolio (W); firms in the bottom 46 shares (bottom decile) to the loser portfolio (L). Thus, the portfolios are formed conditional upon the excess behaviour prior to the portfolio formation date t=0.

For both the portfolios in each of the 6 non-overlapping one-year periods (n = 1,…, N; N = 12), starting from January 1997 to January 2007, the cumulative residual returns CRR of all the securities in the portfolios, for the next 12 months (the test period, months 13 to 24), i.e., t =1 through t = 12, were computed.

Using CRR from all the 6 test periods, average CRR were calculated for both the portfolios and

each month between t = 1 and t = 12. They are denoted as $ACRR_{W,t}$ and $ACRR_{L,t}$. The overreaction hypothesis predicts that, for t > 0, $ACRR_{W,t} < 0$ and $ACRR_{L,t} > 0$, so that by implication, $[ACRR_{L,t} - ACRR_{W,t}] > 0$. In order to assess whether, at any time t, there is indeed a statistically significant difference in the investment performance, the pool estimate of population variance in $CARR_t$

$$S_t^2 = \left[\sum_{n=1}^N (CRR_{W,n,t} - ACRR_{W,t})^2 + \sum_{n=1}^N (CRR_{L,n,t} - ACRR_{L,t})^2\right]/2(N-1)$$

With two samples of equal size N, the variance of the difference of sample means equals $2S_t^2/N$ and, therefore, the t- statistic is:

$$T_t = \left[ACRR_{L,t} - ACRR_{W,t}\right]/\sqrt{2S_t^2/N}$$

The relevant *t*-statistics can be found for each of the 12 post-formation months. In addition to this, to look further into the performance of winner and loser stocks, the present study incorporated the Mann-Whitney test to the equality of average market capitalisation, price-earning and book-to-market price ratios for both the winner and the loser stocks. The Mann-Whitney test statistics is calculated as under:

$$z = \frac{\bar{T}_1 - \bar{T}_2}{(n_1 + n_2)\sqrt{\frac{n_1 + n_2 + 1}{12 n_1 n_2}}}$$

where:

$\bar{T}_1$ = Average rank of the first sample

$\bar{T}_2$ = Average rank of the second sample

n_1 = First sample size

n_2 = Second sample size

RESULTS AND DISCUSSIONS

Results regarding One-year Portfolio Formation Period

The empirical results of the study are reported in four tables and three figures. The results of one-year portfolio formation period (test period) are presented in **Table 1** and **Figure 1**.

Table 1

Average Cumulative Residual Return of Winner and Loser Portfolios (For One-year Test Period)

Months After Portfolio Formation	ACRR (W)	ACRR (L)	Difference of ACRR (L) and ACRR (W)	t-Statistics
1	0.028	-0.020	-0.047	1.199
2	0.034	-0.064	-0.099	1.475
3	0.016	-0.162	-0.178	1.733
4	0.033	-0.166	-0.199	1.971*
5	0.073	-0.144	-0.218	2.016*
6	0.051	-0.173	-0.224	1.875*
7	0.100	-0.161	-0.261	2.042*
8	0.157	-0.106	-0.263	1.765*
9	0.173	-0.166	-0.339	2.355**
10	0.131	-0.212	-0.343	2.258**
11	0.177	-0.184	-0.361	2.237**
12	0.224	-0.133	-0.357	1.857*

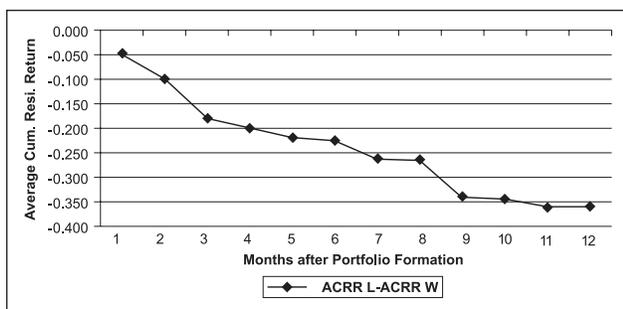*Note:* * Significant at 10 per cent level of significance, ** Significant at 5 per cent level of significance

Figure 1: Difference between Average Cumulative Residual Return of Loser and Winner Portfolio of One-Year Period from January 1996 to December 2007

Over the last twelve years (January 1996 to December 2007), the winner portfolios of 46 stocks outperform the market, on an average by 22.4 per cent, 12 months after portfolio formation. The loser portfolios, on the other hand, underperformed the market, on an average by 13.3 per cent, so that the difference in average cumulative residual return between the extreme portfolios, [ACRR$_{L,12}$ – ACRR$_{W,12}$] equals –35.7 per cent. It is obvious from Figure 1, during the entire test period of one year, the difference in ACRR of the loser portfolio and the winner portfolio [ACRR$_L$ – ACRR$_W$] remains below zero, which implies that the contrarian

strategies could not deliver higher returns than momentum strategies.

Interestingly, the *t* statistic of difference in average cumulative residual return between the extreme portfolios, for months four to twelve, were to be found statistically significant. These results are contrary to the positive performance of contrarian strategies in the existing financial literature. On the whole, the results reported in Table 1 and Figure 1 regarding the test period of one year, could not corroborate the predication of overreaction hypothesis in the Indian stock market. Apparently, the results provide the evidence of profitability of momentum investment strategies in contrast to the contrarian strategies, for the holding period of one year.

Results regarding Two-year Portfolio Formation Period

The overreaction hypothesis predicts that, as we focus on the stocks that go through more (or less) extreme return experiences (during the formation period), the subsequent price reversals will be more (or less) pronounced. An easy method to generate more (less) extreme observations is to lengthen (shorten) the portfolio formation period. After analysing the results of a shorter period, i.e., twelve months, for testing predication of overreaction hypothesis, the results of contrarian investment strategies for the two-year portfolio formation period (test period) are presented in **Table 2** and **Figure 2**.

It is interesting to note that over the last twelve years, the loser portfolios of 46 stocks outperformed the market, on an average by 13.9 per cent, while the portfolios of the winner stocks earned 5.2 per cent more than the market, 24 months after the portfolio formation period. The difference in average cumulative residual return between the extreme portfolios [ACRR$_{L,12}$ – ACRR$_{W,12}$] equals 8.7 per cent.

In contrast to the 12-month test period, the contrarian investment strategies beat the momentum strategies for the longer test period of 24 months, although this is not the case with

Table 2

Average Cumulative Residual Return of Winner and Loser Portfolios
(For Two-year Test Period)

| Months After Portfolio Formation	1	2	3	4	5	6	7	8	9	10	11	12
ACRR (W)	0.007	-0.015	0.020	0.120	0.137	0.091	0.063	0.097	0.100	0.098	0.064	0.038
ACRR (L)	0.010	-0.058	-0.022	0.089	0.144	0.098	0.004	0.024	0.025	0.030	-0.001	-0.021
Difference of ACRR(L) and ACRR (W)	0.003	-0.044	-0.042	-0.031	0.007	0.008	-0.058	-0.073	-0.074	-0.068	-0.065	-0.060
t-Statistics	-0.068	2.127**	0.544	0.308	-0.064	-0.034	0.263	0.358	0.360	0.327	0.295	0.275
Months After Portfolio Formation	13	14	15	16	17	18	19	20	21	22	23	24
ACRR (W)	0.047	0.041	0.032	0.046	0.052	0.044	0.011	0.000	0.009	-0.085	-0.009	0.052
ACRR (L)	-0.019	-0.056	-0.156	-0.152	-0.114	-0.094	-0.090	0.007	-0.033	-0.122	-0.050	0.139
Difference of ACRR(L) and ACRR (W)	-0.066	-0.098	-0.188	-0.198	-0.166	-0.138	-0.101	0.006	-0.042	-0.038	-0.040	0.087
t-Statistics	0.314	0.406	0.673	0.711	0.544	0.466	0.326	-0.020	0.128	0.091	0.105	-0.262
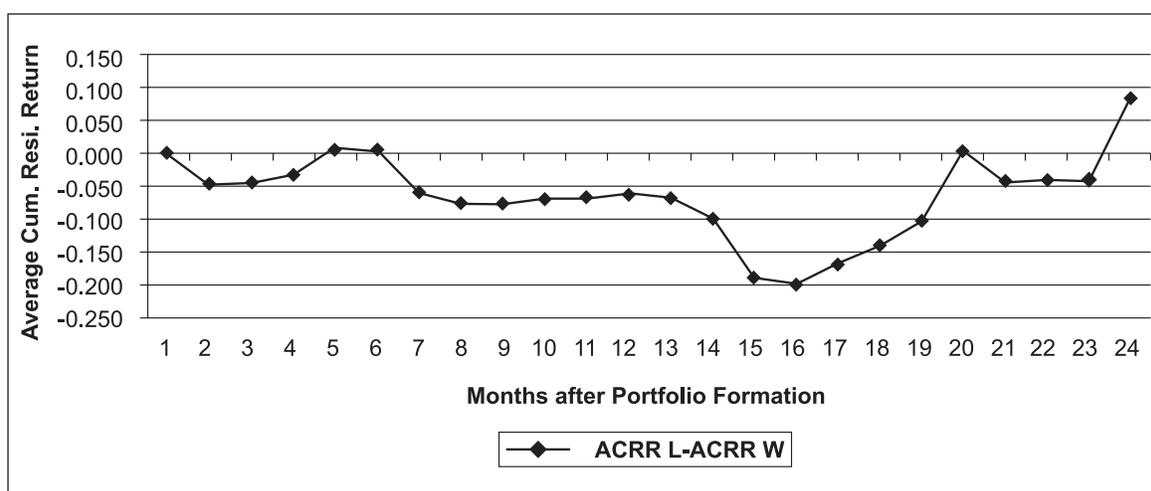
Figure 2 : Difference between Average Cumulative Residual Return of Loser and Winner Portfolio of Two-year Periods from January 1996 to December 2007

intermediate months, as exhibited by Figure 2. In spite of these comments, however, it is obvious that none of the t statistics of difference in average cumulative residual return between the extreme portfolios for all the twenty four months were found statistically significant. On the whole, the results regarding the two-year test period could not provide credence to the theory of the predictive overreaction hypothesis in Indian stock market.

Results Regarding Three-year Portfolio Formation Period

Finally, for including more extreme observations of the stock-return movement, the results of the three-year portfolio formation period (test period) are reported in **Table 3** and **Figure 3** to further test this phenomenon in the Indian equity market.

The numbers regarding this longer test period reveal that over the last twelve years, the winner

Table 3

Average Cumulative Residual Returns of Winner and Loser Portfolios
(For Three-year Test Period)

| *Months After Portfolio Formation*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
ACRR (W)	0.071	0.152	0.239	0.232	0.173	0.106	0.119	0.202	0.212	0.139	0.176	0.184
ACRR (L)	0.001	-0.010	-0.055	-0.047	-0.085	-0.088	-0.053	0.159	0.103	0.129	0.067	0.154
Difference of ACRR(L) and ACRR (W)	-0.070	-0.162	-0.293	-0.279	-0.258	-0.195	-0.171	-0.043	-0.109	-0.010	-0.109	-0.030
t-Statistics	1.291	2.114	3.331	3.313	2.127	1.735	1.218	0.500	1.417	0.098	1.850	0.169
Months After Portfolio Formation	13	14	15	16	17	18	19	20	21	22	23	24
ACRR (W)	0.195	0.117	0.094	0.018	-0.022	-0.091	-0.149	-0.164	-0.176	-0.195	-0.232	-0.241
ACRR (L)	0.046	0.029	-0.037	-0.057	-0.058	-0.160	-0.173	-0.163	-0.194	-0.189	-0.190	-0.166
Difference of ACRR(L) and ACRR (W)	-0.149	-0.088	-0.131	-0.075	-0.036	-0.068	-0.024	0.001	-0.017	0.006	0.042	0.076
t-Statistics	1.653	1.035	1.818	0.513	0.220	0.815	0.280	-0.016	0.180	-0.053	-0.303	-0.706
Months After Portfolio Formation	25	26	27	28	29	30	31	32	33	34	35	36
ACRR (W)	-0.270	-0.309	-0.451	-0.489	-0.451	-0.479	-0.541	-0.501	-0.510	-0.547	-0.455	-0.369
ACRR (L)	-0.220	-0.205	-0.319	-0.335	-0.319	-0.348	-0.412	-0.434	-0.414	-0.516	-0.448	-0.391
Difference of ACRR(L) and ACRR (W)	0.050	0.104	0.132	0.154	0.132	0.130	0.128	0.067	0.096	0.032	0.007	-0.022
t-Statistics	-0.547	-0.792	-0.734	-0.742	-0.663	-0.571	-0.476	-0.276	-0.341	-0.120	-0.027	0.086
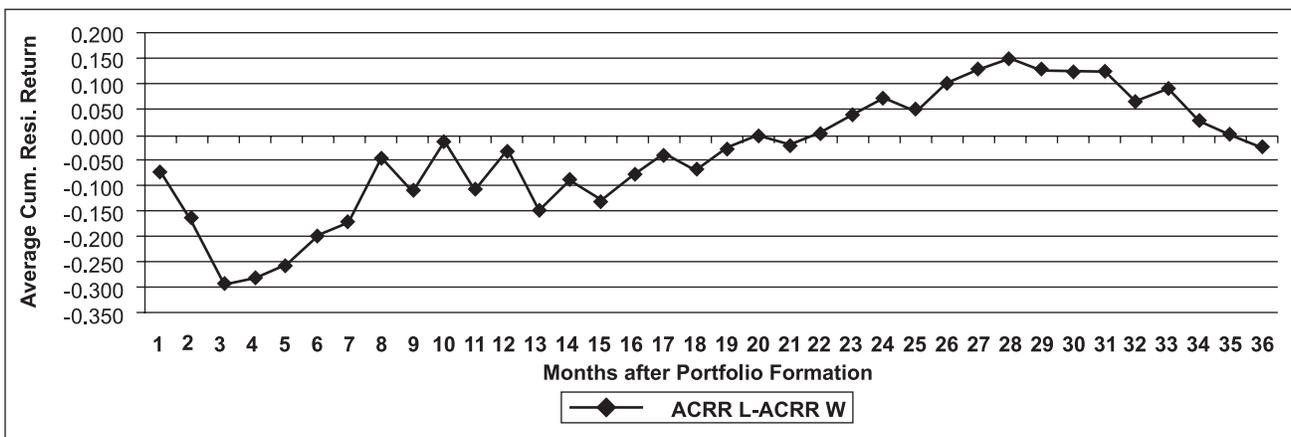
Figure 3: Difference between Average Cumulative Residual Return of Loser and Winner Portfolio of Three-year Periods from January 1996 to December 2007

portfolios of 46 stocks underperformed the market, on an average, by 36.9 per cent, 36 months after the portfolio formation. The loser portfolios, on the other hand, underperformed the market, on an average by 39.1 per cent, so that the difference in the average cumulative residual return between the extreme portfolios, [ACRR$_{L, 36}$ – ACRR$_{W, 36}$] equals – 2.2 per cent.

As is evident from Figure 3, during the entire test period of 36 months, the difference in ACRR of loser portfolio and winner portfolio [ACRR$_L$ – ACRR$_W$] remains below zero till twenty-two months. After this the loser portfolio yields positive performance over the winner which continued till the end of test period. Although Figure 3 might suggest overreaction, apparently similar to what

is described in the existing financial literature, the *t* statistics of the difference in average cumulative-residual return between the extreme portfolios for all the thirty-six months were found statistically insignificant. On the whole, the results of the three test periods, namely, 12 months, 24 months and 36 months, support the absence of the overreaction hypothesis in the Indian equity market.

It is obvious from the results that the stocks that went through more (or less) extreme return experiences (during the formation period), there were no subsequent (test period) prominent price reversals.

Consistent with the results of Jegadeesh and Titman (1993), we found an evidence of the abnormal returns associated with the momentum strategies for relatively short-time horizon, i.e., one-year holding period in the Indian Stock Market and this positive performance of 12 months test period over 24 months and 36 months test period could be attributed to psychological phenomenon known as conservatism or under-reaction.

Fundamentals of Winner and Loser Stocks

In order to further examine the difference between the performance of the winner stocks and the loser stocks, we considered some fundamental numbers of both stocks. **Table 4** reports the median market

capitalisation, price-earning ratio and book to market price ratio for six test periods of 12 months portfolio formation period.

It is obvious from the table that the Mann-Whitney test statistics (-1.28) for six test periods lead to validate the null hypothesis that there is no significant difference in average market capitalisation of the winner stocks and the loser stocks, These findings could not corroborate the empirical evidence reported by Banz (1981) and Sahgal and Tripathi (2007), i.e., the larger the market value of the firm's common stock, the lower the rate of return generated by the stock.

Basu (1977) observed the significant difference between the price-earning ratios of winner and loser stocks. Similar to the above findings, on the basis of Mann-Whitney test statistics (-2.24) for six test periods, the present study could not accept the null hypothesis of equality of average price-earning ratio of the winner and the loser stocks. The results indicated the presence of price-earning anomaly in the Indian stock market. Rosenberg, *et al*. (1985) and Fama and French (1992) argued that the stocks with high B/M ratios had significantly higher returns than the stocks with low B/M. It is curious to the Mann-Whitney test statistics (-2.08) for six test periods leads to the negation of the null hypothesis that there is no significant difference in the average book-to-market price ratio of the winner stocks and

Table 4

Market Capitalisation, Price-earning Ratio, and Book-to-Market Value Ratio of Winner and Loser Portfolios (For the Whole Study Period)

	Market Capitalisation		Price-Earning Ratio		Book Value-Market Value Ratio	
	Winner	Loser	Winner	Loser	Winner	Loser
I test period	271.11	46.81	15.40	2.44	3.19	0.35
II test period	142.57	34.76	21.50	2.50	4.75	0.38
III test period	114.21	108.48	6.63	5.85	0.83	0.95
IV test period	133.90	53.71	6.96	5.74	1.26	0.65
V test period	157.42	360.80	15.01	14.06	3.15	1.63
VI test period	1087.29	346.18	15.42	11.62	4.09	1.31
Mann-Whitney U	-1.28		-2.24**		-2.08**	
Significance level	0.240		0.025		0.041	

Note: * Significant at 10 per cent level of significance, ** Significant at 5 per cent level of significance

the loser stocks. These results are consistent with the earlier studies as mentioned above.

On the whole, the empirical evidence could not provide credence to the overreaction hypothesis which implies that extreme movements in stock prices were not followed by subsequent price movements in the opposite direction in the Indian Equity Market. Nevertheless, the results endorsed that the superior performance of the winner stocks associated with the price-earning and book-to-market ratio effect.

CONCLUSION

Existing financial literature has been plagued with various anomalies over the last three decades that lead us to question not only the pricing models employed but also the market efficiency hypothesis. In this line, one of the topics that has achieved great attention is the possibility that investors can forecast the changes in the direction that the returns will make. One specific case that attracts attention is the overreaction hypothesis which suggested that in revising their prospects, investors tend to over-weight the recent information and under-weight the past information, thus, violating the Bayes' Theorem. Observing this hypothesis, therefore, a trading strategy that buys loser and sells winners would provide significant abnormal returns in future and this leads to testing such over-reaction hypothesis in the equity market. We tested this phenomenon in the Indian stock market by using the monthly stock prices of 460 scrips of the National Stock Exchange for the period of January 1996 to December 2007. Inconsistent to the overreaction hypothesis, the portfolios of prior winners were found to outperform the prior losers. Twelve months after the portfolio formation, the winner stocks earned about 22.4 per cent. The empirical evidence revealed that the extreme movements in stock prices were not followed by subsequent price movements in the opposite direction, thus, the winners experienced higher returns and the losers continued to be losers. The study documented the non-existence of overreaction hypothesis while the abnormal returns were exhibited by momentum

investment strategies of the one-year holding period in the Indian equity market. Furthermore, the study revealed the significant difference between average price-earning ratios and book-to-market price ratios of the winner and the loser stocks. On the whole, the study could not support the higher contrarian profits than the momentum and the further (less) investors look stock prices in the past, the less (more) they overreact to them, creating lower (higher) long-term reversals.

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Marketing is merely a civilised form of warfare in which most battles are won with words, ideas, and disciplined thinking.

Albert W. Emery

The aim of marketing is to make selling superfluous.

Peter F. Drucker

PERFORMANCE APPRAISAL OF COMMERCIAL BANKS THROUGH CAMEL FRAMEWORK

Ved Pal* and Parveen Chauhan**

Abstract

The present study seeks to appraise the performance of commercial banks in the light of the CAMEL framework, an internationally-accepted tool to assess the performance of financial institutions. A data set of 63 banks from India, for the years 2002-2006, was taken. The sample consisted of those banks which were in existence during the study period. The performance ratios of the various components of the CAMEL were converted into composite-factor score by using the principal-component analysis and ranked on the basis of quartile of composite score. It was found that foreign banks, along with new private banks, were the best-achievers in terms of the components of the CAMEL framework. Public-sector banks which included SBI's and nationalised banks, registered a relatively moderate performance. Old private banks, as a group, were the laggards among the Indian banks.

Key words: *Performance appraisal, Commercial banks, CAMEL framework, Principal component analysis, Performance ratios*

INTRODUCTION

The performance and size of the financial sector play a significant role in the economic growth of any nation. This role of the financial sector essentially stems from the fact that financial intermediation has a prominent role in augmenting the total size of investable resources in the economy. There has been a long debate regarding the direction of relationship between financial development and economic growth. Schumpeter (1911) argued that well-functioning banks were able to identify innovative entrepreneurs that allowed funds being channeled to the most promising investment projects.

On the same lines, McKinnon (1973), Shaw (1973), and Fry (1995) emphasised that financial markets had a key role in any economic activity. King and Levine (1993) stressed that the level of financial depth (defined as the ratio of liquid assets to GDP) did, in fact, help to predict economic growth. Another study by Levine (1997) also revealed that the financial intermediary development positively influenced the economic growth.

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In contrast to this approach, Robinson (1952) and Stiglitz (1994) argued that economic development created demand for financial services and thereby led to financial development. They concluded that economic growth created additional demand for financial service which led to more developed financial sector. Recent theoretical literature on the financial development is based on the endogenous growth theory, which suggests that a financial intermediary has a positive effect on a steady state growth. In the recent past, a number of empirical studies were conducted to test the hypothesis relating to the relationship between financial development and economic growth and there has been a broad consensus that financial development promoted economic growth.

The Banking Sector: A Brief Profile

The financial system in India consists of various institutions which play certain specific roles and perform certain functions. The Reserve Bank of India (RBI) regulates the functioning of these institutions. These can be broadly categorised into three categories: (1) commercial banks, (2) co-operative banks, and (3) other financial institutions. The commercial banks and co-operative banks provide short-term finance. At the time of Independence of the country, in 1947, the banking sector was much smaller and had a weak structure. The majority of banking activities were concentrated in the metropolitan and urban centres. The advances and loans extended by banks were biased towards the working capital for trade and larger firms. Such services were not extended to 'the weaker' sectors of the economy, namely, agriculture and small industries. A need was felt for the inclusive growth of the financial sector. As a sequel of this thinking, the government nationalised a significant part of the banking system in 1955, when the Imperial Bank of India was nationalised. The next significant milestone in banking in india took place in 1969, and the third in 1980, when the major private banks were nationalised. The nationalisation of

banks made them more amenable to follow the government policies. The declared policy of the government was to control the 'commanding heights' of the economy for the purpose of meeting the development needs of the economy, in conformity with the Five-year Plan objectives. In this regulated environment, nationalised as well as non-nationalised banks were severely restricted through various fund-deployment regulations and strict branch-licensing policies. Particularly directed lending to the priority sector, as defined by the government, strict control over the rate of interest to be charged from various categories of customers, and discouragement to competition was the major policy-restriction imposed on the management of banks in India.

As a result of the policy of Government for nationalisation of banks, more than 90 per cent of India's banks were put under direct state control. The public-sector commercial banks are now of three categories:

1. *State Bank Group*: It includes eight banks, including the State Bank of India (SBI) and associated banks of SBI;

2. *Nationalised Banks*: This group includes 19 banks. In 1969, the government nationalized 14 scheduled commercial banks, followed by six more in 1980. In 1993, the merger of the New Bank India with the Punjab National Bank reduced the number of nationalised banks from 20 to 19, which are wholly owned by the government, although some of them have since made public issues; and

3. *Regional Rural Banks (RRBs)*: In order to meet the rural credit demand, special type of banks were established in 1975, with the sponsorship of the State Bank Group and nationalised banks, including the partnership of individual States.

The other dominant group of commercial banks comes under the private-sector banks, where equity is held by private share holders and there is no government share-holding. The foreign

banks are registered and headquartered in foreign countries, but have opened branches in India on a continual basis.

In order to make the financial sector consistent with the market economy, financial-sector reforms were introduced in India as part of the structural adjustment in the early 1990s. The balance of payments crisis which followed in the wake of the Gulf War of 1990s rapidly brought forward the imperatives for financial-sector strengthening. In 1991, the government appointed a high-level committee on the financial system (the 'Narsimham Committee') to look into all aspects of the financial system and make recommendations for its reform. This committee made a number of recommendations regarding operational flexibility and functional autonomy of the banking sector. The acceptance of recommendations of the first Narsimham Committee was considered as the first step taken by the government to enhance efficiency, productivity, and profitability of the Indian banking sector. The financial-sector reforms focussed on:

(i) Liberalisation which seeks to reduce the number of direct controls over banks to introduce the efficiency and productivity in the system; and

(ii) Stronger regulation of financial sector for its stability.

The major reforms introduced in the financial sector since 1991 include the following:

1. Interest rates on deposits and lending have been deregulated with banks enjoying greater freedom to determine their rates.

2. Lowering of reserve requirements (SLR and CRR), thus releasing more lendable resources which the banks can deploy profitably.

3. Adoption of global standards prudential norms in terms of capital adequacy, asset classification, income recognition, provisioning, exposure limits, and investment fluctuation reserve.

4. Government equity in banks has been reduced and strong banks have been allowed access to the capital market for raising additional capital.

5. With a view to increasing competition in the banking sector, new private-sector banks have been licensed.

6. New areas have been opened up for bank financing, insurance, credit cards, infrastructure financing, leasing, gold banking, besides investment banking, asset management, and factoring.

7. Limits for investment in overseas markets by banks, mutual funds, and companies have been liberalised.

8. The RBI guidelines have been issued for putting in place risk management systems in the banks. Risk Management Committees address credit risk, market risk and operational risk. Banks now have specialised committees to measure and monitor the various risks and have upgraded their risk management skills and systems.

