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From The Editor's Desk

I take this opportunity to thank all contributors and readers for making ***Tecnia Journal of Management Studies*** an astounding success. The interest of authors in sending their research-based articles for publication and overwhelming response received from the readers is duly acknowledged. I owe my heartfelt gratitude to all the management institutes for sending us their journals on mutual exchange basis, and their support to serve you better.

We are happy to launch the Thirteenth issue of our academic journal. The present issue incorporates the following articles:

- Equity Valuation with Reference to Book value, Earning & Cash Flow
- Perceptions of Investors on Mutual Funds- A Comparative Study on Public and Private Sector Mutual Funds
- Determination and Validation of Retail Service Quality Index (RSQI) In Apparel Stores in Madurai City.
- Determinants of Profitability in Indian Automotive Industry
- Determinants of Share Prices in Indian Auto Industry
- A Comparative Study of the Personality of the Alienated and Non-Alienated Employees AS Measured by 16PF
- Consumer Choice Process: A Quantitative Research
- A Probing Reading on Attention to Web Advertising
- A Study of Workplace Stress in Hospitality Sector
- Assessing Social Capital for Organisational Performance – A Case of Indian IT Sector
- Growth Trajectory of Zara – Case Study

My thanks to the authors, Silky Janglani, Dr. Simranjeet Kaur Sandhar, Dr. Amitabh Joshi, Manasa Vipparthi Ashwin Margam, Dr. K.Karthikeyan, R.Murali, S.Bharath, Dr. Dharmendra S. Mistry, Varun Dawar, Rashmi Aggarwal, Sandhya Gupta, Dr. Ajay Kumar Rathore, Dr. Ajay Pratap Singh, Dr. R.C. Singh, Prof. Col. (Retd.) Mahander Singh, Dr. G.B. Sitaram, Chandan Parsad & Madhavendra Nath Jha who have sent their manuscripts in time and extended their co-operation particularly in following the American Psychological Association (APA) Style Manual in the references.

I extend my sincere thanks to our Chairman Sh. R. K. Gupta, who has always been a guiding light and prime inspiration to publish this journal. I am grateful for his continuous support and encouragement to bring out the Journal in a proper form. I also appreciate Editorial Committee Members for their assistance, advice and suggestion in shaping up the Journal. My sincere thanks to our distinguished reviewers and all team members of Tecnia family for their untiring efforts and support in bringing out this bi-annual Journal.

I am sure the issue will generate immense interest among corporate members, policy-makers, academicians and students.

Editor

Contents

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Equity Valuation with Reference to Book Value, Earning & Cash Flow

Silky Janglani*
Simranjeet Kaur Sandhar**
Amitabh Joshi***

Abstract: *This study examines the value relevance of earnings Book values and Cash flows. Using a valuation model provided by Ohlson (1995), the study uses statistical association between stock prices and all the three variables i.e. earnings, Cash flows and book values to measure value-relevance of the accounting system. In the backdrop of relevance of accounting numbers for equity valuation, Ohlson (1995) and Feltham & Ohlson (1995) provide an objective valuation model based on abnormal earning. According to the models, the fundamental of valuation depends on abnormal earning (NIa). The study deals with the scrips listed at BSE on SENSEX. The results show that earnings and book values jointly and individually are positively and significantly related to stock prices.*

Keywords: *Abnormal Earning, Book Value, Operating Cash Flow, Equity Value*

Background

The relevance of book value, earnings and cash flow in equity valuation is a well-researched area in accounting. Evidence in this area, however, has been mixing. In the backdrop of relevance of accounting numbers for equity valuation, Ohlson (1995) and Feltham & Ohlson (1995) provide an objective valuation model based on abnormal earning.

Our work is motivated by recent research in accounting, both theoretical and empirical. Ohlson (1995) and Feltham and Ohlson (1995), who base their theory of valuation on the residual income valuation model (RIVM), show that under certain conditions share price can be expressed as a weighted average of book value and earnings. The Ohlson and Feltham-Ohlson models have spawned much empirical research examining the comparative valuation relevance of the balance sheet and the income statement.

As a source of information for financial decision making financial statement numbers and their interpretation play the most significant role in fundamental analysis. While most research in this area has concentrated almost exclusively on explaining price by book value and reported earnings (or their components), our focus is on the relation between share price and book value and cash flow.

This paper conducts an empirical examination of valuation techniques of equity with a focus on a practical issue. Book value, cash flow and earnings approaches are equivalent when the respective payoffs are predicted "to infinity," but practical analysis requires prediction over finite horizons. The paper assesses how the various techniques perform

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in finite horizon analysis. In the present paper we have made an attempt to taste the forecasting ability of equity share value of BSE Listed companies empirically for a period covering altogether10 years (2001 to 2011) by pooling cross-sectional data on abnormal earning, book value and operating cash flow in line with the forecasting and valuation equation models of Ohlson (1995) and Feltham & Ohlson (1995).

Review of Literature on Models of Earning, Book Value, and Equity Valuation

Based on models developed by Ohlson (1995) and Feltham, Ohlson (1995), a number of empirical studies have been conducted revealing different degrees of predictive ability of various earning components with respect to valuation. Valuation techniques are characterized as pro forma accounting methods with different rules for recognizing payoffs, and their relevant features are identified within a framework that expresses them as special cases of a generic accounting model. This framework refers to the reconciliation of the infinite horizon cash flow and accrual accounting models in Feltham and Ohlson (1995) and the finite-horizon synthesis in Penman (1996). It establishes conditions where each technique provides a valuation without error, with and without terminal values, and identifies when (seemingly different) calculations yield the same valuation. In particular, it demonstrates that DCF techniques with "operating income" specified in the terminal value are identical to models that specify accrual earnings as the payoff. Hence the comparison of DCF techniques with accrual accounting residual income techniques amounts to comparing different calculations of the terminal value in DCF analysis. This brings the focus to the critical practical problem, the determination of terminal values. (Penman & Sougiannis, January, 1995).

Kim and Kross (2005) find that the ability of earnings to predict future operating cash flows has been increasing for the 1973-2000 period. Looking at the abnormal share returns over a three-day window surrounding the earnings release days, Landsman and Maydew (2002) find an increase in abnormal returns, suggesting an increase in the information content or the value relevance of earnings. However, Brown et al. (1999) show that the increased R-squares are driven by the presence of scale effect in the level regression. After controlling for the scale factor's coefficient of variation, they find a decline in value relevance, as measured by R-squares. In another stream of study, Banker et al. (2009) find a positive relation between the roles of accounting earnings in equity valuation and performance evaluation. Compared with cash flows, the role of accounting earnings has declined both in value relevance and performance evaluation.

Bernard (1995) was one of the first to gauge the value relevance of accounting data. He compared the explanatory power of a model in which share price is explained by book value and earnings versus a model of share price based on dividends alone. He found that the accounting variables dominate dividends, which is interpreted as confirming the benefits of the linkage between accounting data and firm value.

In their another paper Barth, Beaver, Hand and Landsman (2004), the authors attempted to find out whether and to which extent disaggregation of earning and imposing valuation model linear information structure (Linear Information Model or LIM) aid in predicting equity value across various industries. Under LIM the predicted values of the variables (abnormal earning, book value and so on) in t-th year are obtained treating the respective values of the said variables for (t-1) th year as independent variables. Hence, LIM is essentially AR (1) process. The first LIM is based on aggregate earning, LIM 2 disaggregates earning into cash flow and total accrual. LIM3 disaggregates earning into cash flow and four major components of accrual- change in receivables, change in inventory, changes in payables and depreciation. Then, both the predicted values obtained by using the LIM model and actual values (without LIM structure) have been used to forecast the equity share values. The major findings are: coefficients of abnormal earning and book value are significantly positive with and without LIM structure across industries. Disaggregating earning into cash flow and total accruals can enhance equity valuation prediction in the pooled regression. Valuation coefficients with and without imposing LIM structure differ significantly for almost all industries. Disaggregating total accruals into four components - change in receivables, change in inventory, and changes in payables and depreciation aid in predicting equity values under LIM but the coefficients are not significantly different from zero when LIM structure is not imposed.

Objective of the Study

The present study attempts to find out empirically the predictive ability of accounting based fundamentals namely book value, earning and cash flow in equity valuation mainly in the backdrop of models developed by Ohlson (1995) and Feltham-Ohlson (1995) in respect of SENSEX companies of the BSE (Bombay Stock Exchange) of India.

Research Design

The period of the study is of 5 Yrs (2007 – 2011). As per Ohlson (1995) cohesive theory of a firm's value that relies on clean surplus in relation to identify a role for each of the three variables, earnings, book value and dividends. According to him, the change in book value (BV) shall equal earning minus dividend (net of capital contribution). This relation is called clean surplus relation which highlights that all changes in assets/ liabilities unrelated to dividends must pass through the income statement.

$$BV_t = BV_{t-1} + x_t - d_t \quad \text{........ (1)}$$

Where x_t = Earning in period t,

d_t = Dividend in period t

Re-arranging equation (1), we get

$$BV_t + d_t = BV_{t-1} + x_t \quad \text{........ (2)}$$

Equations (1) and (2) show that dividend do not impact earning but reduces BV_t. If dividend is not paid, book value increases by the amount of dividend. This conclusion is similar to dividend irrelevance of MM (1961) in market value context. The main of contention of MM is - dividend amounts to distribution of value - not creation thereof. Similarly, to the extent of dividend payment, investors claim on the book value reduces.

The paper goes in 3 steps: firstly book value, abnormal earnings, cash from operations and market value of equity prices of current year and preceding year is collected on BSE listed companies. Secondly a relationship is observed between with the lagged value of book value of assets and current year book value of assets (Eq. (3)). Then if this relationship is significant then the impact of lagged book value and lagged abnormal earnings can be analyzed on abnormal earnings of current year (Eq. (4)). Thirdly impact of current year abnormal earning and current year book value on current year's market value of equity prices is analyzed (Eq. (4)). Fourthly cash flow as one more important relevant factor is introduced and its impact both lagged and current year's value is also analyzed with current year abnormal returns and current year market value of earnings (Eq. (6&7). Two models applied are:

Model 1: Abnormal Earning and Book Value

NI_{it} = abnormal earning value of equity of i^{th} firm at the end of t-th year

BV_{it} = book value of equity of i^{th} firm at the end of t-th year

MV_{it} = market value of equity of i^{th} firm at the end of t-th year

Abnormal earning at time t NI_{it} equals NI_{t-1} - r * BV_{t-1} where NI is earning available to equity shareholders before extraordinary items and BV_{t-1} is the book value of the equity at the close of immediate preceding year, r is risk free rate of return.

$$BV_{it} = \alpha + \beta\ BV_{t-1} + \varepsilon \quad \text{........ Eq. (3)}$$

$$NI_{it} = \alpha + \beta\ NI_{t-1} + \beta\ BV_{t-1} + \varepsilon \quad \text{........ Eq. (4)}$$

$$MV_{it} = \alpha + \beta\ NI_t + \beta\ BV_t + \varepsilon \quad \text{........ Eq. (5)}$$

Model 2: Abnormal Earning, Book Value and Operating Cash Flow (CFO)

CFO_{it} is operating cash flow of the i^{th} firm in t-th year

$$NI_{it} = \alpha + \beta\ NI_{t-1} + \beta\ BV_{t-1} + \beta\ CFO_{t-1} + \varepsilon \quad \text{.... Eq (6)}$$

$$MV_{it} = \alpha + \beta\ NI_t + \beta\ BV_t + \beta\ CFO_t + \alpha \quad \text{...... Eq. (7)}$$

Results & Discussions

1. The regression coefficients of the equations of Model 1 derived from pooling of cross-sectional data from 2006-2011 are reported in the following tables.

Table 1: Impact of Lagged Book Value on Current Book Value (Eq. 3)

Predictors	R	Sig
Book Value Lagged	0.860	.000

The table shows that lagged book value has a high degree of impact on current year's book value of equity. The value of coefficient suggests that the book value (BV_t) is related to book value lagged by one year (BV_{t-1}) positively in a manner which is statistically significant. Hence previous year's book value makes a significant difference on the book value current year book value of equity.

Table 2: Impact of Lagged Book Value & Lagged Earning on Current Earning (Eq. 4)

Predictors	R	Sig
Lagged Book Value	.303	0.967
Lagged Earning	1.000	.000

The value now depicts that there is low degree of impact of lagged book value of equity on earning available to equity shareholders of current year. Abnormal earning is positively related to one year lagged abnormal earning and book value of equity in a statistically significant manner. Hence the significant value is greater than .05. Whereas lagged earning makes significant difference on current year's earning. Also the value of R shows perfect impact on current earning.

Table 3: Impact of Book Value & Earning on Market Price of Equity (Eq. 5)

Predictors	R	Sig
Book Value	0.455	.000
Earning	0.482	0.034

Both the independent variables i.e. book value of equity of current year & current year's earning have moderate degree of impact on market price of equity. The significant value proves that both the independent variables are significantly different with the dependent variable.

Table 4: Impact of Book Value lagged, Lagged Earning & Lagged Cash flows on Current Earning (Eq. 6)

Predictors	R	Sig
Book Value Lagged	0.304	.982
Earning lagged	1.000	.000
Cash Flow Lagged	1.000	.834

The significant value of lagged book value & lagged cash flow is greater than .05 so they are not able to show significant difference but lagged earning is the variable which shows significant difference on current earnings. But the effect of the lagged earning & lagged cash flow says that they make a high level of impact on current earnings. But book value of previous year has low degree of impact on current earnings available to equity shareholders before extra ordinary items.

Table 5: Impact of Book Value, Earning & Cash flows on Market Price (Eq. 7)

Predictors	R	Sig
Book Value	0.455	.982
Earning	0.482	.048
Cash Flow	0.492	.136

Lastly the values of current year show moderate degree of impact on market price of shares. Current year of book value are not in significant level. R value hardly undergoes any improvement. Our empirical findings are consistent with Ohlson (1995) and Feltham, Ohlson (1995) models.

Conclusion

The role of book value and earnings in equity valuation is a well-researched topic. The findings suggest that abnormal earning is related to one year lagged abnormal earning and book value of the equity. The relation is statistically significant. Abnormal earning follows autoregressive process with respect to immediate previous period abnormal earning and book value of the equity.
Similarly, operating cash flow also follows AR (1) process and is related to prior period operating cash flow and book value. Thus, abnormal earning and book value are sufficient in predicting market value and operating cash flow does not add to value relevance as per the findings of our study. Along with abnormal earning (which is a must for the model), besides book value of equity and cash flow, the behavior of other variables including qualitative variables may be considered as well in future research

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Perceptions of Investors on Mutual Funds – A Comparative Study on Public and Private Sector Mutual Funds

Manasa Vipparthi*
Ashwin Margam**

Abstract: *Indian Mutual Fund (MF) industry provides reasonable options for an ordinary man to invest in the share market. The plethora of schemes provides variety of options to suit the individual objectives whatever their age, financial position, risk tolerance and return expectations. In the past few years, we had seen a dramatic growth of the Indian MF industry with many private players bringing global expertise to the Indian MF industry.*

Investment in mutual funds is effected by the perception of the investors. Financial markets are constantly becoming more efficient by providing more promising solutions to the investors. Being a part of financial markets although mutual funds industry is responding very fast by understanding the dynamics of investor's perception towards rewards, still they are continuously following this race in their endeavor to differentiate their products responding to sudden changes in the economy. Therefore a need is there to study investor's perception regarding the mutual funds. The study at first tests whether there is any relation between demographic profile of the investor and selection of mutual fund alternative from among public sector and private sector.

Introduction

Mutual funds are recognized as a mechanism of pooling together the investment of unsophisticated investors and turn in the hands of professionally managed fund managers for consistent return along-with capital appreciation. Money collected in this process is then invested in capital market instrument such as shares, debentures and other securities. Finally, unit holders in proportion of units owned by them share the income earned through these investments and capital appreciation. Mutual funds put forward a way out to investors to approach most schemes and get well-diversified portfolio because investors with small savings neither have sufficient expertise nor have access to required diversification.

Mutual funds have already entered into a world of exciting innovative products. These products are now tailor made to suit specific needs of investors. Intensified competition and involvement of private players in the race of mutual funds have forced professional managers to bring innovation in mutual funds. Thus, mutual funds industry has moved from offering a handful of schemes like equity, debt or balanced funds to liquid, money market, sector specific funds, index funds and gilt edged funds.

With the entry of private sector funds in 1993, a new era started in the Indian mutual fund industry giving the Indian investors a wider choice of fund families. Also, 1993 was the year in which the first Mutual Fund Regulations came into being,

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under which all mutual funds, except UTI were to be registered and governed. The erstwhile Kothari Pioneer (now merged with Franklin Templeton) was the first private sector mutual fund registered in July 1993.

The MF industry has evolved as an important financial intermediary in the Indian capital market. As of March 2009, the industry comprising 37 Asset Management Companies (AMCs) managed financial assets of over 4.89 trillions. Domestic MF industry is growing at a CAGR of 30% during the last three years, according to the Associated Chambers of Commerce and Industry of India (ASSOCHAM). According to the ASSOCHAM study, Asset Under Management (AUM) as percentage of GDP in India is 4.12% as against those of Australia 88.22%, Germany 10.54%, Japan 7.57%, UK 18.81%, USA 61.27%, Canada 34.33%, France 59.63%, Hong Kong 101.085 and Brazil 19.95%. The entry of commercial banks and private players in the MF industry coupled with the rapid growth of the Indian capital markets during the past couple of years has fostered an impressive growth in the Mutual Funds. The Indian mutual funds business is expected to grow significantly in the coming years due to a high degree of transparency and disclosure standards comparable to anywhere in the world, though there are many challenges that need to be addressed to increase net mobilisation of funds in the sector.

Review of Literature

The existing "Behavioural Finance" studies are very few and very little information is available about investor perceptions, preferences, attitudes and behaviour. All efforts in this direction are fragmented.De Bondt and Thaler (1985)[3] while investigating the possible psychological basis for investor behaviour, argue that mean reversion in stock prices is an evidence of investor over reaction where investors overemphasize recent firm performance in forming future expectations.Gupta (1994)[5] made a household investor survey with the objective to provide data on the investor preferences on MFs and other financial assets. The findings of the study were more appropriate, at that time, to the policy makers and mutual funds to design the financial products for the future.Madhusudhan V Jambodekar (1996)[6] conducted a study to assess the awareness of MFs among investors, to identify the information sources influencing the buying decision and the factors influencing the choice of a particular fund. The study reveals among other things that Income Schemes and Open Ended Schemes are more preferred than Growth Schemes and Close Ended Schemes during the then prevalent market conditions. Investors look for safety of Principal, Liquidity and Capital appreciation in the order of importance; Newspapers and Magazines are the first source of information through which investors get to know about MFs/Schemes and investor service is a major differentiating factor in the selection of Mutual Fund Schemes. Goetzman (1997)[4] state that there is evidence that investor psychology affects fund/scheme selection and switching.Shanmugham (2000)[7] conducted a survey of 201 individual investors to study the information sourcing by investors, their perceptions of various investment strategy dimensions and the factors motivating share investment decisions, and reports that among the various factors, psychological and sociological factors dominated the economic factors in share investment decisions.Anjan Chakarabarti and Harsh Rungta (2000)[1] stressed the importance of brand effect in determining the competitive position of the AMCs. Their study reveals that brand image factor, though cannot be easily captured by computable performance measures, influences the investor's perception and hence his fund/scheme selection.

Need of the Study

The mutual funds industry has grown by leaps and bounds in last couple of years. Following the strengthening of regulatory framework there is now greater transparency and credibility in the functioning of mutual funds and has been successful in regaining investor's faith. But to sustain the momentum it should start focusing on the areas where greater accountability and transparency could propel the industry towards a new growth trajectory. As of now big challenge for the mutual fund industry is to mount on investor awareness and to spread further to the semi-urban and rural areas. In this context, the need of study has been aroused in order to see the preference, awareness and the investors' perception regarding the mutual funds in public and private sectors.

Objectives of the study

The study has been undertaken with the following objectives.

1. To test whether the choice of public and private sector mutual funds is independent of demographic profile.
2. To identify the factors affecting investors' perception and the choice of public and private sector mutual funds.

Research Methodology

In order to achieve the objective of developing an understanding about investor's perception towards mutual funds, a well structured questionnaire was designed. Responses of individual investors were collected through filled questionnaire with pre explained objectives of research. Questionnaires were distributed to 400 individual investors-200 each for public and private sector investors, who were selected from different regions of Warangal, which included selective investors who were assumed to be having basic knowledge of financial environment. Main focus of questionnaire was to obtain responses of individual investors regarding how they evaluate mutual funds services in terms of various factors on their investment. For analyzing primary data percentage method, cross tabulation and Chi-Square[2] analysis were used.

Results of the survey

Impact of Demographic factors on investment in public and private sector mutual funds.

For the purpose of analysis demographic profile of the investors is cross tabulated in relation to choosing of the investment alternative in public and private sector mutual funds by the investors. It provides a view on perception of investors based on their social factors like Gender, Age, Educational Qualification, Marital Status, Occupation and Level of income. Hence an attempt is made to study the impact of demographic profile of the investor on the choice of investment in public and private sector mutual funds.