8. The limit for foreign direct investment in private banks has been increased from 49 per cent to 74 per cent and the 10-per cent cap on voting rights has been removed. In addition, the limit for foreign institutional investment in private banks has been fixed at 49 per cent.

Besides the above-mentioned reforms, for better monitoring of the banking system, the Off-site Monitoring and Surveillance System (OSMOS) was introduced in 1995 as an additional tool for the supervision of commercial banks. In 1995, the RBI set up a working group under the chairmanship of Mr. S. Padmanabhan to review the banking supervision system. They proposed a rating system for domestic and foreign banks based on the international CAMEL model, combining the financial management systems and control elements, in July 1998. It recommended that the banks should be rated on

a five-point scale (A to E) based on the lines of the international CAMEL rating model. India joined the Basel accord in April 1992 and committed to implement the revised norms of Basel-II in March 2008. By the 2009-end, foreign banks are expected to get a free hand to grow and acquire other banks in India on an equal footing with the banks incorporated in India.

EARLIER STUDIES ON CAMEL FRAMEWORK

The CAMEL's rating of a bank is directly known only by the bank's senior management and the appropriate supervisory staff, and is never released by supervisory agencies, even on a lagged basis. While the examination results are confidential, the public may infer such supervisory information on the bank's conditions based on subsequent actions or specific disclosures. Overall, the private supervisory information gathered during a bank examination is not disclosed to the public, although studies have shown that it does filter into the financial market.

Several studies have examined whether and to what extent the information provided by CAMEL is useful in the supervisory monitoring of banks. Barker and Holdsworth (1993) found the evidence that CAMEL ratings are useful in predicting bank failures even after controlling for a wide range of publicly-available information about the condition and performance of banks.

Swindle (1995) used the capital adequacy component of the CAMEL rating system to assess whether regulators in the 1980s influenced the inadequately capitalised banks to improve their capital. Using a measure of regulatory pressure that is based on publicly-available information, the study found that inadequately capitalised banks responded to the regulators' demands for greater capital adequacy.

Hirtle and Lopez (1999) examined the utility of past CAMEL ratings in assessing the banks' current conditions. The study found that subject to condition on current public information, the private supervisory information contained in the past CAMEL ratings provided further insight into bank current conditions, as summarised by the current CAMEL ratings.

DeYoung, *et al.* (1998) examined whether private supervisory information would be useful in pricing the sub-ordinated debt of large bank-holding companies (BHCs). They used an econometric technique that estimated the private information component of the CAMEL ratings for the BHCs' lead banks and regressed it on to sub-ordinated bond prices. They concluded that this aspect of CAMEL ratings added significant explanatory power to the regression after controlling for publicly-available financial information.

Cole and Gunther (1998) found that new (less than 6-months old) CAMEL ratings more accurately predicted the bank financial distress than what the financial ratios can, but that financial ratios were better predictors than the older (more than 6-months old) CAMEL ratings.

Bousaid and Saucier (2003) used the CAMEL rating on Japanese banks for the period 1993-1999 and found that CAMEL framework had the capacity to predict and explain the distress. The study revealed that the major problem of failed banks was not of the inefficiency of management, but the below-standard capital adequacy and considerable problems in their assets quality.

Gasbarro, Sadguna, and Zumwalt (2004) examined the changing financial soundness of Indonesian banks during the South-east Asian financial crisis. The study revealed that during the stable economic periods, four of the five traditional CAMEL components provided insights into the financial soundness of the Indonesian banks. However, during the crisis period, the relationships between financial characteristics and CAMEL ratings deteriorated and only one of the traditional CAMEL components – earnings – objectively discriminated among the ratings.

Baral (2005) sought to investigate the financial health of joint-venture banks in the CAMEL framework. They found that the health of joint-venture banks was better than that of the other commercial banks.

Kapil and Kapil (2005) analysed the financial position of Indian banks and assessed the relationship between the CAMEL ratings and the bank's stock performance. They found that the Off-site Supervisory Examination Model, CAMEL, was related to the banks' stock performance in the capital market. Moreover, the private supervisory information gathered by banks' examiners in the form of CAMEL ratings does filter into the financial markets, in spite of the fact that they were confidential and not disclosed to the public.

Khalid (2006) investigated the effects of privatisation and liberalisation on the performance of the banking sector in Pakistan in the light of the CAMEL framework and found that there was little evidence of improvement in most of the indicators of financial health as a result of the privatisation and liberalisation policies pursued so far in the banking sector of the country.

OBJECTIVES OF THE STUDY

From the survey of the existing literature, we found that most of the studies analysed the performance of commercial banks by investigating individual financial ratios falling under the CAMEL framework. The present study seeks to measure the performance of commercial banks in India in terms of the composite score of various indicators of the CAMEL framework, alongwith its individual financial ratios.

METHODOLOGY

The study is entirely based on the CAMEL framework. The financial performance of banks in this framework is concentrated in five components: capital adequacy, asset quality, management efficiency, earning quality, and liquidity position.

DATA AND SAMPLING

We used the secondary data published by the Reserve Bank of India and the PROWESS database of CMIE (Centre for Monitoring Indian Economy, Mumbai), for the years 2002-2006, for 63 sampled banks, which comprised 8 banks of the SBI group, 19 nationalised banks, 14 foreign banks, 17 old private banks, and 5 new private banks (the banks which came into existence under the RBI guidelines for licensing of new banks in the private sector issued on January 22, 1993). The sample includes only those banks which were in existence during the period 2002-2006. A list of these banks is given in **Appendix.**

PERFORMANCE RATIOS FOR CAMEL FRAMEWORK

Capital Adequacy

Capital adequacy provides fortification for the depositors from the potential shocks of losses that a bank might incur and promote the stability in the banking system. It helps in absorbing major financial risks (like the credit risk, market risk, foreign exchange risk, interest rate risk and the risk involved in off-balance sheet operations). So, it reflects the ability of the bank to absorb the unanticipated shocks. Capital adequacy of any financial institution is instrumental in the formation of risk perceptions among its stakeholders. Capital adequacy can be measured through the followings ratios:

(a) *Capital-assets Ratio*: It is arrived at by dividing the banks' capital (contribution by owners of the banks) by its total assets. The higher the capital-assets ratio, the higher the quality of the capital employed.

(b) *Debt-equity Ratio*: It is computed by dividing the debt (borrowings and deposits) by the equity (capital plus reserves and surplus). It indicates the degree of leverage of the bank and measures how much of the bank business is financed through debt and how much through equity. A higher ratio reflects less protection for the creditors and depositors of the bank.

(c) *Advances to Total Assets:* It reflects the aggressiveness of the bank in lending the funds. The higher value of this ratio means there are more advances as a portion of total assets.

(d) *G-Secs (Government Securities) to Total Investment*: It measures the risk-taking ability of the bank. Since the government securities are risk-free, the higher the investment in G-securities, the lower the risk involved in the bank investment.

Assets Quality

The quality of assets is an important parameter to gauge the strength of any banking institution, as the quality of its assets has a major bearing on the earnings ability of that institution. This reflects the extent of credit-risk and recovering the bank debt. It can be computed as follows:

(a) *Net NPA (non-performing assets) to Total Assets*: It is arrived at by dividing the net NPA by total assets. The lower value of this ratio indicates towards the better quality of assets.

(b) *Net NPA to Advances:* It is computed by dividing the net NPA by advances. The lower value of this ratio signifies the improved quality of advances.

(c) *Total Investment to Total Assets*: It indicates the extent of deployment of assets invested as against the advances. The higher level of investment means lack of credit off-take and that the banks choose other avenues, such as government securities and other approved securities to park their funds.

(d) *Total Earning Assets to Total Assets*: It is calculated by dividing the amount of total earning assets (advances plus investment) by the amount of total assets. The higher of its value shows the strength of the earning base of the bank.

Management Efficiency

Management efficiency is the most critical element that ensures the survival and growth of the bank. It is measured as follows:

(a) *Total Advance to Total Deposits:* It measures the efficiency of the management in converting the available deposits into advances. The efficiency is positively related to the value of the ratio.

(b) *Business per Employee*: It measures the quality of the bank's employees in generating business. It is calculated by dividing the total business (total advances and total deposit) by the total number of employees. The higher value of this ratio entails higher efficiency in the management.

(c) *Operating Expenses to Total Income*: It is arrived at by dividing operating expenses to the total income. The higher value of this ratio adversely affects the measure of the management quality in the bank.

(d) *Total Expenses to Total Income*: It is arrived at by dividing the total expenses by the total income. The lower value of this ratio is considered better for the management.

Earnings Quality

While the quality earnings add profit, losses result in the erosion of the capital base of a bank. The earnings quality is usually measured as follows:

(a) *Interest Income to Total Income:* It measures the interest income as a percentage of the total income. The greater value of this ratio implies more earnings of the bank from lending and larger interest rate risk.

(b) *Non-interest Income to Total Income*: It measures the non-interest income as a percentage of the total income. The more of it is taken as to lower the chances of interest rate risk and more diversification in earning sources.

(c) *Operating Profit to Total Assets*: It is arrived at by dividing the operating profit by the total assets. The earnings quality of the bank is directly proportional to this ratio.

(d) *Net Interest Margin*: It is computed by dividing the net interest income to the total earning assets (advances plus investment).

The higher value of this ratio is taken as one of the indicators of earning quality of the bank.

Liquidity Position

Liquidity is very important for any financial institution. While a bank has to take proper care about the liquidity risk, high funds invested in high-return portfolio yield high profitability for the bank. Thus, any bank generates profit on a reasonable level of liquidly for the depositors. The liquidity position can be measured as follows:

(a) *Liquid Assets to Total Deposit*: It indicates the bank's ability to meet the customers' deposit in a particular year. Liquid assets include cash in hand, balance with the RBI and other banks (both in India and abroad). The higher value of this ratio implies the better liquidity of the bank.

(b) *Money at Call and Short Notice to Deposits*: It shows the money at call and short notice in a particular year as a portion of total assets. The more of this ratio indicates a comfortable position of liquidity for the bank.

(c) *Cash to Deposits:* It measures the cash in hand at the bank in a particular year in relation to the deposits of the customers. The greater value of this ratio makes the bank less stressful on the liquidity front.

(d) *Balance with RBI to Deposit*: In banking, the balances of commercial banks with central bank are considered as safe assets and may be converted into cash with least cost. The more of this proportion implies better liquidity position of the bank.

METHODS OF ANALYSIS

We used descriptive and statistical techniques to analyse the performance of the banks. For computing the composite score of different ratios under CAMEL, we relied on the method of Principal Component Analysis (PCA), which is one of the variants of factor analysis. The mathematical form

of principal component analysis was developed by Hotelling (1933). This method has a special advantage over all other methods of aggregation in the sense that it redefines the larger set of variables in terms of a fewer set of orthogonal variables, called principal components, and succeeds in reducing the dimensionality problem. It comprises the construction of a set of variables P_i, called principal component (i = 1,2,……k), out of a set of variables X_i (i=1,2,3……k). Each principal component is a linear combination of the X's:

$$P_1 = a_{11}x_1 + a_{12}x_2 + ... + a_{1k}x_k$$
$$P_2 = a_{21}x_1 + a_{22}x_2 + ... + a_{2k}x_k$$
$$P_k = a_{k1}x_1 + a_{k2}x_2 + ... + a_{kk}x_k$$

The method of principal component can be applied by using the original values of the X_j's, or of the standardised variables Z_j, defined by:

$$Z_j = \frac{(X_j - \bar{X})}{\sigma_{xj}}$$

The coefficients a_{ij}'s are called the loading of the principal component which are so chosen that the newly created variables, called the principal components, satisfy two conditions:

(i) The principal components are orthogonal (uncorrelated); and

(ii) The first principal component has the largest possible variance; the second principal component is then chosen in such a way that absorbs the maximum of the remaining variations in X's, after allowing for the variation accounted for by the first principal component, and so on.

In this procedure, the data matrix is transformed to a new set of uncorrelated principal components, which account as much of the variation as possible in the descending order. It may be possible that the first two or three of these principal components account for a substantial variation, say 80 to 90 per cent, and the contribution of the remaining variables is very small. In such circumstances,

it becomes unnecessary to drive the remaining principal components.

The steps involved in the principal component analysis are:

1. Prepare an inter-correlation matrix, R, from the variables given in the data matrix.

2. Work out the eigen values of R, which imply the variances of various principal components. Let these eigen values, arranged in descending order, be $\lambda_1, \lambda_2, \ldots, \lambda_r$

4. Take the first few values of λ's, and find out the proportion:

$$\lambda_1 + \lambda_2 + \ldots + \lambda_r / P$$

5. If this value is satisfactory, say 60 per cent or more, then find out the eigen vectors corresponding to these eigen values.

Convert the original variables into standard scores, and using the elements given in the first eigen vector as weights, get the weighted sum of the standardised scores for each observation. The values so obtained shall be the scores of the first principal component. Similarly, using the other eigen vectors, the scores of the 2nd, 3rd, and the rth principal components can be worked out.

Multiply each eigen vector used above by the square root of their corresponding eigen values and give them as factor loading.

For a better understanding, the values of principal component index (factor score in the terminology of factor analysis) are scaled on the value of ten, by using the following formula:

$$\text{Value} = 10 * ((Y_{actual} - Y_{min}) / \text{Range})$$

where,

Y_{actual} = Actual value of factor score

Y_{min} = Minimum value of factor score

Range = Range of factor score

For getting the composite score for the different ratios for the components of CAMEL, the principal components that have a eigen value of one or more, are aggregated by using the weighted average. The weights are derived from the proportion of variance explained by the individual factor. For instance, if two components have eigen values greater than one, with a total variance of 80 per cent, and having individual variance explained, 50 per cent and 30 per cent, respectively. Here, both these components are combined by taking weighted average of individual score, and weights are assigned according to their proportion of variance explained out of 80 per cent. After computing the weighted average of the extracted values, their weights are normalised at the scale of 10, by using the above-mentioned formula.

Ranking Criteria

For the purpose of ranking of the commercial banks' performance in the light of CAMEL, the composite score of different components of CAMEL are put into four categories on the basis of the quartile of composite score (CS). This criterion of ranking is based on the actual relative performance of the banks in India.

Rank I (Best performer) is assigned to the bank which falls in the 4th quartile of the composite score (CS>=Q_3)

Rank II (Good performer) is assigned to the bank which falls in the 3rd quartile of the composite score (Q_2<=CS<Q_3).

Rank III (Average performer) is assigned to the bank which falls in the 2nd quartile of the composite score (Q_1<=CS<Q_2).

Rank IV (Poor performer) is assigned to the bank which falls in the 1st quartile of the composite score (CS<Q_1).

DATA ANALYSIS

This section analyses the indicators of the financial performance of the sampled banks under the CAMEL framework.

Table 1

Indicators of Capital Adequacy

Particulars	Year	SBI's	Nationalised Banks	Foreign Banks	Private (Old)	Private (New)	All banks
Capital-assets ratio	2002	0.61	2.45	6.26	0.90	1.74	2.59
	2003	0.53	2.05	7.91	0.90	1.94	2.84
	2004	0.45	1.89	7.49	0.80	1.19	2.60
	2005	0.38	1.69	10.33	0.90	1.21	3.19
	2006	0.34	1.22	9.99	1.02	0.87	2.97
	Average	0.46	1.86	8.39	0.90	1.39	
Debt-equity ratio	2002	17.93	18.41	8.71	17.21	15.53	15.64
	2003	17.19	18.22	6.94	16.06	13.75	14.65
	2004	16.12	16.92	6.79	15.98	14.06	14.09
	2005	16.80	17.06	7.06	16.45	11.17	14.17
	2006	16.82	15.87	5.95	15.50	12.60	13.43
	Average	16.97	17.29	7.09	16.24	13.42	
Advances-to-total assets ratio	2002	42.51	43.10	42.33	43.31	40.98	42.74
	2003	43.07	43.90	41.65	44.45	43.59	43.42
	2004	43.82	43.65	39.89	44.17	45.19	43.10
	2005	48.92	48.05	41.50	49.86	50.15	47.36
	2006	55.51	54.47	42.14	53.75	52.24	51.49
	Average	46.76	46.63	41.50	47.11	46.43	
G-secs-to- total investment ratio	2002	83.61	72.19	73.02	71.91	64.53	73.14
	2003	86.10	75.69	79.85	73.71	69.54	76.91
	2004	89.85	78.64	77.91	76.66	77.29	79.26
	2005	92.39	81.36	85.49	79.95	71.23	82.49
	2006	91.44	82.11	83.55	80.05	72.41	82.29
	Average	88.68	78.00	79.96	76.46	71.00	

Capital Adequacy

The minimum amount of capital that a bank should have to meet future losses was specified differently by the national regulators until its successful harmonisation by the Basel Accord of 1988. As per the latest RBI norms (2009), the banks in India should have the capital adequacy ratio of 9 per cent. The higher the capital in relation to the total assets, the stronger is the bank. The major indicators of capital adequacy are shown in **Table 1**.

During the study period (2002-06), capital-asset ratio of all the banks improved from 2.59 per cent in 2002 to 2.97 per cent in 2006. Foreign banks, with an average of 8.39 per cent capital-asset ratio, evidenced stronger capital base than all the other

banks. SBIs had the lowest capital base, with an average of only 0.46 per cent.

All the public-sector banks and private banks (old and new) have a strong debt-equity ratio. Foreign banks were observed to have the lowest debt-equity ratio. It may be due to their limited access to mobilise the deposits from the domestic market. This ratio has exhibited a decreasing trend over the study period. It may be due to the pressure on government to recapitalise some of the banks. In the recent past, many banks went to the equity market to raise the capital.

The advance-to-total assets ratio indicates the aggressiveness of a bank in lending. All banks, excepting the foreign banks, had more than 45 per cent advances in relation to their total assets.

The pattern of movement in this ratio for all the banks has shown improvement in aggressiveness to extend the loans in relation to assets from 42.74 per cent in 2002, to 51.49 per cent in 2006.

The investment in the Government securities is considered as a risk-free investment which carries lowest return and reflects the quality of the invested assets. The SBIs' made 88.68 per cent investment in the G-securities in relation to the total investment. The new private-sector banks had the highest proportion of risky investment, with 71 per cent investment in G-securities, which was the lowest in the whole banking industry. It may be due to their attractiveness for higher return related

sector banks stood third, with 0.307, and had a poor capital adequacy rate. The capital adequacy has shown a sign of improvement during the study period. It might have resulted from implementation of the new capital accord in 2004, popularly known as Basel II, under which the banks' capital requirement will be more closely aligned with the underlying risks in their balance sheets to promote stronger risk management practices.

Assets Quality

The indicators of assets quality are given in **Table 3**.

Table 2

Composite Score of Capital Adequacy

Capital adequacy	Years	SBI's	Nationalised Banks	Foreign Banks	Private (Old)	Private (New)	All banks
	2002	0.283 (2)	0.348 (2)	1.138 (1)	0.222 (3)	0.266 (2)	0.475 (1)
	2003	0.301 (2)	0.342 (2)	1.593 (1)	0.248 (3)	0.331 (2)	0.589 (1)
	2004	0.336 (3)	0.369 (2)	1.647 (1)	0.272 (3)	0.318 (3)	0.619 (1)
	2005	0.321 (2)	0.355 (2)	2.140 (1)	0.283 (3)	0.352 (2)	0.727 (1)
	2006	0.288 (3)	0.302 (3)	2.091 (1)	0.291 (3)	0.267 (3)	0.692 (1)
	Average	0.306 (2)	0.343 (2)	1.722 (1)	0.263 (3)	0.307 (2)	

Note: Figures in the parenthesis show the relative ranking.

to the market-oriented investment portfolio. For the sampled banks, the proportion of investment in G-securities increased from 73.14 per cent in 2002 to 82.29 per cent in 2006. This implies lowering the risk involved in the investment made by the banks.

Composite scores (normalised at the scale of 10) of all indicators of capital adequacy, which is computed through the principal component analysis, are presented in **Table 2** (Figures given in the parenthesis shows the relative ranking based on quaritle).

The foreign banks emerged as the highest performers by attaining the first rank in the capital adequacy. While the public-sector banks and new private banks performed better to enhance their capital base, the old private-

The SBIs and the foreign banks emerged stronger in managing the NNPA, with their ratio of 0.96 per cent NNPA. The old private-sector banks, with 1.66 per cent, had the highest ratio, which reflects relatively poor quality of assets. For all the banks, this ratio improved from 1.92 per cent in 2002 to 0.64 per cent in 2006, which shows that the quality of assets in the whole banking industry improved. The declining ratio of NNPA for the different group of banks implies that the banks became increasingly cautious in assessing the credit risk and debt recovery.

Foreign banks had the highest NNPA in proportion to the total advances, with 5.25 per cent, followed by the old private-sector banks, with 3.56 per cent. It is also observed that the proportion of NNPA's reduced rapidly during the period.

Table 3

Indicators of Assets Quality

Particulars	Years	SBI's	Nationalised Banks	Foreign Banks	Private (Old)	Private (New)	All banks
Ratio of NNPA-to-total assets	2002	1.89	1.85	1.07	2.85	1.50	1.92
	2003	1.13	1.65	1.13	2.18	1.27	1.58
	2004	0.50	1.00	1.50	1.19	0.78	1.08
	2005	0.65	1.02	0.56	1.14	0.87	0.89
	2006	0.65	0.64	0.49	0.82	0.57	0.64
	Average	0.96	1.23	0.96	1.66	1.00	
NNPA-to-Advances ratio	2002	4.34	4.32	5.50	6.28	3.36	5.04
	2003	2.63	3.73	5.59	4.76	2.96	4.22
	2004	1.14	2.23	4.74	2.72	1.70	2.74
	2005	1.33	2.18	5.63	2.18	1.70	2.80
	2006	1.15	1.18	4.77	1.48	1.07	2.03
	Average	2.12	2.73	5.25	3.56	2.16	
Ratio of total investments to total assets	2002	40.16	39.74	30.90	35.97	41.42	36.94
	2003	43.46	42.17	33.96	36.27	40.27	38.76
	2004	43.67	41.95	34.03	37.42	38.12	38.88
	2005	38.30	38.48	32.35	32.60	33.97	35.15
	2006	31.40	32.28	28.53	28.81	34.15	30.55
	Average	39.40	38.92	31.95	34.21	37.59	
Ratio of total earning assets to total assets	2002	82.66	82.84	74.58	80.94	77.98	80.08
	2003	86.53	86.06	76.46	83.96	78.05	82.78
	2004	87.49	85.61	74.49	84.68	78.50	82.56
	2005	87.22	86.53	74.47	83.56	82.89	82.85
	2006	86.91	86.75	70.89	83.48	85.62	82.27
	Average	86.16	85.56	74.18	83.32	80.61	

Among all the groups of banks, foreign banks were the top performers, with 31.95 per cent investment against their total assets. While Indian public-sector banks (SBIs' and nationalised) had the lowest assets quality in the banking sector.

Foreign banks had the lowest and decreasing earning base, with an average of 74.18 per cent from 2002 to 06. The earning base for all banks improved from 80.08 per cent in 2002 to 82.27 per cent in 2006.

The composite score of all indicators of assets quality is given in **Table 4**.

As shown in the table, the quality of the assets in the banks improved over the period. Foreign banks ascertained themselves in the upper quartile

Table 4

Composite Score of Assets Quality

Assets quality	Year	SBI's	Nationalised Banks	Foreign Banks	Private (Old)	Private (New)	All banks
	2002	1.581 (2)	1.557 (2)	1.745 (1)	1.525 (3)	1.903 (1)	1.612 (2)
	2003	1.747 (2)	1.717 (2)	2.217 (1)	1.603 (3)	2.011 (1)	1.803 (2)
	2004	1.926 (2)	1.871 (2)	2.088 (1)	1.704 (3)	2.883 (1)	1.983 (1)
	2005	2.060 (1)	2.245 (1)	2.666 (1)	1.728 (3)	2.360 (1)	2.176 (1)
	2006	2.082 (2)	2.432 (2)	3.039 (1)	1.916 (3)	2.367 (2)	2.363 (2)
	Average	1.879 (2)	2.015 (2)	2.362 (1)	1.686 (3)	2.310 (1)	

Note: Figures in the parenthesis show the relative ranking.

in their assets quality, with 2.362 score, followed by new private banks, with 2.310 score. On the other hand, the old private-sector banks with 1.686 score, are found to be at a relatively lower rank in terms of the assets quality. The improvement in the assets quality of the Indian banking system may be the result of the policy guidelines of the RBI, tightening of the norms related to the income recognition, asset classification, and provisioning.

Besides, the improvement in asset quality can also be attributed to the improved recovery climate resulting from the strong macroeconomic performance as well as the several institutional measures initiated by the Reserve Bank and the Government, such as the setting up of debt recovery tribunals, *Lok Adalats*, scheme of corporate debt restructuring in 2001, and the SARFAESI Act in 2002.

Management Efficiency

The indicators of management efficiency are shown in **Table 5**.

The ratio of the total advances to total deposits shows the quality of management in converting the available deposit into advances. Foreign banks emerged as relatively highly efficient in converting the available deposit into advances with 82.83 per cent, followed by new private banks, with 66.04 per cent. Moreover, the management efficiency of all the banks improved over the study period.

Foreign banks' employee generated the highest average of Rs.111.65 million business, per year during the period, followed by new private-sector banks, with Rs.83.56 million business per employee, in contrast to the SBIs' which had the lowest average of Rs.24.55 million business per employee. During the period, business per employee of all

Table 5

Indicators of Management Efficiency

Particulars	Years	SBI's	Nationalised Bank	Foreign	Private (Old)	Private (New)	All banks
Ratio of total advance to total deposits	2002	53.41	49.38	85.50	49.41	68.22	59.42
	2003	53.54	50.51	84.34	50.49	62.80	59.38
	2004	54.42	50.79	79.30	50.07	63.07	58.37
	2005	59.41	55.90	84.96	56.45	68.38	63.94
	2006	68.20	63.48	80.04	61.16	67.73	67.47
	Average	57.80	54.01	82.83	53.51	66.04	
Business per employee (In millions)	2002	16.12	19.48	101.71	19.81	84.32	42.56
	2003	19.52	22.09	110.76	22.78	91.97	47.20
	2004	22.63	25.60	110.09	26.48	83.14	48.80
	2005	28.39	30.80	111.30	30.17	80.32	52.14
	2006	36.10	37.07	124.41	34.90	78.04	59.02
	Average	24.55	27.01	111.65	26.83	83.56	
Ratio of operating exp. to total income	2002	21.47	23.63	23.73	19.30	19.15	21.86
	2003	21.13	23.55	26.06	20.30	20.85	22.71
	2004	21.73	24.21	26.04	22.36	25.97	23.94
	2005	24.33	26.16	31.79	26.56	30.41	27.63
	2006	26.12	26.38	30.14	29.46	29.29	28.24
	Average	22.95	24.79	27.55	23.60	25.13	
Ratio of total exp. to total income	2002	76.34	82.99	83.10	76.68	76.51	79.96
	2003	72.48	77.39	80.82	74.74	75.97	76.70
	2004	66.66	71.73	70.38	73.04	71.74	71.14
	2005	69.87	73.24	73.14	80.00	73.90	74.67
	2006	74.41	76.32	74.60	81.10	75.17	76.89
	Average	71.95	76.33	76.41	77.11	74.66	

banks has improved. The possible reason for budding business per employee of public-sector banks is the restructuring of the workforce and Voluntary Retirement Scheme (VRS) introduced in 2000-01 by public-sector banks.

With 27.55 per cent operating expenses ratio, the foreign banks' turned out to be as least efficient in controlling the operating expenses. During the period, all the banks failed to control the operating expenses ratio, which indicate that the management efficiency of all the banks decreased over time in controlling the operating expenses. It may be due to the relatively higher establishment cost, like technology advancement and the branch up-gradation by the banks during the recent years.

to 1.370 in 2006. This suggests that management efficiency in the banks was reduced. It may be due to the high operating expenses and establishment and technological expenses.

Earnings Quality

The indicators of the earnings position of the banks are presented in **Table 7**.

In case of the ratio of interest income to total income, both nationalised banks and old private sector banks reported the highest average ratio, with 83.95 per cent and 83.63 per cent, respectively. For the period 2002-06, the foreign banks evidenced an average of 73.41 per cent income from advances, which means less earnings from the lending

Table 6
Composite Score of Management Efficiency

Management efficiency	Year	SBI's	Nationalised Banks	Foreign Banks	Private (Old)	Private (New)	All banks
	2002	1.407 (3)	1.437 (3)	2.474 (1)	1.746 (2)	2.368 (1)	1.821 (2)
	2003	1.407 (3)	1.371 (3)	2.036 (1)	1.661 (2)	2.290 (1)	1.674 (2)
	2004	1.279 (3)	1.276 (3)	1.914 (1)	1.496 (2)	1.746 (1)	1.515 (2)
	2005	1.183 (2)	1.170 (3)	1.491 (1)	1.272 (2)	1.457 (1)	1.293 (2)
	2006	1.141 (3)	1.191 (3)	1.927 (1)	1.197 (3)	1.447 (1)	1.370 (2)
	Average	1.283 (3)	1.289 (3)	1.968 (1)	1.474 (2)	1.862 (1)	

Note: Figures in the parenthesis show the relative ranking.

Among the bank groups, SBIs emerged as the best performer in managing this ratio. As this ratio contains interest expenses, all the banks showed a fluctuating value of this ratio.

The composite score of all the indicators of management efficiency is summarised in **Table 6**.

It is noticed that among all banks under study, the foreign banks performed relatively better in terms of efficiency, with 1.968 score, and were positioned in the upper quartile of performance. The public-sector banks (SBIs' and nationalised) fell in the lowest quartile in respect of the management efficiency. The management efficiency, expressed as a composite score for the all the sampled banks, dropped from 1.821 in 2002

operations. These banks, along with the new private-sector banks, declined in their ratio of interest income to total income over the study period. In contrast, the interest income of the banks improved over the period, which may be due to the increase in credit off-take stimulated by increase in demand by the fast-moving Indian economy.

The ratio of the non-interest income to total income indicates fee income and less default risk. On this parameter, foreign banks had the highest non-interest income in relation to the total income, with a ratio of 26.54 per cent. It suggests that these banks had comparatively more income from non-lending activities. Nationalised banks had the lowest ratio 16.07 per cent, which suggests that these banks had less income from fee-based activities

Table 7

Indicators of Earnings Quality

Particulars	Years	SBI's	Nationalised Bank	Foreign Bank	Private (Old)	Private (New)	All banks
Ration of interest income to total income	2002	83.12	85.57	77.57	79.52	80.62	81.45
	2003	81.21	83.11	75.52	79.68	78.21	79.87
	2004	76.49	80.11	67.89	80.07	78.13	76.76
	2005	83.07	83.79	72.18	89.49	80.58	82.40
	2006	84.50	87.15	73.90	89.39	78.31	83.77
	Average	81.68	83.95	73.41	83.63	79.17	
Ratio of non-interest income to total income	2002	16.89	14.44	22.46	20.55	19.39	18.57
	2003	18.74	16.89	24.66	20.37	21.93	20.19
	2004	23.66	19.89	32.23	19.99	21.68	23.28
	2005	16.75	15.97	27.71	10.43	19.07	17.43
	2006	15.48	13.13	25.63	11.10	21.11	16.29
	Average	18.30	16.07	26.54	16.49	20.63	
Ratio of operating profit to total assets	2002	2.52	1.77	2.29	2.73	2.26	2.28
	2003	2.84	2.31	2.26	2.67	2.52	2.48
	2004	3.30	2.67	3.13	2.61	2.57	2.83
	2005	2.54	2.22	2.59	1.67	2.01	2.18
	2006	2.08	1.89	2.29	1.58	1.90	1.92
	Average	2.65	2.17	2.51	2.25	2.25	
Net interest margin	2002	3.63	3.27	2.80	3.10	2.39	3.10
	2003	3.55	3.46	2.99	3.12	2.59	3.21
	2004	3.56	3.59	3.20	3.36	3.04	3.39
	2005	3.63	3.56	3.34	3.53	3.18	3.48
	2006	3.38	3.38	3.67	3.47	3.06	3.44
	Average	3.55	3.45	3.20	3.32	2.85	

and lack diversification of their core business. For the sampled banks, the non interest income ratio showed a fluctuating pattern. However, recent years had a declining trend. The new private-sector and foreign banks continued to score greater value over the public-sector banks in fee-based income which may be driven by their strong IT platforms that help in financial trading, cross-selling and meeting many needs of the customers. Besides, these banks are used to market-oriented environment and strong advantages in areas, like the distribution of mutual funds and insurance products, and foreign exchange transactions (including derivatives) in addition to loan processing fees, which accounted for the bulk of the fee income.

The ratio of operating profit to total assets measures the effectiveness of the bank in employing

Table 8

Composite Score of Earnings Quality

Earnings quality	Year	SBI's	Nationalised Banks	Foreign Banks	Private (Old)	Private (New)	All banks
	2002	5.079 (2)	4.564 (3)	4.980 (2)	5.148 (2)	4.691 (3)	4.890 (3)
	2003	5.258 (1)	4.946 (3)	5.131 (2)	5.126 (2)	4.970 (3)	5.077 (3)
	2004	5.653 (2)	5.259 (3)	5.878 (1)	5.167 (3)	5.132 (3)	5.412 (2)
	2005	5.081 (2)	4.904 (2)	5.516 (1)	4.426 (3)	4.848 (2)	4.929 (2)
	2006	4.766 (2)	4.576 (3)	5.427 (3)	4.392 (3)	4.872 (2)	4.763 (2)
	Average	5.167 (2)	4.850 (2)	5.386 (2)	4.852 (3)	4.902 (3)	

Note: Figures in the parenthesis show the relative ranking.

its working funds to generate profit. On this parameter, SBIs occupied the top position, with 2.65 per cent, followed by foreign banks. While the nationalised banks were the poor performers on this count, with 2.17 per cent operating profit from the assets employed.

The net interest margin reflects the ability of the banks to generate income from their total earning assets. In this respect, the public-sector banks secured the top position, followed by the foreign banks. Over the study period, this ratio showed signs of improvement in the banking sector. This may be an outcome of improved assets-liability management in the banks.

The composite score of all indicators of the earnings quality of the banks is given in **Table 8**.

The table shows that foreign banks scored maximum value of 5.386 in earnings quality and obtained the first rank in this respect. Nationalised

banks were at the lowest position in the earnings quality with 4.850 score, whereas the old private banks slipped from the second rank in 2002 to the third rank in 2006. On the other hand, the public-sector banks (SBIs and nationalised banks) have shown relatively stable ranking from 2002 to 2006.

Liquidity

The major indicators of liquidity are shown in **Table 9**.

As shown in the table, for liquid assets-to-total deposits ratio, the foreign banks had the highest liquidity, with an average of 31.74 per cent, doing relatively well in meeting the customer demand. They were followed by the new private banks, with 15.73 per cent ratio. Furthermore, public-sector banks had least liquidity ratio, with an average value around 10

Table 9

Indicators of Liquidity

Particulars	Year	SBI's	Nationalised Bank	Foreign Bank	Private (Old)	Private (New)	All banks
Ratio of liquid assets to total deposits	2002	13.47	11.68	37.61	15.80	21.79	19.58
	2003	10.26	9.75	28.08	12.78	15.86	15.19
	2004	9.61	10.97	30.55	12.57	17.69	16.12
	2005	10.10	10.53	28.75	13.34	12.76	15.46
	2006	9.53	10.98	33.70	13.59	10.56	16.52
	Average	10.59	10.78	31.74	13.62	15.73	
Ratio of money at call and short notice to total assets	2002	2.84	0.80	16.54	0.50	7.34	4.99
	2003	1.62	0.53	7.67	0.40	1.15	2.27
	2004	1.76	0.79	8.47	0.80	0.90	2.63
	2005	2.01	1.08	5.27	0.77	2.01	2.12
	2006	2.09	0.84	8.59	0.92	1.08	2.76
	Average	2.06	0.81	9.31	0.68	2.50	
Ratio of cash to total deposits	2002	0.38	0.71	0.28	1.24	0.63	0.71
	2003	0.32	0.68	0.28	1.10	0.77	0.67
	2004	0.33	0.64	0.29	1.06	0.74	0.64
	2005	0.26	0.57	0.24	1.03	0.82	0.60
	2006	0.27	0.55	0.23	1.03	1.04	0.61
	Average	0.31	0.63	0.26	1.09	0.80	
Ratio of balance with RBI to total deposits	2002	6.42	6.32	5.80	5.74	6.62	6.08
	2003	5.91	6.00	5.97	4.98	7.89	5.86
	2004	5.89	6.94	7.52	5.28	10.23	6.75
	2005	5.60	6.34	7.37	5.41	6.94	6.27
	2006	5.55	6.32	7.78	4.79	4.43	5.98
	Average	5.87	6.38	6.89	5.24	7.22	

Table 10

Composite Score of Liquidly

Liquidity	Year	SBI's	Nationalised Bank	Foreign Bank	Private (Old)	Private (New)	All banks
	2002	1.832 (2)	1.569 (3)	3.253 (1)	1.417 (3)	2.424 (2)	2.004 (2)
	2003	1.450 (2)	1.349 (2)	2.529 (1)	1.002 (3)	2.382 (1)	1.612 (2)
	2004	1.416 (3)	1.793 (2)	3.285 (1)	1.133 (3)	3.382 (1)	2.025 (2)
	2005	1.348 (3)	1.562 (2)	3.022 (1)	1.227 (3)	1.892 (2)	1.795 (2)
	2006	1.303 (2)	1.570 (2)	3.544 (1)	0.997 (3)	0.724 (3)	1.753 (2)
	Average	1.470 (2)	1.569 (2)	3.127 (1)	1.155 (3)	2.161 (1)	

Note: Figures in the parenthesis show the relative ranking.

per cent. Decrease in the liquidity ratio over the period can be attributed primarily to meeting the sustained larger demand for bank credit due to accelerated economic activity.

For the rates of money at call and short notice to total assets, foreign banks had a higher liquidity than other banks, with an average value of 9.31 per cent money at call, and short notice in proportion to total assets from 2002 to 2006, followed by the new private banks, with 2.50 per cent ratio. The old private banks had the lowest ratio of 0.68 per cent.

In case of the cash-to-deposit ratio, all the banks, other than the new private-sector banks, have shown a decline. On this parameter, old private banks were the top-performers among all the banks. Holding the cash is considered as idle assets for any institutions and has opportunity cost of return foregone on alternative assets. In the recent past, Indian banks experienced the market-oriented environment and introduced a number of innovative financial products. Since these products can be converted into liquid assets with the least cost, the banks have less incentive to keep larger cash.

In the ratio of bank balance with the RBI to deposits, new private banks registered the highest ratio (7.22 per cent), followed by the foreign banks, with 6.89 per cent. It implies that these banks had relatively comfortable reserves of safe assets to meet the unexpected withdrawal by customers.

The composite scores of all indicators of liquidity are given in **Table 10**.

As shown in the table, the foreign banks were the best performers in terms of liquidity, with 3.127 score, followed by the new private banks. The SBIs reflected poor position in respect of the liquidity indicator of the CAMEL framework. The declining composite score of liquidity indicators in the banks may be due to the better assets-liability management and administered interest rate structure and availability of innovative market-oriented financial products.

Table 11

Composite Ranking

Particulars	SBI's	Nationalised Bank	Foreign Bank	Old Pvt.	New Pvt.
Capital Adequacy	0.306 (2)	0.343 (2)	1.722 (1)	0.263 (3)	0.307 (2)
Assets Quality	1.879 (2)	2.015 (2)	2.362 (1)	1.686 (3)	2.310 (1)
Management Efficiency	1.283 (3)	1.289 (3)	1.968 (1)	1.474 (2)	1.862 (1)
Earnings Quality	5.167 (2)	4.850 (2)	5.386 (2)	4.852 (3)	4.902 (3)
Liquidity	1.470 (2)	1.569 (2)	3.127 (1)	1.155 (3)	2.161 (2)

Note: Figures in the parenthesis show the relative ranking.

Overall Performance

The overall picture of the performance of the sampled banks, in the light of all the components of CAMEL, is presented in **Table 11**.

From the table, it is noticed that the foreign banks, as a group emerged as the leading group in all the components of CAMEL framework. Next to these banks were the new private banks which showed their dominant position in assets quality and management efficiency. These banks were working in a relatively more flexible environment insofar as the recruiting and retaining of the professional managers is concerned. Moreover, these banks adopted modern managerial practices due to increasing competition. The public-sector banks, which include the SBIs and the nationalised banks, registered a relatively moderate performance. They need to enhance their managerial efficiency.

CONCLUSION

The present study covers the performance of 63 commercial banks in India for the period 2002-06. The sampled banks had more than 95 per cent of total assets of the schedule commercial banks in India. The results can, therefore, be generalised for the whole banking sector. For the Indian economy, the period of study (2002-06) is characterised as financial liberalisation and modern banking environment. From the results, it can be concluded that foreign banks showed their dominant position in the performance based on the CAMEL framework, followed by the new private-sector banks. The public-sector banks which recorded relatively moderate performance need to enhance the managerial efficiency. It demands management autonomy to these banks. The government being the major shareholder of these banks wields tremendous influence on the bank management.

The old private banks are found to have relatively poor performers. A majority of these banks are smaller in size. The new financial environment is characterised by intense competition, new technology, deregulation, and globalisation. In order to survive and thrive in business, these banks require drastic steps in restructuring their existing system, and introduce the managerial practices similar to those adopted in new private banks and some leading foreign banks.

The recent global financial crisis and the South-east Asian financial crisis during the late 1990s have highlighted the importance of financial soundness and stability of the financial sector. It calls for an effective risk-management system. Measuring the performance of banks in terms of the CAMEL, which forms part of the Basel Accord, can provide useful information for risk measurement and can enhance the management capability of the banks.

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MARKETING STRATEGIES IN THE PLASTIC MONEY INDUSTRY
A Study of Selected Banks in India

Savita Hanspal* and Deepti Kumra**

Abstract

This paper is based on an exploratory study of selected public, private, and foreign banks in marketing of the ATM/ debit and credit cards. It examines the differences in the marketing strategies adopted by various banks, relating to the selection of target customers for selling the cards, criteria for issuing them, insisting on the Direct Sales Agents to abide by the Fair Practices Code, existence of a separate department for management of credit and debit/ATM cards, transaction and loan limits, and the free-credit period. It also assesses how far the banks comply with the RBI Guidelines in this regard. The study reveals that in spite of the banks' claims that they adhered to the guidelines, the actual practice was different. While the private and foreign banks adopted service differentiation strategies, the public sector banks lag behind as they already have a large customer base, formed when they existed as nationalised banks. The public-sector banks need to improve their customer service and adopt customer-orientation.

Key words: *Marketing Strategies, Credit cards, Debit/ ATM cards, Customer profile, RBI Guidelines.*

INTRODUCTION

Convenience, safety, easy acceptability, changing demographic profile, and non-conventional working hours of individuals have resulted in a rise in the use of alternate modes of payment and withdrawal of cash from banks. The use of ATM, debit, and credit cards is witnessing an unprecedented increase as their users are able to do away with the restrictive banking hours, and the limitation of non-availability of bank branches in all areas. The banks, issuing such cards, have to use innovative strategies to gain the costumers' patronage.

The banks have jumped at this opportunity to augment their income and have witnessed an intensive competition amongst them and among the private and foreign banks to attract new customers and retain the existing ones.

The banks have had to rethink their marketing philosophy and concept to constantly search for new tools to enable them to retain and attract

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their customers by improving their relationship marketing. It also aids in attracting new customers. Customer Relationship Management (CRM) builds on the principles of relationship marketing and is used by bankers to improve their relations with their customers. According to Kutner and Cripps (1997), CRM was based on four relationship-based tenets. First, customers should be managed as an important asset. Second, profitability varies from customer to customer and is not equally profitable. Third, customers vary in their needs, preferences, buying behaviour and price sensitivity. Fourth, companies can tailor their offerings to maximise the overall value of their customer portfolio by understanding customer drivers and customer profitability.

REVIEW OF LITERATURE

Most of the earlier studies in the field of plastic money focussed on the circumstances responsible for the invention of plastic money (credit cards, ATM and debit cards, and smart cards) and its characteristics.

Studies on Credit Cards

Becker and Williams (1975) and Garcia (1977) emphasised the need to consider the impact of credit cards on the demand for money. Mathews and Slocum (1969) focussed on the impact of social class on the credit card usage; Plummer (1971) studied the impact of life-cycle patterns on card usage; Adcock, *et al.* (1977) updated bank credit card-users' profile; Hirschman (1979) identified the differences in purchase behaviour of credit card users; Crook, *et al.* (1992) identified the differences between the characteristics of users and non-users of credit cards; Mathur and Moschis (1994) focussed on the use of credit cards by senior Americans; and Ferguson (2006) highlighted the intricacies involved in the functioning of these cards.

Devlin, *et al.* (2007) examined the phenomenon of main and subsidiary credit-card holding and spending. Hamilton and Khan (2001) analysed the behaviour of credit cardholders.

Some studies focussed on the different stages in the implementation of CRM – operational, analytical, and collaborative (Lee and Kwon, 2005, Goyal, 2008). El Sawy and Bowles (1997), Shaw, *et al.* (2001), Jackson (2002) studied the role of management and information technology in CRM. Gronroos (1990) analysed the marketing practices followed by banks.

Research reviewed the statistical methods used in credit scoring, to classify good or bad credit risks and provide an estimated probability of default (Hand and Henley, 1997; and Castronova and Hagstrom, 2001). Goyal (2008) studied the management of perceived credit card risk through supplementary services. Chakravorti and Emmons (2003) provided a theoretical benchmark regarding credit-card networks.

Studies on ATM Cards

A number of studies have been undertaken on the operational aspects of the ATM cards, their impact on branch teller labour productivity and retail deposit market share (Banker and Kauffman,1991); on the incentives of banks to share their Automated Teller Machines (ATMs) when they are competitors in the market for deposits (Matutes and Padilla, 1994); empirical examination of the various elements of ATM pricing (e.g., Prager, 1999, Prager, 2001; Stavins, 2000; Hannan, *et al., 2003*); developing theoretical models to introduce and analyse the idea of indirect effect of ATM surcharges on bank profitability (Massoud and Bernhardt, 2004).

Worthington (1992) and Szmigin (1997) found that consumers using the credit card as a charge card often did not use their debit card at all and McKechnie, *et al.* (1998, 1999) and Plouffe, *et al.* (2000) assessed the consumers' and merchants' reaction to the smart card payment technology.

Studies on Banker-Customer Relationship

Studies by Parasuraman, *et al.* (1993) and Berger and Mester (1997) revealed that banks had little market-orientation towards fulfilling the services with regard to customer needs. Angelis, *et al.* (2005)

established that customers satisfied with service quality were less likely to switch to other banks.

Thus, very few studies have been undertaken in India to evaluate the banks' marketing strategies for credit/ATM/debit cards. Since these cards are fast becoming a popular mode of payment and withdrawal, the present study attempts to focus on the service providers and their strategies rather than the consumers' perspective on the delivery of the related services. Based on the press reports on the problems faced by consumers in the issue and operation of these cards, the study examines the practices of the different banks to identify the similarities and the differences in their customer-orientation.

OBJECTIVES OF THE STUDY

The opening of the economy has brought to the Indian consumers a choice in banking services, increased purchasing power and diverse payment options. This exploratory study seeks to identify the strategies adopted by various banks in India in the marketing of credit/debit/ATM cards, in order to identify the differences in the practices of the different types of banks – the public, private and foreign. It also attempts to ascertain whether the banks target their customers differently and whether based on customer profiles, they provide a different service levels to different segments of their customers.

The study seeks to examine the following practices: the criteria used by the banks for issuing the credit cards, strategies for tapping customers for issuing ATM/debit and credit cards, hiring of Direct Sales Agents, setting up of separate departments for management of plastic cards, the minimum and maximum transaction and loan

limits, free credit period, repayment facilities for credit cards, and the use of customer profiles in taking these decisions.

RESEARCH METHODOLOGY

Two structured questionnaires were developed, one each for the banks issuing the credit card and ATM/debit card. A sample of 27 banks – ten public sector, ten private sector, and seven foreign banks, was selected on the basis of their ranking by the magazine '*4Ps Business and Marketing*', in a research conducted for selecting India's fifteen best banks in each sector. Senior officials responsible for developing marketing strategies were personally interviewed.

The data was collected from one branch per bank located in Delhi and National Capital. Further, the data for ATM/debit cards was analysed separately as the banks differed on whether they issued credit cards and/or ATM/debit cards. While twenty-six banks issued ATM/debit cards, only nineteen issued credit cards.

FINDINGS OF THE STUDY

The credit cards were first issued in the United States in the 1950s by the Diners Club, Inc., and the first ATM/debit cards were issued after 37 years in the UK on 3rd June 1987. In India, credit cards and ATM/debit cards are of recent origin. These cards were first issued by banks in India in the 1980s; but the banks which issued the cards during that period did not satisfy the criteria for selecting the sample and were, therefore, not included in the sample. The reporting of years in which such cards were issued by selected banks revealed that credit cards were first issued by a foreign bank in India during

Table 1

Existence of a Separate Department for Cards

Type of Banks	Public Sector		Private Sector		Foreign Banks	
Type of Cards	ATM/Debit	Credit	ATM/Debit	Credit	ATM/Debit	Credit
Number of Banks	10	7	10	5	6	7
No. of separate department	–	–	1(10.0)	–	1(16.7)	–
Separate department	10(100.0)	7(100.0)	9(90.0)	5(100.0)	5(83.3)	7(100.0)

Note: Figures in parenthesis are percentages

1990-1993. The ATM/debit card was launched during 1996-1999, again by a foreign sector bank. Most of the banks belonging to the public, private and foreign sectors in the sample launched these cards during 1999 to 2005, much after the economy was opened to foreign competition.

Existence of a Separate Department

In order to assess the importance assigned by the banks to the function of managing customer relationships with ATM/debit and credit card users, they were asked whether there was a separate department for issue and operation of ATM/debit and credit cards. All nineteen banks in the credit card sample and twenty four out of the twenty six banks surveyed in the ATM/debit card sample had a separate department (**Table 1**).

It was noted that a separate department existed for credit cards as well as debit cards where the bank issued both types of cards.

Fair Practices Code

In order to ensure that banks issuing credit cards followed fair practices in their operations, the RBI Guidelines require that each bank has a well-documented policy and a Fair Practices Code (FPC) and that a copy of the FPC is uploaded on the website of the bank available to the customer at anytime. The FPC is a charter of practices which the banks are required to follow to ensure transparency and prevention of fraud in credit card operations. A sample Code was first released by the Indian Bankers Association in March, 2005. All the banks reported that they had placed the FPC on their websites.

Targeting Prospective Customers

The banks offered many types of accounts, such as savings, current, recurring, and fixed depositing. It was noted that the issuing of the cards was restricted to specific type of account-holders only. They were asked whether the cards were issued to specific account holders or whether they made use of a marketing data base. The results (**Table 2**) revealed that the issue of these cards was linked to an individual's account with the bank.

In order to identify whether practices differed among the banks belonging to different sectors, a sector-wise analysis was made. The results are presented in **Table 3**.

A majority (53 per cent) of the banks did not approach the current account holders for selling credit cards. Further, a good majority of the public-sector banks (71 per cent) preferred to issue credit cards to their savings and fixed deposit account holders, as these balances provided the issuers with some security to fall back upon. None of the selected banks had approached the customers short-listed in its marketing database.

Table 2
Targeting Customers: ATM/Debit /Credit Cards

Type of Banks/Type of Cards	Public/ debit	Public/ credit	Private/ debit	Private/ credit	Foreign/ debit	Foreign/ credit
Number of Banks	10	19	10	19	6	19
Do not issue to all account holders	3(30.0)	8(42.1)	4(40.0)	10(52.6)	3(50.0)	8(42.1)
Issue to all account holders	7(70.0)	11(57.9)	6(60.0)	9(47.4)	3(50.0)	11(57.9)

Table 3
Sector-wise Differences: Targeting Credit Card Customers

Type of Banks/Types of Accounts	Savings A/c	Current A/c	Fixed Deposit	Marketing Database
Public Sector (Sample 7)	5(71.4)	3(42.9)	5(71.4)	–
Private Sector (Sample 5)	3(60.0)	3(60.0)	3(60.0)	–
Foreign (Sample 7)	3(42.9)	3(42.9)	3(42.9)	–
Total	11	9	11	–

Binding the DSAs with Fair Practices Code

In order to rope in a larger number of prospective customers, banks often hired Direct Sales Agents (DSAs) to sell various types of credit cards. Often the customers did not realise that the service providers and card issuers were two different entities, and therefore, there were circumstances when consumers did not obtain the service level promised by the DSAs. Hence, the RBI felt that if the banks /NBFCs outsourced the various credit card operations, they had to be extremely careful that the appointment of such service-providers did not compromise with the quality of the customer service and the banks/NBFCs' ability to manage credit, liquidity and operational risks. In order to ensure fair practices and to maintain customer confidentiality, the RBI stipulated that banks hiring the sales agents must bind them to a code of conduct which should be mentioned in the bank/NBFCs Code of Fair Practices.