Gender: Table-1 shows the distribution of the sample respondents based on gender and their investment in public and private sector mutual funds.

Table 1: Gender

Type	Gender		Total
	Male	Female	
Private	179	21	200
	89.5%	10.5%	100.0%
Public	168	32	200
	84.0%	16.0%	100.0%
Total	347	53	400
	86.8%	13.2%	100.0%

(Source; Primary Data)

Table-1 reveals that the percentage of male MF investors of private sector is 89.5% and female MF investors is 10.5%, whereas in public sector it is84% and 16% respectively. the male constitute 86.8 %(347) and female 13.2 %.(53) It clearly implies that mutual fund investment is more prevalent among men rather women.

Result showing relationship between Gender and Investment Decision in Public and Private sector

Test Statistic	Degrees of Freedom	Signi-ficance Level	Calculated Value	Table Value	Result
Chi-Square	1	5%	2.62	3.84	Accept H_o

To test this saying Chi-Square test is applied and inferences are drawn. The calculated value is 2.62 at 1 degree of freedom and at 5%significance level. The table value is 3.84 which is more than the calculated value. Thus the null hypothesis is accepted indicating that there is no significant difference of opinion of gender on the investment pattern in both public and private sector mutual funds and female investors were not tapped fully in both the sectors.

Age: Table-2 shows the distribution of the sample respondents based on age and their investment in public and private sector mutual funds.

Table 2: Age

Type	Age					Total
	20-30	31-40	41-50	51-60	61 & above	
Private	76	8	0	94	22	200
	38.0%	4.0%	.0%	47.0%	11.0%	100.0%
Public	49	59	15	68	9	200
	24.5%	29.5%	7.5%	34.0%	4.5%	100.0%
Total	125	67	15	162	31	400
	31.2%	16.8%	3.8%	40.5%	7.8%	100.0%

(Source: primary data)

It can be observed from Table-2 that majority of the investors belong to the age group of 20-30 and 51-60 in both the public and private sector mutual funds, followed by the age group of 31-40 where majority investors are from public sector. Very few constitute the middle aged group of 41-50 in public sector and none in private sector. Thus, we can infer that middle aged persons are more cautious in their investment and don't like to take risk.

Result showing relationship between Age and Investment Decision in Public and Private sector Mutual Funds.

Test Statistic	Degrees of Freedom	Signi-ficance Level	Calculated Value	Table Value	Result
Chi-Square	4	5%	69.277	9.488	Reject H_o

We can also conclude with the chi-square result that, as the calculated value is more than the table value, null hypothesis is rejected and there is a significant difference in the investment pattern in both public and private sector mutual funds as people belonging to different age groups have different perception in both the sectors.

Marital Status: Table-3 shows the distribution of the sample respondents based on marital status and their investment in public and private sector mutual funds.

Table 3: Marital status

Type	Marital status		Total
	Married	Unmarried	
Private	120	80	200
	60.0%	40.0%	100.0%
Public	171	29	200
	85.5%	14.5%	100.0%
Total	291	109	400
	72.8%	27.2%	100.0%

(Source: primary data)

Table-3 shows that, majority of the investors both in public and private sectors are married people. Comparing both the sectors, there is more number of married people in public sector (171) than in private sector (120).

Result showing relationship between Marital Status and Investment Decision in Public and Private sector

Test Statistic	Degrees of Freedom	Signi-ficance Level	Calculated Value	Table Value	Result
Chi-Square	1	5%	32.801	3.841	Reject H_o

The results of the chi-square shows that the calculated value is more than the table value and null hypothesis is rejected implying that there is a significant difference in the investment pattern in both public and private sector investors with regard to the marital status.

Occupation: Table-4 shows the distribution of the sample respondents based on occupation and their investment in public and private sector mutual funds.

Table 4: Occupation

Type	Occupation						Total
	Agri-culturist	Pvt. Employee	Govt. Employee	Business-man	Self-employed	Pensioner	
Private	0 .0%	14 7.0%	23 11.5%	103 51.5%	47 23.5%	13 6.5%	200 100.0%
Public	15 7.5%	9 4.5%	60 30.0%	64 32.0%	15 7.5%	37 18.5%	200 100.0%
Total	15 3.8%	23 5.8%	83 20.8%	167 41.8%	62 15.5%	50 12.5%	400 100.0%

(Source: primary data)

Table-4 shows that, among the total sample respondents, majority were from the business sector (41.8%)in both public and private sector but comparatively the private sector constitutes more number of investors (51.5%), followed by Govt. employees (20.8%) in both the sectors-but majority are from public sector, and then followed by self employed (15.5%).

Result showing relationship between Occupation and Investment Decision in Public and Private sector

Test Statistic	Degrees of Freedom	Signi-ficance Level	Calculated Value	Table Value	Result
Chi-Square	5	5%	69.725	11.071	Reject H_o

Chi-square result shows that the calculated value (69.725) is more than the table value (11.071) rejecting null hypothesis. Hence concluding that there is a significant difference in the pattern of investment in both the sectors and the perception is not the same. And certainly the level of occupations plays a significant impact on the investment pattern.

Educational Qualification

Table-5: Educational Qualification

Type	Education				Total
	SSC	Inter-mediate	Graduate	Post Graduate	
Private	9	10	51	130	200
	4.5%	5.0%	25.5%	65.0%	100.0%
Public	9	18	69	104	200
	4.5%	9.0%	34.5%	52.0%	100.0%
Total	18	28	120	234	400
	4.5%	7.0%	30.0%	58.5%	100.0%

Table-5 shows that majority (58.50%) investors are from the post graduate level in both the sectors and 30% are graduates. The least percentage goes to the non graduates.

Result showing relationship between Educational Qualification and Investment Decision in Public and Private sector

Test Statistic	Degrees of Freedom	Signi-ficance Level	Calculated Value	Table Value	Result
Chi-Square	3	5%	7.875	9.488	Accept H_o

From the results of the chi-square we can infer that the calculated value is less than the table value, accepting the null hypothesis which implies that, in both the sectors education plays a prominent role and there is no significant difference of opinion in the perception of the investors.

Level of Income

Table-6 shows that majority of investors in both public and private sectors fall in the monthly income group of Rs.10, 000-20,000 (35.8%) followed by Rs. 20,000 – Rs. 30,000 (22.2%) and then 30,000 & above.

Table 6: Level of Income

Type	Income				Total
	Below Rs.10,000	Rs.10,000 - Rs.20,000	Rs.20,000 - Rs.30,000	Rs.30,000 & above	
Private	51	75	38	36	200
	25.5%	37.5%	19.0%	18.0%	100.0%
Public	30	68	51	51	200
	15.0%	34.0%	25.5%	25.5%	100.0%
Total	81	143	89	87	400
	20.2%	35.8%	22.2%	21.8%	100.0%

(Source: primary data)

Result showing relationship between Level of Income and Investment Decision in Public and Private sector

Test Statistic	Degrees of Freedom	Signi-ficance Level	Calculated Value	Table Value	Result
Chi-Square	3	5%	10.272	15.086	Accept H_o

Chi-square result shows that at 5% significance level and at 3degrees of freedom the calculated value is less than the table value implying that null hypothesis is accepted and there is no significant difference in the investment pattern in both the sectors and people from middle income level are the highest investors in mutual funds. It is also a known fact that, middle income people tend to take minimum risk and thus might have invested more in mutual funds.

II. Factors affecting investors' perception towards mutual funds

To understand the factors influencing investors' perception towards mutual funds, the factors identified and considered to compare between perceptions of public and private sector mutual fund investors are Liquidity, Flexibility, Management fee, Tax benefits, Service Quality, Returns, Transparency and Security. Chi-square test is applied to test and analyse their significance and importance attached in selection of mutual funds in public and private sectors.Table-7 gives a perusal view of the hypothesis framed, the results of the test and inferences drawn from it.

Table 7: Factors influencing investors' perception towards mutual funds

Hypothesis	**Chi Square Value**	**Remarks**
Ho: Perception of Public and private sector mutual fund investors are independent of **liquidity** factor. Ha: Perception of Public and private sector mutual fund investors is not independent of **liquidity** factor.	$X^2 = 25.460$ $X^2_{4.005} = 9.488$	Thus, Ho Hypothesis is rejected and it can be said that the Perceptions of Public and Private sector mutual fund investors are not independent of Liquidity factor.
Ho: Perception of Public and private sector mutual fund investors are independent of **Flexibility** factor. Ha: Perception of Public and private sector mutual fund investors is not independent of **Flexibility** factor.	$X^2 = 9.534$ $X^2_{4.005}=9.488$	Thus, Ho Hypothesis is rejected and it can be said that the Perceptions of Public and Private sector mutual fund investors are not independent of Flexibility factor.
Ho: Perception of Public and private sector mutual fund investors are independent of **Management Fee** factor. Ha: Perception of Public and private sector mutual fund investors is not independent of **Management Fee** factor.	$X^2 = 7.326$ $X^2_{3.005}= 7.815$	Thus, Ho Hypothesis is accepted and it can be said that the Perceptions of Public and Private sector mutual fund investors are independent of Management Fee factor.
Ho: Perception of Public and private sector mutual fund investors are independent of **Tax Saving** factor. Ha: Perception of Public and private sector mutual fund investors is not independent of **Tax Saving** factor.	$X^2 = 16.275$ $X^2_{4.005}= 9.488$	Thus, Ho Hypothesis is rejected and it can be said that the Perceptions of Public and Private sector mutual fund investors are not independent of Tax Saving factor.
Ho: Perception of Public and private sector mutual fund investors are independent of **Service Quality** factor. Ha: Perception of Public and private sector mutual fund investors is not independent of **Service Quality** factor.	$X^2 = 28.391$ $X^2_{4.005}= 9.488$	Thus, Ho Hypothesis is rejected and it can be said that the Perceptions of Public and Private sector mutual fund investors are not independent of Service Quality factor.
Ho: Perception of Public and private sector mutual fund investors are independent of **Return on Income** factor. Ha: Perception of Public and private sector mutual fund investors is not independent of **Return on Income** factor.	$X^2 =6.574$ $X^2_{4.005}=9.488$	Thus, Ho Hypothesis is accepted and it can be said that the Perceptions of Public and Private sector mutual fund investors are independent of Return on Income factor.
Ho: Perception of Public and private sector mutual fund investors are independent of **Transparency** factor. Ha: Perception of Public and private sector mutual fund investors is not independent of **Transparency** factor.	$X^2 = 11.622$ $X^2_{4.005}=9.488$	Thus, Ho Hypothesis is rejected and it can be said that the Perceptions of Public and Private sector mutual fund investors are not independent of Transparency factor.
Ho: Perception of Public and private sector mutual fund investors are independent of **Security** factor. Ha: Perception of Public and private sector mutual fund investors is not independent of **Security** factor.	$X^2 = 4.314$ $X^2_{4.005}=9.488$	Thus, Ho Hypothesis is accepted and it can be said that the Perceptions of Public and Private sector mutual fund investors are independent of Security factor.

(Source: primary data)

From the analysis it is clear that the significantly influencing factors on the investment made by the investors of public and private sector mutual funds are liquidity, flexibility, savings on tax, service quality and transparency. As per the table-7 above, at 5% significant level and at 4 degrees of freedom, the calculated values of all these factors were greater than the table values, which implies that the perception of investors are dependent on these factors and there is no significant difference in the opinion of both the public and private sectors mutual fund investors. As far as the other factors like Management Fee, Return on Income and Security are concerned, there is a significant difference in the perceptions of the investors of the public and private sector mutual funds and needs to be concentrated on.

Management fee is the minimum fee charged by the AMC for floating different investment schemes, and from the study the investors opine that private sector mutual fund companies charge more fees compared to that of public sector mutual fund companies and thus there is dissatisfaction regarding this factor among the private sector investors. Hence fund manager of the private sectors should concentrate on this aspect.

Investor's investment in any particular fund scheme of mutual funds depends upon anticipated **return** that will accrue from that particular investment. The analysis shows that there is a significant difference in the perception of the investors of public and private sector mutual funds and feel that the returns from the public sector are not satisfactory and upto their expectations. It is a known fact that most of the public sector MF companies invest in safe instruments which have less returns but surer returns, where as the private sector MF companies invests in equities which are highly risky but get greater returns.

Security is one area where investors like to bank on. The main reason behind saving and investing in any of the financial investments is to secure for the future. As per the analysis it is quite evident that there is a significant difference in the perception of the investors on public and private sector mutual funds. The investors of the public sector feel more secured compared with that of private sector mutual funds even though the returns are not that much expected because they feel that the public sector MF's are well regulated and are less risky compared to that of private sector MF's.

Conclusion

Mutual Funds have emerged as an important segment of financial markets and so far have delivered value to the investors. The study reveals that the investors' perception is dependent on the demographic profile and assesses that the investors Age, Marital status and occupation has direct impact on the investors' choice of investment. The study further reveals that female segment are not fully tapped and even there is low target on higher income group people. Hence fund managers should take steps to tap the female segment and higher income group segment to enhance more investment in mutual fund Investment Avenue which would really help the industry to flourish. Further the findings of the research were on the factors influencing investors' perception on public private MF's. It reveals that Liquidity. Flexibility, Tax savings, Service Quality and Transparency are the factors which have a higher impact on perception of investors. These factors give them the required boosting in the investment process. Therefore it becomes imperative on part of the fund managers to enhance these features for attracting more investors and also to retain the trust, the investors have in them.

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Determination and Validation of Retail Service Quality Index (RSQI) in Apparel Stores in Madurai City

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Abstract: *The triumph of retail business exclusively depends on the customer satisfaction.Incresed disposable income increased the purchase of apparels in retail stores and it is necessary for the apparel stores to retain the prospective customers. Branded apparels are now fast selling among the customers. Delivering customers/shoppers satisfaction is not a simple calculation but involves a cumbersome process of multiple variables acting together in a complex networked fashion in varying magnitudes. Now India is said to be a glamorous market for retail industry and heavy competition exists between local and global players. The present research aims to identify the most influencing factors which induce the customers for repeated visit to the same apparel retail stores. Interesting findings were revealed in this study which interprets a genuine output to the marketers which will enhance them to boost up the business even more.*

Keywords: *Apparel stores, retail industry, organized retail, merchandising, visualizing*

Introduction

The retail industry in India is of late often being hailed as one of the dawn sector in the economy. The total retail (organised and unorganised) industry in India is currently estimated to be Rs 20 lakh crore. This has been projected to reach Rs 27 lakh crore by 2015. Organised retail, which is currently estimated to be Rs1.0 lakh crore (5 per cent share), is projected to reach Rs 3.0 lakh crore (11 per cent share) by 2015. This means a tripling of the current size and scale of organised retail in the next five years. While organised retail will grow at a fast pace, it is important to note that a larger part of the Rs 7.0 lakh crore growth in total retail will come from unorganised retail. We project this segment (unorganised retail) to grow by over Rs 4.5 lakh crore in the next five years. Discretionary income of the Indian population is rising at about 15 per cent every year, one would expect the apparel sector to witness a higher growth. There is going to be significant changes in the overall consumption basket hence brands in low involvement categories would be under the increasing threat of commoditization. Profitable growth would be the emphasis for retailers and investors in the time to come. We expect that in the next 5-10 years, the scale of business opportunity and pace of change would be fundamentally different from what it has been in the past. This calls for almost every company to go back to the strategy drawing board and develop a vision for the next decade in order to emerge as a successful player in the consumer and retail sector.

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Research Questions

- To examine the factors which influences the customers to visit retail apparel stores repeatedly
- To study the demographic and rational profile of the customers.
- To understand the relationship between certain demographic variables.

Literature review

In India, organised retailing is in the nascent state, merchandise and convenience are considered as important issues than ambience or other services extended by retail outlets. Sinha et al's (2002) study revealed that convenience and merchandise are identified as primary reasons followed by ambience and patronized stores as the reasons for choosing the stores for purchasing. In Uusitalo's (2001) study on store size comparison, findings suggest that the associations of small stores included personal attention, accessibility, nearness, and high prices. Large stores were associated with the great amounts of goods, special offers, and a lot of walking and searching. In Moschis et al's (2004) study findings are in similar lines with that of Sinha et al work; findings including ease of locating the merchandise, shop near to the residence, familiar brands' availability, and fast checkout counters are considered by more than 80 per cent of consumers as some of the reasons to start or continue to patronize the food stores. Significance of geographic location is found to be an over-looking factor; Marjanen (2000) argued that positive image alone is not sufficient to attract the shoppers, when the location in relation to the other activities was not satisfactory. Store environment is found to be a significant factor in consumer's evaluations. Moya and Kincade (2002) found that shoppers placed more importance on the sensory/layout environmental dimension than the music/layout environmental dimension. Home's (2002) study on rural consumers' patronage behavior in Finnish context found that social interaction with store personnel is a crucial evaluation criterion of rural consumers concerning grocery shopping and grocery stores. Moreover, the personal interaction is found to influence the sales too; Howard, Gengler and Jain (1995) found that if salesperson remembers the customer's name, it would influence increase in sales if the customer found it to be a compliment as opposed to the suspicion of the salesperson's vested interest in remembering the name. Reynolds and Arnold (2000) reported that relationship customers maintained their primary loyalty to the salesperson, which then "spills over" and affected loyalty to the store. Uusitalo's (2001) study in the Finnish context too supports that the feeling of personal attention and care about personal needs and hopes is expressed by several informants. Slatten et al's (2009) study reveals that managers must regard their employees as critical assets, owing to the interactive nature of service delivery. Price is considered to be an important attribute in shopping; customers showed compromise for some store attributes as long as they receive lower prices (Paulins and Geistfelds, 2003). Identification of consumer segments is a vital antecedent for the success of any business. Age has been identified as a factor for segmenting the shoppers; later aged female teens have been identified as one of the important segments that contribute higher percent to sales (Taylor and Cosenza, 2002). Jarratt (1998) argued that dissatisfaction with the total shopping offer within the local trading area will encourage outshopping activity of all shopper segments. There is the transition in the shopping behavior of the Indian consumers along with the growth in the retail industry. They have identified that policy, availability, physical aspects, problem solving, value added services, store merchandise, accessibility and convenience are the important factors from the customer perception analysis using Retail service quality instrument. Also they said that the factors like value added services, store merchandise, accessibility are the new dimensions that have emerged which are not found in the previous studies **(S.P. Thenmozhi and Dr. D. Dhanapal -2010).**

The empirical results of this study indicated that five dimensions of retail service quality – physical aspects, reliability, personal interaction, problem solving and policy – have positive and significant effects on the overall retail service quality and perceived quality of store brands. (**Min-Hsin Huang-February 2009).**It was also inferred from the study that there is a significant difference between the dimensions of service quality and its effect on customer loyalty. This is true in service context where consumers look for tangible clues and merchandise to patronize a retail store. It is thus recommended that retail stores owners should give prime importance to the quality, **(Romi Sainy 2009).**The findings show that our emphasis on the service quality antecedents is vital because the dimensions of service quality play a significant role in the performance of a hotel as a service sector. Thus, the delivery of quality services remains essential to the success of the hospitality industry (**Farzaneh Mola and Jamil Jusoh 2011)**

Research Methodology

Measures

Based on the works of Dabolkar et al. (1996) the following scale has been adopted for measuring the perception of the in-store shopping experiences of customers. Dabholkar *et al.* (1996) proposed that retail service quality has a hierarchical factor structure comprising five basic dimensions, namely 'physical aspects', 'reliability', 'personal interaction', 'problem solving', and 'policy'. The instrument to a large extent is a combination of SERVQUAL and Store Image dimensions which form a very important aspect to customers in their in-store shopping experiences. Store image comprises three general factors: merchandise related aspects, service related aspects and pleasantness of shopping at a store (Mazursky and Jacoby, 1985). The research design chosen for the study is descriptive. The primary data was collected through a self administrated questionnaire which was originally developed for this purpose. Fifty questionnaires were distributed for the purpose of pre-testing the questionnaire's contents. A complete questionnaire was developed based on the comments collected during the pre-testing period. Convenient sampling has been employed with the questionnaires being collected from 455 respondents. Questions asked respondents to rate their degree of agreement using a 5-point Likert scale. The study was carried out in leading apparel retail stores in Madurai city, Tamilnadu, South India. An examination had been made from the reliability of the data to check whether random error causing inconsistency and in turn lower reliability is at a manageable level or not, by running reliability test. Amongst the reliability tests that were run, the minimum value of coefficient alpha (**Cronbach's alpha**) obtained was **0.722**. This shows that data has satisfactory internal consistency reliability. Using Statistical Package for Social Science the following tests were carried out 1) Factor analysis 2) Multiple Regression and 3) Chi square test.

Factor Analysis

KMO and Bartlett's Test

The individual statement of retail service quality was examined using factor analysis based on 28 individual statements and the reliability of the subsequent factor structure was then tested for internal consistency of the grouping of the items.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.773**
Bartlett's Test of Sphericity	Approx. Chi-Square	2229.286
	df	378
	Sig.	.000

Kaiser – Meyer – Olkin measure of sampling adequacy index is 0.773, which indicates that factor analysis is appropriate for the given data set. KMO measure of sampling adequacy is an index to examine the appropriateness of factor analysis. High values between 0.5 and 1.0 indicate factor analysis is appropriate. Values below 0.5 imply that factor analysis may not be appropriate.