Banks do not need to hire agents to sell ATM/debit cards as these cards are linked to a customer's savings account; and, therefore, the customer can get one by simply opening an account with the bank. This question was, therefore, addressed to the banks issuing credit cards only.

The survey shows that 13 of the 19 banks hired DSAs (7 foreign, 3 public, and 3 private sector) to get new subscribers to credit cards. They were asked whether they bound their sales agents by the code of conduct evolved by the RBI.

All foreign banks and approximately 50 per cent each of the private and public sector banks had bound their DSAs with a code of conduct. So long as the DSAs were not bound, they would continue to promise the services and quality beyond the scope of the offer to provide, thereby increasing consumer complaints and litigation on the one hand, and mistrust for the bank, on the other.

Issue of Credit Cards in Partnership

Some banks issue credit cards together with other banks. This means that the bank issuing the credit card partners with another bank where customers hold their accounts. In this way, the partnering banks have access to the account holder of the other bank which does not independently issue credit cards. The customer has the facility to charge the purchases on their credit cards to that bank's account. The banks were asked if they issued credit cards in conjunction with some other bank(s). It was found that 13 of the 19 banks surveyed issued the cards independently, and only 6 banks reported to have issued credit cards, in partnership with other banks. Out of these, 43 per cent were foreign banks, only 29 per cent were public and 20 per cent were private banks. The preference of foreign banks for this practice may be to take advantage of the large customer base of the public and private sector banks operating in the country.

A bank can not issue ATM/debit cards in partnership with any other bank, since these cards are linked to an individual's current or savings account with the issuing bank. Accordingly, this question was not asked from the banks issuing ATM/debit cards

Sharing of ATM Machines

In the case of ATM cards, however, the banks can share their Automated Teller Machines (ATMs) allowing the customers of one bank to withdraw money from the machine of another bank. This practice provides additional access points to the customers of a bank and at the same time reduces the cost of installing the ATMs by the bank individually at easily accessible locations. By permitting sharing, a bank earns an additional fee[1] from its customers and pays a part of it to the bank, permitting the use of its machines. All the selected banks reported that they allowed sharing of their ATM machine with other banks.

Assessing Credit Limits

In order to increase the customer base, the banks initially issued the cards without solicitation. They also offered additional credit card(s) to an existing customer to increase the number

of the subscribers. This practice resulted in not only increasing the customer base of the banks, but simultaneously increasing the financial burden on the customer and in many situations, unmanageable debt for them. Sensing this, the RBI, laid down that as holding several credit cards enhances the total credit available to any consumer and also the risk of default, banks/ NBFCs should assess the credit limit for a credit card customer having regard to the limits enjoyed by the cardholder from other banks on the basis of self-declaration or credit information.

We found that all banks issuing credit cards to the customers reported that they sought information on the other credit cards held by the customer. However, despite this, the consumers are often unable to pay dues on their credit cards and are lured into living beyond their means to the advantage of banks who earn exorbitant interest on the outstanding dues.

Criteria for Issuing Cards

ATM/debit cards are linked to the customer's savings account and current account. Any expenditure or withdrawal using these cards is automatically deducted from the account held by the customer. In the case of credit cards, however, the holder may not have had any previous transaction with the bank. The user needs to repay the money utilized on purchasing the goods by payment through cheque or cash. Hence, the banks need to assess the creditworthiness of the customer before issuing a credit card to him.

The banks were requested to select and rank the factors they considered while issuing a credit card from the following options: the applicant's net annual income, nature of employment, age, place of residence, number of dependents, and ownership of house and car. The first three rankings assigned to each factor were combined to report on the criteria that were important for the bank.

The findings revealed that the public sector banks considered net annual income, nature of employment, age, and number of dependents as

the most important criteria for issuing the credit card. The private-sector banks (only two banks provided this information) considered the net annual income, number of dependents, and the nature of employment as the three most important factors, and the foreign banks considered the nature of employment, net annual income, ownership of house and the number of dependents as the most important factors for issuing credit cards to the customer.

While the place of residence was not important for the banks of all the three types, the ownership of the house was considered very important by foreign banks. The banks in the private sector did not consider the customer's age, ownership of house, car and the profession as important criteria.

Requirement of Minimum Balance

In the case of credit cards, there is no requirement of holding a minimum balance because these cards permit the holders to buy on credit. In the case of ATM cards, however, the banks often stipulate that withdrawals could be made only up to a certain limit and that a minimum balance had to be maintained. Hence, this question was addressed to the banks issuing the ATM/debit cards.

Fourteen of the twenty six banks required their customers to maintain a minimum balance in the current/savings account. The remaining twelve banks permitted their customers to withdraw all the cash balance available with them (**Table 4**). None of the banks permitted the customers to overdraw.

Table 4
Requirement of Minimum Balance
by Different Banks

Type of Banks	Public Sector	Private Sector	Foreign
Number of Banks	10	10	6
No minimum balance required (No./%)	5 (50.0)	4 (40.0)	3 (50.0)
Requirement of minimum balance (No./%)	5 (50.0)	6 (60.0)	3 (50.0)

Amount of Minimum Balance Required

It was also necessary to see whether there were differences among the banks on the amount required to be maintained as minimum balance. The information was sought from 14 banks which required maintaining a minimum balance.

The minimum balance required by banks ranged from Rs. 500 to Rs. 10,000. While the public sector banks required not more than Rs. 1,000 as minimum balance, the foreign banks required a balance, varying from Rs. 5,000 to Rs. 10,000. The private sector banks were in between – their minimum balance requirement varied from Rs. 1,000 to Rs. 5,000.

Prescribing Transaction Limit

The banks often stipulate a certain limit on transaction and loan while issuing ATM/debit cards and credit cards to the customer. In the case of ATM/debit cards, transaction limits restrict the amount of money a customer can withdraw in a day or charge the debit card for purchases of goods. In case of credit cards, this could mean a limit on the amount of purchases that could be made during a month or the payment cycle. In the case of credit cards, all the responding banks were found to have prescribed transaction limits for their credit card customers.

In case of ATM/debit cards, however, twenty two out of the selected twenty six banks imposed daily transaction limits. One each in the public and private sectors and two foreign banks did not impose any such limit.

Amount of Transaction Limit

On the question on the amount of transaction limits prescribed on the ATM/debit card (**Table 5**), nine banks (three in the public sector and six in the private sector) did not report such a limit.

The public sector banks prescribed a withdrawal limit of not more than Rs 15,000. The foreign banks permitted the highest amount of withdrawal varying from Rs 75,000 to Rs 1,25,000. The private sector banks were somewhere in the

middle-their transaction limits varied from Rs 12,500 to Rs 15,000.

Table 5
Daily Transaction Limits: ATM/Debit Cards

Type of Banks	Public Sector	Private Sector	Foreign
Rs 7,500	2 (10.0)	-	-
Rs 12,500	1 (10.0)	1 (10.0)	-
Rs 15000	3(30.0)	2 (20.0)	-
Rs 75000	-	-	2(33.3)
Rs 1,25,000	-	-	2(33.3)
Total	6	3	4

The private sector banks appeared to be more conservative in fixing transaction limit as compared to the foreign sector banks. As transaction limit varied across the three type of banks, those permitting a higher limit might be able to build preference for themselves from people who would want more quick cash over those that offer lower transaction limit

Consumer Profiles:
Basis of Fixing Transaction Limit

Different types of credit cards like silver, gold, and platinum etc, are issued to customers on the basis of their profiles. The amount of purchase which the customer can make on the credit card depends on the type of credit card held by him. The banks were asked whether the transaction limits applicable to different categories of cardholders were, always, sometimes, rarely or never based on the customer's individual profile.

It was noted that all the banks issuing credit cards used customer's individual profile in setting an individual transaction limit. It was not based on the nature of the card; and it was not uniform for all the customers; rather it was based on individual profiles of those to whom the cards were issued.

Loan Limit

The facility of loan is provided to the credit card holder. On the question of whether the loan limit applicable to different categories of cardholders varied on their individual profiles, four options (always, sometimes, rarely or

never) were provided to the respondents. All the nineteen banks responded that they 'always' set loan limits based on the customer's individual profile.

Free-Credit Period

A credit card enables the customer to purchase goods on credit on the condition that he repays the bank for such purchases. In case he repays the full amount by the due date, there is no extra charge other than the transaction fee/service tax. The period upto the due date is referred to as the free credit period. If the payment of the purchase is made after the due date of the bill, then the customer has to pay the amount due along with interest for making late payment. Thus, the customer enjoys a free credit period that is the period in which the bill has to be paid, after which the bank charges interest for the delayed payment. According to the RBI Guidelines, the customer should have sufficient number of days (at least one fortnight) for making payment before charging interest. Only 12 banks provided this information (**Table 6**).

Table 6
Minimum Number of Days of Free Credit

Type of Banks	15	17	20	47
Public Sector (Sample 7)*	–	–	6(85.7)	–
Private Sector (Sample 5)*	2(40.0)	–	–	–
Foreign (Sample 7)*	1(14.3)	1(14.3)	–	2(28.6)
Total	3	1	6	2

The minimum free credit period provided by banks varied from fifteen to forty seven days. Some banks were providing more days of free credit to attract more customers to subscribe to their cards.

The banks were also asked to provide information on the maximum free credit period available to their customers. The RBI has not laid any guideline in this regard. As revealed by **Table 7**, the maximum free credit period varied from one type of banks to the other.

Table 7
Maximum Number of Days of Free Credit

Type of Banks	40	45	50	55	Total
Public Sector (Sample 7)	–	–	6(85.7)	–	6
Private Sector (Sample 5)	–	1(20.0)	3(60.0)	–	4
Foreign (Sample 7)	1(14.3)	–	3(42.9)	1(14.3)	5
Total	1	1	12	1	

The above table shows that the maximum free credit period varied from 40 to 55 days but a majority (twelve of the fifteen) banks were providing a maximum free credit period of fifty days. A variation in this period could be used by the banks to attract subscribers of other credit cards.

Issue of Monthly Statement

Banks issue monthly statement of account to the credit card customers. Such a statement reflects the total usage of the cards and the balance available for further transactions. The survey showed that a majority of the banks (twenty two out of twenty six) did not issue a separate monthly statement (in addition to the passbook), because generally, the ATM withdrawal entries could be easily distinguished from other withdrawals and the amount was directly deducted from the current/ savings account. The details of transaction were already reflected in the customer's passbook (**Table 8**).

Table 8
Issue of Separate Statement for ATM/Debit Cards

Type of Banks	Public Sector	Private Sector	Foreign	Total
Number of Banks	10	10	6	26
Those who do not issue a separate statement	10 (100.0)	10 (100.0)	2 (33.3)	22
Those who Issue a separate statement	–	–	4 (66.7)	04

Only four (all foreign) out of the 26 banks issued a monthly statement reflecting the ATM/ debit card usage during the month. None of the

banks in the public and the private sector issued such a statement.

Re-Payment of Credit Card Bills

The credit card issuing banks provide facility for payment of credit card bill. The banks were asked whether they accepted a bill payment at multiple locations through popular facilities such as drop boxes, paying cash at selective outlets, paying the bill at the merchant establishment, payment at the issuing branch, and making electronic payment.

It was found that 17 of the 19 banks provided their credit card customers with a drop-box payment facility, installed at all branches of the bank, sites of ATM machines and merchant establishments so that the customers could drop their payment cheque in such box conveniently. The remaining two banks did not provide this facility. Similarly, 74 per cent of the banks had a tie-up with merchant establishments to accept cheques for the bill payment from the customer. This facility was not provided by five banks, of which one each were from the private and foreign sectors and three were from the public sector.

A majority of the banks (14 of the 19) provided their customers with the option of paying the credit card bill by accepting cash payments at select branches of the bank. Fifteen of the 19 banks provided the credit card customers the facility to pay the bill at the branch issuing the credit card to them. Two banks each from the public and the private sectors did not provide such facility. Only five banks provided their customers with the option of paying the bill electronically. The results were further analysed to assess whether these banks differed in providing such facilities to their cardholders (**Table 9**).

CONCLUSION

The study has revealed that the banks in India had separate departments to deal with credit and ATM/debit cards; and that most of the banks, irrespective of the sector to which they belong, reported that these complied with the RBI Guidelines. However, the situation in practice was found to be different. The foreign and private-sector banks which issued debit and credit cards in India are competing with the public sector banks by providing certain facilities to attract customers, like higher transaction limits, differential minimum balance requirements, more free credit period, and higher loan limits. In operating the plastic money, the banks were concerned with securing themselves, and aim to increase their earnings through high interest on loans by luring the consumers into taking more cards from different banks; taking add on cards from the same bank and facilitating purchases they could ill-afford. The lack of social responsibility concern of the issuing banks was responsible in part, for encouraging the tendency to keep up with the Joneses' and some other adverse social consequences, such as bankruptcy and suicide. Further, the different banks sold tailor-made offers to the gullible consumers and that this service differentiation was there to stay, making it more difficult for the RBI to control and regulate the banks in the future.

The RBI has, therefore, to be vigilant and proactive in identifying the practices that adversely affect the consumers. It must also ensure that the data regarding consumer complaints and their resolution is recorded and made available for the purpose of research and audit to bring an improvement in the quality of service. A directive on transparency would also result in improving the

Table 9
Repayment of Credit Card Bills

Sector of Banks	Drop Box	Merchant Estb	Bank Branches	Issue Branch	ElecPayments
Public(Sample 7)	5(71.4)	4(57.1)	5(71.4)	5(71.4)	1(14.3)
Private(Sample5)	5(100.0)	4 (80.0)	3 (60.0)	5 (100.0)	1 (20.0)
Foreign(Sample7)	7 (100.0)	6 (85.7)	6 (85.7)	5 (71.4)	3 (42.9)

efficiency and competitiveness of banks, bringing
down the number of consumer complaints in the
use of plastic money.

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INFLUENCE OF PRODUCT ATTRIBUTES ON CONSUMER SATISFACTION AND REPURCHASE INTENTION
A Study of Scooter Industry

H.C. Purohit*

Abstract

Faced with tough competition, companies endeavour to win the customers' favour. They can do so only by doing a better job of meeting and satisfying customer needs. Gone are the days when companies felt customer will consume what the seller offers. In fact, no one can survive in this competitive world whose product is poorly made or fails to meet the customers' need. Companies seek to measure customer satisfaction with an element of the products performance, i.e., delivery, the consumer needs, and direct measure of customer satisfaction, by conducting surveys. This paper attempts to ascertain the influence of product attributes on consumer satisfaction and repurchase intention in the scooter industry in India. It also seeks to identify the product attributes which influence the repurchase intention of the scooter customers.

Key words: *Product attributes, Consumer satisfaction, Repurchase behaviour, Perceived performance, Customer expectations*

INTRODUCTION

The Concept of Consumer Satisfaction

Satisfaction refers to the phenomenon of fulfillment of one's expectation. It is a function of the closeness between the yuyers expectation and the product's perceived performance. If the performance falls short of expectations, the consumer is disappointed and dissatisfied; if it meets the expectation, the consumer is satisfied; if it exceeds expectations, the consumer is delighted; he is astonished when the delivery far exceeds the pre-purchase expectations. The following equations describe these relationships:

Satisfaction = Function of Pre-purchase Expectation and Post-Purchase Perceived Delivery

Perceived Delivery < Expectation = Dissatisfaction

Perceived Delivery = Expectation = Satisfaction

Perceived Delivery > Expectation = Delight

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Perceived Delivery >> Expectation = Astonishment

The Consumer Satisfaction/Dissatisfaction and Disconfirmation (Gap) theory explains the pre-purchase expectation and post-purchase performance of a product through the equation given below:

Pre-purchase expectation > Post-purchase performance = Negative disconfirmation → may lead to dissatisfaction

Pre-purchase expectation = Post-purchase performance = Confirmation → which may lead to satisfaction

Pre-purchase expectation < Post-purchase performance = Positive disconfirmation → which may lead to satisfaction

Consumer Satisfaction and Loyalty

Although every marketer wants to retain his existing customers, very few companies adopt positive marketing strategies aimed at customer retention. Most of the companies are organised for customer acquisition. Their advertising and sales programmes are designed to promote their products and services to new customers. But it is conventional wisdom that acquiring a new customer is five times more expensive than retaining the existing one. The majority of the business firms prepares database marketing programmes and prepares consumers' profiles to develop customer relationship and create loyalty. Loyal consumers spread a positive word-of-mouth communication – about the brand. Such positive communication by the consumers builds a company's positive image in the society and increases its market share in the long run. A consumer will be loyal only when he is satisfied with the performance of the product. If the performance is not at par with their expectations they may not be satisfied and may shift to other brand product.

SURVEY OF LITERATURE

Numerous studies confirmed that customer satisfaction is likely to increase the customer's resolution to buy the product more often and satisfied customers are more likely to urge others to try the product (Bearden and Teel, 1983; Olshavsky and Miller, 1972). Oliver (1980) noted that a high level of consumer satisfaction increased the favourability of brand attitude, which, in turn, increased the intention to repurchase the brand. La Barbera and Mazurksy (1983) reported that the influence of customer satisfaction on repurchase intention was fairly strong, while the importance of satisfaction in predicting repurchase/future behaviour decreased with high brand loyalty. Satisfaction can be determined at various points in time. It is generally accepted that consumer satisfaction is a post-purchase phenomenon (Yi, 1990; Churchill and Surprenant, 1982; Fornell, 1992; Oliver, 1981; Tse and Wilton, 1988; Westbrook and Oliver, 1991).

A number of subtle differences, however, still exist in this perspective. The purchase decision can be evaluated after choice, but prior to the actual purchase of the product (Kourilsky and Murray 1981). For example, Westbrook and Oliver (1991) defined satisfaction as "a post-choice evaluative judgment concerning a specific purchase selection" (Day 1984). Others suggested that "the consumer's response to the evaluation . . . as perceived after its consumption" (Tse and Wilton, 1988) or "the summary psychological state resulting . . . about the consumption experience" (Oliver, 1981). This is quite different from the post-purchase timing, since it adds a restriction that the product must have been consumed before the satisfaction is determined.

Consumer Satisfaction and Company's Market Share

Consumer satisfaction is important to business from a short-term as well as a long-term point of view. In the short term, a satisfied consumer will spread positive word of mouth communication about the product, i.e., appreciate the market performance of the product and recommend the same to his relatives, colleagues, friends and neighbours; he may also repurchase the same product in coming days. This short-term activity

of a satisfied consumer will lead to long-term benefits to the business firm. In the long term, this positive communication about the product made by a satisfied consumer will make better market image in the society and the recommendation regarding the use of the product among his friends, relatives, colleagues and neighbours, or the repurchase intention of the consumer will increase the market share of the firm.

OBJECTIVES OF THE STUDY

The study seeks to measure the satisfaction level and repurchase intention of the scooter users about the brands and models which they have used, and find out the correlation of product attributes with the consumers' satisfaction and repurchase intention.

RESEARCH METHODOLOGY

In order to achieve the objective of the study, a questionnaire was administered with selected users of the scooter brands. A list of the buyers was obtained from the dealers. The respondents were contacted personally. The buyers, who had purchased a scooter one-two year back, were interviewed for the purpose. It was a systematic sampling; the performance of the scooter was measured on 27 attributes. A structured questionnaire was handed over to the respondents in the three cities of U.P., viz, Allahabad, Varansi, and Jaunpur. The questionnaire had three parts; the first part consisting of performance evaluation of the scooter on different attributes, second part of the questionnaire was intended to measure the users' satisfaction level with respect to the different brands. The third part sought to measure re-purchases intention of the users. The satisfaction was measured on the 7-point Likert's scale, ranging from 'Completely satisfied' to 'Completely dissatisfied'. The repurchase intention was also measured on a 7-point Likert's scale, ranging from 'Definitely would like to repurchase' to 'Definitely' would not repurchase'. Moreover, the performance of the scooter was measured on 27 attributes (Purohit, *et al.,* 2005), ranging

Table 1
Consumer Satisfaction with Different Brands of Scooter

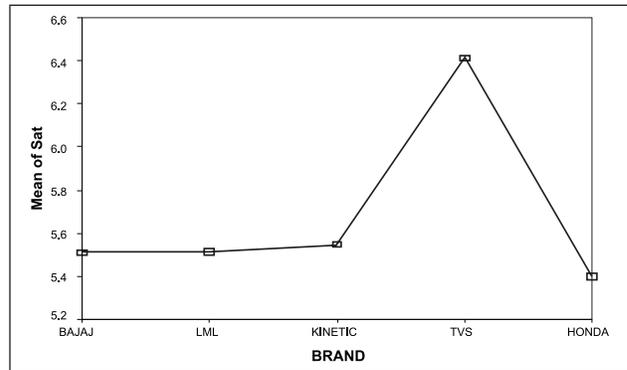| Brand	'Completely Satisfied'	'Satis-fied'	'Dis-satisfied'	Mean	S.D
Bajaj	24%	62%	14%	5.51	1.552
LML	19%	70%	11%	5.51	1.260
Kinetic	27%	18%	55%	5.54	1.143
TVS	59%	36%	5%	6.40	0.855
Honda	33%	47%	20%	5.40	1.962

Figure 1: Consumer Satisfaction with Different Brands of Scooter

from 'Very good' to 'Very bad'. The data was analysed with the help of the SPSS. Correlation and regression were also computed.

MAJOR FINDINGS

The major findings of the study are described below:

Satisfaction: Satisfaction with different brand of scooter are summarized in **Table 1** and depicted in **Figure 1**.

An over whelming majority (86 per cent) of the consumers were satisfied, with the performance of Bajaj brand scooter, with 24 per cent completely satisfied, the mean value of the item was 5.51 with 1.52 S.D. An overwhelming majority (89 per cent) of the users of LML scooter was satisfied with the performance of the brand, with 19 per cent completely satisfied, the mean value of the item was 5.51, and the S.D. was 1.26. In the case of Honda brand, an overwhelming majority (80 per cent) of the respondents reported that they were satisfied with the performance of the scooter, with one-

Table 2
Consumer Repurchase Intention
for Different Brands of Scooter

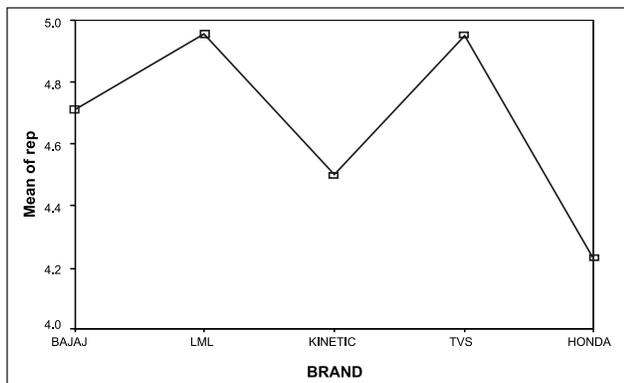| *Brand*	*'Definitely Repurchase'*	*'Repur-chase'*	*'Definitely Not Purchase'*	*Mean*	*S.D*
Bajaj	18%	51%	31%	4.71	2.158
LML	13%	63%	24%	4.95	1.876
Kinetic	18%	41%	41%	4.50	2.133
TVS	32%	41%	27%	4.95	2.257
Honda	33%	20%	47%	4.23	2.674

Figure 2: Consumer Repurchase Intention with Different Brands of Scooter

third (33 per cent) of the respondents completely satisfied. The TVS brand registered the highest level of consumer satisfaction in comparison to other scooter brands, as almost all (95 per cent) of the respondents reported that they were satisfied with the performance of the TVS brand, with 59 per cent completely satisfied, the mean value of the item being 6.40 and S.D. of 0.855.

However, more than half (55 per cent) of the Kinetic Honda consumers were dissatisfied with the performance of the kinetic Honda scooter, only 45 per cent users were satisfied, with 27 per cent completely satisfied. The mean value is 5.54, with 1.143 S.D.

Repurchase: The particulars of the repurchase intention of the users of scooter brands are given in **Table 2**. The same are depicted in **Figure 2**.

As shown in the table, large majority (69 per cent) of the respondents of Bajaj scooter did intend to repurchase the same model of the scooter in the coming days, with 18 per cent definite intention of repurchase, while around one-third (31 per cent)

of the respondents indicated their intention to repurchase the scooter this brand in the future. The mean value of the item is 4.71, with S.D. of 2.158. A large majority (76 per cent) of the respondents reported that they would like to purchase the scooter of LML brand in the future, with 13 per cent definite repurchase intention; the mean value of the item being 4.95, with S.D of 1.876. A large majority (73 per cent) of the respondents intended to purchase the TVS brand scooters in the future, having 32 per cent definite repurchase intention. While more than half (59 per cent) of the respondents reported that they would repurchase a scooter of Kinetic brand in the future, with 18 per cent having definite repurchase intention, 41 per cent of the respondents were found to be having negative intention regarding the repurchase of the Kinetic scooter, with mean value of 4.50 and S.D of 2.133. Nearly half (53 per cent) of the respondents intended to have a Honda scooter in the future, with one-third (33 per cent) having a definite repurchase intention. However, less than half (47 per cent) of the respondents reported that they did not intend to repurchase a Honda scooter in the future, with a mean value of 4.23 and S.D. of 2.674.

It is clear that the satisfaction level of a large majority of the respondents was high with all the scooter brands, but the repurchase intention was relatively low for all the brands. This may be because of the degree of satisfaction, but the Kinetic and Honda brands had very low repurchase intention in comparison to other brands. It may be because of their limited number of models/products, as the two brands had only gearless and self-start scooters.

The Kinetic and Honda people might also consider of launching other variants of the scooter and target the untapped market segment. This will help them penetrate in the market of Bajaj and LML brands. The marketers of these scooters should try to improve the performance of their product and try to exceed the pre-purchase expectation of the consumer with the delivery of the product and try to retain all the existing consumers. Then only they can survive in this global competitive environment.

Table 3
Correlation between Consumer Satisfaction and Product Attributes (Bajaj Brand)

(N=90)

Attributes	Satisfaction Index
Durability	*0.299 (**)*
Riding comfort	0.298 (**)
Color	0.165
Pick up	0.490 (**)
Fuel efficiency	0.237 (*)
Height	0.178
Spare parts availability	0.046
Re-sale value	0.322 (**)
Overall look	0.160
Price	0.378 (**)
New model changes	0.212 (*)
Load capacity	0.049
Engine power	0.023
Gear number	0.464 (**)
Brand popularity	-0.074
Tyre size (stability)	0.287 (**)
Status	0.064
Travel convenience	0.522 (**)
Headlight power	0.412 (**)
Foot brake power	0.423 (**)
Foot brake life	0.448 (**)
Maintenance expenses	0.142
Maintenance ease	0.294 (**)
Body design	0.308 (**)
Body strength	0.473 (**)
Body weight	0.293 (**)
Overall functioning	0.458 (**)

Note: ** Correlation is significant at the 0.01 level
            * Correlation is significant at the 0.05 level

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.814(a)	0.663	0.516	1.08047

Note: *Predictors:* (Constant), overall functioning, new model changes, brand popularity, spare parts availability, riding comfort, status, maintenance ease, engine power, body design, overall look, travel convenience, durability, foot brake life, price, height, body weight, tyre size stability, maintenance expenses, color, pick up, resale value, load capacity, headlight power, fuel efficiency, gear number, foot brake power, body strength

ANOVA (b)

Model		Sum of Squares	Df	Mean Square	F
1	Regression	142.109	27	5.263	4.508*
	Residual	72.380	62	1.167	
	Total	214.489	89		

Note: a   *Predictors*: (Constant), overall functioning, new model changes, brand popularity, spare parts availability, riding comfort, status, maintenance ease, engine power, body design, overall look, travel convenience, durability, foot brake life, price, height, body weight, tyre size stability, maintenance expenses, color, pick up, resale value, load capacity, headlight power, fuel efficiency, gear number, foot brake power, body strength

     b   *Dependent Variable:* satisfaction

     * Significant at 0.001 level of 'a predictors'

Determinants of Customer Satisfaction for Different Brands

Bajaj Brand: The product attributes which influence the customer satisfaction for Bajaj scooters are listed in **Table 3**.

As shown in the table, the major determinants are: durability, riding comfort, pick-up, re-sale value, price, gear number, tyre size (stability point-of-view), travel convenience, head light power, foot-brake power, foot-brake life, maintenance ease, body design, body strength, body weight, and overall functioning of the scooter, have positive correlation with the satisfaction, which is significant at the 0.01 level. Fuel efficiency and new model changes have significant positive correlation with satisfaction, at 0.05 level. However, the attributes including colour, height, spare parts availability, overall look, load capacity, engine horse power, brand popularity, status and maintenance expenses, do not have any relationship with satisfaction (see Table 3).

Regression: After analysing the data on regression, it is found that the pick-up of the Bajaj scooter contributed 36 per cent in satisfaction, price contributed 25 per cent, gear number contributed 31 per cent, head light power 23 per cent, foot-brake power 26 per cent, foot-brake life 34 per cent, maintenance ease 28 per cent, body

ANOVA(b)

	Model	Sum of Squares	df	Mean Square	F
1	Regression	71.107	27	2.634	2.882*
	Residual	38.378	42	.914	
	Total	109.486	69		

Notes: *a Predictors:* (Constant), overall functioning, spare parts availability, resale value, durability, brand popularity, body weight, new model changes, pick up, foot brake life, maintenance expenses, engine power, overall look, riding comfort, travel convenience, price, body strength, color, fuel efficiency, maintenance ease, status, body design, tyre size stability, load capacity, foot brake power, gear number, height, headlight power

b. Dependent Variable: satisfaction

* Significant at 0.001 level of 'a predictors'

Table 6
Regression Analysis of Consumer Satisfaction and Product Attributes (LML brand)

(N=70)

Attributes	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	1.098	1.696	.647	.521
Durability	-.019	.157	-.121	.904
Riding comfort	-.007	.213	-.033	.974
Color	.075	.215	.348	.730
Pick-up	-.227	.195	-1.164	.251
Fuel efficiency	.051	.232	.219	.828
Height	-.096	.277	-.348	.729
Spare parts availability	.117	.231	.505	.616
Re-sale value	-.112	.121	-.932	.357
Overall look	-.041	.200	-.207	.837
Price	.078	.185	.419	.677
New model changes	-.252	.210	-1.199	.237
Load capacity	.306	.241	1.271	.211
Engine power	-.331	.234	-1.411	.166
Gear number	.419	.234	1.791	.081
Brand popularity	-.013	.174	-.075	.941
Tyre size (stability)	-.056	.198	-.280	.781
Status	.527	.233	2.265	.029
Travel convenience	-.106	.211	-.500	.620
Headlite power	.216	.263	.822	.416
Foot brake power	.295	.225	1.309	.198
Foot brake life	-.508	.183	-2.775	.008
Maintenence expenses	-.582	.174	-3.355	.002
Mantenence ease	.174	.222	.785	.437
Body design	-.046	.205	-.223	.825
Body strength	.431	.182	2.371	.022
Body weight	-.114	.213	-.535	.596
Overall functioning	.564	.187	3.010	.004

Dependent Variable: satisfaction

with the customer satisfaction, at the 0.01 level. While, height, overall look, tyre size (stability point-of-view), status, travel convenience, maintenance ease, body design, and body weight have positive correlation with satisfaction, at the 0.05 level.

However, the attributes of LML scooter; durability, riding comfort, colour choice, pick-up, spare parts availability, re-sale value, new model changes, engine (horse) power, brand popularity, foot-brake life, and maintenance expenses did not have any significant correlation with satisfaction (**Table 5**).

Regression: The major attributes which contribute to prediction of consumer satisfaction are shown in **Table 6**.

Table 7
Correlation between Consumer Satisfaction and Product Attributes (Kinetic Brand)

(N=22)

Attributes	Satisfaction
Durability	.047
Riding comfort	-.006
Color	.066
Pick-up	.442(*)
Fuel efficiency	.301
Height	.081
Spare parts availability	-.241
Re-sale value	.059
Overall look	-.015
Price	-.025
New model changes	.136
Load capacity	.012
Engine power	.306
Gear number	-.017
Brand popularity	.303
Tyre size (stability)	.110
Status	-.148
Travel convenience	.146
Headlight power	.014
Foot brake power	-.191
Foot brake life	.079
Maintenance expenses	.099
Maintenance ease	.106
Body design	.227
Body strength	-.017
Body weight	-.177
Overall functioning	.143

Notes: * Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

As shown in the table, major determinants of consumer satisfaction in this case are gear number (15 per cent), status (14 per cent), head light power (22 per cent), and body strength contributes (19 per cent). The contribution of the rest of the attributes is not large.

Kinetic Brand: The determinants of customer satisfaction in the case of Kinetic scooter are listed in **Table 7**.

As shown in the table, the pick-up of the Kinetic scooter is the only attribute which has a positive and significant correlation with satisfaction, at the 0.05 level. The remaining attributes are not found to have any significant correlation.

Regression: The regression analysis, in case of Kinetic scooter can be ignored, due to the low level of significant correlation of product attributes and satisfaction.

TVS Brand: In the case of TVS scooter, the product attributes are shown in **Table 8**.

As noted in the table, the major attributes are: durability, re-sale value, foot-brake power, and foot-brake life are found to have a positive and significant correlation with satisfaction, at 0.05 level. While maintenance expenses, body strength and overall functioning have a positive correlation at 0.01 level. However, the remaining attributes

Table 8

Correlation between Consumer Satisfaction and Product Attributes (TVS Brand)

(N=22)

Attributes	Satisfaction
Durability	.532(*)
Riding comfort	.101
Color	.000
Pick up	.319
Fuel efficiency	.075
Height	.085
Spare parts availability	-.025
Re-sale value	.443(*)
Overall look	-.018
Price	.071
New model changes	-.311
Load capacity	.178
Engine power	-.122
Gear number	.259
Brand popularity	.193
Tyre size (stability)	-.045
Status	.071
Travel convenience	.393
Headlight power	.271
Foot brake power	.428(*)
Foot brake life	.441(*)
Maintenance expenses	.583(**)
Maintenance ease	.421
Body design	.136
Body strength	.650(**)
Body weight	.014
Overall functioning	.582(**)

Notes: * Correlation is significant at the 0.05 level

    ** Correlation is significant at the 0.01 level

Table 9

Correlation between Consumer Satisfaction and Product Attributes (Honda Brand)

(N=30)

Attributes	Satisfaction
Durability	-.159
Riding comfort	.396(*)
Color	-.052
Pick-up	-.058
Fuel efficiency	.113
Height	-.060
Spare parts availability	-.190
Re-sale value	.143
Overall look	.413(*)
Price	.443(*)
New model changes	.253
Load capacity	-.048
Engine power	.366(*)
Gear number	.178
Brand popularity	.080
Tyre size (stability)	.152
Status	.074
Travel convenience	-.108
Headlight power	.053
Foot brake power	-.040
Foot brake life	-.062
Maintenance expenses	.272
Maintenance ease	.305
Body design	.111
Body strength	-.017
Body weight	-.244
Overall functioning	.165

Notes: * Correlation is significant at the 0.05 level .

    ** Correlation is significant at the 0.01 level

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.985(a)	0.970	0.562	1.29608

Notes: *a Predictors*: (Constant), overall functioning, brand popularity, foot brake power, height, travel convenience, foot brake life, gear number, pick up, engine power, fuel efficiency, new model changes, body weight, resale value, spare parts availability, durability, body design, load capacity, maintenance expenses, color, status, tyre size stability, riding comfort, body strength, price, headlight power, maintenance ease, overall look

ANOVA(b)

	Model	Sum of Squares	Df	Mean Square	F
1	Regression	107.840	27	3.994	2.378*
	Residual	3.360	2	1.680	
	Total	111.200	29		

Note: *a Predictors*: (Constant), overall functioning, brand popularity, foot brake power, height, travel convenience, foot brake life, gear number, pick up, engine power, fuel efficiency, new model changes, body weight, resale value, spare parts availability, durability, body design, load capacity, maintenance expenses, color, status, tyre size stability, riding comfort, body strength, price, headlight power, maintenance ease, overall look

b *Dependent Variable*: satisfaction

* Significant at 0.339 level of 'a predictors'

are not found to have any significant correlation with satisfaction.

Regression: The regression analysis in the case of TVS scooter is ignored, due to the low correlation of product attributes and satisfaction.

Honda Brand: The Honda scooter attributes of riding comfort, overall look, price, and engine (horse) power, have significant positive correlation with satisfaction, at 0.05 (**Table 9**).

Regression: The product attributes of riding comfort makes 30 per cent contribution, overall look 22 per cent, and engine (horse) power 24 per cent in the satisfaction of consumers. However, the attributes, like colour choice (-31 per cent), height (-31 per cent), load capacity (-22 per cent), and body strength (-29 per cent), etc., are having negative value in measurement of satisfaction (**Table 10**).

Thus, the product attributes, like colour choice, load capacity, height, and body strength, are not considered as a parameter of satisfaction, since these attributes do not reflect the aesthetics of the consumers. Now-a-days, the scooter can not be treated as a means of family transport, it is capturing the market as an alternative of Motor bike and the stylist models launched by TVS and Honda are appreciated not due to durability or load capacity but because of an elegant look and design.

Table 10

Regression Analysis of Consumer Satisfaction and Product Attributes (Honda Brand)

(N=30)

Attributes	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	5.974	19.864	.301	.792
Durability	.576	1.894	.304	.790
Riding comfort	2.629	2.428	1.083	.392
Color	-.339	1.512	-.224	.843
Pick-up	-2.709	1.323	-2.048	.177
Fuel efficiency	1.014	1.272	.797	.509
Height	.100	.798	.125	.912
Spare parts availability	-.760	.384	-1.979	.186
Re-sale value	1.159	.600	1.932	.193
Overall look	.357	1.286	.278	.807
Price	-.031	.831	-.037	.974
New model changes	-1.401	.501	-2.796	.108
Load capacity	-1.269	.784	-1.619	.247
Engine power	.598	.536	1.115	.381
Gear number	-.251	.515	-.487	.674
Brand popularity	-.375	.470	-.798	.508
Tyre size (stability)	.885	.752	1.176	.361
Status	.650	.677	.961	.438
Travel convenience	-2.247	.697	-3.225	.084
Headlight power	1.566	1.442	1.086	.391
Foot brake power	-.874	.630	-1.387	.300
Foot brake life	.177	.600	.295	.796
Maintenance expenses	-.663	.898	-.738	.538
Maintenance ease	2.039	.994	2.051	.177
Body design	1.369	.929	1.472	.279
Body strength	-.591	.640	-.923	.453
Body weight	.555	.860	.645	.585
Overall functioning	-2.303	2.150	-1.071	.396

Note: a Dependent Variable: satisfaction

CONCLUSION

It is found that the consumers of the TVS brand of scooter were more satisfied in comparison

with the other brands studied. Honda brand was also posing threats to the marketers of scooters through launching the state-of-the-art-technology scooters in the market. Kinetic Honda and Bajaj brands were also vying in this competitive era and trying to satisfy their consumers with their unique positioning of the gearless scooter and old patronage, but the LML was loosing its grip over the market, as a very small number of consumers were satisfied with the performance of the scooter. Satisfaction has been observed as a direct influencer of repurchase, as TVS and Honda brands were given the highest rating for the repurchase of the same model.

It can be concluded that the product attributes including colour choice, load capacity, height, and body strength were not very important for the consumers, as these attributes did not reflect the aesthetics of the consumers. Now-a-days, the scooter is not only the means of family transport, but is penetrating as an alternative of the motor bike and capturing the market with the stylist, self start, and gearless models, as the TVS and Honda brands were appreciated by the consumers, it is not due to durability or load capacity, but because of the elegant look and the stylist design. The manufacturers of scooters should collect data about the likes and dislikes of the target consumers, before developing and launching a new scooter or modifying the existing one. Then only, they can attract the two-wheeler market of Gen. X and penetrate into the two-wheelers market as an alternative to the motor bike.

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CONSUMER SATISFACTION IN ORGANISED RETAIL OUTLETS
A Study in Gujarat

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Abstract

This paper examines the extent of consumer satisfaction on the basis of various service attributes in the organised retail outlets in the state of Gujarat. It also evaluates the effect of socio-economic factors on the buyer's decision to buy from an organised retail outlet. A sample of 339 consumers was personally surveyed, using a structured questionnaire. Using the descriptive analysis, t-test, ANOVA test, and total consumer satisfaction index, the hypotheses were tested. The results may help the organised retailers to pay more attention to some socio-economic groups as well as to the factors that influence the purchase. They may also be useful in ascertaining proper weightages assigned to different factors by consumers, so that they can make informed purchase decisions in the emerging retail market.

Key words: *Organised retailing, Consumer satisfaction, Socio-economic factors, Weightages to factors, Total Consumer Satisfaction Index*

INTRODUCTION

Retailing includes all the activities involved in selling goods or providing services directly to final consumers for personal, non-business use. Any organisation selling to final consumers – whether it is a manufacturer, wholesaler or a retailer – is doing retailing. It does not matter how the goods or services are sold (by person, mail, telephone, vending machine, or the Internet), or where they are sold (in a store, on the street, or in the consumer's home) (Kotler, Keller, Koshy, and Jha, 2009). Almost all the stores pass through the stages of introduction, growth, maturity, and decline, known as the retail life cycle (Davidson, Bates, and Bass, 1976).

Retailing: The Growth Story

Retailing is as old as trade and business. Our everyday needs are largely met by the retail business. In many countries, the retail business is well-organised and in most of the developed countries it is controlled by major companies.

It is estimated that the global business in retailing is worth US $ 6.6 trillion, most of which, in the developed world, is organised retailing. In the developing countries, the retail trade is mostly unorganised. The share of the organised retailing in India is about 5 per cent of the total retail trade (Havaldar and Cavale, 2008). Retailing is one of the pillars of economy in India and accounts

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for approximately 35 per cent of the GDP (*Retail Reality*, August 2009).

There are various formats of organised retailing in India. These include: supermarkets (*Apna Bazar, Foodworld*, etc.), discount store chains (*Subhiksha, Margin-free*, etc.), hypermarkets (*BigBazar, Giant*, etc.), departmental chain stores (*Shopper's Stop, Pantaloon,* etc.), grocery chain (*Raj Rajya Sahakari, Five Star*, etc.), convenience chain (*BPCL IN & Out, Convenio*, etc.), and health and pharmacy chain (*Apollo, Health & Glo*, etc.) (*Marketing White Book*, 2005).

Some people believe that the livelihood of small-scale and rural vendors would be threatened by the growth of organised retailers. However, various studies have revealed that only a limited number of small vendors will be affected and that the benefits of market expansion will far outweigh the impact of the new stores (*IBEF Report*, August 2009). Since Gujarat is one of the leading states of India, in terms of industries, economy and living standards, the organised retailing has developed much in Gujarat.

Retail Consumer: Changing Trends

Traditionally, Indian consumers purchase convenience goods from the nearby retail stores, called the *Kirana* stores. Home delivery services, the convenience of being next door, availability of small quantities of goods, and personalised service, are some of the benefits that retain customer loyalty to these outlets (Sabnavis, 2009). However, consumer format choice decision is dynamic in nature and has changed over time (Zeithaml, 1988). Consumers have started considering both monetary and non-monetary aspects, such as time and effort, while deciding about a marketplace for purchasing (Arnold and Tigert, 1996). Retailers are now adding fun and community in order to compete with other stores and on-line retailers (Khermouch, 1995). Search cost for a consumer can be reduced by proper layout and display of the merchandise and maintaining the atmospherics value (Sinha and Banerjee, 2004).

Technology can take even better dimensions. Retailers are adopting checkout scanning systems (Yang, 1995), electronic funds transfer, electronic data interchange (Vlosky, Wilson, and Smith, 1994), in-store television, store traffic radar systems, and improved merchandise-handling systems. In order to achieve larger markets, global retailers are even increasing in the present day environment. They have their presence in almost every country of the world (Rapoport and Martin, 1995).

Significance of the Study

Every business is facing competition today. Because of competition, the consumer has become the uncrowned king of the retail business. Consumer satisfaction has, thus, become utmost important for any businessman. The knowledge of satisfaction in different segments of the market is even more important for any businessman. This paper seeks to examine the consumer satisfaction in the organised retail sector which is, thus, important to any organised retailer.

REVIEW OF LITERATURE

Every firm has a goal of wealth maximisation, where the consumer loyalty plays an important part. It is observed that there is a direct connection between satisfaction and loyalty: a satisfied customer becomes loyal and a dissatisfied customer moves to another vendor (Heskett, Jones, Lovemann, Sasser, and Schlesinger, 1994). The primary objective of creating the American Customer Satisfaction Index (ACSI), in 1984, was to explain the development of customer loyalty. In the ACSI model, customer satisfaction has three antecedents: perceived quality, perceived value, and customer expectations (Anderson and Fornell, 2000). Customer satisfaction can be defined as satisfying the needs and desires of the customer (Besterfield, 1994). Howard and Sheth (1969) first described consumer satisfaction as a related psychological state to appraise the reasonableness between what a consumer actually gets and gives. Churchill and Surprenant (1982) observed that consumer satisfaction resulted from

purchasing and using a certain product, which was made by a consumer to compare the expected reward and the actual cost of the goods purchased. Voss, Parasuraman, and Grewal (1998) observed that the price decision had an impact on consumers' satisfaction in service industries. A product-service system comprises four components (products, services, infrastructure, and networks), rendering the evaluation process of consumer satisfaction even more complex (Mont, 2000). The major factors of customer satisfaction can be summarised as: product quality, product packaging, keeping delivery commitments, price, responsiveness and ability to resolve complaints and reject reports, overall communication, accessibility, and attitude (Bhave, 2002).

In the retail sector also, various researches have been conducted for measuring consumer satisfaction. Mittal and Kamakura (2001) sought to establish the linkage between consumer satisfaction and purchase intentions in the retail sector. Cronin, Brady, and Hult (2000) observed that in the retail environment, better consumer satisfaction resulted in loyalty, which is a factor of success. Venkateshwarlu and Ranjani (2007) found that with the opening up of the economy, the survival of retailer, irrespective of size, has become difficult due to cut-throat competition. Babin, Darden and Griffin (1994) developed a personal shopping value scale to get the intrinsic and extrinsic values of shopping experiences. The scale recognizes that value is provided by the complete shopping experience. Kamnath (2001) observed that the retail philosophy is based entirely on the value for money. A study by Bell, Ho, and Tang (1998) revealed that location is not the only factor in store choice decisions but, consumers optimise their total shopping costs, efforts to access the store location, being one component of their fixed cost of shopping. Sweeney and Soutar (2001) used exploratory factor analysis of twenty-nine factors generated from a literature review, to establish four categories for durable goods, i.e., quality / performance, emotional value, price, and social value. They claimed to have both intrinsic and extrinsic factors in their scale.

OBJECTIVES AND HYPOTHESES

From the review of literature, it is clear that knowing consumer satisfaction level is a crucial aspect for marketers. Thus, the objectives formed out of the problem are as follows:

1. To identify

   (a) The difference in satisfaction among different age groups.

   (b) The difference in satisfaction between the male and female consumers.

   (c) The difference in satisfaction among consumer having different educational background.

   (d) The difference in satisfaction among consumers having different size of the family.

   (e) The difference in satisfaction among consumer having different monthly household-income.

2. To measure the overall satisfaction among consumers of organised retailing.

   From the objectives, the following hypotheses were framed:

H_{01}: There is no significant difference in the observed satisfaction among consumers of different age groups.

H_{02}: There is no significant difference in the observed satisfaction among the male and female consumers.

H_{03}: There is no significant difference in the observed satisfaction among the consumers of different education groups.

H_{04}: There is no significant difference in the observed satisfaction among the consumers having different sizes of the family.

H_{05}: There is no significant difference in the observed satisfaction among the consumers having different monthly household income.

In addition to the above hypotheses, the researcher sought to find out the overall consumer satisfaction index in order to ascertain the overall satisfaction among the consumers of organised retailing.

RESEARCH METHODOLOGY

Data Collection, Sample and the Tools

One of the primary concerns of this paper is to identify the important factors affecting the buying behaviour of organised retail consumers in Gujarat. To determine these factors, a semi-structured interview, with 4 organised retail managers and 85 consumers, was conducted. For selection of consumers, it was necessary that they had been purchasing goods from the organised retailers for a minimum period of one year. Through a structured questionnaire, which is shown in the Appendix, the data were collected for the final analysis in the first and second quarters of 2009. Out of the total 400 questionnaires sent, only 339 questionnaires were found valid for analysis. The data were collected from cities only as the majority of organised retailers are located only in the city areas. The cities included Ahmedabad, Rajkot, Bhavnagar, and Mehsana. The sampling technique used was convenience sampling. The survey questionnaire included a number of questions related to retail market satisfaction and the responses were recorded on a five-point Likert-type scale (1 = 'not at all important', and 5 = 'extremely important'). Similarly, the questions related to the socio-economic profiles of the respondents, such as age, gender, education, family-size, and household income were also included.

DATA ANALYSIS

The data collected were analysed through MS Excel and SPSS. The data analysis techniques included the *t*-test, ANOVA test, and the customer satisfaction index analysis. In measuring customer satisfaction, the American Customer Satisfaction Index (ACSI) is in wide use in the private sector. The ACSI was developed by, and is the proprietary article of, the University of Michigan Business School and the Claes Fornell International Group. The Index uses the responses to three questions about satisfaction, answered on a 1-to-10 scale, where 1 is 'lowest' and 10 is 'highest'. The three questions were:

1. What is your overall satisfaction with the services?

2. To what extent have the services met your expectations?

3. How well did the services you received compare with the ideal set of services?

Putting the answers to these questions to the formula gives us the ACSI score. The weightage given to each factor is based on industry and location, which is a license purchase. Instead, a different method of measuring customer satisfaction, Customer Satisfaction Index (CSI), was used. The Customer Satisfaction Index represents the overall satisfaction level of that customer as one number, usually expressed as a percentage. Plotting the Customer Satisfaction Index against time scale shows exactly how well the supplier is accomplishing the task of customer satisfaction over a period of time (Bhave, 2002).

Various factors were decided and modified during the meetings with experts. The list of factors considered included value/price, quality of products, variety of products, convenience, one-roof buying, hours of operation, security arrangements, proximity from residence, assistance provided, product advertising and display, low crowding, parking facilities, low traffic, availability of ATM/bank, home delivery service, children entertainment, music, air conditioning, automatic stair/elevator (lift) facilities, and the acceptance of credit cards.

Each criterion was measured on the Five-point Likert scale and their importance was also measured on the Likert scale, which is used to measure the consumer satisfaction level. Comparison of observed satisfaction was also made on the basis of various socio-economic factors.

Respondents' Profile

The respondents' socio-economic profile is summarised in **Table 1**.

Table 1
Socio-economic Profile of Respondents

Characteristics	No. of Respondents	Characteristics	No. of Respondents
Age group		*Size of the family*	
< 30 years	126	< 4 members	162
30 – 55 years	148	4 – 6 members	108
> 55 years	65	> 6 members	69
Gender		*Monthly household income*	
Male	198	< Rs. 10000	74
Female	141	10001 – 20000	95
Education		20001 – 30000	95
Upto schooling and undergraduates	103	> 30000	75
Graduates	128		
Post graduates or professionals and more	108		

The distribution of frequencies for consumer satisfaction shows a normal curve, which is depicted in **Figure 1**.
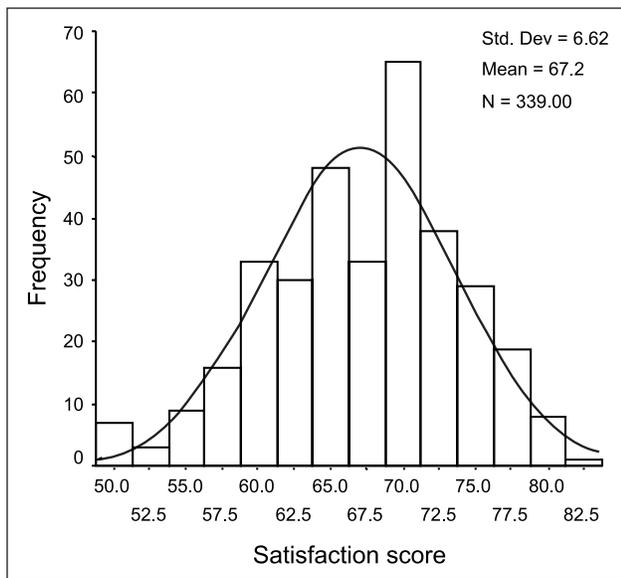

Figure 1: Satisfaction Score and Number of Respondents

Consumer Satisfaction through Different Socio-economic Factors

The various factors considered for comparison included the age, gender, education, size of the family, and the monthly household income.