Interpretation of factors is facilitated by identifying the statements that have large loadings in the same factor. The factors can be interpreted in terms of the statement that loads high on it. The factors of effectiveness of mobile advertising comprises of 28 individual statements. Out of 28 statements, it was grouped and reduced to 9 factors which contribute more towards the customer satisfaction towards apparel stores. Component wise highest factor has highlighted in the table and they are, This store willingly handles returns and exchanges of products **(.724)**, When this store promises to do something by a certain time, it will do so **(.701)**, Employees in this store have the knowledge to answer customers' questions **(.631)**, The physical facilities at this store are visually appealing **(.711)**, This store willingly handles returns and exchanges of products **(.724)**, This store has operating convenient hours to all their customers **(.766)**, This store accepts most major credit/Debit cards**. (.703)**. Factor 5 and 7 were omitted since it doesn't have any relationship among independent variables.

Table 2: Rotated Component Matrix

	Component								
	1	2	3	4	5	6	7	8	9
This store has modern-looking equipment and fixtures.									.524
The physical facilities at this store are visually appealing.				**.711**					
Materials associated with this store's service (such as shopping bags, catalogs or statements) are visually appealing.				.510					
This store has clean, attractive and convenient public areas (restrooms, fitting rooms).									
The store layout at this store makes it easy for customers to find what they need.		.636							
The store layout at this store makes it easy for customers to move around in the store.		.629							
When this store promises to do something by a certain time, it will do so.		**.701**							
This store provides its services at the time it promises to do so.		.535							
This store performs the service right the first time.					.604				
This store has products available when the customers want it.							.694		
This store insists on error-free sales transactions and records.			.524						
Employees in this store have the knowledge to answer customers' questions.			**.631**						
The behavior of employees in this store instills confidence in customers.			.531						
Customers feel safe in their transactions with this store.	.646								
Employees in this store give prompt service to customers.									
Employees in this store tell the customers exactly when services will be performed.									
Employees in this store are never too busy to respond to customers' requests.									
This store gives customers individual attention.									
Employees in this store are consistently courteous with customers.									
Employees in this store treat customers courteously on the telephone.	.582								
This store willingly handles returns and exchanges of products.	**.724**								
When a customer has a problem, this store shows a sincere interest in solving it.	.573								
Employees of this store are able to handle customer complaints directly and immediately.	.716								
This store offers high quality products						.705			
This store provides plenty of convenient parking for customers.	.651								
This store has operating convenient hours to all their customers.						**.766**			
This store accepts most major credit/Debit cards.									**.703**
This store offers customer privilege cards/discount cards.								.862	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 14 iterations.

Multiple Regressions – Based on Emerged Components from Factor Analysis

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
6	.759(f)	**.577**	.571	.199

Predictors: (Constant), This store willingly handles returns and exchanges of products., Employees in this store have the knowledge to answer customers' questions., When this store promises to do something by a certain time, it will do so., This store accepts most major credit/Debit cards., This store has operating convenient hours to all their customers., The physical facilities at this store are visually appealing.

The above model summary table shows R-Square for this model is 0.577. This means that 57.77 percent of the variation in overall effectiveness of apparel stores (dependent variable) can be explained from the 7 independent variables. The table also shows the adjusted R-square for the model as .571.

Any time another independent variable is added to a multiple regression model, the R-square will increase (even if only slightly). Consequently, it becomes difficult to determine which models do the best job of explaining variation in the same dependent variable. The adjusted R-square does just what its name implies. It adjusts the R-square by the number of predictor variables in the model. This adjustment allows the easy comparison of the explanatory power of models with different numbers of predictor's variable. It also helps us to decide how many variables to include in our regression model.

Table 4: Anova

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
6	Regression Residual Total	24.110 17.694 41.804	6 448 454	4.018 .039	101.740	.000(f)

The ANOVA table, as displayed in the above table shows the F ratio for the regression model that indicates the statistical significance of the overall regression model. The larger the F ratio there will be more variance in the dependent variable that is associated with the independent variable. The F ratio =101.740. The statistical significance is .000- the "sig". There is relationship between independent and dependent variables.

From the above 6 independent variables all of them are statistically significant.

Table 5: Coefficients(a)

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
6	(Constant)	1.933	.083		23.264	.000
	This store willingly handles returns and exchanges of products.	.139	.009	**.506**	16.035	**.000**
	Employees in this store have the knowledge to answer customers' questions.	.088	.010	**.276**	8.598	**.000**
	When this store promises to do something by a certain time, it will do so.	.067	.010	**.211**	6.648	**.000**
	This store accepts most major credit/Debit cards.	.065	.010	**.203**	6.459	**.000**
	This store has operating convenient hours to all their customers.	.041	.009	**.150**	4.792	**.000**
	The physical facilities at this store are visually appealing.	.061	.013	**.145**	4.684	**.000**

a Dependent Variable: overall satisfaction of customers towards retail apparel stores

Table 6: Chi-Square Test (a)

Annual income * Amount spending for purchase

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.495(a)	8	**.018**
Likelihood Ratio	22.488	8	.004
Linear-by-Linear Association	7.248	1	.007
N of Valid Cases	455		

a 6 cells (40.0%) have expected count less than 5. The minimum expected count is .26.

The calculated Pearson chi square value is .018 which is lesser than the expected value of .05. So there is a relationship exists between annual income of the respondents and amount spending for purchase.

Table 7: Chi-Square Test (b)

Gender * frequency of visit to the store in a month

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.051(a)	4	**.007**
Likelihood Ratio	14.169	4	.007
Linear-by-Linear Association	13.466	1	.000
N of Valid Cases	455		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.30.

The calculated Pearson chi square value is .007 which is lesser than the expected value of .05. So there is a relationship exists between Gender and frequency of visit.

Discussion

In a swiftly varying context like India, the shoppers have more choices than ever for products, and more locations and channels than ever for their purchases. The marketers could gain considerable insights about the shoppers by analyzing the past data; from their purchase histories, shoppers point to the products and services they want. Marketers, who investigate this data carefully, gain added information that the customers are pointing to yield as well. As per the result obtained from the regression analysis, it is inferred that willingness of exchange and returns by store, Employee knowledge about store, promise and commitment of the store, acceptance of major credit/debit cards, Operation of stores at convenient hours and physical facilities of the stores contribute more towards the repeated purchase of the Madurai peoples. The chi square test also given attention grabbing findings which shows that there was a significant association between annual income and amount spending for purchase. And the test added that there was a relationship exists between gender and frequency of purchase. Since majority of the respondents were female, there frequency of visit was high compared to male.

Conclusion

Indian markets are characterized by low income level, literacy, constrained penetration of goods and services, which in turn limit the capacity of consumption of goods and services. Understanding the markets, identifying meaningful segments are essential activities for any marketers. Employee contribution and their interaction were given only low contribution in this study. Marketers have to have an eye on the human resource and necessary training needed for employees in interaction, courtesy, and prompt service. Many times the customers prefer to handle their issues at store levels – an informal complaining handling than a formal procedure. To receive the complaints and feedback mechanism, maintaining a good rapport/ personal interaction element is an essential element of store offering. The personal interaction component proved to affect the evaluation of various store attributes. Thus, creating and maintaining an effective store environment or merchandize quality alone is not sufficient for the success of stores; the human interaction found to influence all the other offerings.

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DETERMINANTS OF PROFITABILITY IN INDIAN AUTOMOTIVE INDUSTRY

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Abstract: *As the most of the firms contemplate profit maximisation as an indicator of growth and development of an enterprise, the concept of profitability has become significant. Profitability is considered to be the centre around which rotation of all the actions of business takes place. The main objective of this study is to ascertain the determinants of profitability of Indian Automobiles Industry for a period of five years i.e. 2004-05 to 2008-09. The study found that DE, ITR and SIZE were the most important determinants of the profitability which affected the profitability of the companies under the study positively. Only LIQ was found to have negative effect on the profitability.*

Keywords: *Debt-Equity Ratio, Inventory Turnover Ratio, Liquidity, Profitability, Size*

Introduction

Profitability is significant for survival and growth of the business enterprise. Several factors play an important role directly or indirectly in determining profitability. Profitability is determined by pricing strategy as well as sales volume. It also depends not only on the factors affecting elements of cost of sales but cost of production also. Size, share in market, stage of growth and corporate policies and strategies of an enterprise also play a vital role in determining profitability thereof (Samuels and Smyth, 1968; Marcus, 1969; Gale, 1972; Penerose, 1980). As the large size firms have the advantage of technical know how and economies in manufacturing, marketing, supervision, and in raising capital; positive relationship exists between the size of the firms and profitability (Nagarjunan and Barathwal, 1989). Profitability is also determined by the assets structure and proper utilisation of the production capacity (Chandra Sekaran, 1993). Profitability is also explained by the age of the firms, diversification, expansion of capacities and retained earnings (Agarwal, 1999). Vertical integration, leverage, liquidity, inventory turnover and operating expenses to sales ratio are also the strongest determinants of the profitability of an enterprise (Vijaya Kumar and Kadirvel, 2003). The prime objective of this study is to check determinants of profitability of the selected three passenger vehicle players and three two-wheeler players in India during the period 2004-05 to 2008-09. For the purpose of analyzing the determinants of profitability, selection of variables has been made on the basis of empirical works and existing theory. It is hypothesized for the study that independent variables (i.e. Size (Total Assets), Liquidity (Current Ratio), Inventory Turnover Ratio and Debt-Equity Ratio) are statistically significant in explaining dependent variable (Profitability i.e. Return on Capital Employed) of the players under the study. This study is organised as follows: the next section following the introduction discusses the study methodology. The third section provides details of the results and analysis of the available data and the final section presents the main conclusions.

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Study Methodology

The main objective of this study is to ascertain the determinants of profitability of Indian Automobiles Industry for a period of five years i.e. 2004-05 to 2008-09. It includes following three Indian passenger vehicle players and three two-wheeler players selected on the basis of performance, position, sales and paid up capital:

Maruti Suzuki India Limited
Tata Motors Limited
Mahindra & Mahindra Limited
Hero Honda Motors Limited
Kinetic Motor Company Limited
TVS Motor Company Limited

The study is mainly based on secondary data collected from annual reports of companies. This study uses a descriptive analysis to ascertain determinants of profitability of the entities.

Though number of factors affects profitability of the business, the following dependent variable i.e. Return on Capital Employed and independent variables i.e. Size, Liquidity, Inventory Turnover Ratio and Debt-Equity Ratio which are found dominant in determining profitability of Indian Automobiles Industry have been selected for the study.

Dependent Variable

In order to measure profitability of the enterprise, general and overall profitability ratios are used as measures. General profitability or Return on sales focuses on short-term perspective of profitability because sales are annual flows, while overall profitability or return on assets focuses on long-term perspective of profitability. Return on Capital employed has been used as dependent variable in this study.

Independent Variables

Size: Size of the firm has been employed as one of the determinants of profitability by the many researchers in their study. The reason for taking size of the firm as the determinants of profitability is that the bigger the size of the firm is, the lower the costs are and thus the higher the returns are. On the basis of economic theory, the size-profitability relationship is more likely to be curvi-linear and hence in the initial stage, profitability is high due to big size of the firm, after reaching a certain stage, the advantage of the size comes to an end and beyond that there may be indirect relationship due to problem of the size. On the basis of economic theory normally a positive hypothesis is set for size-profitability relationship.

Liquidity: The management of the company is required to manage not only the fixed capital but working capital also. The management of the working capital is significant to maintain liquidity in the enterprise. To get an idea about liquidity of various firms, current ratio of each firm is compared with one another. On one hand, the firm having higher current ratio is considered to be having better liquidity position while on the other it also indicates poor credit management and thus indicates loose or liberal management practices. The firm having lower current ratio is considered to be having inadequate margin of safety and thus poor liquidity.

Inventory Turnover Ratio: Like working capital management, management of inventory is equally significant for any enterprise. Heavy investment in inventory than its requirement results into unnecessary blockage of capital. Lower investment in inventory than its need results into low sales and thus low degree of profitability. To know whether management of inventory is done adequately or not, inventory turnover ratio of the enterprise is determined. Inventory turnover ratio indicates number of times inventory moved during the year. If the inventory turnover ratio of the enterprise is high, the business is considered to be more profitable. While low inventory turnover ratio indicates inability of the firm in meeting customer demand, excessive investment in inventory, obsolescence of the inventory and ultimately affects the profitability of the firm. Review of empirical work also reveals inventory turnover ratio as one of the important

Variables that affects the profitability of the enterprise. In view of this, inventory turnover ratio has been used as independent variable in this study

Debt-Equity Ratio: Debt- Equity Ratio focuses on the relationship between long term external equities and the internal equities. The higher ratio suggests greater pressure and interference form external equities providers. It also suggests fixed financial burden on the company's profit. Even the lower ratio is no profitable from the view point of the equity shareholders because of non-availing of the benefit of trading on equity.

Specification of Model

Multiple Linear Regression model consisting of four independent variables has been used to test the effect of independent variables on dependent variable as shown below:

$$y = b_0 + b_1 x_1 + b_2 x_2 + ... + b_k x_k$$

Where, y - **The Dependent Variable,**

$x_1, x_2, ..., x_k$ - **Independent Variables and**

$b_0, b_1, b_2, ..., b_k$ - **The Regression Coefficients**

The independent variable is the known, or predicted, variable. As the values for x_i vary, the corresponding value for y either increases or decreases, depending on the sign of b_i.

$$\mathbf{P = (b_o + b_1SIZE + b_2LIQ + b_3ITR + b_4DE)}$$

Where, P - **Profitability (Return on Capital Employed)**

SIZE - **Total Assets**

LIQ - **Liquidity (Current Ratio)**

ITR - **Inventory Turnover Ratio**

DE - **Debt-Equity Ratio**

For the analysis of data for five years i.e. 2004-05 to 2008-09 the technique of multiple linear regression analysis was used. An attempt was made to develop a multiple regression equation using identified key variables. The following hypotheses were tested:

H_0 – There is no relationship between the dependent variable and the independent variables.

H_1 – There is relationship between the dependent variable and the independent variables.

H_2 – The model fitted is best described the behaviour of dependent variable against suitable Alternatives.

Result and Analysis

Table 1 displays that in Indian automobiles industry; DE and LIQ were the most important determinants of the profitability as the regression coefficients of these variables had the highest values during the study period. The regression coefficients of SIZE had positive values during the most of the years under the study, which suggests that there was a positive relationship between profitability and SIZE. It means that the companies that are big in SIZE have a good profitability as compared to the companies which are small in SIZE. The regression coefficients of LIQ show negative values during the most of the years under the study which suggests that there was a negative relationship between profitability and LIQ. It means that decreasing LIQ affects the profitability adversely. The regression coefficients of ITR show positive values during the period of the study which suggests that there was a positive relationship between profitability and ITR. It means that the higher the ITR is, the higher the profitability will be. The regression coefficients of DE show positive values during the most of the years under the study which suggests that there was a positive relationship between profitability and DE. It means that low DE affects the profitability adversely because of low benefit of 'Trading on Equity'. The above analysis was also supported by the values of

Table 1: Determinants of Profitability of Indian Automobiles Industry

Year	Regression Coefficients				Model Summary (at 5 percent Significant Level)		
	SIZE	LIQ	ITR	DE	R^2	F	*Significance F*
2004-05	0.00077	-11.97968	1.78826	15.78686	0.98601	17.62342	0.176574
	(0.61098)	(-1.45773)	(4.36236)	(1.01979)			
2005-06	0.00201	-12.245	1.11170	-26.6073	0.99815	135.5314	0.064324
	(3.86655)	(-3.07939)	(7.13304)	(-4.79793)			
2006-07	0.00185	-11.4473	0.74192	-4.96634	0.93733	3.73955	0.367647
	(0.95953)	(-0.50041)	(1.23564)	(-0.38913)			
2007-08	0.00098	4.32073	1.43326	0.32307	0.96913	7.84902	0.260827
	(1.32585)	(0.13732)	(2.43819)	(0.24453)			
2008-09	-1.09905	-16.70768	1.34408	7.55972	0.99350	38.26734	0.120585
	(-0.06683)	(-4.17195)	(11.34175)	(1.80620)			

Values in Brackets are t values

coefficient of determinants r^2 which ranges between 0.93733 and 0.99815. This indicates that the independent variables have been causing more than ninety seven percent of the variation in profitability of the companies under the study. The 'F' values also support that the independent variables were the most important variables to determine the profitability. The results of the model give reliable estimates and is best described the behaviour of dependent variable against suitable alternatives and therefore Alternate Hypotheses H_1 and H_2 are accepted.

Conclusion

It may be concluded that DE, ITR and SIZE were the most important determinants of the profitability which affected the profitability of the companies under the study positively. Only LIQ was found to have negative effect on the profitability. DE was the most important determinant of profitability of the automobiles industry because its regression coefficients were the highest and found statistically significant for the most the years under the study which suggests that there was a positive relationship between profitability and DE. Second highest regression coefficient of LIQ suggests that it was also another significant determinant of profitability and there was a negative relationship between profitability and LIQ. ITR was the only determinant which affected the profitability of the companies during the study period positively but due to its lower regression coefficient, it was at the third place. Finally, SIZE was the determinant which was positively related with the profitability of the companies during the most of the years of the study period and its the lowest regression coefficients made it last in the list of the determinants selected for the present study.

From the analysis of various determinants of profitability, it is clear that the firms having big SIZE are earning good return on capital employed. As the SIZE of the firm is the strongest factor in determining the profitability, it is therefore suggested that the management should concentrate on increasing the size because the firms having big size have access to capital market and enjoy benefit of low cost of sales and hence they earn good return on capital employed. ITR is also found to be a significant factor in shaping the profitability of the selected companies under the study. It is therefore recommended to improve inventory turnover ratio through creation of demand of goods by increasing geographical boundary of the market for company's products. With a view to improving the ratio, the company should also focus on controlling cost of goods sold by making effective purchase of raw material and reducing wastage in production. With a view to manage LIQ, it is also suggested to have trade off between solvency and profitability because it is the outcome of properly managed working capital and it takes care of not only composition of the current assets but funds invested in obtaining current assets too. In order to manage solvency, it is suggested to have the balance DE so as to reduce fixed financial burden on the company's profit on one hand and give the benefit of trading on equity to the shareholders.

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DETERMINANTS OF SHARE PRICES IN INDIAN AUTO INDUSTRY

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Abstract: *The paper attempts to investigate the value relevance of major corporate financial variables in the context of Indian Auto companies. Using a cross section of BSE Auto index listed firms over the 2001-2011 period, the study empirically determines the extent to which stock prices are supported by corporate policy issues (Dividend decision, Investment decision and Financing decision) in Indian stock market. The results of this study indicate that fundamental corporate financial variables play an important role in stock pricing in Indian Auto sector. The study provides support for the value relevance of dividend and investment policy suggesting that earnings distributed as dividends have a greater impact on firm value than does earning retained within the firm confirming the signaling effect of dividend policy. The study finds that dividend policy and investment policy are value relevant and helps provide a signal regarding the market information not contained in accounting publications. The study however fails to establish the value relevance of capital structure in Indian Auto sector.*

Keywords: *Share prices, corporate financial variables, value relevance, dividend policy, capital structure, investment decisions*

Introduction

Background

The value relevance of financial statements have always been an area of central concern in academics given the need to understand the factors that explain pricing of tradeable assets. The desire to understand the pricing/valuation of assets in absence of uniform set of factors/variables have led to plethora of theoretical based valuation models and frameworks attempting to link accounting information to firm/stock value. As a consequence, a number of empirical studies have been conducted, mostly in developed markets (US, UK) to explain this value relevance. Although different studies have linked various accounting variables to firm/stock value, the common findings have moved towards the belief that basic fundamental accounting variables (viz. earnings, book value, dividends, cash flow) approximate pricing of firm particularly well

The value relevance of published accounting information in the form of accounting earnings and the book value of assets has been a popular research topic in recent years with a large body of work emerging from the seminal works of Ohlson (1995,1999), and Feltham-Ohlson (1995, 1996), Strong et al. (1996), Rees (1997) and many others.

Basis and Objective of Study

The purpose of this study is to examine the value relevance of various corporate financial variables viz.

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dividend, debt and capital expenditure in Indian IT sector so as to provide further empirical evidence on accounting based value models (Ohlson, 1995,1999, Feltham-Ohlson, 1995, 1996, Strong et al., 1996, Rees,1997 and many others). Stock pricing models which are based on the Ohlson framework, combines the dividend discount model with a clean surplus relation and values stock price as a function of book value of equity and the present value of future expected abnormal earnings. Arguing that a number of other key financial variables - notably capital structure, dividend policy and capital expenditures - are also indicators of value, the financial hypothesis are tested using the following extension of basic Ohlson model

$$P_{it} + b_1 DV_{it} + b_2 BV_{it} + b_3 RE_{it} + b_4 D_{it}/E_{it} + b_5 IV_{it} + \varepsilon_t$$

Where P_{it} is the price per share for firm i at year end t, BV_{it} is the book value of equity per share for firm i at year end t, DV_{it} is the ordinary dividend per share for firm i at year end t, RE_{it} is the retained earnings per share for firm i at year end t, D_{it}/E_{it} is the ratio of long term debt (secured and unsecured loans) to equity for firm i at year end t and IV_{it} is the investment (capital expenditure) per share for firm i at year end t.