Comparison of Customer Satisfaction by Age

The hypothesis for testing here is: 'There is no significant difference of observed satisfaction among different age-groups'. The observed satisfaction of consumers according to their age-groups is shown in **Table 2** and **Figure 2**.

Table 2
One-Way ANOVA: Age Group

Source of variation	Sum of squares	df	Mean square	F
Between groups	608.548	2	304.274	
Within groups	14201.989	336	42.268	7.199
Total	14810.537	338		
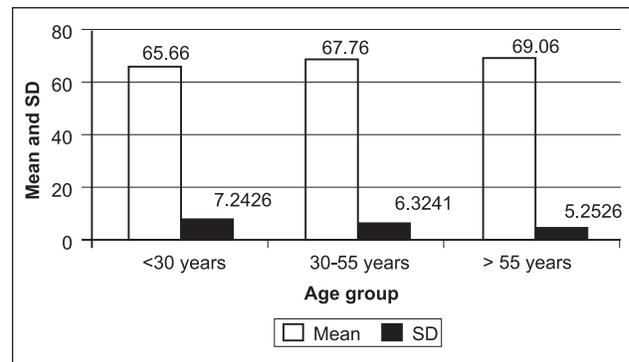
Figure 2: Mean and Standard Deviation for Age Groups

From the above ANOVA table, it is clear that the F value for this set of sample is significant at the 0.05 level. So, the null hypothesis is not accepted. Thus, there is a significant difference in the observed satisfaction among the respondents of different age-groups.

In order to ascertain the significance of the difference between the age-groups, the multiple comparisons were made by the Tukey HSD test. The computation are shown in **Table 3**.

Table 3
Tukey HSD Test: Age Group

Tukey HSD	(I) Age Group	(J) Age Group	Mean Difference (I-J)	Std. Error
	< 30 years	30 – 55 years	-2.1933*	.7881
		> 55 years	-3.4980*	.9928
	30 – 55 years	< 30 years	2.1933*	.7881
		> 55 years	-1.3048	.9674
	> 55 years	< 30 years	3.4980*	.9928
		30 – 55 years	1.3048	.9674

Note: *The mean difference is significant at the 0.05 level.

As shown in the table, there is a significant difference between the <30 years age-group and the 30-55 years age-group, and between the <30 years age-group and the >55 years age group. From the mean score, it can be said that those in the <30 years age-group have less observed satisfaction than those in the 30-55 years age-group, and the >55 years age-group.

Comparison of Customer Satisfaction by Gender

The hypothesis to be tested here is that there is no significant difference in the observed satisfaction among the male and female customers. The gender-wise distribution of the observed customer satisfaction is shown in **Table 4**.

Table 4
Observed Satisfaction: Gender-wise

Gender	No. of respondents	Mean	SD	t - score
Male	198	66.47	6.7144	-2.397
Female	141	68.21	6.3702	
Total	339	67.19	6.6195	

From the above table, it is clear that the *t* value for this set of sample is significant at 0.05 level. So, the null hypothesis is not accepted. Thus, there is a significant difference in the observed satisfaction among the male and female respondents. From the mean score, it can be said that the female respondents were more satisfied than their male counterparts.

Comparison of Customer Satisfaction by Education

The next hypothesis is that there is no significant difference in the observed satisfaction among consumers having different educational background. The computation of observed satisfaction is shown in **Figure 3** and **Tables 5**.

Table 5
One-way ANOVA: Respondents' Education Groups

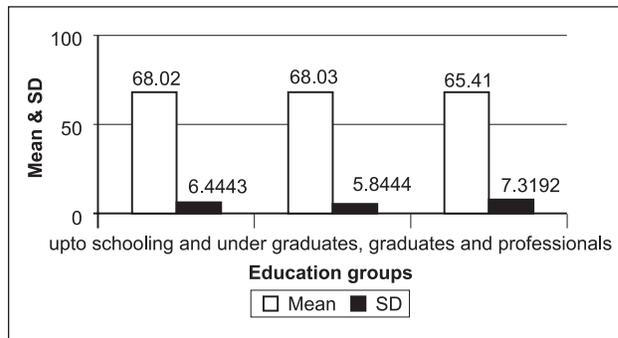| Source of Variation	Sum of Squares	Df	Mean Square	F
Between groups	504.627	2	252.313	
Within groups	14305.91	336	42.577	5.926
Total	14810.537	338		

Figure 3: Mean and Standard Deviation for Education Groups

From the above ANOVA table, it is clear that the F value for this set of sample is significant at 0.05 level. So, the null hypothesis is rejected and it can be said that there is a significant difference in the observed satisfaction among consumers having different educational background.

In order to identify the significance of difference between various groups, the multiple comparisons were made by using the Tukey HSD test, which are shown in **Table 6**.

Table 6
Tuckey HSD Test: Education Groups

Tukey HSD	(I) Education Group	(J) Education Group	Mean Difference (I - J)	Std. Error
	Upto schooling and under-graduates	Graduates	-1.183	.8637
		Post graduates or professionals and more	2.612*	.8987
	Graduates	Upto schooling and under-graduates	1.183	.8637
		Post graduates or professionals and more	2.6238*	.8526
	Post graduates or professionals and more	Upto schooling and under-graduates	-2.612*	.8987
		Graduates	-2.6238*	.8526

Note: *The mean difference is significant at the 0.05 level.

From the above table, it is clear that there is a significant difference among consumers educated upto school level and undergraduates and post-graduates/professionals and higher education group and between graduates and post-graduates or professionals and higher education groups.

From the mean score, it can be concluded said that the post-graduates, professionals, and higher education respondents have shown less observed satisfaction than those upto school level and undergraduates and graduates.

Comparison According to the Size of the Family

The hypothesis here is that there is no significant difference in the observed satisfaction among the consumer groups having different size of the family. The observed satisfaction according to the size of the family is shown in **Figure 4** and **Table 7**.

Table 7
One-way ANOVA: Size of the Family Group

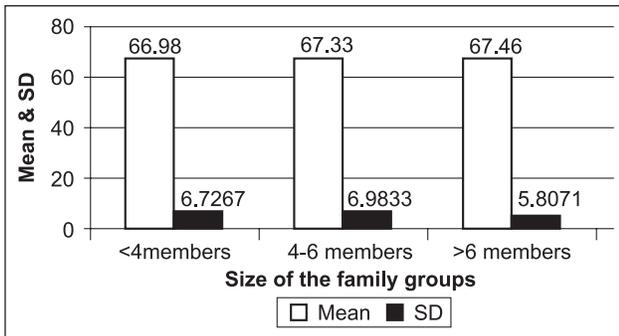| Source of Variation	Sum of squares	df	Mean square	F
Between groups	14.433	2	7.217	
Within groups	14796.104	336	44.036	.164
Total	14810.537	338		

Figure 4: Mean and Standard Deviations for Size of the Family Groups

From the above ANOVA table, it is clear that the F value for this set of sample is not significant at the 0.05 level. So, the null hypothesis is accepted. Thus, there is no significant difference in the observed satisfaction among the respondents grouped according to the size of the family.

Comparison according to the Monthly Household Income

The next hypothesis is: There is no significant difference in the observed satisfaction among consumer groups having different monthly household income. The computation of mean and standard deviation of satisfaction among the respondents having different household income is shown in **Figure 5** and **Table 8**.

Table 8
One-Way ANOVA: Monthly Household Income Group

Source of variation	Sum of squares	Df	Mean square	F
Between groups	196.734	3	65.578	
Within groups	14613.803	335	43.623	1.503
Total	14810.537	338		
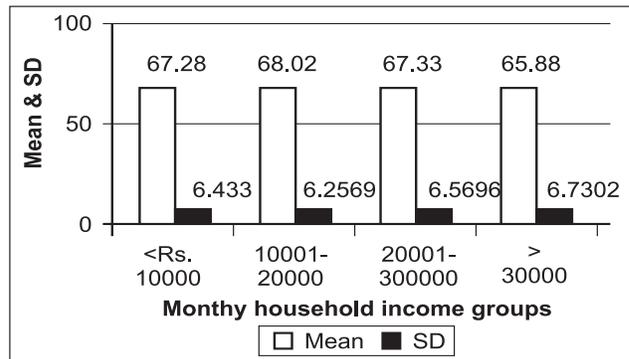
Figure 5: Mean and Standard Deviations for Monthly Household Income Groups

From the above ANOVA table, it is noted that the F value for this set of sample is not significant at the 0.05 level. So, the null hypothesis is accepted. Thus, there is no significant difference in the observed satisfaction among the respondents belonging to different monthly household income groups.

Measuring the Level of Satisfaction

The computations concerning the level of satisfaction through the Total Customer Satisfaction Index (TCSI) are shown in **Table 9**.

From the above table, it is noted that the Customer Satisfaction Index observed is 67.52177 per cent.

POLICY IMPLICATIONS

Since the difference in the observed satisfaction among consumers belonging to different age-groups is significant, the retailer needs to pay more

Table 9
Total Customer Satisfaction Index

Parameter	Importance score	Weighting factor	Satisfaction score	Weighted score
Value / price	3.775811209	0.068736	3.666667	0.252032
Quality of products	3.156342183	0.065027	3.982301	0.258959
Variety of products	3.150442478	0.054359	3.678466	0.199957
Convenience	2.820058997	0.054257	3.309735	0.179577
One roof buying	2.887905605	0.048567	4.053097	0.196848
Hours of operation	2.548672566	0.049736	3.551622	0.176643
Security arrangements	3.03539823	0.043894	3.840708	0.168582
Proximity from residence	2.814159292	0.052276	2.498525	0.130613
Assistance provided	2.415929204	0.048466	2.737463	0.132673
Product advertising and display	2.132743363	0.041607	3.212389	0.133659
Low crowding	3.469026549	0.03673	2.418879	0.088846
Parking facilities	2.584070796	0.059744	3.117994	0.186281
Low traffic	3.174041298	0.044503	2.740413	0.121957
Availability of ATM / bank	2.864306785	0.054664	3.271386	0.178826
Home delivery service	2.678466077	0.049329	2.141593	0.105644
Children entertainment	3.03539823	0.046129	3.171091	0.146279
Music	2.876106195	0.052276	3.967552	0.207408
Air conditioning	2.640117994	0.049533	3.896755	0.193016
Automatic stair/elevator (lift) facilities	2.014749263	0.045468	3.988201	0.181337
Acceptance of credit cards	3.775811209	0.034698	3.946903	0.136951
Total	58.06489676	1	67.19174	3.376088
			3.376088 * 2	6.752177
			Total Customer Satisfaction Index	**67.52177 %**

Note: From the above table, the Customer Satisfaction Index observed is 67.52177 per cent

attention towards the consumers aged less than 30 years. As female consumers are more satisfied than the male ones, the retailers need to do more for the male consumers.

The post-graduates and professionals and consumers with higher educational qualification are comparatively less satisfied than those in the other education groups. It suggests that the retailer needs to pay more attention towards the consumers having post-graduate and professional and other higher education. The size of the family and the monthly household income have no significant influence over the satisfaction among consumers.

Since the Total Customer Satisfaction Index observed is 67.52 per cent, there is need for paying attention towards the consumers in several areas, like crowding, home delivery services, traffic intensity, proximity from house, assistance provided, product advertising and display, acceptance of credit cards, and children's entertainment, since the weighted scores are comparatively low for these factors.

CONCLUSION

Consumers in India are rapidly changing in the retail industry, from the unorganised buying to the organised one. Strong economic growth has brought with it a new set of consumers with sufficient disposable income and those who are more conscious of buying as a total process than the end-product only. In the emerging Indian retail environment, this study provides insights into consumer satisfaction in retail buying. The study provides strategic inputs to the upcoming retail markets and the changing preferences of the consumers.

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Under capitalism, man exploits man. Under communism, it's just the opposite.

John Kenneth Galbraith

Vision without action is a day dream; action without vision is a nightmare.

Japanese Proverb

The wind and the waves are always on the side of the ablest navigators.

Edward Gibbons

Equal opportunity means everyone will have a fair chance at being incompetent.
Laurence J. Peter

While great decisions are invented in the laboratory,
great products are invented in the marketing department.

William H. Davidow

CUSTOMERS' ATTITUDE AND PERCEPTION TOWARDS SHOPPING MALLS
A Study in Ghaziabad and Noida

Rajan Yadav*

Abstract

The study seeks to provide a framework to identify the determinants of customers' attitude and perception towards emerging retail formats, such as the shopping mall. It also seeks to ascertain the key variables that affect attitude and perception formation towards the shopping malls and investigates important demographic and social variables, like income, frequency to visit to shopping malls, time-spending patterns, and merchandising preferences among mall visitors. The study is based on a sample of 95 respondents selected from sampled shopping malls of Ghaziabad and Noida on the basis of judgmental sampling. The data was analysed using factor analysis through principal component method of extraction and varimax method of rotation, which identified six factors preserving 63.4 per cent variability of the original data. The highest preference was given to purchase of apparels than any other merchandise category in the shopping mall.

Key words: *Organised retailing, Retail format, Consumer attitude, Perception, Merchandise*

INTRODUCTION

The structure of a country's retail sector has an enormous influence on the marketing strategies and activities of the firms. India's retail sector is the second largest employer in the country, after agriculture. There are more than 12 million retail outlets in India, almost half of which are low-cost kiosks and push-carts. However, the organised sector accounts for only 4 per cent of the total retail market in India. A similar phenomenon prvails in Malaysia, Taiwan, and Indonesia. Even in China, a significant per cent of consumer goods are sold through modern retail formats. Retailing is going through the process of accelerated evolution in India.

Any retail organisation has three dimensions: the resource, the distribution, and the consumer. Indian retailing is witnessing profound changes in each of these dimensions. The political, legal, economic, social, and the technological aspects are also undergoing major changes and have an impact on the organised retailing. Organised retail stores are characterised by large, professionally-managed format, providing goods and services

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that appeal to customers in an ambience which is highly conducive to shopping.

The recent years have seen the emergence of a large number of new retail formats in the Indian market in the form of shopping malls, departments stores, specialty stores, convenience stores, hyper markets, etc. The shopping mall as a retail format is one of the most visible and penetrated retail organisations even among the Tier I and Tier II Indian cities, such as Lucknow, Agra, Jaipur, Ludhiana, Patiala, Kanpur, and Jalandhar.

The available research on retail buying behaviour in the Indian context have shown that consumers can be divided into two broad segments: One, the higher-income segment – those who do not shop themselves, have very low involvement and whose monthly groceries bill is a small proportion of their income. The second segment is the middle and lower-income group consumers for whom grocery shopping has high involvement, as the expenditure constitutes 50 per cent or more of their monthly income. The organised retail formats, characterised by value, variety, convenience and service, target this segment.

In the backdrop of the above discussion, when we analyse the shopping mall as an emerging format of retailing, we find that investment worth thousands of crores has already been made in the form of shopping malls. However, customers are still believed to be in an evaluation phase when it comes to the purchases from these formats. A number of research scholars have reported that these formats are far below the expectation of their promoters in terms of the profit and benefits, respectively. Mall managers and retailers offer a variety of facilities to the customer in the form of designing unique physical evidence, alongwith other retail marketing-mix elements. However, some of these elements contribute positively in overall service experience, while others may be just a wastage of critical resources. This study seeks to identify the combination of the best elements, as perceived by customers, to be a part of their overall service experience, so that a better retail offering can be made to the customer.

LITERATURE REVIEW

The choice of a retail format has been found to be dependent on the socio-economic background of the customer, their personality, and past purchase experience (Meoti, Jennifer, Feinberg, and Westgate, 2000). Haytko and Baker (2004) found that, as compared to young shoppers, elderly shoppers were more price-conscious and the proximity of residence to retail outlet was an important factor for them. The young shoppers considered shopping as a recreational activity and thus, choose a format that is perceived to be high on entertainment value.

Another dimension that has been found to influence the retail format choice is the type of the shopping task. A task is defined as the goal set by the customer to resolve the needs derived out of a specific situation. Dholakia (2001) found that the retail store choice was differentiated by the nature of the task. They studied the retail format choice decision across various tasks, as described by the respondents, such as urgent purchase, large quantities, and regular purchase.

Experience is the consequence of acquiring and processing stimulation over time. It is one of the personal selection factors that affect perception. Hence, it can be found that the shopping mall experience is the result of acquiring and processing stimulation in the mall, over repeated visits. Experience is also affected by the personal characteristics of the teenagers, that, in turn, influence their shopping mall perception. Tabak, Ozgen, and Aykol (2003) conducted a research study on the teenagers' shopping attitudes and concluded that shopping practices at malls were perceived as a social experience.

The study by Haytko and Baker (2004), which explains the shoppers' attitude towards the mall experience, revealed that several factors determined the selection of a mall. These include the image of the shopping mall. Image refers to how a retail format is perceived by the customers and others. To succeed, a firm must communicate a distinctive, clean and consistent image. Numerous factors contribute to a retailer's image, and it is

the totality of them that forms an overall image (Berman and Evans, 2004). Haytko and Baker (2004) found that five image attributes of the shopping mall influence the shoppers' attitude and their experience: comfort, safety, retail-mix, accessibility, and atmosphere. Additionally, two characteristics, namely, education cohort and trend consciousness influence the perception of their experiences. The situational influence of mall companion and motivations for going to the malls were also identified.

Some research studies have reported the gender differences in terms of shopping preference and behaviour. Research has shown that the behaviour of men and women differs on many counts, like they process the information differently (Grewal, *et al.,* 2003). Besides, they load different meanings to value and material possessions, go shopping for different reasons. Women go shopping just to meet their needs seeing it as a duty. Available research on shopping behaviour seems to suggest that it is women who go shopping and that shopping is described as a 'female-type' task.

Yadav and Prajapati (2008) viewed mall shopping as a relative choice phenomenon, i.e., a consumer chooses to shop at a mall over the other outlets and chooses some mall over other malls where the choice is available. The mall patronage is contingent upon the choice variation. Mall shopping can also reflect more economical, or functional, shopping orientation, because they provide a convenient and efficient way to compare shops across a variety of goods and/or a way to complete several purchase in one trip.

Moreover, studies have also been conducted to examine the relationship between mall shopping frequency and background variables, both demographic and those related to shopping motivations. A high degree of correlation was found between the visit frequency and the degree of recreational shopping motivation. This supports the hypothesis that people who shop to satisfy their affective and cognitive needs, such as the need for affiliation, power and stimulation, visit malls frequently. Functional–economic type shoppers might be induced to make secondary

purchase when visiting the mall. Many of these strategies are, in fact, being adopted by new malls which are already operational or coming up, thereby creating perceptible difference among customers.

A similar micro-level study was carried out by Singh and Bansal (2008), on the basis of the following attributes: infrastructure quality, one-roof arrangement, parking place, approachability, outlet choice, ambience and the availability of different brands. Sonia(2008) conducted a study and identified several attributes, like quality, range of products, fixed-price, availability of brands, discount, parking, advertisement, display of products, ambience, value for money, need-based purchase, family members' pressure, socio-economic status, and behaviour of the staff in attitude and perception formation towards shopping malls.

The analysis of the literature available on the subject reveals a kind of gap. The customers' attitudes and perception towards retail formats differ significantly in a developed and developing economy. Most of the research studies that are available in this area are more relevant to the European and the American markets, which collectively represent the 'western model' of consumption behaviour which has less significance in the Indian context. The rate at which some new developments are taking place in the Indian retail market, fosters an urgent need to understand the shoppers' attitudes and perception in relation to the emerging formats of retailing.

OBJECTIVES OF THE STUDY

The present study was conducted with two objectives:

1. To examine the role of the shopping mall as an emerging format of organised retailing; and

2. To identify the major attributes that determine the customers' attitude and perception towards the shopping mall.

HYPOTHESES

In the light of the above objectives, the following hypotheses were formulated:

H_{01}: The frequency of the customer's visit to the shopping mall is independent of his/her income.

H_{02}: The average time spent by the customer in the mall is independent of his/her average family income.

H_{03}: All the product items in a mall are equally preferred by the shopper.

METHODOLOGY

The study is a cross-sectional descriptive research design which is highly suitable for this kind of research. The data was collected in two phases:

First Phase: A list of shopping malls which were operational in Ghaziabad and Noida was collected from the Ghaziabad Development Authority and the Noida Development Authority, respectively. It was essential for a better coverage of the area under study for the purpose of the primary data collection. A sample of 10 shopping malls (five from each area) was drawn by using judgmental sampling for the purpose of primary data collection in the second phase.

Second Phase: It consists of two sub-phases. In the first sub-phase, a qualitative study was conducted using the content analysis to make an understanding of what actually determines the consumers' attitude towards shopping malls. The researcher got a fair idea of various factors that determine the customers' attitude and perception, and merchandise preference while visiting the shopping mall, beside a number of other information necessary for the construction of a structured tool for collecting the primary information in a systematic manner. In the second sub-phase, a close-ended questionnaire was constructed on the basis of the input provided in the content analysis conducted in the first sub-phase of the data collection. The questionnaire

was divided into two parts. Part I consisted of the questions which were personal and demographic in nature and involved questions on age, income, education, gender, frequency to visit the shopping mall, etc; Part II of the questionnaire consisted of the questions intended to determine their attitude towards the shopping mall and certain other variables.

Since the problem under study required the measurement of abstract and qualitative aspects, like attitude, satisfaction, etc, Likert's 5-point scale was used to measure and convert the qualitative data into the quantitative one for the purpose of a rigorous statistical interpretation and analysis. These scales, also known as summated scales, were developed by utilizing the item analysis approach where a particular item is evaluated on the basis of how well it discriminates between the options. The options are converted into numeric values and the score is summed up to measure the respondents' attitude and perception towards any object under study.

A pilot study was, then, administered to see the efficiency of the questionnaire. The sample size for this purpose was 10 respondents, selected on the basis of non-random sampling technique.

Sample Size

The study was confined to the twin cities of Ghazibad and Noida of Western Uttar Pradesh. The selected cities are heterogeneous in nature and truly represent the cosmopolitan nature of various urban centres of the Indian market. Due to financial constraints and time-limit, a sample of 95 was taken, using the non-proportional judgmental sampling method, drawn equally from the sample shopping malls, selected during the first phase of data collection. Every tenth customer that made an exit from the sample shopping mall constituted the unit of the study (sample).It was based on the notion that by that time (exit) customers get a fairly good idea about their experience in a shopping mall and would be able to comfortably answer the questions developed for primary data collection.

DATA ANALYSIS

The demographic profile of the respondents is summarised in **Table 1**.

Table 1

Demographic Profile of Respondents

Variables	Characteristics	N	Percent
Gender	Male	51	51
	Female	44	44
Education	12th standard or below	20	21
	Graduation	33	34
	Post graduation	12	13
	Professionals (i.e., CA,B.Tech,LLB, etc.	19	20
	Others	11	12
Monthly household income (MHI)	Upto 10,000	0	0
	Rs. 10,001-25,000	10	10.9
	Rs. 25,001-50,000	25	26.2
	Above Rs. 50,000	60	62.9

As shown in the table, shopping malls are preferred by male customers more than their female counterpart. The gender-wise analysis shows that a little more than half of the shoppers who visited the malls were male. The study reveals that one-third of the respondent were graduate. Surprisingly, no respondent reported his average monthly family income below Rs. 10,000. The format is quite popular in higher-income categories as more than 60 per cent respondents reported their average monthly family income above Rs. 50,000.

To study the perception of the customers and their attitude towards the shopping mall, the responses were taken on 18 attitudinal statements. These responses were then factor-analysed to convert them into lesser number of constructs, which were used to study the customer perception and attitude towards the mall.

Before applying the factor-analysis, interdependence of the attitudinal statements was checked, using Bartlett's test under the Null Hypothesis (H_o) that the statements were independent amongst themselves against the alternative (H_1) that they were interdependent.

The KMO sample adequacy test for sufficiency of the data was also applied. The results are shown in **Table 2**.

Table 2

KMO and Bartlett's Test Result

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.649
Bartlett's Test of Sphericity	Approx. Chi-Square	2737.205
	Df	153.000
	Sig.	0.000

The table shows that the Chi-square statistic is significant at 5 per cent level of significance. Thus, we reject the null hypothesis and accept the alternate, i.e., the attitudinal statements are interdependent and hence can be factor-analysed. The value of KMO sampling adequacy (0.649) is also greater than 0.5, which implies that the sample is also adequate for factor-analysis.

Communalities: This is the proportion of each variable's variance that can be explained by the factors. With the principal factor axis factoring, the initial values on the diagonal of the correlation matrix are determined by the squared multiple correlation of the variable with the other variables.

Table 3

Rotated Factor Matrix

Factors	Mean	Std. Deviation	Analysis N	Comm-unalities
Nearness	3.58	0.807	95	1.00
Access/connec.	4.04	0.459	95	1.00
Surroundings	3.80	0.518	95	1.00
Parking	4.54	0.598	95	1.00
Elev/lifts	4.03	0.424	95	1.00
Common facility	4.15	0.356	95	1.00
Entry/exit	4.37	0.485	95	1.00
Neatness/clean	4.58	0.496	95	1.00
Tempr/light	4.20	0.402	95	1.00
Music/scent	3.67	0.750	95	1.00
Window display	4.18	0.699	95	1.00
Range of goods	4.77	0.424	95	1.00
Price range	4.78	0.417	95	1.00
Nego./disco.	3.65	0.872	95	1.00
Res/café/food	3.46	0.885	95	1.00
Ent option	4.26	.4034	95	1.00
Co-shoppers	3.51	0.599	95	1.00
Behaviour of sales staff	3.71	0.634	95	1.00

Mean and Standard Deviation: In the probability theory and statistics, standard deviation is a measure of the variability or dispersion of a population, a data set, or a probability distribution. A low standard deviation indicates that the data points tend to be very close to the same value (the mean), while high standard deviation indicates that the data are spread over a large range of values. The descriptive statistics of the various factors are presented in **Table 3**.

As shown in the table, in majority of the cases the difference between mean value and standard deviation is very low, and hence, they are closely clustered around the mean value.

Rotated Factor Matrix: Table 3 contains the rotated factor loadings, which represent the correlation between the variable and the factor. Because these are correlations, possible values range from -1 to +1. We shall not consider correlations that are 0.5 or less. This makes the

output easier to read by removing the clutter of low correlations that are probably not meaningful anyway. On applying the factor analysis, using the principal component method of extraction and the varimax method of rotation, six factors were generated, preserving 63.4 per cent variability of the original data. The factors generated, their constituents, and their respective factor loadings have been shown in **Table 4**.

Factor1

Entertainment Value: The factors include constructs like music/scent, window display and availability of restaurant/café in the shopping malls. Since all these factors are mainly related with entertainment value of the retail format, a new nomenclature has been given to accommodate all these constructs in the form of entertainment value.

Factor 2

Infrastructure Value: The customer laid high emphasis on availability of adequate parking, common facilities and comfortable entry-exit which collectively included in the infrastructure value as desired by customer visiting shopping malls.

Factor 3

Location Value: The nearness of the shopping mall to customer's place of residence and work, connectivity and surrounding of the mall got high acceptance in customer's evoked set of attributes while visiting a shopping mall. Since all of these factors are related with location of the mall, they have been included and categorized under location value of the shopping mall.

Factor 4

Pricing and Merchandising Value: Certain factors, like range of goods and price range, ranked high on rotated component matrix, a new category thus, created under pricing and merchandising value.

Table 4

Rotated Component Matrix

Factors	Component					
	1	*2*	*3*	*4*	*5*	*6*
Nearness	-0.487	-0.032	0.545	-0.123	-0.078	0.056
Access/connec.	-0.302	0.136	0.783	0.004	0.048	0.166
Surroundings	0.131	0.104	0.587	-0.174	0.092	-0.413
Parking	0.239	0.583	-0.149	0.044	-0.066	0.393
Elev./lifts	0.236	0.283	0.237	0.235	0.653	0.209
Common facilt.	0.004	0.684	0.350	0.040	-0.005	-0.011
Entry/exit	-0.242	0.767	-0.020	0.041	-0.164	-0.049
Neatness/clean	-0.201	0.667	-0.196	-0.243	0.026	0.065
Tempre./light	0.124	0.738	0.286	-0.011	0.028	-0.016
Music/scent	0.835	0.078	-0.119	-0.165	0.137	-0.021
Window display	0.743	-0.234	-0.055	0.005	-0.169	-0.281
Range of goods	-0.113	-0.115	-0.186	0.707	0.200	0.107
Price range	-0.071	0.043	0.015	0.859	-0.052	-0.168
Nego./disco.	-0.251	-0.165	0.064	0.143	0.560	-0.037
Res./café/food	0.790	-0.045	-0.046	0.067	0.086	0.340
Ent option	0.404	-0.021	-0.076	-0.189	-0.073	0.224
Co-shoppers	0.121	0.053	0.052	-0.100	-0.087	0.726
Behaviour of sales staff	-0.124	0.112	0.132	0.130	-0.706	0.238

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 8 iterations

Factor 5

Basic Amenities: Additional facilities, like availability of adequate lifts and elevators also ranked high in the factor analysis.

Factor 6

Nature of Co-shoppers: It comprises of nature and stuff of co- shoppers while visiting a shopping mall.

The Scree plot graph (**Figure 1**) show the eigen value against the component number/ factors. We have taken factors into account for those eigen values which are greater than 1. From the seventh factor onward, we can see that the line is almost flat, meaning that each successive factor is accounting for smaller and smaller amounts of the total variance.
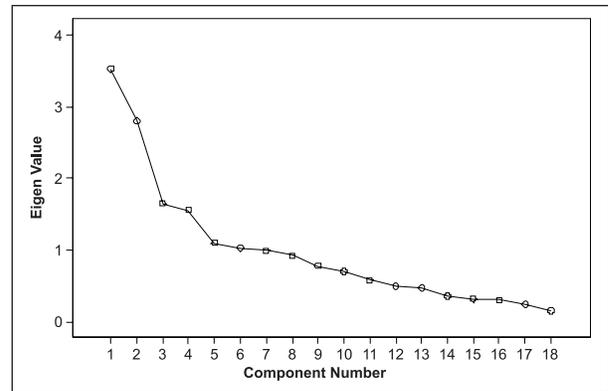
Shopper's Income and Frequency of Visiting Malls

Further, the influence of the income of the customer on the visits to the shopping malls was studied. We sought to investigate if there was any association between the income of the customer and their frequency of visit to the shopping mall. The results are shown in **Table 5**.

It can be seen from the table, as the average family income of the respondent increases, the frequency of his visit to the mall also increases, indicating that there is a significant association between the shopper's income and the frequency of visit.

Figure 1: Scree Plot

We sought to investigate the relationship between these two variables by conducting ANOVA to test the formulated hypothesis. The results are shown in Table 6.

H_o: The frequency of visit to the shopping mall is independent of the income of the customer.

Table 6

Result of ANOVA

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	61.638	10	.000

From the table, it can be seen that the value of Chi-Square statistic is significant at 5 per cent level of significance. Hence, we reject the null hypothesis and accept the alternate hypothesis, i.e., the frequency of customer's visit to the shopping mall is dependent on his income.

Table 5
Average Monthly Family Income and Frequency to Visit to Malls

Frequency of Visit		Average Monthly Family Income (in INR)			
		10,001-25,000	25,001-50,000	More than 50,000	Total
At least once a week	% of Total	0.0%	0.0%	7.7%	7.7%
Once in 2 weeks	% of Total	0.0%	5.0%	12.9%	17.9%
Once in a month	% of Total	3.0%	4.0%	16.1%	23.2%
Once in 2-3 months	% of Total	5.8%	14.1%	18.3%	38.3%
Once in 4-6 months	% of Total	2.0%	3.0%	6.9%	11.9%
Beyond 6 months	% of Total	0.0%	0.0%	1.0%	1.0%
Total	% of Total	10.9%	26.2%	62.9%	100.0%

Time Spent in the Shopping Mall

We also assessed the average time spent by the customer in the mall. The respondents were asked to indicate their preference as to how much time they spent in the mall. It was noted that 89 per cent of the respondents spent more than 3 hours in the mall. 57 per cent of them were there in the mall for more than 4 hours. A little more than 10 per cent respondents reported to have spent less than 2 hours in their visit to the shopping mall.

Further, the relationship between the time spent in the mall and the average family income of the customer was investigated by running Chi-square test to test the formulated hypothesis.

H_o: The approximate time spent by the customer in the mall is independent of his/her average family income.

Table 7

Result of Chi-Square Test

	Value	*df*	*Asymp. Sig. (2-sided)*
Pearson Chi-Square	9.956	4	0.041

From **Table 7**, it can be seen that the value of Chi-Square statistic is significant at 5 per cent level of significance. Hence, we reject the null hypothesis and accept the alternate hypothesis, i.e., the approximate time spent by the customer in the mall is dependent on his/her average family income.

The study of the frequency distribution of the time spent by the customer with respect to their average family income yields interesting results.
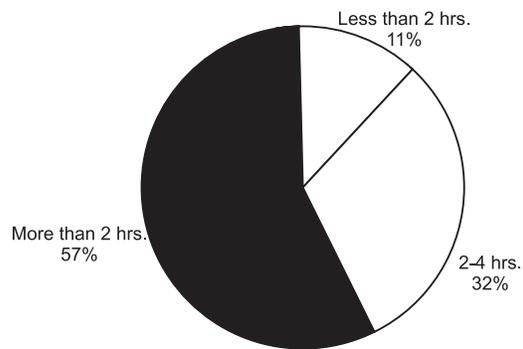

Figure 2: Respondents' Time-Spending Pattern

The distribution is given in **Table 8** and **Figure 2**. From the table, it can be inferred that as the average family income increases, the customer tends to spend more time in the malls. Thus, we can say that the increase in average family income not only increases the frequency of visit to the malls but also positively influences the time spent by the customer in the mall.

Respondents' Merchandise Preferences in Shopping Mall

We analysed the respondents' preference with respect to the products they bought from the mall. The respondents were asked to rank the products like apparels, electronic gadgets, grocery, jewelry and gift items, cosmetics, and books/CD from the most preferred to least preferred scale. The study observed the variation in preferences and identified the most preferred and least preferred merchandise from the shopping malls.

The following hypothesis was tested for this purpose:

Table 8

Average Monthly Family Income and Time Spent in Shopping Mall

			Average Monthly Family Income (in Rs.)			
			10,001-25,000	*25,001-50,000*	*More than 50,000*	*Total*
Approximate Time spent in the Mall	Less than 2 hours	% of Total	0.8%	3.0%	7.1%	10.9%
	3-4 hours	% of Total	3.0%	11.1%	18.1%	32.3%
	More than 4 hours	% of Total	7.1%	12.1%	37.7%	56.9%
	Total	% of Total	10.9%	26.2%	62.9%	100.0%

H_o: All the product items were not equally preferred by the shoppers.

Friedman's ANOVA test was applied to test the stated hypothesis and the results are given in **Table 9**.

Table 9

Result of Friedman ANOVA test

Test Statistic	
N	95
Chi-Square	961.961
Df	5.000
Asymp. Sig.	0.000
a. Friedman Test	

The table shows that the Chi-square statistic is significant at 5 per cent level of significance. Thus, we reject the null hypothesis and accept the alternate, i.e., all the product items were not equally preferred by the customers.

Ranking of Merchandise Preferences

The mean rank of the respondents' merchandise preference was calculated for a clear understanding and identifying the trends. The ranking of the preferences is presented in **Table 10**.

Table 10

Respondents' Merchandise Preferences in Malls

Merchandise Categories	Mean Rank
Preference to purchase apparels from shopping mall	1.31
Preference to purchase electronic gadgets from shopping mall	4.79
Preference to purchase grocery/ confectionary items from shopping mall	3.52
Preference to purchase jewellery and gift items from shopping mall	3.66
Preference to purchase cosmetics from shopping mall	3.87
Preference to purchase CD/ books from shopping mall	3.85

From the mean ranks, it can be inferred that the customers preferred to purchase apparels the most whereas the least preference was given to electronic gadgets for purchasing from the shopping mall.

MANAGERIAL IMPLICATIONS

During the last couple of years, the things started to change gradually with the emergence of the modern formats of retailing. One of the most prominent formats that have come out under organised retailing is the shopping mall. The format has made a dent not only in metro cities but also in Class I and II Indian cities. The real estate boom and improvements in connectivity has further supported the development of this format. Several real estate developers, retailers and others have invested considerable amount in the form of shopping malls. It is, therefore, necessary to understand the customers' attitude and perception towards these kinds of retail formats to make a productive use of this investment to the benefit of customers as well as the retail trade as a whole.

The basic premise of the study has been that the customer attitude of certain services, like shopping malls, are strongly influenced by the absence or presence of certain elements, like location, infrastructure and amenities, ambience, merchandising and pricing, entertainment value, and personal value. The result proved that when these elements are present at the optimum level, customers become more satisfied with the mall, and, therefore, more inclined towards visiting in the same shopping mall again. In such cases, there is no difference between the perceived service and actual service the customers get. The findings appear to be applicable to other shopping malls as well, because the clientage of the mall remains more or less the same in different parts of the Indian market. In the backdrop of the previous discussion, the study makes the following suggestions:

1. Mall managers should ensure that the spatial layouts which make people feel constricted or confined will have a direct effect on attitude formation and their desire to return to the shopping mall. It should be planned to enhance the comfortable level and interest of the shoppers within the mall.

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2. Since lot of importance has been given to the 'merchandise and pricing value', the mall managers should make a careful selection of the retail outlets in the composition of the mall.

3. Customer prefers to shop apparels/clothes more than any other product variety from the shopping mall. It is largely due to the deep assortment of these product categories offered by retail outlets operating from the mall. The mall managers, therefore, required to improve the assortment of product categories other than apparels/clothes by carefully designing their mall space allocation to outlets offering other product categories also.

4. The attitude and behaviour of the sales staff can reinforce or direct customer in revisiting the mall. The retail outlets within malls are required to train sales-staff for specific role, costume them in uniforms and script their interaction and movements with customers.

5. Mall managers are required to improve the approximate time spent by customer by attractively designing the elements of interior and exterior of the shopping mall.

6. The shopping malls are required to distinguish it from numerous other formats that are evolving in Indian market by making a better understanding of the customer needs and expectation strategically.

A better understanding of all these issues may improve the bottom line and top line of the shopping malls and organised retail industry as a whole. It will also ensure better quality and improved customer service management at malls. There is a wide scope for more research studies, with bigger sample sizes as the attitude and perception may change with the passage of time.

CONCLUSION

The study is an endeavour to understand the growth of organised formats of retailing and analysing customers' attitude and perception towards the shopping mall .It is a cross-sectional conclusive research design with a sample size of 95 respondents selected from 10 shopping malls of Ghaziabad and Noida. Most of the findings are parallel to the existing literature available. However, some findings have shown variation originating from different demographic and socio-cultural background of the respondents.

Among various retail formats that have evolved in the recent past, shopping mall is one of the most prominent and visible. The format has well-penetrated across Indian cities and had became one of the most crucial retail formats not only in terms of investment, but also in terms of the its emergence as a point of consumer shopping behaviour. Although customers are believed to be in an evaluation phase, when it comes to purchase from these formats of organised retailing.

Customers' attitude and perception towards shopping malls was analysed by developing eighteen different attributes, carefully selected by conducting the factor analysis. The selected variables presented 63.4 per cent variability. Most of these variables were selected on the basis of previous research studies conducted on similar retail problems under different settings. The data were put under suitable statistical tests, like Chi-square test, ANOVA, etc. for the purpose of testing the hypothesis.

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Follow effective action with quiet reflection.
From the quiet reflection, will come even more effective action.

Peter F. Drucker

The only job security anybody has in this company (Chrysler) comes from quality, productivity, and satisfied customers.

Lee Iacocca

We have no more right to consume happiness without producing it than to consume wealth without producing it.

George Bernard Shaw
(Candida (1898), Act I)

Consumerism is a shame on marketing.

Peter F. Drucker

A good plan violently executed now is better than a perfect plan next week.

George S. Patton
War as I Know It

An economist is an expert who will know tomorrow
why the things he predicted yesterday didn't happen today.

Laurence J. Peter

In a hierarchy, every employee tends to rise to his level of incompetence.

Laurence J. Peter

NOTE/COMMUNICATION

THE DIRECT TAXES CODE BILL, 2009
An Appraisal

Indu Jain*

Taxation policy is an integral part of the fiscal policy of a country. It determines the mode and the manner in which the government shall generate revenue through tax collection. It provides directions to the public to invest and utilise their money for specific business and purposes to earn more profit by claiming exemptions. The policy also seeks to penalise defaulting taxpayers through its administrative action and compliance procedure. In the globalised world, tax reforms are necessary to meet the growing challenges and to meet people's expectations in the changing circumstances. The Direct Taxes Code Bill, 2009, is a step in that direction.

The draft of the Direct Tax Code along with the discussion paper was released by the Union Finance Minister, Mr. Pranab Mukherjee, on 12th August, 2009. The draft code is open to public for debate, discussion, and suggestions. In his Foreward to the Code, the Finance Minister said:

> The thrust of the code is to improve the efficiency and equity of our tax system by eliminating distortions in the tax structure, introducing moderate levels of taxation and expanding the tax base. The attempt is to simplify the language to ensure better comprehension and remove ambiguity to foster voluntary compliance. The new code is designed to provide stability in the tax regime as it is based on well-accepted principles of taxation and best international practices.

Salient Features of the Code

The salient features of the new Code are given below:

1. **Single code for direct taxes**: All direct taxes, such as the income tax, dividend distribution tax, and the wealth tax, have been brought under a single code.

2. **Use of simple language**: Simple language is used in the code so as to convey with clarity, the intent, scope and amplitude of the legal provisions.

3. **Reducing the scope for litigation**: An attempt has been made to avoid ambiguity in the provisions that might give rise to rival interpretations.

4. **Flexibility:** The statute is drafted in a manner so as to accommodate the changes in the structure of a growing economy, without resorting to frequent amendments.

5. **Consolidation of provisions:** These provisions relating to definitions, incentives, procedures, and rates of taxes have been consolidated.

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6. Providing stability: Under the code, all the rates of taxes are proposed to be prescribed in the First to the Fourth Schedules to the code itself, thereby obviating the need for an annual Finance Bill.

This note intends to analyse certain important provisions in the Draft Code, 2009, in the light of the objectives it seeks to achieve and how far they are in accordance with the international practice.

The major provisions of the Direct Taxes Code Bill, 2009, pertain to: (1) Tax Rates; (2) Tax Year; (3) Residential Status; (4) Valuation of Perquisites; (5) Income from House Property; (6) Capital Gains; and (7) Tax Incentives.

These are briefly discussed below:

1. Tax Rates

The tax rate structure is the most important part of Tax System of any country.

The tax rates in the new draft code prescribed in the First Schedule are as follows:

(a) Individual or Hindu Undivided Family Taxpayers

Rates of Income Tax

Existing Tax Rates for the Income Year 2009-10		Proposed Tax Rates for the Income Year 2011-12	
Taxable Income	Tax Rates	Taxable Income	Tax Rate
Upto Rs.1,60,000	Nil	Upto Rs.1,60,000	Nil
Above Rs.1,60,000 and upto 3,00,000	10%	Above Rs.1,60,000 and upto RS.10,00,000	10%
Above Rs.3,00,000 and upto Rs.5,00,000	20%	Above Rs.10,00,000 and upto Rs.25,00,000	20%
Above Rs.5,00,000	30%	Above Rs.25,00,000	30%

(b) Resident Woman Taxpayer

Existing Tax Rates for the Income Year 2009-10		Proposed Tax Rates for the Income Year 2011-12	
Taxable Income	Tax Rate	Taxable Income	Tax Rate
Upto Rs.1,90,000	Nil	Upto Rs.1,90,000	Nil
Above Rs.1,90,000 and upto 3,00,000	10%	Above Rs.1,90,000 and upto RS.10,00,000	10%
Above Rs.3,00,000 and upto Rs.5,00,000	20%	Above Rs.10,00,000 and upto Rs.25,00,000	20%
Above Rs.5,00,000	30%	Above Rs.25,00,000	30%

(c) Resident Senior Citizens (aged 65 years or more, at any time during the financial year).

Existing Tax Rates for the Income Year 2009-10		Proposed Tax Rates for the Income Year 2011-12	
Taxable Income	Tax Rate	Taxable Income	Tax Rate
Upto Rs. 2,40,000	Nil	Upto Rs.2,40,000	Nil
Above Rs.2,40,000 and upto 3,00,000	10%	Above Rs.2,40,000 and upto RS.10,00,000	10%
Above Rs.3,00,000 and upto Rs.5,00,000	20%	Above Rs.10,00,000 and upto Rs.25,00,000	20%
Above Rs.5,00,000	30%	Above Rs.25,00,000	30%

From the above tax rates, it emerges that while there is no change in the level of income at which the tax rate is nil, i.e., tax exemption limit remains the same, the upper limit of the income level has been increased from Rs.3,00,000 to Rs.10,00,000 (a 3½ times increase), at 10 per cent rate of tax. The increase is five times (i.e., from Rs.5,00,000 to Rs.25,00,000) in the upper limit of the taxable income at which 20 per cent rate of Income tax is applicable. Moreover, the increase is five times or more in the level of the taxable income at which the tax at the maximum rate of 30 per cent, is applicable.

Thus, a lower-income group taxpayer, having an income upto Rs.2,00,000 to Rs.3,00,000 is not provided any relief in the new tax rates. The maximum relief is proposed to be provided to the individuals having an annual income above Rs.5,00,000 but not over Rs.10,00,000, as earlier they were taxable at the highest tax rate of 30 per cent on an income above Rs.5,00,000. However, under the new code those having an annual income between Rs.5,00,000 and Rs.10,00,000 will be taxable at the lowest tax rate, i.e., 10 per cent.

Thus, apart from the fact that the high-income group assesses will get the maximum benefit, the rate structure does not follow the international trend, as in the majority of the countries, the income levels are adjusted according to the inflation rate. The exemption limit is also adjusted accordingly.

2. Tax Year

In the Indian tax system, two separate years are being adopted for the assessment purpose. While

one is called the 'previous year', i.e., the year in which the income is earned, the other is called the 'assessment year', i.e., the year in which the income is assessed for long. This has created confusion as the rates and other provisions are applicable to the assessment year, but mainly applied on the income of the previous year. By adopting the one-year system, i.e., income year or tax year, the year in which the income is earned, the provisions will be applicable to that year only. In other countries of the world also, only one-year system of taxation is adopted. Thus, it is a welcome step.

3. Residential Status

As the scope of the total income in any country depends upon the residential status of a person, two important changes prescribed in the code are as follows:

1. The 'Resident' and 'Not Ordinary Resident' status of an individual taxpayer has been abolished. The rules for determining the resident and non-resident status remains the same. An individual can be resident in India if he fulfills any one of the following conditions:

   (a) He has been in India for a period of 182 days or more during the financial year.

   (b) He has been in India for a period of 60 days or more during the financial year and has also been in India for 365 days or more during four years immediately preceding the previous year.

   If an individual does not satisfy any of the above two conditions, he will be non-resident.

   By abolishing the status of 'Not Ordinarily Resident', the procedure of determining the residential status of an individual has been simplified and is bought in tune with the international practice.

2. The second change is in the residential status of a company. Presently, a company is resident in India if;

(a) It is an Indian company, or

(b) The control and management of its affairs are wholly situated in India.

In the Draft Code, a company which is not an Indian Company, i.e., a foreign company can still be considered resident even if the control is partly or wholly situated in India. This will affect multinational companies, who are registered outside India but are having some control in India. While earlier, their foreign income was not taxable in India, after the implementation of the new code their foreign income will also become taxable in India. Thus, it may affect foreign investment in India.

4. Valuation of Perquisites

Perquisites refer to the benefits received by an employee from his employer in kind. These include rent-free accommodation, free transport, though received in kind, forms an integral part of the taxable salary. The valuation of perquisites is a tedious task and has been subject to frequent changes in the last five years, especially since 2005, when the most controversial 'Fringe Benefit Tax' (FBT) was introduced where certain perquisites, including expenses on hospitality, travel expenses, sales and promotion expenses, were taxed in the hands of employer at the maximum marginal rate. The FBT received a lot of criticism from industries and the general public. The new FBT provisions were withdrawn in the Finance Act, 2009. From the assessment year: 2009-10, all perquisites shall be taxed in the hands of employees at normal tax rates.

The new direct tax code proposes to levy tax on all the perquisites, including the reimbursement of medical expenses, and the leave travel concession (LTC), which were either fully or partly exempt. It is a step towards minimising the exemptions. Another change is that although the method of valuation of rent-free accommodation shall remain unchanged, i.e., the value will be either 7.5%, or 10% or 15% of the salary or the rent paid by the employer, if house is taken on rent by employer, the difference in the method of

valuation of the government and non-government employees shall be done away with. In the code, the method of valuation of rent-free accommodation shall be the same for both the government and other employees. This will certainly remove the anomaly existing for past so many years and will simplify the valuation process.

While the proposal to minimise the exemption is justified, taxing the perquisites, like the medical facility and the leave-travel concession, especially in the case of low-income group employees, appears to be inequitable.

5. Income from House Property

Presently, the income from house property is based on factors, such as municipal value, fair rent and actual rent received. The new code proposes to compute such income on the basis of higher of the following two:

(i)   Rent receivable from the property

(ii) 6 per cent of either the ratable value fixed by the local authority or the cost of acquisition or construction of the property.

This change in the taxability of income from house property based on the actual cost of construction or acquisition does not seem to be logical and will surely complicate the computation of such income. Another change proposed in the code is to reduce standard deduction from 30 per cent of the gross annual value to 20 per cent. Further, the gross annual value of one self-occupied house property will be nil as is the position at present. However, the deduction on account of interest on capital borrowed for purchase, construction, repair or renewal of one self-occupied house property, which is restricted upto Rs.1,50,000 presently is proposed to be disallowed in the new code. This will discourage the lower and middle-income-group tax-payers from making investments in house property.

6. Capital Gains

Many changes are proposed to be made with regard to the computation and the taxability of capital gains; the major change is that the distinction between short-term capital asset and long-term capital asset which was based on holding of asset for three years (one year in the case of shares), has been abolished. Another change is that while currently long-term capital gains arising from the transfer of long-term capital asset (after being held for three years or more) is taxable at a flat rate of 20 per cent and short-term capital gain arising from the transfer of short-term capital assets (after being held for less than or upto three years) is taxable just like any other income at either 10, 20, or 30 per cent rate of tax, in the new code, all types of capital gain, whether sold after holding for more than three years or less, shall be taxable just like any ordinary income.

The benefit of indexation which is presently applicable in the case of long-term capital assets will continue to be available if the capital asset is transferred any time after one year from the date of its purchase or construction.

The Code also proposes to change the base year from April, 1981 to April, 2000. At present, the assessee has the option to take either the actual cost or the fair-market value as on April, 981, whichever is higher as the cost of acquisition in respect of capital assets acquired prior to April, 1981. The code proposes that if an asset is acquired prior to April, 2000, the assessee may take either the actual cost or the fair market value (as on April, 2000) as the cost of acquisition. In other words, capital gains upto April, 2000 will not be taxable and if the assessee is sold after being held for more than one year, then the cost of acquisition or construction will be indexed taking April, 2000 as the base year. Thus, the impact of inflation on the capital gain is reduced or eliminated due to the benefit of indexation.

The government also proposes to abolish the Security Transaction Tax (STT) applicable on transfer of shares. Thus, these provisions will reduce the capital gains to a large extent, the proposal to treat capital gain at par with other income seems appropriate and equitable.

Further, the exemption under Section 54, provided on purchase of residential house within the specified period on sale of long term residential house, held by an individual or HUF, is proposed to be abolished. The gain on sale of private residence is exempt in many countries, such as the U.K. and the U.S. Thus, there is need to reconsider this proposal and to continue with the exemption, which in any case, can not exceed the capital gain. However, the exemption may be allowed only once or twice.