Literature Review

Valuation Theories and Models

The relationship between accounting information and share price of a firm has been an area of extensive academic research and interest given that the general purpose of financial statements is to provide relevant financial information to investors.

Earlier research in this field concentrated only on earnings as the value driver of share prices, but with emergence of seminal work from Ohlson (1995) and Feltham-Ohlson (1997) book value of equity as an additional variable started to gain prominence with residual income framework becoming indicator of value creation.

Residual income (abnormal earnings) valuation model

The RIV (Residual income valuation) model, which has its genesis in DDM valuation model, shows that the intrinsic value of a firm can be expressed as original investment (original book value) plus the present value of infinite residual (abnormal) earnings beyond that investment. Mathematically

$$V_t = BV_t + \sum_{i=1}^{\infty} \frac{E_t[x^{\alpha}_{t+i}]}{(1+r)^t}$$

where V_t is the intrinsic value of common equity at time t, BV_t is the book value of common equity at time t, $E_t[x^{\alpha}_t]$ is the expected future residual (abnormal) income in period t+i conditional on information available at time t, and r is the cost of equity, indicated as a constant

Ohlson (1995) defines residual income or abnormal earnings as:

$$x^{\alpha}_t = x_t - (r_t * BV_{t-1})$$

where x^{α}_t is the residual income at time t, $_t$ denotes net income for the period ending at time t, r is the cost of equity, and BV is the book value of common equity at time t–1. The residual (abnormal) income is defined as the amount that net income exceeds the capital charge on the book value of equity.

The Ohlson (1995) model

The Ohlson model which builds on the abnormal earnings model is comprised of 3 basic assumptions. First, price is equal to the present value of expected dividends

$$V_t = \sum_{i=1}^{\infty} \frac{E_t[DIV_{t+i}]}{(1+r_{t+i})^t}$$

Second, the clean surplus accounting relation:

$$BV_t = BV_{t-1} + x_t - D_t$$

Combining the clean surplus assumption with the dividend discount model in yields:

$$V_t = BV_t + \sum_{i=1}^{\infty} \frac{E_t[x^{\alpha}_{t+i}]}{(1+r)^t}$$

Ohlson extended the above residual income model by introducing the third assumption of Linear information dynamic (LIM).

The linear information dynamic makes assumptions about the relationship between earnings of different periods and it is presented below:

$$x^{\alpha}_{t+1} = \omega x^{\alpha}_{t} + \upsilon_t + \varepsilon_{1,\, t+1}$$

$$\upsilon_{t+1} = \square\upsilon_t + \varepsilon_{1,\, t+2}$$

Where: x^{α}_{t} = abnormal earnings

ω = persistence term for abnormal earnings
$\square$ = 'other information', and
$\square$ = persistence term for 'other information'
ε = error term

The equations jointly describe current abnormal earnings as a function of the previous period abnormal earnings plus 'other information' and an error term. Both equations are autoregressive one processes, which in practice would be calculated across an extended time period.

The assumption of the linear information dynamic together with the assumptions necessary to state the abnormal earnings model (PVED and clean surplus relation) allow the following closed-form value relation to be stated:

$$V_t = BV_t + \alpha_1 x^{\alpha}_{t} + \alpha_2 v_t$$

Where: V_t = equity value of firm at time t

BV_t = book value at time t

x^{a}_{t} = abnormal earning at time t

v = 'other information' at time t

$\alpha_1 = \omega/(1+R_f - \omega)$, and
$\alpha_2 = R/(1+R_f\text{-}\omega).\ (1+R_f\text{-}\gamma)$

This formulation treats the value of shareholders' equity as the sum of three components: (i) current book value, (ii) capitalised current residual income, and (iii) capitalised value implied by other information. Conversely, the model implies that the market value is equal to the book value of the firm's assets, adjusted for abnormal earnings and other information that modifies the prediction of future profitability. The discount rate used in the Ohlson (1995) model thus far has been the risk free rate, and therefore based on risk neutrality.

Empirical Model and Hypothesis

Most empirical models based on Ohlson (1995) framework values stock price as a function of book value of equity and the present value of future expected abnormal earnings. This simplified basic expression, however, serves only as a first approximation as almost all empiricists generally extend the basic model to include other fundamental variables. Collins et al. (1997), Rees (1997), Amir and Lev (1996), Tiras et al. (1998), among others, have all extended the basic model to include other variables.

Arguing that a number of other key financial variables - notably capital structure, dividend policy and capital expenditures - are also indicators of value, the financial hypothesis are tested using the following extension of basic Ohlson model and incorporating the 3 corporate policy decisions (Dividend decision, Investment decision and Financing decision)

$$P_{it} = b_0 + b_1 DV_{it} + b_2 BV_{it} + b_3 RE_{it} + b_4 D_{it}/E_{it} + b_5 IV_{it} + \varepsilon_t$$

Where P_{it} is the price per share for firm i at year end t, BV_{it} is the book value of equity per share for firm i at year end t, DV_{it} is the ordinary dividend per share for firm i at year end t, RE_{it} is the retained earnings per share for firm i at year end t, D_{it}/E_{it} is the ratio of long term debt (secured and unsecured loans) to equity for firm i at year end t and IV_{it} is the investment (capital expenditure) per share for firm i at year end t.

The Hypothesis

H1 – Value of a firm is a function of retained earnings and book value per share i.e. BV_{it} and RE_{it} and are positively and significantly related to P_{it}

H2 – Dividend policy relevance is examined because contrary to dividend irrelevance theory of Miller and Modigliani (1961), arguments for dividend as a signal of value have been made.The null hypothesis is value relevance of dividend is not greater than that of retained earnings: i.e $b_1 < b_3$.

H3 – Capital Structure relevance is examined because contrary to capital structure irrelevance theory of Miller and Modigliani (1958), arguments for debt as a signal of value have been made. The null hypothesis is that capital structure is not value relevant i.e. $b_4 = 0$.

H4 – Investment expenditure relevance is examined by testing the null hypothesis that investment expenditure is not value relevant i.e. $b_5 = 0$.

Data and Sample

1. *Source of Data*

The underlying index of the empirical study is BSE (Bombay Stock Exchange) Auto index, which is based on free float market capitalization method. The BSE Auto index contains the 11 largest Auto stocks in Indian equity market which have a combined market cap of around 2.9 lakh crore. The index members have been taken as existing on 31st March 2011. To construct the data sample, the historical data is taken from Accord Fintech database. This database provides the data needed for the study including earnings, book values, dividends, stock prices etc. The data used is all year end data including stock prices.

Summary of Sample firms

BSE Auto Index
Amtek Auto Ltd.
Apollo Tyres Ltd.
Ashok Leyland Ltd.
Bajaj Auto Ltd
Bharat Forge Ltd.
Cummins India Ltd.
Exide Industries Ltd.
Hero MotoCorp Ltd.
Mahindra & Mahindra Ltd.
Maruti Suzuki India Ltd.
Tata Motors Ltd.

2. *Time Period of Study*

The period of study is based on 11 year sample from 2001 to 2011. A year for the purpose of sample classification starts from April of the year concerned and ends in March of the following year. For example, the 2001 sample starts from April 1, 2000 and ends at March 31, 2001.

3. *Selection Criteria*

For a firm to qualify for inclusion in the sample, following criteria was laid down:

a) The firm must be a constituent of BSE-Auto index

b) The firm must have (at the end of the fiscal year) all required data including, but not limited to price, earnings, book values, dividends, debt and capital investment in the Accord Fintech database. Cases with missing data were eliminated.

Data Analysis and Results

A) ***Descriptive Statistics***: The descriptive statistics of the variables used in the study are given in table 1 below:

Table 1: Descriptive Statistics

Variables –per share	**Mean**	**Standard Deviation**	**Minimum**	**Maximum**
P	395.43	416.52	18.10	2,011.10
DPS	8.55	15.35	0.00	110.00
BV	110.38	84.02	8.37	479.84
RE	15.55	17.22	-19.56	80.42
IV	19.19	24.08	0.00	114.43
Debt	63.50	62.87	0.03	290.85
EPS	24.10	24.73	-19.56	117.75

B) ***Correlation Statistics***: The correlation matrix (Table 2) reveals the correlation between the variables used. The correlation statistics are generally quite high with earnings, dividends and book value being highly and positively correlated with price per share whereas debt showing low correlation with price.

Table 2: Correlation between explanatory variables

	Price	**EPS**	**DPS**	**BV**	**Debt**	**IV**	**RE**
Price	1						
EPS	0.92	1					
DPS	0.71	0.73	1				
BV	0.63	0.63	0.21	1			
Debt	0.02	-0.01	-0.04	0.42	1		
IV	0.20	0.27	-0.02	0.67	0.52	1	
RE	0.70	0.79	0.15	0.71	0.01	0.41	1

C) ***Results of the Valuation model***: The results of the above stated hypothesis are given in below table 3. The table incorporates the results of the basic model, the full model and partial version of full model. The full and partial models are discussed in the following paragraphs. It is argued that the partial versions of the full model would help in determining the sensitivity of results to alternative specifications.

The basic model shows that the slope coefficients of book value (0.68) and retained earnings (12.2) are positively and statistically significant thereby showing value relevance of basic financial variables in Indian Auto industry.

With regards to the second hypothesis of dividend relevance, the results show that both the dividends (16.3) and retained earnings (12.2) coefficients are significantly different from zero, with the dividend coefficient being greater than the retained earnings coefficient. Thus the null hypothesis that dividend coefficient is equal to the retained earnings coefficient is rejected at 5% level of significance. The results of the study shows that level of dividends play an important role in determination of stock prices in case of Indian auto companies and are viewed as credible way of signal by management regarding their long term financial health and prospects. Also given the semi strong efficiency of Indian market and information asymmetry, dividends are an important signal with regards to management private information.

The intervening column in the table (Dividend & Debt) shows no evidence regarding the third hypothesis of debt as a signal of value. The coefficient of debt to equity ratio (-4.9) has been found to be statistically insignificant and thus provide no support for the hypothesis that capital structure is value relevant.

The fourth hypothesis where value relevance of investment policy is tested shows that the capital investment variable is negatively associated with price and its coefficient (-2.88) is significantly different from zero thereby providing relevance for investment decisions.

Table 3: Tests of the signaling models: Pooled data models

	Basic	**Dividend & Debt**	**Full**
Intercept	**-10.6**	**-6.67**	**-14.88**
t-stat	-0.43	-0.22	-0.51
p value	*0.668*	*0.828*	*0.613*
DPS	**16.36**	**16.33**	**15.6**
t-stat	16.61***	16.34***	16.07***
p value	*0.000*	*0.000*	*0.000*
BV	**0.68**	**0.68**	**1.32**
t-stat	2.7***	2.7***	4.4***
p value	*0.008*	*0.008*	*0.000*
RE	**12.28**	**12.22**	**11.81**
t-stat	10.09***	9.79***	9.93***
p value	*0.000*	*0.000*	*0.000*
D/E	**-**	**-4.91**	**2.42**
t-stat		-0.22	0.11
p value		*0.828*	*0.911*
IV	**-**	**-**	**-2.87**
t-stat			-3.54***
p value			*0.001*
R-Sq	86.7%	86.7%	88.1%
R-Sq(adj)	86.3%	86.2%	87.5%

*** means significant at 5% level

Conclusion

The use of fundamental variables to explain stock price behavior has been an important area of research globally. While there has been an extensive research on fundamental based valuation models in developed countries like US, UK, Canada there has been dearth of empirical evidence in emerging markets particularly India. To fill this gap, this study attempts to determine the extent to which various fundamental corporate policy variables viz. dividend, debt, capital expenditure helps explain stock prices in Indian Auto companies. The study finds that dividend policy and investment policy are value relevant and helps provide a signal regarding the market information not contained in accounting publications. The study however fails to establish the value relevance of capital structure in Indian Auto sector.

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A Comparative Study of the Personality of the Alienated and Non-Alienated Employees as Measured by 16PF

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Abstract: *The damaging effects of employment have been discussed for many years. Marx identified several possible forms of alienation. Laborers can be alienated from the product of their labor (Marx, 1963 trans.). They can also be alienated from the process of production, making work external from their nature and not improving their abilities. In Marx's view capitalists abuse the power of ownership to alienate laborers from their work. Seeman (1975) notes six varieties of alienation: powerlessness, meaningless, normlessness, cultural estrangement, self-estrangement & social isolation. Seeman argues that powerlessness and self-estrangement are the two most common forms in work. Most work has been via surveys of individual attitudes and feelings toward work. Most surveys report generally high levels of satisfaction and morale but high variation across occupations and work levels. High satisfaction tends to be associated with intrinsic interest of work, level of control, level of pay and economic security, and opportunities for social interaction (Special Task Force, 1973). Work and personality measures has best been done by Kohn and associates (Kohn and Schooler 1983). They found that "men in self-directed jobs become less authoritarian, less self-deprecatory, less fatalistic, and less conformist in their ideas while becoming more self-confident and more responsible to standards of morality (Spenner, 1988, p. 75). Work does seem to have an effect on personality (and vice versa). The impact of these alienation forces also extends beyond work into family and social life. Companies rarely assess or compensate for the negative psychological impact of work, and these costs are often born by society in general.*

The present study was conducted with sample of 200 male employees (age range - 30 to 40 years) and was administered alienation scale and 16 PF to assess the personality differences in alienated an non -alienated employees. The results revealed that the said two groups differ significantly on factor A, B, C, H, I, M and O of 16 PF.

Introduction

The present structure of Indian society with progressive urbanization and Industrialization, the rise of middle classes, the increasing stress and competition appears to magnify the feeling of alienation. It is in this context that the study of alienation has attracted the attention of researchers. Alienation is a non- cognitive trait of the personality which refers to a syndrome of powerless, isolation & self estrangement Citing the works of other Psychologist, Fromm-Reichmann consider alienation "the common fate of person in modern society" (Fromm-Reichmann 1959). One of pioneer study is that of Davids (1955) who observed that alienated person has a weak ego structure. McDill (1961) found a direct relationship between anomie and authoritarianism. In an extensive study Tolar (1971)

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examined the relationships between alienation and a number of personality variables in male sample and found that alienation has significant positive correlations with external locus of control, hostility, depression and anxiety. Tolar (1971) notes greater susceptibility to persuasive techniques meaning there by more suggestibility on the part of the alienated person. Steinger (1976) found that dogmatism was a critical factor of alienation, though he suggested that dogmatism in this content should more accurately be called "derogation and aloneness." In an Indian study of 80 male students it was observed that there is a positive and significant correlation between dogmatism and alienation (Pestonjee and Singh, 1978). On a perusal of studies referred above it becomes clear that there would be some basic personality traits associated with alienation. If it is accepted that worthwhile interesting investigation to identify some of the personality traits associated with alienated employees.

Objective

The Objective of the present paper is to make a comparative study of the personality traits of the alienated & non alienated employees.

Method

The selection of sample was based on multistage random sampling procedure. Firstly 400 male government employees were selected and given alienation scale. On the basis of this scale 185 were found alienated employees.

The final study was conducted on 200 employees, out of which 100 were alienated and 100 non - alienated. The age range of all employees was 30-40 years. Their educational qualification varied from 6 to 10 years. All employees belonged to middle income group.

Tool

For the measurement of alienation Dean's Alienation scale(1961) was used. Alienation scale is five point Likert Scale designed to measure alienation along the dimensions of social isolation, powerlessness and normalessness. In all , the scale has 24 items and score on each item ranges from 0 to 4.

For the measurement of personality characteristics, the 16 PF questionnaire constructed by Cattle & Eber (1962) was used.

Procedure

Prior appointment was taken with the subjects and each was contacted individually on the scheduled date & time. They were asked to be honest in their responses. The data were collected by administering 16 PF questionnaires. Scoring was done as per the instructions of the manual of the test. Though the testing was lengthy, the subjects were cooperative and willing to undertake the testing. The obtained results were statistically analyzed using one way ANOVA or F-ratio.

Results

The following table shows the means of alienated and non alienated employee s on personality factors A,B,C,H,I,M and O. Analysis of variance was computed to test the differences between the means of above said two groups on each of the factors.

Table – 1

Personality Factors	Mean		df	F-ratio	Level of significance
	Alienated employees	Non-alienated employees			
A Reserved v/s outgoing	9.99	10.36	1/198	11.01	.01
B Scholastic Mental capacity	10.60	9.17		9	.01
C Ego Strength	12.36	13.36		28.73	.01
H Parmia v/s Threctia	12.31	14.49		7.06	.01
I Tender minded v/s Tough minded	12.87	9.02		21.68	.01
M Autia v/s Praxernia	13.81	10.02		22.49	.01
O Shrewdness v/s Artlessness	12.38	9.35		20.76	.01

F value at 1 and 198 df = 3.98 at .05 level and 6.76 at .01 level
Factor A(Reserved v/s Outgoing)

The mean of the alienated and non alienated employees on the factor A are 9.99 and 10.36 respectively. The difference between the two means is significant because the F-ratio 11.0 is greater than F-value required at at .01 level.

The low mean of the alienated employees shows that they tend to be reserved, detached, critical and cool. They like things rather than people, working alone and avoid compromises. They are likely to be precise, critical and obstructive or hard. They are rigid in their way of doing things and in personal standards.

The high mean of non-alienated employees shows a greater probability of their easy going. They tend to be good people, soft hearted, kindly adaptable. They may readily from active groups, be generous in personal relations, be less afraid of criticism. They like occupations dealing with people and socially impressive situation. All these characteristics of non-alienated employees indicate a probability of interaction with their friends & colleagues.

Factor B (Scholastic Mental capacity)

As regard to factor B the alienated and non alienated employees have mean scores 10.60 and 9.17 respectively. The difference between two means is significant because the value F is much greater than the required value of F at .01 level.

The high mean of the alienated employees shows that they tend to be intelligent, fast learner, quick to grasp ideas and mentally alert. The low mean score of the non-alienated employees show that they tend to be slow to learn and grasp, dull given to concrete and liberal interpretations.

Factor C (Ego strength)

On factor C the alienated and non-alienated employees have mean scores 12.36 and 13.66 respectively. The difference between these two means is significant because F-ratio is much greater than required value of F at .01 level.

The high mean of non-alienated employees shows that they tend to be emotionally mature, stable, unruffled , realistic about life, possessing ego strength, more able to maintain solid group morale.

While the low mean score of alienated employees shows that they have the high chances to be low frustration, tolerance for unsatisfactory conditions, evasive of necessary reality demands, neurotically fatigued, fretful , easily emotionally annoyed, active in dissatisfaction, having neurotic symptoms. These personality characteristics may make a person disturbed, lower down his adjustment and hence he may feel alienation.

Factor H (Parmia v/s Threctia)

As regards to factor H , the mean of the non-alienated employee was 14.49 while the mean of the alienated employee was 12.31. The obtained F – value is 7.06 which is greater than the required value of F at 0.01 level. Hence it shows a significant difference between these two means.

The low mean direction of the alienated employees indicates that they may be shy, withdrawing, cautious, retiring. They usually suffer from inferiority feelings. They tend to be slow and impede in speech and in expressing themselves. They prefer one or two close friends and are not given to keeping in contact with all that is going on around them. While the high mean of the non alienated employees shows that they may be venture some, socially bold, unhibited and spontaneous, It may be due to their authority and speak out whatever comes to their minds.

Factor I (Tender minded V/S Tough minded)

With regard to factor I the alienated employees scored high (12.87) as compared to disalienated employees (9.02) The F value is is 21.68 which is greater than required F value at .01 level and hence the difference between teo means is significant.

The high mean direction of the alienated employees indicates that they tend to be tender minded, dependent, over protective. They may be sensitive and day dreaming. They are artistic, feminine, impatient and demanding of attention. All these characteristics of the alienated employees may help to develop alienation feeling.

On the other side non-alienated employees tend to be rough minded, realistic, self reliant. They may be practical, masculine, independent.

Factor M (Autia – Praxernia)

On this factor the alienated and non – alienated employees have mean scores 13.81 and 10.02

respectively. The difference between two means is significant at .01 level.

The high mean of alienated employees shows a greater probability of their careless of practical matters. They tend to be imaginative wrapped up in inner urgencies, oblivious of particular people and physical realities a Bohemian.

On the other side the non -alienated employees tend to be practical, careful, conventional, attentive to practical matters , regulated external realities.

Factor O (Shrewdness – Artlessness)

With regard to factor O the alienated employees scored high 12.38 as compared to non – alienated employees ' mean 9.35. The value of f ratio 20.76 is significant at .01 levels.

This means that alienated employees tend to be apprehensive, depressed, moody, worrying and anxiety laden. On the other side the non – alienated employees tend to be placid, self assured, confident, unanimous confidence in their capacity to deal with things.

The above discussion shows that the alienation of the employees is likely to be the function of their personality make up. But this should not be mean that personality make up is the only cause of alienation. The result of the present study simply means that there are certain personality factors which are more responsible to alienation of the employees.

The main conclusion of this study is that the alienated and non-alienated employees differ significantly on Factor A, B, C, H, I, M and O of 16 PF. It can be safely said that the feeling of alienation is highly related with the personality of workers.

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Consumer Choice Process: A Quantitative Research

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Abstract: *In order to make a choice between various alternatives, every consumer follows five stages of choice process: problem recognition, information search, evaluation, actual purchase and post purchase process. In order to be very specific in business plans and strategies, marketing managers need to understand and measure the choice process of consumers quantitatively. Regression models are used to have a quantitative measurement of information search behaviour of consumers. Brand Choice behaviour is predicted with the help of discrete binary choice models and multinomial discrete choice models. Quantitative analysis of loyalty behaviour with the help of choice models gives an indication about post purchase behaviour. Use of these models helps the marketing managers to find the right mix of variables for their product and thus to position their product in such a manner that the choice process of consumers leads them to select that product which marketing managers want.*

Keywords: *consumer choice, models, quantitatively*

Introduction

A fundamental understanding of consumer behaviour underpins all marketing activities and is necessary prerequisite to organization being marketing oriented and thus profitable. Consumer behaviour is defined as, "the process and activities that people engage in when searching for, selecting, purchasing, using, evaluating, and disposing of products and services so as to satisfy their needs and desires" (Belch and Belch, 1993, pp.115). It studies how consumers take decisions by spending their limited resources–money, time, and efforts on consumption related items.

The complexity of consumer behaviour arises due to a large number of alternatives available to the consumer from which he/she chooses only one alternative. No doubt, in this competitive world, no alternative is less than other; rather all the alternatives are fully compatible. But these alternatives differ more or less from each other in the eyes of the consumer. Thus the question arises how consumer decides which alternative to choose. Consumer choice process studies how consumer chooses between two or more alternatives. To be competitive in the market place, marketers need to understand when and how they need to intervene in the choice process to influence the buying process of consumer. In order to decide what to choose, consumer passes through the following five stages.

Problem Recognition: Problem recognition focuses on the primary motivation behind shopping for products. Problem recognition is the result of a discrepancy between a desired state and an actual state that is sufficient to arouse and activate the choice process (Hill, 2001). When actual state exceeds the desired state or desired state exceeds the actual state, then it leads to a problem, which requires the choice process.

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A discrepancy between actual state and desired state generally arises due to a) changing family characteristics, b) changing financial conditions c) changing financial expectation, d) changing reference groups, e) need for novelty, f) changing situation, g) individual development, h) dissatisfaction with existing solutions, etc.

Information Search: Information search refers to all those actions that are taken by a consumer to obtain all relevant facts that could give a solution to the problem. Haines (1978) defined information to include such data that induces consumer to construct or alter an existing decision process for the relevant product, including raw data, encoded symbols, and any other data capable of representing reality to the decision-maker. Information search may be internal or external.

Evaluation: In this stage, consumer establishes his/her belief about the features of the alternative products. Information gathered by the consumer about various alternatives solutions helps him/her to evaluate alternatives.

Consumers may use various evaluation criteria such as price, size and colour, packing, quality, durability and safety, etc.

When consumers judge alternative brands on several evaluative criteria, they must have some method to select one brand from the various choices. Decision rules serve this function. A decision rule specifies how a consumer compares two or more brands. Five commonly used decision rules are disjunctive, conjunctive, lexicographic, elimination-by-aspects, and compensatory. These decision rules are explained by Hawkins et al., (2003).

Conjunctive decision rule establishes minimum required performance standards for each evaluative criterion and selects the first or all brands that surpass these minimum standards.

Disjunctive decision rule establishes a minimum level of performance for each important attribute (often a fairly high level). All brands that surpass the performance level for any key attribute are considered acceptable.

Elimination-by-aspects decision rule requires the consumer to rank the evaluative criteria in terms of their importance and to establish a cut-off point for each criterion. All brands are first considered on the most important criterion. Those that do not surpass the cut-off point are dropped from consideration. If more than one brand passes the cut-off point the process is repeated on those brands for the second most important criterion. This continues until only one brand remains.

Lexicographic decision rule requires the consumer to rank the criteria in order of importance. The consumer then selects the brand that performs best on the most important attribute. If two or more brands tie on this attribute, they are evaluated on the second most important attribute. This continues through the attributes until one brand outperforms the others.

In *compensatory decision rule* the very good performance on one evaluative criterion compensates the poor performance on another evaluative criterion. Consumers may wish to average out very good features with some less attractive features of a product in determining overall brand preference. The decision rules work best with functional products and cognitive decisions.

Outlet Selection: The procedure for selecting an outlet is same as the process for selecting the brand. Consumer recognizes a problem, which requires purchase of some product. External and internal search is made from where to buy that product. Various alternatives are evaluated. The alternative, which best fits the evaluative criteria is selected. The evaluative criteria for an outlet are different from a brand's evaluative criteria. The evaluative criteria of an outlet include store image, location, layout, size, sales personnel, point of purchase (POP) displays, equipments, furnishings, etc.

Consumers can follow three basic sequences while making a purchase decision: brand or item first, outlet second; outlet first, brand second; or brand and outlet simultaneously (Hawkins et al., 2003).

Actual Purchase: In the evaluation stage of brand, the consumer forms a ranked set of preferences for the alternative products and intent to purchase the product he/she likes best from that outlet that he/she selects by evaluating various outlets. A number of additional factors also intervene before actual purchase is made. For example negative attitude of others, change in expected family income, change in expected price of product, change in expected benefit of the product.

There can be three types of purchase decision categories: fully planned purchase (in which brand

and product are pre decided before store visit), partially planned purchase (in which product is decided but brand is not selected), Impulse purchase (both product and brand are chosen in store). These three purchase types may overlap due to situational factors such as product promotion, store atmosphere, weather etc (Belk et. al, 1975)

Post purchase feelings: After purchasing the product, the consumer will experience some level of satisfaction or dissatisfaction. The satisfaction level of the buyer is measured by a difference between buyer's expectation and product's perceived performance (Swan and Combs, 1976). If product's performance is equal or greater than expectation, then it will lead to repeat purchase, committed customer and increased use whereas if performance falls short of expectation then it gives rise to brand switching or discontinued use. Satisfied consumers may switch from one brand to another when motivated by higher perceived quality or lower price or both (Blattberg et al., 1995).

Quantitative Research in Marketing

The chief executives and operating officers of various companies believe that marketing is the most important function of business (Fredrick and Webster, 1981). Marketing managers face a lot of problems that call for decision making for example, deciding the price of product, deciding promotional offers, deciding the timings of launching a new product. In order to be successful in this competitive world, these problems must have some reliable solutions. Reliable solution is derived from quantitative tools rather than qualitative analysis. This is not to assert that better results always occur when quantitative approach is used but one is more likely to achieve superior results. In order to deal with complex problems of marketing, there is a need to capture the essence of marketing phenomena in well-specified models.

There are two basic methodologies for modelling in marketing: Verbal and Mathematical.

Verbal models are described in words. For example:

Increase in Price $\xrightarrow{\text{leads to}}$ Reduction in Sales

This model says verbally that there is reduction in sales if a company adopts a strategy of increasing prices, other things remaining the same. Verbal models do not give a quantitative measurement of change that is, in the given example of verbal model it cannot be ascertained that if the price increases by one rupee that by which amount the sales will fall.

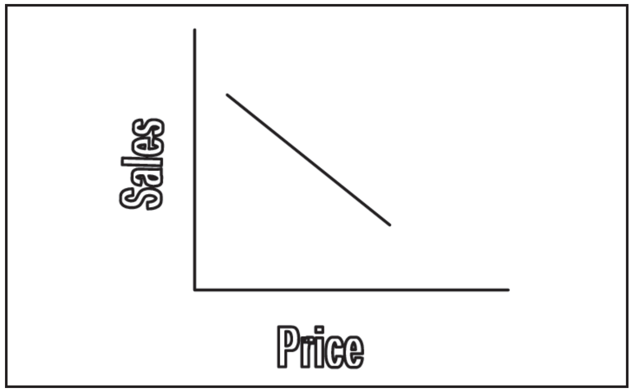

Figure 1: Sales Price relationship

Often, verbal models are explained graphically in the form of graphs, pictures or charts. Examples include road maps, organizational charts and flow diagram. These models describe the overall phenomena so that viewers can grasp the whole relationship. Figure 1 shows the inverse relationship between price and sales. It says that when price increases then the amount of sales decreases.

Mathematical models use symbols to denote marketing variables and express their relationship as equations or inequalities. For example

$$Y = \alpha + \beta X + \mu \qquad \text{(Equation -1)}$$

Where Y is sales (dependent variable), X is price (independent variable). á is known as intercept, which gives the value of dependent variable (amount of sales–Y) when independent variable/variables (price–X) is zero. So in equation 1, value of α represents that amount of sales when price is zero. It can be inferred that the value of $\alpha > 0$ that is, positive since who will not want to buy when price is zero. Often the intercept has no particular economic meaning (Gujarati, 2004). In equation 1, since the price can never be zero, α has no relevance for decision-making. β is known as slope, which measures the rate of change in dependent variable for a unit change in independent variable. In equation 1 if price (X) increases by one rupee, then the amount of sales will be changed by β amount. Now since there is inverse relationship between price and amount of sales, it could be inferred that $\beta < 0$ that is, negative which means that if there is an increase in price by one rupee then amount of sales will fall by β amount. μ is random error term that represents all those forces besides price that affect sales and can also be accounted for but have not been included in the model for determining the amount of sales. These forces can be income of the consumer, promotional offers, etc. m also includes purely random forces which can't be included in model for example, inherent randomness in human behaviour, errors of measurement.

Quantitative Research in Consumer Choice

A key determinant to effective marketing is an understanding of consumers. Foxall et al., (1998) suggest that success of a business depends upon how effectively a manager understands his/her consumers and thus executing a strategy based on this understanding. Here understanding means, understanding the process consumers follow, while making a choice. Choice process can be understood with the help of co-relational and causal relationship

Co-relational relationships: A Co-relational relationship occurs when two variables are correlated, that is, an observed change in one variable is accompanied by a corresponding change in the other variable. There may be positive, negative as well as zero co-relation. A positive co-relation means that as one variable increases, other also increases. In contrast, a negative co-relation means that as one variable increases, the other decreases. Zero co-relation means that there is no systematic relationship between two variables, that is, a change in the one variable is accompanied sometimes by an increase, sometimes by a decrease, and sometimes by no change in the other variable (Kardes, 2002). For example, a high and positive co-relation between product involvement and information search intention has been shown by Lin and Chen (2006) which means that as the involvement for a product increases the intention for search also increases and vice-versa.

With the help of co-relational relationships one can determine the relationship between variables of information search and extent of search, brand choice and its determinants, store choice and its antecedent variables and drivers of repeat purchase behaviour.

Causal relationship: Causal relationship between two variables does not only mean that there is a co-relation between two variables but it also tells that one variable influences the other. That is, there is cause and effect relationship and cause always precedes the effect. For example, in the study of Taylor et al., (2004), the satisfaction with the current brand acted as cause and the repeat purchase was the effect.

Experts call antecedent or causal variable the independent variable, the consequence, or effect as dependent variable because it is dependent on the independent variable (Kardes, 2002).

Models of Consumer Choice Process

Analysing consumer choice process is easier said than done. To measure consumer choice process quantitatively, there are various consumer choice models so that marketing managers can be very specific in their plans and strategies. Some models, which describe the consumer choice process, are discussed as under:

Consumer problem recognition: Consumers develop styles of recognizing problems because of repeated occurrence of the same or similar problems. Some consumers recognize problems primarily when their actual state changes and hardly ever as a result of change to the desired state; other consumers tend to recognize problems when their desired state changes although they also recognize problem when their actual state changes (Bruner, 1987).

At this stage, choice models determine whether there is any need to buy a particular category or not. Consumer recognises a problem that stimulates him/her to buy a product. Because of budget constraints, he/she will buy after comparing utility of buying with utility of not buying. Consumer will consider buying a product/category only if utility of buying exceeds utility of not buying. For example, in routine life, a consumer has a large number of needs. Because of any stimulus, he/she determines the need of buying a car. Determinants of utility of buying a car will be saving of time, comfort, status, etc. Problem arises in specifying the components of utility of not buying. Various authors have suggested different benchmarks against which the utility of buying within the category can be compared for example budgetary constraints. Now if the utility of buying the car is consumer's top priority and the price of the car is within the range of his/her budget, he/she will buy the car.

Generally authors develop such models in which first category choice is estimated and after that, brand choice is examined. Ching (2006) proposed price consideration model that examined the consumer's decision of choosing a particular category for every week. After choosing the category, consumers decided what to buy.

Consumer Information Search: In order to make a wise choice, information search is necessary (Guo, 2001). How much consumers know about the product or service when they decide to make a purchase and how they obtain this information are important issues. Knowledge of consumer information acquisition is fundamental to understand buyer behaviour, planning marketing communication, and developing strategies and tactics (Xia and Morroe, 2005).

Regression models are generally used to measure extent of information search made by the consumers from the various sources of information like mass media advertisement, word of mouth (WOM) communication, and previous experience, etc. These models also explain the relationship of extent of search with its determinants (product involvement, product class knowledge, cost of search, and benefits of search, etc).

Various studies have provided interesting results with regard to information search behaviour of consumers. Claxton et al., (1974) suggest that differences in the extent of the search arise due to the personal, situational and product characteristics. Moore and Lehmann (1980) examined the information search behaviour of the consumers for nondurable product that is bread. A large number of independent variables (market environment, situational variables, product importance, knowledge and experience and individual differences) were analysed. Results of regression analysis depicted the same results as found in previous studies. Punj and Staelin (1983) examined negative relationship between cost of search and amount of external search. Zaichkowsky (1985) indicated that high involvement with the product encouraged more search for information. Bruks (1985) identified U shaped relationship curve between product class knowledge and amount of search made. Beatty and Smith (1987) analysed various sources of information like retailer search, media search, interpersonal search and neutral sources (consumer reports and publications) and concluded that purchase involvement, attitude towards shopping and time availability had a positive effect on information search behaviour of consumer whereas product class knowledge reduced the likeliness for information search. Dowling and Staelin (1994) found that increased perceived risk with the product induces more search for information. Urbany et al., (1996) found negative relation between mobility constraint and amount of search for grocery items. Moorthy et al., (1997) used Log-Lin model to determine the effect of determinants of search (brand uncertainty, cost of search, and experience, etc) on amount of search made by consumers. Erdem et al., (2002) depicted that cost of various information sources would alter information acquisition behaviour of consumers. Iglesias and Guillen (2002) used multiple regression analysis and found that prior knowledge and sales price variation were positively related to information search of the consumers.

Evaluation and Purchase: Whenever a consumer decides to buy a product, he has a large number of choices in the form of number of brands and he has to decide which brand he has to choose. This choice problem is more complicated because all these brands of product are available in a large number of stores. These stores offer different services to the consumers. Thus the consumer has to decide that from where he/she will buy. Evaluating various alternatives on the basis of their attributes makes the choice and finally the chosen product is purchase. This stage is very crucial for a marketing manager since all the plans and action of an organisation are directed towards influencing purchasing behaviour of consumer. Marketers, in order to examine the evaluation process of consumers, ask them to rate the attributes of a particular alternative. This method is adopted when survey method is used or the details of the consumers are not available. Otherwise by using panel data evaluation process can be examined for any consumer at any time for marketing mix variables. After evaluation, choice process of consumers is predicted with the help of binary choice models (logit, probit) and multinomial choice models (multinomial logit, multinomial probit) etc.

When there are exactly two choices, choice models are called binary choice models. Marketing managers generally face such type of behaviour in practical situations. Multinomial Models are extensions of binary model of purchase incidence, in which dependent variable has only two outcomes. But in case of multinomial framework dependent variable has more than two outcomes.

Various studies have used different methods to evaluate and predict the choice behaviour of the consumers.

Punj and Staelin (1978) applied stochastic utility model to analyse the choice behaviour for business schools of graduate students. Gensch and Recker (1979) used multinomial logit framework to predict the store choice behaviour of consumers. The consumers were asked to rate the attributes of the stores visited by them on a seven-point scale. Guadagni and Little (1983) used multinomial logit model to examine the effect of marketing variables on consumer choice among various brand alternatives of coffee by using panel data. Coskunoglu et al., (1985) factor analysed the various attributes of a product to examine choice behaviour and then applied new logit model to predict the purchase behaviour of the consumers. Gensch (1985) used logit framework to predict the choice behaviour of the consumers for various means of transportation that is, bus and car. Dubin (1986) used nested logit model to estimate the space heat and water heat choice in order to predict operating and capital cost of each residence. Dai (1998) used discrete choice model to analyse the college choice behaviour of high school seniors. The survey was made to collect the data with regard to the number of attributes of the students and factors important in college choice. Anand (2001) examined consumer preferences for the attributes of alternative sources of water supply in Chennai (India) and analysed their choice behaviour by using multinomial logit framework. Sinha, et al., (2002) factor analysed the various reasons acting as drivers of store choice and applied multinomial logit model to analyse the store choice process of Indian consumers. Banerjee et al., (2005) applied nested logit model to determine the brand choice for toiletries category. They selected three categories of independent variables that is, marketing mix variables (price, promotion and distribution), demographics and psychometric variables (economy, performance and overall usefulness). Psychometric variables were attitude statements and were factor analysed to extract three factors. The model was a two stage model that examined the brand choice first and then pack size. Panda (2005) used multi-dimensional scaling technique to identify the preferences of Indian consumers for the new car. Bhat and Jain (2006) determined the health insurance purchase decision of Indian consumers in a binary probit framework by evaluating their attitude towards various health insurance schemes. Liu et al., (2006) factor analysed various attributes of oysters to examine the evaluative criteria of consumers and then applied logit framework to analyse the purchase behaviour of consumers. Klee (2006) presented a model that determines the payment instrument consumer would use from various alternatives (debit cards, credit cards, direct payments from bank account and paper money) available to him. Kumar and Sachan (2006) used discrete choice experiments to understand the students' preferences for management institutes in India.

Post Purchase Behaviour: Marketing manager's task never ends up with the purchase of product by the consumer rather after purchase he/she becomes interested in determining the post purchase behaviour of consumer that is, repeat purchase intention, word of mouth behaviour, purchase loyalty and attitudinal loyalty. Loyalty behaviour of the consumer generally depends upon the experience/ satisfaction with the product. Satisfaction is measured by the difference between perceived product performance and consumer expectation. The level of satisfaction affects the future choice behaviour of consumers. If the consumer is satisfied with his/her past purchase, there is a great probability of repeat purchase. For example, a person drinks coke, if he/she is highly satisfied with the performance of coke, then there is a high probability that the consumer will demand coke for the next time also, though he has a large choice for soft drinks.

Again large number of studies has used various techniques like path analysis, regression models, logit choice models to measure loyalty pattern.

Colombo and Morrison (1989) suggested a simple model that could be estimated by using a standard log-linear model approach to determine the loyal and switcher customers. Hallowell (1996) used ordinary least square (OLS) regression to measure the relationship between satisfaction and loyalty pattern. Bloemer and Ruyter (1998) employed regression models to estimate the relationship between satisfaction, image, deliberation and involvement on measure of loyalty. Leszczyc and Timmermans (1997) proposed a probit model to determine the repeat shopping behaviour for a store. Chaudhuri (1999) used path analysis to determine the direct and indirect influences of brand attitudes and brand loyalty on brand performance measures. Delgado–Ballester and Munuera–Aleman (2001) examined the effect of commitment, involvement, satisfaction and trust on loyalty with the help of regression equations. Chaudhuri and Holbrook (2001) used path analysis to examine loyalty (attitudinal loyalty and purachase loaylty) and its antecedents (brand trust and brand affect). Lambert-Pandrauel and Laurent (2002) used logistic regression to predict the repeat buying behaviour of older people for automobiles. Arora and Shaw (2002) used correlation measure to test the relationship between satisfaction and repeat purchase intention. Back and Parks (2003) used Oliver's (1997) model to test the relationship among satisfaction and loyalty. Taylor, et al., (2004) used structural equation analysis to measure two aspects of loyalty that is, behavioural loyalty and attitudinal loyalty. The independent variables taken were satisfaction, value, resistance to change, affect, trust and brand equity. Skogland and Siguaw (2004) used a series of regression models to examine the relationships of various aspects of loyalty (repeat purchase, attitudinal loyalty and word of mouth loyalty) with satisfaction, involvement and demographic characteristics of consumers. Datta and Chakraborty (2006) examined the consumer's loyalty on the basis of their shopping behaviour with the help of Oliver's four stage model (Oliver, 1997).

Conclusion

Consumer choice models target to model consumer purchase behaviour and more specifically, to model the procedure used by consumer to make up his mind. The most important advantage of consumer choice models is that, the results derived from these models, are of quantitative nature. No doubt, use of these models makes the whole process complex but the results are extremely promising because a quantitative approach more accurately predicts as compared to qualitative ones (Wheller, 1974). If these models are used, marketing managers can find the right mix of variables for their product and thus can position their product in such a manner that the choice process of consumers leads them to select that product which marketing managers want.