7. Tax Incentives

The new Code claims to have reviewed the tax incentives granted earlier seeks to withdraw all business incentives other than those for activities which create externalities. However, many business tax incentives which are given to promote specific business activities or to set up business in backward or rural areas, still continue to be available though the mode of providing them incentives has been modified. While at present the exemption granted is based on profit, the new Code proposes to provide the exemption till such time all capital and revenue expenditure (other than land and goodwill) are recovered. Worldwide, tax incentives are provided on the basis of the need of the country. While the U.S and the U.K provide more social incentives, Malaysia provides a large number of business incentives to attract foreign investment.

Another tax incentive, namely, life insurance premium, provident fund contributions, tuition fee for full time education of children of assessee, and many more contributions, which is currently deductible upto a maximum of Rs.1,00,000 is proposed to be deductible upto Rs.3,00,000. The increase will benefit high-income group taxpayers. Many such contributions, such as life insurance premium, statutory fund and recognised provident fund contributions are exempt presently both at the time of making contributions and on receipt of lump-sum payment. The code proposes that the contribution and on receipt of lump-sum payment will be exempt only at the time of contribution and will be taxable at the time of actual receipt of the lump-sum payment.

On the basis of analysis of the proposed changes in the Direct Taxes Code Bill, 2009, the following suggestions are made:

1. While restructuring the tax rate, the exemption limit needs to be increased to Rs.3,00,000 against the limit of Rs.1,60,000 specified in the code, keeping in view the international trend and the impact of inflation.

2. The change in the meaning of resident company needs to be reviewed. It is suggested that the current status be maintained and only those foreign companies be treated as resident in India, whose control and management is situated wholly in India.

3. Although the proposal to tax all perquisites in the hands of employee is justified, it would be better if certain perquisites, such as medical facility and leave travel concession, are exempted in the case of low salaried employees.

4. The present rules relating to the determination of the gross annual value of house property be retained. Any change in the method of computation of the gross annual value of house property will further complicate the tax system.

5. In order to boost the investment in house property, deduction upto certain limit in respect of interest on capital borrowed for purchase or construction of house property be allowed.

6. The exemption provided under Section 54 available on purchase or construction of new residential house after the sale of the residential house and under Section 54D on purchase/construction of land and building for business purposes after the sale of the existing land and building, being used for business purposes, be continued to encourage investment in these capital assets.

7. Deduction in respect of contribution towards life insurance premium, provident fund, pension fund and tuition fee for full time education of children of employees be increased only marginally, from Rs.1,00,000 to Rs.1,50,000. The proposed deduction of Rs.3,00,000 will benefit only high-income group assesses and will not give any relief to low-income group assesses, who can not save money due to the increased cost of living and high inflation.

CONCLUDING REMARKS

Certain changes proposed in the Direct Taxes Code Bill, 2009, appear to be equitable and effective. These include: introduction of a uniform year as tax year for purposes of the assessment of income and abolition of 'not-ordinarily resident' status. However, certain major changes proposed do not seem to serve the objectives of the Code. The proposed changes which need to be reconsidered include: the review of exemption limit, the restructuring of tax rate to take into consideration the need of the lower-income group persons, proposal to increase the amount of deduction in respect of life-insurance premium and provident-fund contributions, proposal to change the method of computation of annual value of the house property, proposal to withdraw the deduction in respect of the interest on borrowed capital on self-occupied house property, and the proposal to base tax incentives for certain priority business or for doing business in specified areas on capital and other expenditure instead of providing exemption from the profit of such business upto a specified period.

BOOK REVIEWS

Dave Rochlin, *Hunter or Hunted? Technology, Innovation, and Competitive Strategy* **(New Delhi: Thomson, India Edition, 2006), Pages: 306, Hardbound, Price: not mentioned**

This book, with an unconventional title, is authored by Dave Rochlin, with endnotes, glossary, and index, spanning over 306 pages. Reproduced for sale in the Indian sub-continent only, the book focusses on making better strategic decisions for factoring technology in a holistic sense. The book has already been well received as is evident from a number of appreciative comments, reproduced on the backside cover flap of the book.

Prior to formal chapterisation, the author, in a 14-page note, titled 'Introduction: The Hunt', explains the power of competition, innovation versus resource base, need to learn from history, confronting competitive evolution, the need for completeness and technology, and institutional change. Thereafter, he provides an overview of the book and then provides a rationale for a seemingly unconventional title of the book – 'Hunter or Hunted?'

The book is divided into three parts, each of which is devoted to an important perspective. While Part 1 focusses on the systems and context, Part 2 deals with evolution and life cycles, and Part 3 is devoted to competitive advantage in identifying, cultivating technology, and overcoming competitive barriers.

Part 1, comprising three chapters, identifies the systemic context in which a technology-provider attempts to affect change and the ecosystem to technology innovation. It focusses on the methods of assessing the impact of the size and resources of the firm, its competencies, competitive dynamics, delivery mechanisms, and a host of other factors relevant in strategic decision-making. It focusses on the 'eco-system' as a precursor to developing strategy, and provides a systematic and contextual framework.

In Part 2, comprising Chapters 4 to 7, the author attempts to examine technology from the point-of-view of evolution and life cycle. The author re-affirms it that whether to launch a new business directly, sell out, partner, focus on product improvements, or to rapidly build market share, these are contingent upon the demand and competitive pressure.

Part 3 comprises Chapters 8, 9, and 10. Here, the author looks at the strategies and tactics for creating as well as disrupting the competitive barriers. Identification of the existing and potential barriers is an important element in the survivability and superior long-term performance. The opportunities and threats posed by the new technologies have attracted the special attention of the author. The other key differentiation is the systems approach to look at technology in a holistic sense and, of course, the key issue is strategic decision-making, with technology as an enabler. A brief chapter-wise account of the book follows.

Chapter 1 examines the risk and behavioural patterns among start-ups and incumbents. It starts with the question, 'why size matters?', and examines the impact of size of the firm on behaviour, mortality and agility. One would easily agree with the author's assertion that large, well-

established 'incumbent' firms and newer start-ups are radically different in their composition and capabilities, and consequently, strategic posture. Start-ups should take more innovative approaches to technology development, given their risk profile, lack of revenue base, and the funding mechanisms. Each chapter conveys a point through a case history or an anecdote from a variety of situations. This style of book presentation facilitates easy comprehension of a somewhat difficult topic of technology. This chapter discusses the concepts, such as resource-specificity matrix, creative activity versus adaptive response, acquisition versus internal innovation, barriers to the internal innovation, the risk-tolerant nature of start-ups, the power of complimentary assets in technology-adaptation, and the organisational viability.

Chapter 2 focusses on technology value and delivery systems. A firm's contribution to delivering a solution and competition between overall solutions are the significant factors that affect the fortunes of individual firms.

Chapter 3 deals with the concept of market and its disruption. Market structure and industry definition are perceived to be the dynamic processes in which technological innovation plays a key role. It concludes with the opinion that by developing a framework for understanding and anticipating key technology-driven changes, firms in general, irrespective of their size, can compete more effectively among them. This chapter presents the Six Forces Model for identifying the levers of innovation. The anecdotal style facilitates the difficult concepts to 'sink-in' easily. This chapter also addresses the issue of uncertainty in innovation and seeks to identify the signal from the noise. In the case of new technologies, it is given that decision will have to be made under uncertain environment and it will be useful to proactively attempt to reduce environmental uncertainty, rather than passively accept and adapt it.

Part 2 addresses the issues of technology life cycles, technology evolution, and the impact of timing. Chapter 4, as the starting chapter of this part, gives an overview of how cycles develop and which factors drive them. It includes issues, such as the influence of timing, demand-side behaviour, supply-side behaviour, incremental versus disruptive innovation, technology diffusion and adoption, the well-known S-curve, and the role of venture capital in the industry evolution.

Chapter 5 takes up the issues raised in the preceding chapter in greater details on the various aspects of innovators and imitators. This chapter discusses the 'First–Mover Advantage' and the barriers. In the technology domain, moving first does not guarantee success. Without competitive insulation, early firms can benefit by accelerating the diffusion and adoption of new technology. The value and price proposition shifts radically during the early market, since the rapid increase in the value of technology is off-set by pricing pressure due to entry of imitators.

Chapter 6 focusses on technology-enablers. As attractive new technology markets get saturated with competition, the diminishing returns set in. The author suggests that instead of abandoning the new technology opportunity, firms can shift the focuss and concentrate on the enabling technology that creates access for the incumbent firms. These firms benefiting from the experience curve and potential economy of scale, can be better value proposition due to the superior performance and the lower costs.

Chapter 7, as the concluding chapter of Part 2 of the book, specifically the issues of technology adoption and the choice for established businesses, where disruptive innovation is not a strong point, hence they need to find and support competence-enhancing technology opportunities that leverage their complimentary assets and competitive positions and to avoid competence-destroying situations. This chapter also suggests to the small incumbents to find a niche and vertical markets. It also discusses the issues of pure research and S-curve jumps and the error of omission through overconfidence.

On the whole, Part 2 of the book, through four chapters, identifies the opportunities and threats

for the diffusion of paradigm-changing technology that will have a substantial impact on customers and competitors. The disruptive technology can breakdown the existing competitive criteria and create an opportunity to change. As technology passes through innovation, imitation, enablers and incumbent entry, windows of opportunity open and close for various firms. It highlights the importance of developing barriers as a method of protecting their leads.

Part 3 of the book, comprising Chapters 8 to 10, focusses on competitive advantage and effective methods of locking in early promising results to create a more permanent advantage. Chapter 8 presents an overview of the key concepts of competitive advantage: the definition, the measurement and the way to acquire it. It provides a base for developing detailed methods of assessing the role of information technology and general innovation in achieving the competitive advantage. An organisation must align its capability with its goals. Using the tools, such as a balanced scorecard, facilitates this process. Different out-performance metrics leading to multiple winners can be developed. A product needs to exhibit significant superiority in order to gain a foot-hold. The author observes that while gaining a competitive advantage is implicitly or explicitly a goal of all firms, it is imperative for technology-oriented firms.

In Chapter 9, the author describes technology and the traditional sources of competitive advantage, borrowing from Porter's Competitive Strategy Matrix. The author opines that the cost-based strategies, if sustainable, can provide flexibility to pursue options not available to others. Using technology to drive out cost (particularly in the inter-connected value-network, rather than traditional value-chain) is suggested. The cost concept advocated is TCO – Total Cost of Ownership. Differentiations rather than cost-based strategies are outlined and pitfalls of both are identified in this chapter.

Lastly, Chapter 10 looks at other structural barriers that exist in many technology-intensive industries, particularly in the IT arena. These barriers create competitive advantage through value gaps. Invoking the Metcalf's Law, the author derives the network effect for value-creation. A leader's product can have higher value than those of others, simply because of a larger number of its users can interact one with another. Harnessing the network power, it suggests how to avoid diminishing returns. Other relevant issues considered are: the complementors, proper posture towards adherence to and influence over compatibility, and the standards. Switching costs, platform ownership and leadership, and installed base are the factors that have influence over competitive advantage.

Towards the end, the book gives chapter-wise 'End-notes', which provide an extensive bibliography for each chapter. The glossary of terms given here shall be useful to facilitate a better understanding of contents, absence of which might have made comprehension difficult.

The book, *Hunter or Hunted? Technology, Innovation, and Competitive Strategy*, written by Dave Rochlin, offers a holistic view of innovation, technology, and competitive strategy. It is comprehensive in coverage and provides a systems view of the contextual aspects of technology. There are a number of situational examples, cases, and anecdotal experiences included in the book. The book is a serious attempt in unfolding different facets of technology-related choices. Like the title, the style of presentation is also interesting. At times, the terminology used looks uninviting, but the Glossary of Terms, given at the end, comes to the rescue of the reader. Since the original edition was published in 2006, the book must be a familiar resource material to students of technology innovation and apparently, the book is well-received by the market opinion makers. The get-up is good, though I found the font size of the print to be somewhat smaller, leading to visual strain. Although the price is not mentioned, hopefully, it is not too much and is affordable by readers in the Indian sub-continent, for whom this edition is exclusively intended. It appears to be a

good value proposition. It is informative, well-structured, interesting and lucid in presentation, and is strongly commended for policy-planners, R & D libraries, and technology innovators.

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Naval Bajpai, *Business Statistics* (Delhi: Pearson Education in South Asia, Copyright Dorling Kindersley (India) Pvt. Ltd., 2010), Pages: 794, Price: not mentioned.

Statistical tools play an important role in decision-making. However, the decision-making process based on business data is a complex process, which needs clarification of the basic concepts of statistical tools. The advent of high-speed computers increases the needs of application of software in solving the business problem which can save the readers' time and provide correct answers to their problems. The interpretation of the raw data into the useful information is an important task. A clear-cut understanding of statistical techniques helps the business manager in such situations. The book by Naval Bajpai will be welcomed by students, teachers, and researchers, since it demonstrates the use of statistical tools in business, based on Indian case studies and suitable numerical examples.

The book contains data sets formatted for MS Excel, Minitab, and SPSS Statistical analysis, accompanied by a compact disk. Each chapter opens with a list of learning objectives and ends with a number of self-practice problems, chapter summary, key terms, references, discussion questions, and case studies. The applications of the topics are explained through three software programs: MS Excel, Minitab, and the SPSS. The Index, Glossary, and the Statistical tables, with CD ROM, are given in the Appendix, for effective understanding of the statistical tools. There is a wide coverage of the standard business statistics, such as descriptive

and inferential statistics, probability distribution, sampling and sampling distribution, statistical inference, forecasting, quality control, time-series analysis, index numbers, and non-parametric statistics. Decision theory is also introduced in the last chapter. This book is mainly intended for MBA students and research scholars.

The book is divided into 19 chapters, besides some statistical tables given in appendices, a glossary and a subject index at the end of the book. The topics include the introduction to statistics, charts and graphs, measures of central tendency and dispersion, probability, probability distributions, sampling and sampling distributions, statistical inference, correlation and regression analysis, experimental designs, non-parametric tests, time-series analysis and index numbers, forecasting methods, decision theory, and quality control are also given to draw meaningful conclusions by business managers. The coverage of various topics is adequate, as expected in a standard text book of business statistics.

In the Preface, the author states that the focuss on the interpretation rather than the computation, develops competencies that will help the students in their future career as managers. The first chapter elaborates the basic statistical concepts and learning statistical tools, using statistical software programme, such as MS EXCEL, MINITAB, and SPSS. Chapters 2 to 4 explain the construction of charts and graphs, based on pharmaceutical studies using above-mentioned software. The concept of an ideal measure of central tendency, dispersion, skewness, moments, kurtosis and measures of association are explained using the statistical software. The basic concepts have been further elaborated through solved, self-practice problems and case studies based on Indian industrial and business problems. These chapters are of introductory nature and routine statistical techniques are discussed in them. The notations for sample observation are generally denoted by small letters. However, the author has denoted the sample size by N, instead of *n* (see page158), formulas of sample standard deviation and sample variance.

Chapters 5, 6, and 7 deal with the concepts of probability and probability distributions. The probability section includes the introduction to set theory with numerous self-practice problems. The concepts of probability, marginal probability, rule of addition and multiplication theorem and Bayes' Theorem, probability distribution function, expected value, variance of a random variable, and discrete and continuous probability distributions: binomial distribution, Poisson distribution, hypergeomeric distribution, uniform probability distribution, normal probability distribution, exponential distribution, and the computation of their parameters using software are given in the chapters. Perhaps some emphasis could have been placed on empirical probability being derived from log run relative frequency. The main omission here is that no mention has been made of non-mutually exclusive events.

In Chapter 8, the author discusses the importance of sampling methods and the concept of sampling distribution. The sampling methods are explained with the help of numerical examples. The description of sampling methods could have been more elaborate because these are the important parts of the data analysis. Sampling and non-sampling errors, sampling distributions and Central Limit Theorem are also discussed.

Chapter 9 discusses the concept of statistical inference. The estimation of sample size for finite population is briefly introduced. The step–by-step procedure is explained using statistical software applications for computing the estimation of *t*-statistic and confidence intervals.

Chapter 10 and 11 outline the concept of hypothesis testing in statistical inferences. Z-test, *t*-test, and *f*-test, confidence level, significance level, critical region and power of a test are explained with the help of self-practice problems, using MS Excel, Minitab, and SPSS software.

The concept of 'analysis of variance' is explained in Chapter 12. The procedure of *f*-test is explained in the context of null hypothesis. The concept of experimental designs is also introduced by explaining one-way and two-way ANOVA

tables, explaining the completely Randomized Design and Randomized Block Design. The procedure of testing the hypothesis for more than two population variances could also have been introduced for a better understanding of the business managers. The concept of Factorial Design is introduced towards the end of the chapter. Chapter 13 discusses the Chi-squire test for a goodness of fit, and population variance and homogeneity, provides step-by-step self-practice problems, using application of software.

Chapters 14 and 15 are devoted to the simple linear correlation and multiple regression analysis. The coefficient of determination and standard error of estimate are also explained. Residual analysis is used for testing the assumption of regression. SPSS software is used for testing the significance of regression model. It would have been better to solve some numerical examples based on case studies and regression equation fitted accordingly. Partial and multiple correlations, and regression analysis are explained with the help of the least-square methods. The coefficient of multiple determination, adjusted R-square, residual analysis of multiple regression model and its statistical significance are fully explained. The coefficients of partial determination, non-regression model, square-root transformation, logarithmic transformation, and step-wise regression analysis are discussed using the appropriate software. The emphasis is placed on business-based, self-practice problems, which shall be useful in teaching. However, there is no discussion on the comparison of regression line. Similarly, the methods of discriminant analysis have also been ignored.

The concepts of time series analysis and Index numbers are discussed in Chapter 16. Time series analysis is explained in sufficient detail, including the Time series Decomposition model and its component additive and multiplicative model. Different quantitative forecasting methods and trend projection methods are adequately discussed. Autocorrelation and auto regression techniques are explained using Minitab software. The methods for constructing price indexes are given at the end of the chapter.

Chapter 17 describes the techniques of statistical quality control. The control charts for variables, R-chart, c-chart and np-chart are explained using the SPSS for constructing OC curves. Chapter 18 focusses on non-parametric statistics. Sign test, Runs test, Mann–Whitney U-test, Wilcoxon's matched pairs test, and Kruskal-Wallis test are sufficiently explained. Spearman's rank correlation using SPSS is also discussed.

Finally, Chapter 19 is based on a case study. It also includes the procedure for determining the optimal decision based on posterior probability. Bayesian decision analysis and decision-making under risk are also presented and the events in a decision-making problem, in the form of a tree diagram, are also explained.

The book has a wealth of material presented in a descriptive style. The book is particularly recommended for those who wish to explore the application of statistical software in decision-making in business and economic problems.

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Lauren C. Templeton and Scott Phillips, *Investing the Templeton Way* (New Delhi: Tata McGraw-Hill Publishing Company Limited, 2008), Pages: 276, Paperback, Price: Rs. 395.

Investing the Templeton Way is an excellent book for all investors, whether beginners or veterans. The authors provide extremely valuable insights into the wild world of stock markets. These insights are distilled from the life and times of Sir John Templeton, "the greatest stock picker of the century". The authors have been close associates of Sir John and had the privilege access to his stock investing wisdom in words and action.

The writing is lucid and embellished with real life examples of stock market events, interesting anecdotes and some very appropriate yet easy to comprehend simulations of business situations. The book is organised over ten chapters, each fortifying the book's fundamental premise—bargain hunting—by analysing the seminal stock market events from history and how, in each case, Sir John's methods delivered market beating returns. Even if one were to disregard the content pertaining to Sir John's personal history and an occasional dash of eulogy, the book holds immense value for investors of all types and sizes and anybody who cares for his or her hard-earned money. In fact, it advocates a way of life when it comes to money.

Chapter 1 introduces Sir John, his formative years, and his basic investing wisdom. Chapter 2 discusses the strategy of investing during maximum pessimism. The authors illustrate through examples how to ascertain when the market has reached its point of maximum pessimism, and the only way for it to go from that point on is up. Also discussed here are the indicators and the causes of unjustified overreaction to market-wide or company-specific events. In each case, the investors need to observe mental discipline and fortitude to harness the opportunity profitably.

Chapter 3 is about global investing. Sir John was a pioneer in daring to scout the overseas markets for bargains. There are some uncommon traits of each economy and government that one must reckon before applying value investing yardsticks. For instance, an analysis that works well for an American company may not be equally applicable to a Japanese company, simply because Japan might have different standards, for instance, for corporate disclosures, corporate structures, and taxation of profits. Chapter 4 illustrates the application of Sir John's acumen to Japan's post-World War II economy, and thereafter, the spectacular gains of the 1960s and the 1970s. The authors present this case study as a defining moment for Sir John's personal reputation as a global investor.

Chapters 5 and 6 are perhaps the most important ones that teach investors how to spot the beginning of bull markets and ripening of stock market bubbles. This part should be of special importance to investors, because it is during such

transitions that investors lose the largest amount of money. Conversely, these points of inflexion are also the hallmarks that the bargain-hunters must always look for. The authors provide clues to the investors' psychology in the run-up to, and culmination of, these cataclysmic events. There are signals one can pick from the press reports, screaming headlines, and stock analysts' one-liners, and determine whether it is the time of maximum pessimism or the time to short the bubble.

Chapter 7 deals with the political and economic crises that lead to panic in the stock markets. During these events, general investors overreact, thereby, providing opportunity to the bargain-hunters for the brief period, while the impact of such an event persists. The wise investor should have a "trained ear" to listen to such events and fathom their real impact on the financial performance of the company, industry, or the economy. The authors provide excellent examples from history, dating back to the 1941 attack on Pearl Harbour, and how Sir John applied his instinct to come up trumps.

Chapter 8 is about detecting similarities between historical and current financial events and going ahead with fortitude to apply past learning for profitable results. The authors present the case study of South Korea in the context of the Asian Meltdown of the late 1990s. Sir John applied his past learning from Japan, discussed in Chapter 4, to profit from his investments in the Korean companies which led the resurrection of the economy of that country.

Chapter 9 illustrates a situation where Sir John, unable to find suitable stocks to invest as per his yardstick (of optimum investment horizon and expected returns), found it suitable to invest even in the bonds. The point authors make here is that value investors (*aka* 'bargain-hunters') should be willing to look at all forms of financial investments for arriving at a comparatively better investment, in this case, the bonds.

Finally, Chapter 10 is about the China story and how Sir John rightly predicted the rise of the dragon power.

The entire book is replete with words of wisdom and pertinent quotes. Chapter after chapter, it keeps building on the cardinal principles of value investing, and, once you are done reading the book, those very phrases will call your mind home. There is no getting away.

Highly recommended for all investors, this book is fantastic value for money!

Read this book before reaching your pocket for that hard-earned money you were always afraid to lose!

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I.C. Jain, *Management Accounting* **(New Delhi: Taxmann Publications Private Ltd, 2008), Pages: 410, Paperback, Price: Rs 225.**

The process of modern management with its emphasis on detailed information for decision-making provided a tremendous impetus to the development of Management Accounting. Managers need information for the management functions of planning, directing operations, controlling and decision-making. Accordingly, management accounting is an integral part of any organisation's management information system. This also explains why management accounting is now an important component of all business education programmes.

The book under review is new addition to the existing literature on the subject. The book is divided into seven chapters. Each chapter begins with a quotation which aptly brings out the theme of the chapter. Each chapter ends with summary, key terms, objective-type questions in the nature of 'true/false' statements, multiple-choices and fill-in-the-blanks to give the users an adequate exposure of the subject matter. The numerical part includes 130 illustrations, 100 solved problems, and 150 unsolved exercises with answers and hints for arriving at them to build the book into a solution manual.

The first chapter provides an introduction to management accounting, its nature, scope, and the role management accountant plays in the overall control process of an organisation. It also provides a framework for the study of the remaining chapters. The second and the third chapters deal with two important techniques of cost control: Budgetary Control and Standard Costing and Variance Analysis. Chapter 2 concentrates on the process of translating goals and objectives of the organisation into specific activities and the resources that are required to achieve these goals and objectives. It discusses in sufficient detail the objectives of budgeting, essentials of successful budgeting, limitations of budgetary control as a tool of management, the process of formulation of budget, the types of budget and the need for injecting flexibility in the budgeting system. The three control ratios, namely, activity ratio, capacity ratio, and efficiency ratio, are explained with examples at the end of the chapter.

The focuss of the third chapter is on standard costs and standard costing, difference between standard costs and estimated costs, standard costing and budgetary control, types of standard and the process of establishing standards for each element of cost. Calculation of variances relating to material, labour, overheads, and sales, is explained and illustrated. An alternative approach to analyse overall factory overhead variances, viz. Two-way, Three-way, and Four-way Variance Analysis is also explained with an example each. How can the responsibility for the variances be fixed and how the variances are to be disposed of also form part of the chapter. The two techniques of product costing, namely, absorption and marginal costing and their impact on income measurement are examined in the fourth chapter.

Chapter 5 focusses on what will happen to the financial results if a specific level of activity or volume fluctuates. In particular, it discusses the concepts of break-even analysis, profit-volume ratio, margin of safety, and angle of incidence, in a lucid manner. The preparation of the break-even chart, assumptions underlying it, and its limitations are also highlighted.

In the sixth chapter, titled 'Relevant Costing for Short-Term Special Decisions', the focuss is on measuring and identifying those costs which are relevant for different types of decisions, such as acceptance or rejection of a special order, make or buy, selection of optimum product-mix, dropping a product line, shut-down or continue, replacement of plant, exploration of a new market, and introduction of a new product. In Chapter 7, the author has covered two related topics – Responsibility Accounting and Divisional Performance Measurement. In the first part, the different types of responsibility centres, such as cost centres, profit centres, and investment centres and the essential ingredients for the successful operation of a responsibility accounting system are discussed. The various financial and non-financial measures of divisional performance and the methods commonly used to arrive at a transfer price are outlined in the second part.

On the whole, the book is expected serve as a good source material both for the students and the teachers. The professional manager will also find the book handy for reference whenever he is confronted with any complex decision-making situations.

However, the contents of the book could have been expanded by including chapters on topics of Cash Flow Analysis, Financial Statement Analysis, and Management Information System (MIS). The utility of the book could have been enhanced by including a few case studies to enable the readers to relate and apply their understanding of the contents of the book in decision-making situations. A bibliography should have also formed part of the book.

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