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A Probing Reading on Attention to Web Advertising

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Abstract: *The study was conducted in order to develop an understanding of how advertisements in different Web task environments are being attended to as well as how attention to advertisements varies between different attention getting techniques that are being used in Web advertising. Furthermore, a model which describes the relationship between context, attention getting techniques and attention to advertising was developed and tested. In order to address the research issues a theoretical framework was assembled. Five hypotheses were formulated deriving from the framework. To test the hypotheses and the model, an experimental research design was employed. Three experiments were designed to study the hypotheses formulated. 702 individual experiments were conducted.*

Introduction

Advertising

The pursuit to attract attention is a complex one and has many paths. Part of it is the message that is being transferred to the consumer and in particular the properties of the advertisement. That size plays a major role and has a positive correlation with attention is a general notion in advertising (Finn, 1988; Abernethy & Laband, 2004) and has recently also been supported by research on Web site advertising (Baltas, 2003). Except for size, there are many other characteristics of an advertisement that have been studied by researchers. In the work of Finn, other characteristics (for print ads) have been shown as in the figure below.

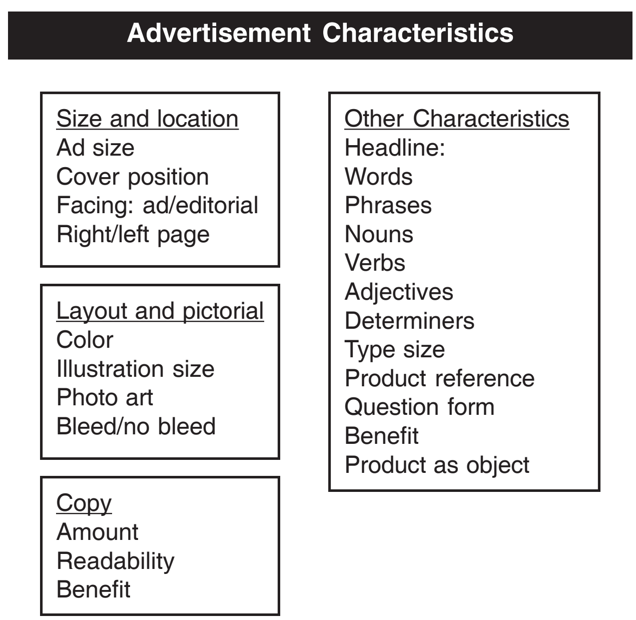

Figure 1. Advertisement characteristics. Adapted from Finn (1988).

Of the characteristics listed in figure 1, not unexpectedly, advertisement size was in fact the property that had shown a significant effect most frequently in the material that Finn reviewed.

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However, aside of the characteristics stated above later researchers have pointed at a few central characteristics of an advertisement that are important to take into consideration. According to Pieters and Wedel (2004) there are three key elements that can be identified in an advertisement, the brand, the picture and the text. Their position is that these three elements have distinct effects on attention.

In Pieters' and Wedel's study they found that the pictorial was superior in attracting attention, independently of its size. Other researchers are also reporting that the pictorial is by far the "most important structural element in magazine advertising" (Rossiter & Percy, p. 295, 1997) and studies (with eye movement tracker) are in fact showing that around 90% of the viewers fixate the main picture in an advertisement before they start focusing on the copy text (Kroeber-Riel, 1984). The enduring effect after viewing the advertisement is the formation of a visual memory of the advertisement that enables subsequent recognition (Finn, 1988). These findings presented here should lead us to convert to the standpoint that advertisements should seldom be designed without adding a pictorial element to it. In that case (without picture) we would suffer the benefit of base line attention to the pictorial element. Furthermore, the pictorial element is also supposed to lead the reader or viewer to the other elements of the advertisement. The purpose is not only to attract attention but to propel readers to engage in reading the brand and text elements.

Web and advertising

When studying different World Wide Web advertisements and what various authors have written about Web advertising one will soon discover a diversity of types of advertisements and also a general lack of classification. Most authors are referring to and studying the banner advertisement, hitherto few are describing its properties. Yet, development of the WWW has brought new advertisement tools, which in turn has made it evident that these tools have to be classified. Classifications have however been poor or at least not up to date with the rapid development in terms of advertisement design and also development of information technology infrastructure, making it possible with larger and more demanding advertisements on the Web.

Despite the rapid development in some parts of the world, researchers are still referring to the banner advertisements as, "…the most common form of advertising currently" (Danaher and Mullarkey, 2003, p. 253), which is a small billboard-like graphic that appears on a Website that is clickable (Hoffman and Novak, 2000), and furthermore, "…is a rectangular shaped image typically located at the top of a Web page" (Chandon, Chtourou and Fortin, 2003, p.217).

Attention to advertising

In a media world with increasing din and media clutter, advertisers are struggling to break through the noise and get the customers to attend to their messages. Advertisers are using different tactics to make their advertising to become attention getting or attention grabbing (Campbell, 1995). The quest for attention is part of the competition and refined techniques may result in a competitive edge. However, according to Pieters, Rosbergen and Hartog the main focus of consumer research has been on "information processing and on the effects of advertising on attitude change" (1996, p. 242). They are furthermore stating that "…little is known about processes of attention, in particular of visual attention to advertising" (ibid). This statement supports this study and that research in this area would be appreciated by the research community.

In line with Pieters et al, the importance of the attention construct has been highlighted and emphasized by other researchers. For instance, Rossiter and Percy (2001, p. 167) are revealing their stance by stating "Before anything else can occur, you must first pay attention to the advertising." This indicates that attention is a prerequisite that is taking place prior to all other constructs, that advertising researchers aim to study.

Horace Schwerin (1967, p. 56-57) states in a somewhat similar fashion as Rossiter and Percy that, "The opening sequence of any commercial is of key importance, since advertisers must capture and hold the attention of viewers". Janiszewski and Bickart (1994, p. 329) are equally concerned about the importance of attention when they argue that "Despite the tremendous amount of money spent on buying consumer attention, little to no research is done on consumer attention".

Additional reasons why attention is important is for instance that, "Catching the consumer's attention can keep her or him from mentally tuning out, switching focus to an alternative activity, or zapping to another channel." (Campbell, 1995, p. 226). Furthermore, increased processing attention has been found to lead to increased information processing and more positive attitudes (Cialdini, Petty & Cacioppo, 1981, Petty, Cacioppo & Schumann, 1983). Increased attention and processing also make attitudes more persistent and more resistant to negative information (Haugtvedt & Strathman, 1990).

Research Methodology

First section - Attention effects of context

In the theoretical chapter it has been elaborated on how the setting or the context in which the advertising resides can influence the impact of advertising. It is important to study this contextual dimension to understand how it affects advertising and whether it is powerful or can be neglected. Extending Kahneman, Janiszewski, Milliken, Tipper and Treisman's theories of attention to an advertising context may provide insight to how attention is affected by context and activity mode. In the theory section, the Web environment was described as a task environment where the primary task is the program content transmitted to the receiver. The secondary task in this context is then the advertisement. Furthermore, a secondary task will be affected by the demand structure of the primary task in such a way that a more demanding primary task will reduce performance on the secondary task and all other events calling for attention. Therefore;

H1: A situation where respondents are exhibiting a less goal oriented surfing behavior will elicit more attention to an advertisement than what a more goal oriented surfing behavior will.

To be rejected…

[H0H1 A situation where respondents are exhibiting a less goal oriented surfing behavior will elicit equal or less attention to an advertisement than what a more goal oriented surfing behavior will.]

If H1 is correct, we can conclude that individuals set to search mode, pay less attention to an advertisement than what a respondent in a surf mode does.

Another contextual dimension that has been elaborated on is the physical appearance of the environment where an advertisement is presented. This physical environment that was described as a task environment may also influence advertising. One aspect of this task environment is its inherent complexity which can be manifested in a number of ways. One such way is the complexity of the search system on a Web site and the search depth that it has. Given what has been learned in the theory it is plausible to state that; as complexity increases, the demand on the primary task will increase and thereby reducing the attention to the secondary task. Hence:

H2: A Web environment that is less complex, with regard to its search depth, will elicit more attention to an advertisement than what a more complex Web environment does.

To be rejected…

[H0H2: A Web environment that is less complex, with regard to its search depth, will elicit equal or less attention to an advertisement than what a more complex Web environment does]

If hypothesis H1 and H2 will be supported then there is reason to consider an alteration of the advertising models displayed in the theoretical chapter. If H1 and H2 are correct then the models studied can be elaborated. More specifically, the attention construct should be described more in detail taking into account what is happening between the advertisement, context, attention getting etc and the attention construct. What is lacking in the models is a more elaborate description of the attention construct. If Thorson's models are taken as an example to compare with, it can be said that what is lacking is an environment or setting construct that takes into account the environment's effect on an individual's attention. There is also a lack of a construct that can impede the incoming stimuli.

These issues that have been pointed at in the previous paragraph will be further addressed under the section "Modeling attention to advertising".

Second section - Advertisements and their respective attention effect

In the previous chapter it was argued around different attention getting techniques and that one and the same advertisement using different attention getting may receive different amounts of attention from individuals. Chandon's study indicated that animation gave a greater response measured as click-through frequency compared to non-animated advertisements. He also recognized that many advertisers had stopped using non-animated advertisements. Many studies referred were studying the phenomena of attracting attention on a very basic level where these basic features were studied. In advertising these basic features are put together on a greater scale and the exposure times are much longer. It is therefore important to understand how attention getting works on a "macro" level.

An animated advertisement is actually using some of the basic features that our experimental psychologists have studied in attention experiments. An animated advertisement will by nature have the possibility to present new objects in the visual field since the animation itself is not stationary. It also has motion or flicker since animation is adding motion to an object that otherwise would be static. Taken together it seems plausible that animation will evoke greater attention than what a non-animated advertisement will. Hence:

H3: An animated advertisement will elicit more attention than a static advertisement.

To be rejected…

[H0H3: An animated advertisement will elicit equal or less attention than a static advertisement]

As was stated already in the theoretical framework, a pop-up advertisement is merely a special case of an animated advertisement from a visual perspective. When the pop-up advertisement appears in a certain location it creates "motion" where it appears. This could be seen as an "abrupt onset" as Yantis described it theoretically, since the pop-up appears in an empty area (sometimes also in other areas than empty areas). Cropper & Evans and Smith & Goodwin found in their study support for animation as a means to attract attention from one area of the screen to another area because of the "visual distinctiveness".

Relevant in the case of pop-up advertisements, since it can be perceived as a special case of an animated advertisement, is of course all the arguments presented in favour of animation in hypothesis 3. With this said:

H4: A pop-up (traditional pop-up, over-the-page) advertisement will elicit more attention than a static advertisement.

To be rejected…

[H0H4: A pop-up (traditional over-the-page pop-up) advertisement will elicit equal or less attention than a static advertisement.]

It is also expected that that a pop-up advertisement will elicit more attention than an advertisement that is just animated. The reason for this is that the pop-up advertisement is not only animated but also that it appears in an empty area creating extra "motion" in the area where it appears compared to its animated counterpart that is just animated and staying in the same area the whole time. It is expected to be easier to inhibit the animated advertisement than what it is inhibiting a pop-up advertisement that is unexpectedly popping-up in the viewers' visual field. Therefore:

H5: A pop-up advertisement will elicit more attention than an animated advertisement.

To be rejected…

[H0H5: A pop-up advertisement will elicit equal or less attention than an animated advertisement]

Analysis

First section

Table 1 & Table 2, exhibit frequencies for the main variables. These two tables are presented to obtain a quick overview of how the respondents scored on recognition, which was the main measure and used to study the effects of the various treatments. The tables are presenting the frequencies and percentages of the respondents that recognized or did not recognize the advertisements in the respective treatments. Table1 is related to hypotheses H1 and H2 that are targeting the context dimension.

The first hypothesis is a comparison between treatment 3 and treatment 4 for the first round of data that was collected. The hypothesis expects that a lower level of internal drive will demand less cognitive resources and thereby increase attention to the advertisement. It was thereby expected that treatment 4 would have less recognition than treatment 3. In table 5.1 the results are distributed into the various cells and the expectation expressed in hypothesis 1 is in line with the raw data.

Hypothesis two is a comparison between treatment 5 and treatment 3. In treatment 5 the advertisement was embedded in a less complex context compared to treatment 3. The context that is referred to here is the difference in complexity in the Web setting or Web environment between the two treatments. The direction of the hypothesis is such

Table 1: Descriptive statistics for treatment 3 & 4 connected with hypothesis 1 and treatment 3 & 5 connected with hypothesis 2.

Treatment 3:	**Frequency**	**Percent**	**Treatment 4:**	**Frequency**	**Percent**	**H1**
No recognition	19	23.7	No recognition	43	53.1	*
Recognition	61	76.3	Recognition	38	46.9	*
Total	80	100.0	Total	81	100.0	*
Treatment 3:			**Treatment 5:**			**H2**
No recognition	35	25.0	No recognition	19	13.5	*
Recognition	105	75.0	Recognition	122	86.5	*
Total	140	100.0	Total	141	100.0	*

that treatment 5 is expected to have a higher level of recognition than treatment 3. The figures in table1 are indeed pointing in this direction.

Hypothesis number three, which is a comparison between the two treatments, expects there to be a greater recognition for the animated advertisement compared to the static advertisement. Table 2 above discloses that the Table 2 exhibits the figures related to hypotheses H3, H4, and H5that are the hypotheses connected to various attention getting techniques.

Hypothesis number three, which is a comparison between the two treatments, expects there to be a greater recognition for the animated advertisement compared to the static advertisement. Table 2 above discloses that the differences between treatments 1 and 2 are miniscule, hence, the notion expressed in hypothesis three seem to be unsupported.

The fourth hypothesis is expecting treatment 1, a static advertisement to be less effective than treatment 3, an expectation that is in line with the figures exhibited.

In hypothesis five it is expected that the pop-up advertisement will elicit more recognition than the animated advertisement, a position supported by the figures.

The last data presented in figure 2 is connected with treatments 3,1 and 6. Hypothesis 6a expected a traditional pop-up to elicit more attention than a pop-up without a frame. Hypothesis 6b expected a static advertisement to elicit more attention than a pop-up without a frame. The figures in table 2 seem to indicate that this notion is correct.

Table 2 Descriptive statistics for hypotheses 3 through 6. The next last column on the right indicates at what occasion the data was collected, in the first round of experiments, in the second or in both. The last column on the right indicates the relation between hypotheses and treatments. It is worth to point out that the figures in the tables above are merely telling the distribution of data and provides a brief overview of the treatments tested in the experiments. When summarizing table 5.1 and 5.2 it can be concluded that the data, at a basic level, is pointing in the direction that the hypotheses expressed. However, the actual testing of the hypotheses is yet to be done and the result from that will be disclosed in the following.

Second section

– Attention effects of context and mode

H1: A situation where respondents are exhibiting a less goal oriented surfing behavior will elicit more attention to an advertisement than what a more goal oriented surfing behavior will.

H1: Exp (B) > 1

H0H1 Exp (B) = 1

The analysis of hypothesis H1 was performed on the first collected data set comprising of 410 respondents since one of the treatments compared was only conducted in the first round of experiments. There were two groups with 80 and 81 respondents respectively that were subjected to the two different treatments. In the test of hypothesis H1 treatments number 3 and number 4 are compared.

Table 2:

Treatment:	**Freq.**	**%**	**Treatment:**	**Freq.**	**%**	**Rond**	**Hyp.**
T1:			T2:			1	H3
No recognition	44	53.7	No recognition	43	50.0		*
Recognition	38	46.3	Recognition	43	50.0		*
Total	82	100.0	Total	86	100.0		*
T1:			T3:			1&2	H4
No recognition	85	52.5	No recognition	35	25.0		*
Recognition	77	47.5	Recognition	105	75.0		*
Total	162	100.0	Total	140	100.0		*
T2:			T3:			1	H5
No recognition	43	50.0	No recognition	19	23.7		*
Recognition	43	50.0	Recognition	61	76.3		*
Total	86	100.0	Total	80	100.0		*
T3:			T6:			2	H6A
No recognition	16	26.7	No recognition	62	67.4		*
Recognition	44	73.3	Recognition	30	32.6		*
Total	60	100.0	Total	92	100.0		*
T1:			T6:			2	H6b
No recognition	41	51.3	No recognition	62	67.4		*
Recognition	39	48.7	Recognition	30	32.6		*
Total	80	100.0	Total	92	100.0		*

In treatment 3 the situation was such that the respondents were free to surf around and look and read anything they wanted to and got interested in. This mode that they were in was described as a surf mode since the respondents could surf to any destination they wanted to, inside of the Website. Treatment 3 received the A-instructions (less goal oriented). The odds of attending to the advertisement in treatment 3 were 3.211:1.

The likelihood of attending to the advertisement is considerably higher in treatment 3 compared to treatment 4. In the other treatment in this analysis, treatment 4, the respondents received the B-instructions (more goal oriented). The respondents were thereby set to a search mode. The odds for attending to the advertisement in treatment 4 were 0.884:1. This means that in treatment 4 the odds was slightly lower than 1:1 to attend to the advertisement. The respondents were clearly less attentive to the

Table 3. Output from a binomial logistic regression comparing treatment 3 and 4, in the figure calculated odds for treatment 3 and 4 are presented.

	B	df	Exp (B)	
Odds to attend in T3 compared to T4	1.290	1	3.633**	
Odds to attend in Treatment 3			3.211	(61/19)
Odds to attend in Treatment 4			0.884	(38/43)

*The value is signification at the .05 level.
**The value is signification at the .01 level.

stimulus advertisement in treatment 4 compared to treatment 3. When the mode or internal drive is changed from surf to search, as is the case when switching from treatment 3 to treatment 4, a radical change in the attentiveness to the advertising occurs. When analyzing the data between the two treatments in a logistic regression there is in fact a 3.633:1 odds to attend to the advertisement in treatment 3 compared to treatment 4. This result is significant at a 99% confidence level, hence the null hypothesis can be rejected. Taken together, the results support hypothesis H1 and it is reasonable to attribute the effect observed to the change of mode or task environment.

The results that have been found are following the same pattern as those presented by researchers in experimental psychology. In the words of Kahneman one could say that the mental effort or cognitive capacity allocated to the task, to search for answers, limits the possibility to allocate cognitive capacity to another task such as attending to an advertisement that is presented in the same task environment. So, when more cognitive capacity is needed in order to solve the first task, less capacity will be left for performing any other task.

Milliken and Tipper argue that attention can be used to generate expectation and to concentrate on ongoing processing demands of a primary task. Attention can furthermore be used to direct behavior selectively toward an event among competing events. However, attempting to perform too many tasks simultaneously in a certain task environment will have a negative impact on how these tasks are being performed. This would then be the effect that can be observed when comparing treatment 3 and 4 with each other and everything else being equal. In treatment 4 the task is more demanding than in treatment 3 resulting in a reduced performance in recognizing the advertisement.

Unlike, for instance, Wolfe, Mack and Rock, Yantis and others have conducted their experiments in experimental psychology, the stimuli onset asynchrony in this experiment was considerably longer and can be seen as being on a macro level. In Mack and Rock's experiments (as well as in other studies in this category) the times were generally in the range of 10 - 100 milliseconds, under an inattentional paradigm, whereas in the experiments conducted in this study the times were potentially lasting up to 345 000 milliseconds and thereby to a greater extent resembling a natural setting.

Despite the differences in stimuli presentation time, the results here follow the general idea that an internal drive has an impact on attention. It is apparent that an increased goal orientation or focus will produce a greater inhibition of information presented outside of the focal area. In line with Kahneman's observations the performance of a secondary task will be constrained by the resources needed for the primary task. Thus, there are reasons to believe that findings in psychology, on a micro level have its macro counterpart as is observed in this study.

Impact of external context factors on attention

H2: A Web environment that is less complex, with regard to its search depth, will elicit more attention to an advertisement than what a more complex Web environment does.

An experiment with treatment 5 and treatment 3 was set up focusing on an external context factor. As in the previous experiment, treatment 5 was compared to treatment 3. Hence, treatment 3 is a reference point or baseline in this case as well.

A total of 281 respondents participated in this experiment with respectively 140 and 141 individuals in treatments 3 and 5. The respondents in Treatment 5 were exposed to a different physical Web environment. It was less complex with regard to its search depth structure.

The analysis of treatment 3 and 5, see figure 5.5, is revealing that the odds of attending to the advertisement in the more complex environment, treatment 3, is 3 to 1 and that the odds of attending to the advertisement in the less complex environment, treatment 5, is 6.421 to 1. When analyzing the data using logistic regression the difference between the two treatments are 2.140:1 to attend to the advertisement in treatment 5 compared to treatment 3. The results are significant at the .05 level.

The statistical analysis shows that a change in the complexity of an environment or setting has a great impact on the attention to an advertisement. Individuals that are using an environment that is less complex, in regards to the search depth, has a higher attentiveness to the advertisement as opposed to what they had in a more complex environment.

The difference in effect that has been measured

Table 4. Output from a binomial logistic regression comparing treatment 3 and 4. In the figure calculated odds for treatment 3 and treatment 5 are presented.

	B	df	Exp (B)	
Odds to attend in T3 compared to T5	0.761	1	2.140*	
Odds to attend in Treatment 3			3.000	(105/35)
Odds to attend in Treatment 5			6.421	(122/19)
*The value is signification at the .05 level. **The value is signification at the 0.01 level.				

is quite large for being a difference that originates from just an alteration of the search depth of the Web environment. However, the reduction of complexity releases cognitive resources that can be spent elsewhere and in this case the advertisement will receive more attention and this is observed as an increase in the advertising effect measured. These results are in line with Krugman's findings where he is arguing that a greater opportunity to attend to an advertisement and to process information results in a positive effect on recognition. It is also an example of Kahneman's Fnotion on how cognitive resources are released and spent elsewhere, i.e. attending to the advertisement. The support for the hypothesis that has been found is an additional example in the same vein as the previous hypothesis.

In summary, the reduced complexity in the task environment or setting has clearly had an impact on the respondents' attentiveness to the advertisement. Differences in the physical appearance of a Web site environment have resulted in a 2.140:1 odds, to the advantage of the less complex environment. The result from the analysis supports hypothesis 2 and is significant at the .05 level.

Conclusion

The conclusions from the study reveal that Web task environments indeed have an impact on attention to advertising. Increased complexity or a more difficult task environment demands more cognitive resources which in turn produces lower attention levels to the advertising stimulus. Reduced complexity, on the other hand, releases cognitive resources that can be spent elsewhere. Thus, a higher attention level to the advertising stimulus was recorded. This also confirmed the properties of the proposed model; namely that the permeability of a filtering mechanism is dependent on for instance level of goal orientation and complexity of the physical task environment i.e. the complexity of the Web site. The study revealed that attention getting techniques such as pop-up advertisements increase the attention to advertising. However, it was found that pop-up advertisements are effective, not mainly because of their abrupt presentation, but because of the distinct properties of the frame. It was found that the frame has a negative meaning for Web users and when the frame comes into the visual field it will attract their attention. At the same time attention will also be distributed towards the advertisement itself. This is recorded as an increase in attention towards the advertising message. The results show that the click-through measure is not an appropriate method when measuring advertising effect. The click-through measure may severely underestimate the advertising effect. Consequently, using click-through frequencies as a basis for pricing is inappropriate, unless the effects at play have been well understood and taken into consideration.

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A Study of Workplace Stress in Hospitality Sector

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Abstract: *Researcher strictly believes that an organization can only grow with the growth of its human resource. Most updated machines, the best infrastructure or most advanced technology may not be of any use if organization does not have the best of the human resource (employees). Therefore, it becomes necessary that these employees are eustressed so that they can give their best in the development of the organization. Using various statistical analysis of data collected from 105 respondents of three star hotels, the study aims to identify and measure general level and potential sources of workplace stress in hospitality sector. An attempt has also been made to measure the above wrt age, gender, position, marital status and education categories.Therefore, study gives specific sources of workplace stress categorywise in the employees of three star hotels so as to address these reasons specifically. This will in growth and development of employees and the organization.*

Introduction

Globalization, ever increasing competition, urbanization, industrialization and rapid pace of technological changes are responsible for continual unasked for changes which often give rise to stress reactions in employees, resulting in a number of negative consequences for both the employee and the organization (Nahavandi & Malekzadeh, 1999[1]; Tosi & Neal, 2003[2]). According to McGrath, stress is present when an environmental demand is of such a magnitude that it may threaten to exceed a person's capabilities or resources for meeting it, and especially so under conditions where coping is paramount or even vital. The situation will be influenced by the nature and the extent of the demands, the character of the individual, the social support available, and the constraints under which the coping process is taking place.

Workplace stress may lead to depression, irritability, short temper, job dissatisfaction, reduced organizational commitment, avoidant behavior (Parker, D.F. and DeCotis, T.A. 1983)3, headaches, heart disease, chronic fatigue, absenteeism, drug/ alcohol consumption, poor decisions(Karasek, R., and Theorell, T., 1990)4, low moral, low quality products and services, poor internal communication, increased levels of conflict, bad publicity, loss of offended customers (Schabracq and Cooper (2000)5) and decreased productivity. Therefore, workplace stress has high cost for the individual, organization and the society.

Objectives

- To study the various potential sources of workplace stress in hospitality sector.
- To measure the general level and potential sources of workplace stress in hospitality sector. w.r.t. to gender, marital status, position, education, age and job stress management.

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Workplace stress

The concept of stress was first introduced in the life sciences by Selye Hans in 19366. According to him stress is "the non-specific response of the body to any demand placed upon it". Further, stress was defined as "any external event or internal drive which threatens to upset the organism equilibrium" (Selye Hans, 1956)7. The word has been derived from the Latin word 'stringere'; meaning the experience of physical hardship, starvation, torture and pain.

"Job Stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job Stress can lead to poor health and even injury." [Stress at work, (United States National Institute of Occupational Safety and Health, Cincinnati, 1999]8. 'Eustress' is a term used for positive responses, whilst the term 'distress' appropriately describes negative aspects. 'Stress', therefore, should be viewed as a continuum along which an individual may pass, from feelings of eustress to those of mild/moderate distress, to those of severe distress.

Sources of Workplace Stress

Work Load is the amount of work assigned to or expected from a worker in a specified time period. It may be divided into work overload and work underload which may be further sub divided into quantitative and qualitative aspects. When individuals perceive that they are incapable of coping with the amount of work assigned to them, they feel stress due to work load. Working under pressure to meet strict deadlines is a major source of quantitative overload, monotonous and routine work is a source of quantitative underload. Qualitative work overload is the beliefs by workers that they lack necessary skills to complete the job whereas in Qualitative work underload, workers feel stress due to non availability of opportunity to demonstrate their skills to the fullest.

Kahn et al. (1964)9 were the first to highlight the importance of role related strain, and defined role dysfunctions as occurring in two primary ways: role ambiguity (insufficient clarity on expected role behaviours) and role conflict (conflicting or competing job demands) (Cooper, Dewe & O'Driscoll, 2001)10

Home-work interface may be defined as spill over of work life to home and home life to work due to demands from work at home, no support from home, absent of stability in home life. It asks about whether home problems are brought to work and work has a negative impact on home life Alexandros-Stamatios G.A. et al. (2003)11.

Job insecurity refers to the fear of job loss or redundancy, or the fear of loss of important aspects of a job.Physical environment refers to anything in the employees' physical working environment, which may lead to increased levels of stress.

Research Methodology

Research Design: Descriptive

Target Population: 3 Star Hotels

Sampling Unit: Employees of 3 Star Hotels

Sampling Type: Probability Sampling (Simple Random Sampling)

Sample Size: 105 Employees

Sample Location: Delhi

Data Type: Primary Data

Instrument: Demographic Questionnaire and Workplace Stress Inventory is based on Likert Measurement Scale.

Analytical Tool: Mean, Standard Deviation & Multiple Linear Regression.

Data analysis

(I) General Level and Potential Sources of workplace Stress in Faculties

Table 1:

Workplace Stress & Potential Sources of Workplace Stress	N	Minimum	Maximum	Mean	Std. Deviation
Workplace Stress	105	77.00	218.00	110.3238	30.32183
Role Ambiguity	105	9.00	116.00	17.7810	19.45210
Job Insecurity	105	10.00	22.00	17.7048	2.95454
Work Over Load	105	13.00	23.00	17.5048	2.88272
Work Home Interface	105	7.00	117.00	16.4667	14.50667
Role Conflict	105	5.00	25.00	14.6286	3.98617
Physical Environment	105	5.00	117.00	13.7714	17.74675
Work Under Load	105	6.00	18.00	12.4667	2.83544
Valid N (listwise)	105				

Means for General Level and Potential Sources of workplace in employees have been presented in Table-1. Mean with level 110.3238 for General level of workplace stress indicates that significant level of Gen. Workplace stress is present in the employees. Means for the seven potential sources of workplace stress shows that Role Ambiguity remains the most important source of workplace stress, with Job Insecurity being the second most important source of workplace stress. Work Over Load remains the third most important source of stress. Work Home Interface and Role Conflict are 4^{th} & 5^{th} in importance respectively. Physical Environment and Work Under Load are insignificant sources of workplace stress in the hierarchy of potential sources of workplace stress.

(II) Demographic Profile

Out of 105 60% of the respondents are male whereas 40% are females.

46.7% of the respondents are married whereas 12.4% are engaged,31.4% are single and 9.5% are separated.

40.0% of the respondents are from top level whereas 39.0% are from middle level e and 21.0% are from junior level.

16.20% of the respondents are from top level whereas 39.0% are from middle level e and 21.0% are from junior level

37.1% of the respondents belong to 36-55 years category whereas 24.8% separately belong to 18-25 and 26-35 years category. Remaining 13.3% belong to 56 and above years category.

(III) General level and potential sources of workplace stress in hospitality sector wrt Gender category

Table 2:

Workplace Stress & Potential Sources of Workplace Stress	Male	Female
Role Ambiguity	16.44	19.79
Role Conflict	15.51	13.31
Work Under Load	12.65	12.19
Work Home Interface	15.00	18.67
Physical Environment	16.02	10.40
Work Over Load	17.59	17.38
Job Insecurity	17.89	17.43
Workplace Stress	111.10	109.17

Table 2 shows that significant general level of workplace stress is present in both male and female employees. Job Insecurity, Work Over Load and Role Ambiguity are respectively the top three potential sources of workplace stress in male employees whereas Role Ambiguity, Work Home Interface and Job Insecurity are respectively the top three potential sources of workplace stress in female employees.

(IV) General level and potential sources of workplace stress in hospitality sector wrt Marital Status category

Table 3:

Workplace Stress & Potential Sources of Workplace Stress	Married	Engaged	Single	Separated
Role Ambiguity	17.96	14.15	19.76	15.10
Role Conflict	14.86	16.00	13.94	14.00
Work Under Load	12.69	11.85	12.42	12.30
Work Home Interface	15.82	22.92	15.45	14.60
Physical Environment	10.78	11.23	17.33	20.00
Work Over Load	17.24	19.15	17.15	17.80
Job Insecurity	17.78	18.15	17.12	18.70
Workplace Stress	107.12	113.46	113.18	112.50

Table 3 shows that significant general level of workplace stress is present in all the four subcategories of employees under marital status category. Role Ambiguity, Job Insecurity and Work Over Load are respectively the top three potential sources of workplace stress in married employees whereas Work Home Interface, Work Over Load and Job Insecurity are respectively the top three potential sources of workplace stress in engaged employees. Role Ambiguity, Physical Environment and Work Over Load are respectively the top three potential sources of workplace stress in single employees whereas Physical Environment, Job Insecurity and Work Over Load are respectively the top three potential sources of workplace stress in separated employees.

(V) General level and potential sources of workplace stress in hospitality sector wrt Position category

Table 4 shows that significant general level of workplace stress is present in all the three subcategories of employees under position category. Job Insecurity, Work Over Load and Role Ambiguity

Table 4:

Workplace Stress & Potential Sources of Workplace Stress	Top Level	Middle Level	Junior Level
Role Ambiguity	16.40	18.54	19.00
Role Conflict	14.98	15.20	12.91
Work Under Load	12.52	13.12	11.14
Work Home Interface	14.83	17.44	17.77
Physical Environment	16.24	13.20	10.14
Work Over Load	17.81	17.27	17.36
Job Insecurity	18.31	17.83	16.32
Workplace Stress	111.10	112.59	104.64

are respectively the top three potential sources of workplace stress in top level employees whereas Role Ambiguity, Job Insecurity and Work Home Interface are respectively the top three potential sources of workplace stress in middle level employees. Role Ambiguity, Work Home Interface and Work Over Load are respectively the top three potential sources of workplace stress in junior level employees.

(VI) General level and potential sources of workplace stress in hospitality sector wrt Education category

Table 5:

Workplace Stress & Potential Sources of Workplace Stress	High School Certificate	Under-graduate	Post-graduate
Role Ambiguity	20.06	18.86	15.89
Role Conflict	13.71	13.95	15.62
Work Under Load	12.88	12.42	12.36
Work Home Interface	14.65	16.86	16.78
Physical Environment	16.88	16.02	10.44
Work Over Load	17.76	17.05	17.84
Job Insecurity	17.53	17.35	18.11
Workplace Stress	113.47	112.51	107.04

Table 5 shows that significant general level of workplace stress is present in all the three subcategories of employees under education category. Role Ambiguity, Work Over Load and Job Insecurity are respectively the top three potential sources of workplace stress in employees with HSC whereas Role Ambiguity, Job Insecurity and Work Over Load are respectively the top three potential sources of workplace stress employees who are undergraduates. Job Insecurity, Work Over Load and Role Ambiguity are respectively the top three potential sources of workplace stress in employees who are postgraduates.

(VII) General level and potential sources of workplace stress in hospitality sector wrt Age category

Table 6:

Workplace Stress & Potential Sources of Workplace Stress	18-25 Years	26-35 Years	36-55 Years	56 and Above Years
Role Ambiguity	16.27	13.77	16.49	13.07
Role Conflict	14.15	14.81	15.08	13.93
Work Under Load	12.08	13.00	12.82	11.21
Work Home Interface	13.81	19.69	17.23	13.29
Physical Environment	18.85	11.92	12.95	10.07
Work Over Load	17.69	17.12	17.59	17.64
Job Insecurity	17.69	17.92	17.79	17.07
Workplace Stress	110.54	108.23	109.95	96.29

Table 6 clearly shows that workplace stress is highest in 18-25 years category followed by 36-55 years category and 26-35 years category. Physical Environment, Work Over Load and Job Insecurity are respectively the top two potential sources of workplace stress in employees who are in 18-25 years category whereas Work Home Interface, Job Insecurity and Work Over Load are respectively the top three potential sources of workplace stress employees who are in 26-35 years category. Job Insecurity, Work Over Load and Work Home Interface are respectively the top three potential sources of workplace stress in employees who are in 36-55 years category whereas Work Over Load and Job Insecurity are respectively the top two potential sources of workplace stress in employees who are in 56 and above years category.

Hypothesis

Ho: There is a relationship between each of the potential sources of stress and job stress.

H1: There is no relationship between each of the potential sources of stress and job stress

Tables 6 and 7 represent the output through anova table and coefficients table. Here,

- p< alpha value(.05), Since Standardized Beta > p(.0005) value for all Criteria Variable (positive value), None of Tolerence levels is < or equal to 0.01 and all VIF values are well below 10-No multicollinearity , therefore, Null hypothesis (Ho) is accepted.

Table 7: ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	95414.215	7	13630.602	6456.683	.000(a)
	Residual	204.775	97	2.111		
	Total	95618.990	104			

a Predictors: (Constant), Job Insecurity, Work Over Load, Role Ambiguity, Physical Environment, Work Home Interface, Work Under Load, Role Conflict

b Dependent Variable: Job Stress

Table 8: Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.138	1.339		2.343	.021
	Role Ambiguity	.988	.008	.636	124.476	.000
	Role Conflict	.980	.048	.129	20.569	.000
	Work Under Load	.812	.053	.080	15.180	.000
	Work Home Interface	1.008	.010	.482	98.155	.000
	Physical Environment	1.003	.008	.587	122.364	.000
	Work Over Load	.942	.053	.090	17.854	.000
	Job Insecurity	1.042	.058	.102	18.008	.000

a Dependent Variable: Job Stress

Conclusion

Based on the preceding discussion of the results, a number of conclusions are drawn from this study. Mean with level 110.32 for General level of workplace stress indicates that significant level of General workplace stress is present in the employees.Means for the seven potential sources of workplace stress shows that Role Ambiguity remains the most important source of workplace stress, with Job Insecurity being the second most important source of workplace stress. Work Over Load remains the third most important source of stress. Work Home Interface and Role Conflict are 4th & 5th in importance respectively. Physical Environment and Work Under Load are insignificant sources of workplace stress in the hierarchy of potential sources of workplace stress. Moreover, significant level of workplace stress is present in the employees across all the subcategories of age, gender, position, marital status and education categories except for the employees who are in the subcategory of 56 and above years.Finally coping strategies have been suggested. But it is to be realized that stress is felt based on individuals' perception and appraisal of stressors. Therefore, no single remedy may be prescribed for all the employees.Moreover, stress management measures are continuous phenomenon as stressors vary with the time.

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Assessing Social Capital for Organisational Performance – A Case of Indian it Sector

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Abstract: *Having talented employees is important, but research shows it's not the only factor impacting a firm's ability to consistently innovate. Employees must also be motivated to work together, and have access to other employees who can communicate and evaluate new ideas, and who value exchanging ideas and collaborating. The research work yielded 126 respondents from Indian software export companies located in and around Bhubaneswar, Odisha, India .The thrust of the research work is to examine the impact of Indian Software organisations' operational HR practices and procedures. The research thrust is also to explore linkage between organisational performance & enhanced social capital. Three sets of questionnaires were designed on collaborative HR practices, social capital and organisational performance in five point likert scale and were administered on the basis of field survey.*

Keywords: *Collaborative HR configuration, interactive culture, organisational rationality, social capital. Information technology.*

Introduction

Technology is drastically changing the world of work, providing greater opportunities for employees to engage and work together .HR configurations facilitate flow of knowledge, which leads to sustainable competitive advantage. HR is always on the front line in developing the knowledge base in the organisation (Youndt & Snells, 2004), as the people dimension play key role for human resource management and human resource development for effective knowledge management practices. It is frequently acknowledged that HR activities play a central role in linking employees' capabilities with performance (Arokiasamy et el, 2009). HR practices have a central importance in knowledge intensive industries because they have immediate effect on the organisations' key resource, its stock of intellectual talent. HR strategy drives the long term strategy of the business. HR practices if chosen deliberately and used strategically can maintain strong organisational boundaries and promote high levels of organisational and professional identity and more specifically it encourages the retention of staff in highly competitive industry. HR practices and processes influence creation and sustenance of social capital as a critical component for managing the flow of knowledge between employees to serve as a competitive advantage. Social capital as an integral part of intellectual capital is represented as unique organizational resource. Social capital of organizations constitutes a distinctly collective property that might be mediated by individuals, yet

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is uniquely organizational. Social capital complements financial and human capital and crucial in bundling intangible assets and provides the network relationship and is often viewed as conferring various benefits. Organizational social capital can be attributed to the aggregate social capital of its members which determines what a group of employees can and will accomplish together.

Objectives

Objectives of the study are to examine the existence of collaborative HR configurations and the idiosyncrasies created by the same practices as well as the development of social capital by the given practices. The research thrust also proposes social capital as a unifying managerial construct to manage and report on intangibles and focuses on looking into the role of social capital on future value creation of the organisation.

Literature Review

From a competitive standpoint, theorists are quick to point out that organisations do not own human capital, employees do. Since those employees are free to leave the firm, there is a significant risk organisations may incur in terms of capital loss unless individual knowledge is transferred and shared. Syed Ikhsan & Rowland (2004) believe that knowledge transfer requires the willingness of a group or individual to work with others and share knowledge to their mutual benefit. Knowledge transfer only takes place in an organisation where its employees display a high level of co-operative behaviour (Goh, 2002). This highlights the need for social capital to protect the investments of organisations knowledge based sources of advantage.

Social capital builds the social networks together with shared norms, values, and understanding that facilitate co-operation within or among groups. Such a networked organisation with people playing multiple roles, being part of multiple teams like a vertical team (Business/ category) as well as horizontal team (function / knowledge domain), is the way forward to effectively "leverage collective knowledge" of an enterprise. HR plays key role in developing such a networked organisation through facilitation of knowledge communities (teams) cutting across formal organisational role. HR plays pivotal role in institutionalising knowledge which requires HR to focus on managing culture change and mindset of people to strengthen collaborative team working and knowledge sharing. Leveraging knowledge is possible only when people value building on each other's ideas, and sharing their insight which again leads to knowledge creation. It is because knowledge creation is the process by which knowledge created by individuals is shared by continual interplay between the tacit and explicit dimensions of knowledge and a growing spiral flow take place, as knowledge moves through individual, group and organisational level (Nonaka Takeuchi, 1995).

Building social capital requires a collaborative organisational environment in which knowledge and information can flow freely. Disclosure of information by firms to their employees and representatives is encouraged as good practices by academics focusing on voluntary behaviour and increasingly by policy makers focusing on legal requirements. Scholars from a variety of perspectives have argued that, social capital may play an important role in knowledge flows by providing a mechanism to share and combine the distributed knowledge among organisational members (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998; Adler & Kwon, 2002). Organizational knowledge creation too is dependent on the ability of the organisational members to exchange and combine existing information, knowledge and ideas through exchange process, teamwork and communication (Smith, Collins & Clark, 2005). Ghoshal & Bartlett (1988) argued that knowledge sharing could not occur without the existence of social connections. Value is embedded in the tacit knowledge and so there will be an interaction between knowledge, skills and physical assets in the organisations to create value. To use more of what people know, companies need to create opportunities for private knowledge to be made explicit. It means knowledge can be articulated in formal language and transmitted across individuals formally and easily (Stewart, 1997). "The only irreplaceable capital an organisation possesses is the knowledge and ability of its people. The productivity of that capital depends on how effectively people share their competencies with those who can use it (Stewart, 1997; 128)". Knowledge flows are necessary for creating firms dynamic capabilities to renew and integrate knowledge which clearly states knowledge hoarding should be discouraged and knowledge processes should be inserted which assist in the flow of information. Information sharing or disclosure is an element in management transparency yielding benefits in employee satisfaction, commitment, and motivation thereby in organisational performance (Lawler; 1995, Pfeffer; 1998).

But there are natural barriers to knowledge exchange and most of which centre around power relationships. Szulanski (1996) found that when trust did not exist in an exchange relationship, the transfer of knowledge from the source to the recipient is stifled and often resisted by one or both the parties. Partnering employees may not trust core knowledge workers to share all possible information that would help the organisation.Therefore organisations need to create a culture of sharing. Often knowledge is seen as power and in a competitive environment there could be a tendency to hoard knowledge. Key to success of KM is creation of knowledge sharing culture and elimination of organizational and cultural barriers for communication. Hence organisations should move from "hoarding of knowledge to gain power" to "sharing of knowledge to gain power."

Since the biggest obstacle to the transfer of best practices in organisations is due to poor relationships between the source and recipient of information. Breaking down these vertical (hierarchical) and horizontal (cross-functional) barriers requires the cultivation of an open and trusting culture having a strong social network. These social networks are critical resource in building teams and transmitting and maintaining knowledge in organisations. 'Knowledge networks are special case of social networks in which the links of net works represent shared or related knowledge. Knowledge network represents "who knows what", social networks represent "who knows who" (Contractor & Monge ; 2002). Therefore, Peter Drucker (1999), the noted management thinker has suggested that a main organising principle of the new economy is networks, partnerships and collaborative ventures.

Eliminating Horizontal Barriers to Social Capital

Collaborative HR systems encourage and reward co-operation, collaboration and information sharing. Organisations are more likely to focus on process facilitation, team building, communications, team project and job rotations to facilitate information sharing and the transfer of knowledge. Collaborative HR configurations enable the organisation to form social networks in which network nodes represent people and network area represent relationships like friendship, advice, supervisor-subordinate relations (Wasserman & Faust; 1994).This social networks also form a resource for collaborative knowledge management, creation and exchange and transformation of knowledge. McGill & Slocum (1994) argue that work structures in knowledge - based organisations need to be characterised by permeability, and network intimacy. A collaborative HR configuration provides nurturing environment that provides the support and encouragement that teams need for job performance (Margulies & Kleiner 1995). Collaborative HR configurations create and facilitate trusting relations and these trusting relationships allow transmission of more information as well as richer and potentially more valuable information. Members are likely to exchange sensitive information and they are less likely to fear opportunistic behaviour on the part of their colleagues, enabling an environment of collaboration and exchange that can benefit both organizations and the individuals who work within them (Bradach & Eccles 1989, Rousseau et al. 1998), as information sharing is a basic and essential component of high performance work systems.

That is, the lines between functional departments, between employees and customers, and between the company and its vendors need to be blurred (permeability), and employees need to be kept close together and close to key business processes (network intimacy). Perhaps one of the best ways to bring permeability and network intimacy to life is through organising around teams and networks, especially cross functional and joint employee - customer problem solving ones. Successful teams are able to balance between autonomy and decentralisation of power on the one hand, for the sake of both motivation and flexibility and centralised control on the other hand, for the sake of co-ordination (Argote & McGrath , 2001). Team based work can also facilitate cross functional communication, enhance worker involvement, and develop better utilization of talent to some strategic aspirations.

To develop the opacity for teamwork and collaboration, organisations may begin by reorienting staffing criteria to focus more on interpersonal skills, and complement this with team training and other cross functional interactions that facilitate broader knowledge networks. Formation of virtual teams can also be a very good means to facilitate knowledge sharing process. Participatory approach of HR configurations can be means to develop and engage people and organisations in substantive, creative roles rather than reactive and passive roles.

Major changes in incentives and culture may require motivating knowledge exchange. In many organisations, sharing knowledge dilutes an individual's power base, as such; strong incentives need to be put in place to engender collective exchange. Even in the best of circumstances, a "market for knowledge" exists and there are cost - benefit trade-offs in any person's decision to participate in that market. Group incentives such as bonuses, profit sharing, and gain sharing may help to ensure that employees interact and exchange ideas with others as their compensation depends on the performance of one another.

Hypothesis 1:- A collaborative HR configuration (Coll-HRC) that focuses on permeable and network intimate work structures, team development, and group incentives is positively related to organisation's level of social capital (O-SC).

Social Capital & Performance

Social capital, generally defined as the actual and potential resources embedded in relationships among actors, is increasingly seen as an important predictor of group and organizational performance (Adler and Kwon 2002, Leana and Van Buren 1999, Nahapiet and Ghoshal 1998). At the macro level, social capital can affect economic performance and the process of economic growth and development. Social capital is a leading driver and source of managerial heuristics for creating increased intangible assets value, subsuming a majority of other intangible concepts. An organisation exhibiting excellent social capital would be seen as one, where internal departments are heavily interconnected, sharing a common vision and objective. The firm would also exhibit similar traits externally, easily forming profitable alliances and partnerships to improve its overall market performance. Human interaction is fundamental premise for building social capital. It has also been argued that the human dimension accounts for at least half of all intellectual capital value to an organisation (O'Donnell et al 2006). Simon (2001) also acknowledges the important role that social and behavioural dimensions play in efficient communications and hence organizational performance. Social capital facilitates individual learning by sharing of information and such situated learning enhances performance. Particularly in knowledge-intensive organization, information sharing and exchange enhance cooperation and mutual accountability leading to organisational performance (Sparrowe et al. 2001).

Social capital may reduce organisational costs in many of the same ways human capital does. By identifying and managing different forms of social capital across employee groups within the architecture, HR practices can facilitate the flow of knowledge within the firm, which ultimately leads to competitive advantage. The flow of knowledge both within and across firms is essential for innovation and continuous adoption, leading to a more sustainable competitive position (Grant; 1996; Kogut & Zander; 1992, Nonaka & Takeuchi; 1995).

Hypothesis 2:- An organisation's level of social capital (O-SC) is positively related to organisational performance (OP).

Collaborative HR configuration	→	Social capital	→	Organizational Performance (nonfinancial)

Figure-1. Conceptual Model linking collaborative HR configuration, social capital & firm performances.

Method

Sample and Procedure

Top management team of various Indian IT companies engaged in software business and located in and around Bhubaneswar, ORISSA was the target group of the study. Top management team (TMT) refers to all those who are decision makers and event makers in the organisation. This includes the owners, board of directors, departmental heads, delivery manager, unit heads and project heads too. Participants were contacted personally as well as via an e-mail. Follow up requests to complete the online survey were e-mailed two weeks later. 126 respondents completed the survey process and returned the questionnaires back. Respondents ranged in age from 21 to 45, 26% were female and 73% were male. 44 % of the respondents have on an average 10 years experience in the industry and 56% posses more than 10 years experience.

Measures

Collaborative HR configuration is characterised by group incentives, cross functional teams, and the like that ensure greater integration and stronger relationships with the firm (Mathieu, Tannenbaum & Salas, 1992).Collaborative HR configuration was measured with eight items from Youndt et al. (2004) study with a little modification and coded 1= strongly disagree, 5= strongly agree. The items included are, our training and development incorporate team building and we encourage group based incentives and so on. This measure has Cronbach's alpha of 0.71.

Methods for measuring SC is done through survey methods, which identify particular dimensions of SC, and typically use Likert-type scales to achieve a measure of quantitative evaluation basically inspired by Putman's critique of civic mindedness in the USA (Putnam, 1995). The typical dimensions of SC that are included in these benchmarking tools include participation in networks, reciprocity, trust in the community, social norms, tolerance of diversity, personal empowerment, trust in government, altruism and philanthropy, and demographic information. Also, Youndt et al. (2004) used a survey instrument to measure SC, along with HC and organisational capital in assessing their impact on investments.

For the present study, social capital was quoted from study done by Youndt et al. (2004). The items too coded as 1= strongly disagree, 5=strongly agree. The items included are, our employees are proficient in collaborating with each other to diagnose and solve problems. Our employees interact and exchange ideas within and across functional departments and divisions. This measure has a Cronbach's alpha of 0.69.

There are multiple definitions pertaining to firm performance. It can be percentage of sales resulting from new products, profitability; capitals employed and return on assets (ROA) (Selvarajan et al., 2007; Hsu et al., 2007). Again, return on investment (ROI), earnings per share (EPS) and net income after tax (NIAT) can also be used as measures of financial performance (Grossman, 2000). Researchers also tend to benchmark managerial accounting indicators against the financial measures in six dimensions like 'workers compensation' (workers' compensation expenses divided by sales), 'quality' (number of errors in production), 'shrinkage' (inventory loss, defects, sales return), 'productivity' (payroll expenses divided by output); and 'operating expenses' (total operating expenses divided by sales) as well. (Wright et al., 2005).

Firm performance can also be measured using 'perceived performance approach'. It is a subjective performance measurement approach where Likert-like scaling is used to measure firm performance from the top management perspectives (Selvarajan, 2007), as they are leading indicators of financial performance (Kaplan & Norton 1992; 2001). In the present study organisation performance was measured with 26 items from the perspective of customer service, quality, productivity and innovation. The items were coded 1= strongly disagree, 5= strongly agree. The questionnaire was designed from the balance scorecard literature of Kaplan & Norton (1992). The items incorporated are, customers are delighted with our service capabilities and our defect injection rate is below the industry average and so on. This measure has Cronbach's alpha of 0.76.

Results

All variables used in the study exhibited normal distributions**.** The descriptive statistics with mean, standard deviation and co-relations are shown below.

Co-relation and descriptive statistics of the study variables

	Variables	Mean	SD	1	2	3
1.	Collaborative HR configuration	3.61	0.58	–		
2.	Social capital	3.77	0. 41	0.406	–	
3.	Organisational performance	3.68	0.55	.888	0.577	–
N = 126 p<0.01						

Source: Data analysis conducted by author

Simple regression analysis was conducted to study the relationship between collaborative HR configuration, social capital and organisational performance with the help of SPSS controlling size of the organisation. It was found that, collaborative HR configuration (Beta = .245, $p<.05$) was significantly related to social capital corroborating Hypothesis 1 and social capital (Beta = .396, $p < .05$) too was significantly related to organisation performance providing support to Hypothesis 2. The interconnectivity between all the three construct under study is collaborative HR configuration, is appreciably substantial

Discussion

The present study adopts a sort of configurationally approach to identify unique patterns of HR practices and business strategy for creation and enhancement of social capital of organisations.In the knowledge era people are often the key sustainable competitive advantage (Davenport & Prusak, 1998; Nonaka & Takuchi, 1995), because the process of creating, sharing and integrating knowledge tends to be tacit, path dependent and socially complex. It tends to be difficult to imitate, and non-transferable to different contexts (Peteraf, 1993) and these relational elements of learning and competitive advantage extend beyond human capital and highlight the importance of social capital (Coleman, 1988; Edvinson & Malone, 1997). While human capital represents the economic value of individual knowledge but social capital represents the value of "resources embedded within, available through and derived from the network of relationships"(Nahapiet & Ghosal, 1998:243).

Social capital is generally referred to as the set of trust, institutions, social norms, social networks, and organisations that shape the interactions of actors within a society and are an asset for the individual and collective production of well being. Though social capital has its historical roots in public welfare, more recently is gaining the attention of the corporate sector (Cohen, D. & L. Prusak, 2001).Social capital is basically "The stock of active connections among people, the trust, mutual understanding and shared values and behaviours that bind the members of human networks and communities and make co-operative action possible" (Cohen & Prusak, 2001, p 72). Like any other forms of economic capital, social capital is argued to have similar although less measurable benefits.

Contribution and Future Direction of the Study

The study contributes to collaborative culture and consensual HR practices practised in Indian software business houses adding to individual social capital as well as organisational social capital which is prime instrumental factor contributing to organisational bottom-line in today's knowledge economy. The study can be extended to capture the contribution of collaborative culture to other elements of intellectual capital like human capital, organisational capital and spiritual capital too.

Conclusion

HR system focused on social capital enhancement directly relates to multiple dimensions of operational efficiency. Collaborative culture emphasizing harmony, along with less aggressive attitudes towards others tends to favour less competition. Collaborative management cultivate win-win situation by developing and sharing "best practices", creating an environment that is comfortable to the idea of openness and managing organizational learning. Hence found to be significantly related to firm performance. As social capital is a relational construct and is dependent on the interaction of individuals, such interactions takes place within particular contexts. As defined by Cappelli & Sherer (1991) and Johns (2003) work context can matter a great deal in shaping organizational behaviour. The study is undertaken in knowledge intensive sector of the economy, the goal of the organisations are to "hire and wire". The organisations put huge emphasis to hire the best people with best net-work and integrate them into the value chain so that their combined human and social capital provides excellent returns. On-boarding of new employees includes connecting them to knowledge sources and information flows so that they will be successful in their jobs. Social capital has some effect on productivity and innovation of the organisations.

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Case Study

Growth Trajectory of Zara

Chandan Parsad*
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Introduction

Humankind has hardly remained unfashionable on earth. Right from loin-clothes to cloaked garbs – and then coats, gowns and accessories in the early 19th century – fashion has had many seasons. It was largely linked to elite fantasies and remained so till mid-1850s, when a professional called fashion designer came up. Paris-based British designer, CF Worth was the first to be tagged so. First it was Paris that reigned supreme, but London and Milan soon caught up, creating their own fashion niche.

Fashion becomes unstylish if it doesn't keep changing. By now, there are a galaxy of designs and customer segments. Not a century back, in the 1950s, the fashion industry was abuzz about *haute couture* (a French term for elevate dressmaking). It meant exclusive high-quality clothes, cut and sewn with meticulous precision – obviously for elite and wealthy clients. Then came *prêt-a-porter'* (ready-to-wear) – not for individual customers, but great care was given to choice and cut of fabric.

Fashion industry soon was visibly altered. Fashion houses migrated away from their homeland and set up new retail locations for revenues – mass retailers rapidly emerged. Fast-changing fads and ever-rising customer demand busied fashion merchandisers and retailers.

Everyone doesn't go for *haute couture*; most want reasonably priced fashions.

Zara, Valentino, Gucci, etc, have realized the importance of this critical mass through faster and efficient value chain processing, and making inexpensive apparel. Zara, for instance, is known to be cheap without being nasty. Specialty retailers are realising the criticality of inventory planning – as uncertain demand, shrinking selling seasons, longer lead times lead to leaner profit margins.

Zara

Zara is one brand in the Spanish fashion distribution group, Inditex Group.

Since it opened in 1975 in Spain, Zara has transformed the fashion world with an innovatory business pattern. Nowadays, Zara is one of the largest global fashion companies. In 2011, the net sales of Zara were •13.739 billion (an increase of 10% over 2010), There were 5,693 Zara stores in 72 countries all over the world at the end of 2011 (Inditex, 2011). In India Zara have 8 stores. Moreover, Interbrand and Business Week ranked the Best Global Brands by value for 2007,

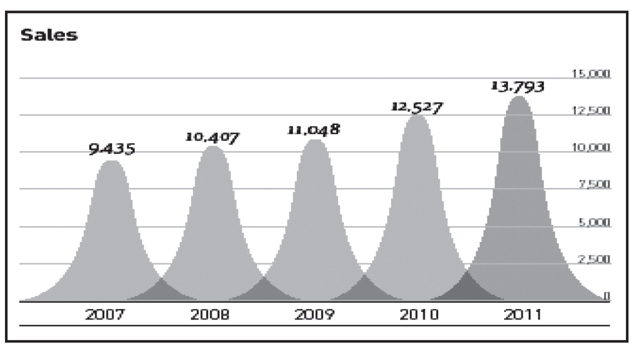

Figure 1: ZARA sales from Inditex Annual report

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and Zara was ranked at No. 64 (brand value is $ 5 billion), which exceeds some luxury fashion brands, such as Prada (ranked at No. 94), Burberry (No.95) and Polo RL (No. 99) (Interbrand, 2007). On the basis solely of the above financial data, it can already be deduced that the high street brand Zara is a strong brand in the fashion industry.

Strategic market

Zara's arrival in India — the world's second most populous country, with 1.1 billion inhabitants — represents a new milestone in the Inditex Group's expansion in Asia, a region in which it already had a very sizeable footprint. After opening its first Asian stores in Japan in 1999, establishments followed in other Southeast Asian countries – Singapore, Malaysia, Indonesia, Thailand and the Philippines – in addition to Hong Kong (2004), mainland China (2006) and South Korea (2008). For its expansion into India, Inditex formed a joint venture with the Tata Group, one of the country's top industrial conglomerates. Inditex will control 51% of the venture, while Trent Limited, a Tata Group company, will control the remaining 49%.

India's economy has grown quickly in recent years, and the country has a large population of shoppers who are keen on fashion and up to date on international trends. The country has a dozen cities whose populations each exceed three million people, and the Indian market promises substantial growth potential for Zara's fashion offering.

Fashionable design with medium price

Design is one of the determinants of the brand's success in the fashion industry, and Zara has more than 250 designers (Inditex, 2007). "Zara was a fashion imitator. [Design of its product] focused its attention on understanding the fashion items that its customers wanted and then delivering them, rather than on promoting predicted season's trends via fashion shows and similar channels of influence, which the fashion industry traditionally used." (Kumar and Linguri, 2005) Zara's product design is one of the most differential features in comparison with other brands, which also occupies an important position in a brand strategy. This is an active product design because consumers are able to make associations relative to Zara, such as 'fashionable' and 'beautiful'.

These associations are then transformed into positive brand images, as "A brand image is a subjective mental picture of a brand shared by a group of consumers" (Riezebos et al., 2003: 63). So design can affect brand images; an excellent one offers a strong brand image to consumers. In addition, Zara chooses a premium strategy in the price dimension of positioning; its price is neither too high (like Prada) nor too low (like Primark) for consumers. Finally, the irresistible combination of latest fashion and quality (i.e. product design) at an affordable price is one of the most valuable differentiations of Zara, which results in Zara's brand being strong. This characteristic also promotes brand images to a high level.

Product strategy of Zara

Product strategy is one of key components of a brand strategy, and a special one can lead to brand strategy's success. Zara provides a considerable number of products, which are more than rival corporations in the fashion industry. It produces approximately 11,000 different products per year, while its major rivals only produce 2,000 to 4,000. Zara spends four to five weeks on the process of designing a new product and getting finished products in its stores (Inditex, 2007).

So, Zara is the leading brand in 'fast fashion'. It can redesign existing products in no more than two weeks. The shorter the product life cycle, the larger success it will have in meeting consumer preferences. "If a style doesn't sell well within a week, it is withdrawn from shops, further orders are cancelled and a new design is pursued. No model stays on the shop floor for more than four weeks, which encourages Zara zealots to make repeat visits. " (Roux, 2002).

The above unique product strategies are successful due to data gathered. In Spain, a high street shop has an expectation that consumers (or zealots) will visit it three times a year, whereas that rises to seventeen times in Zara's case. This uniqueness offers a positive image to consumers. Hence, these particular product strategies help Zara to become a powerful brand in the fashion industry

No traditional advertising

Advertising is the main instrument of a brand strategy; it not only makes consumers accustomed to a brand but also adds value to a brand. Owing to the research by Simon Broadbent (in Jones, 1989; Riezebos et al., 2003: 150), there is an absolute influence of advertising on sales: "An increase of 1% in advertising expenditure results in an average rise of 2% in sales". However, Zara only spends 0.3% of sales on advertising, while Zara's rivals spend 3% to 4% of sales on it. This almost zero advertising is another peculiar strategy of Zara's management. "The reason for not spending money on publicity is that it doesn't bring any added value to our customers. We would rather concentrate on our offering more in terms of design, prices, rapid turn-around of stock and the store experience." Carmen, a press officer at Inditex Group, remarked. (Tungate, 2005: 51).

Customers' feedback and Zara's image

The in-store feedback from consumers is sent back to designers every day.

"The fashion requests collected by stores leads to the initiation of the productive process, which puts together a supply in agreement with the customer's wishes as quickly as possible. This business strategy involves constant relations with the commercial supply and bringing personnel closer to the customer." (Inditex, 2007: 27) Brand values, images and brand-added value cannot be evidenced directly through Zara's management, but they can be reflected by customers' feedback.

For instance, whether Zara's image is positive or negative for consumers; whether consumers see extra value add to Zara; and which values of Zara they will choose. With regard to brand image, a good design or a unique product strategy can influence it to be positive as mentioned above. While in 2007, Zara launches "… its first collection of maternity wear. The Zara for Mum line went on sale in March in over a hundred stores in the main cities of Spain and since September it has been available at all establishments of the chain in the world with a wide range of articles." (Inditex, 2007: 43) This Mum line promotes a powerful image of Zara into the minds of consumers, as it takes consumers' demands seriously and seeks to meet mothers' needs and feedback. As a result, Zara improves its reputation in the fashion industry still further.

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Summary of case study

Fashionable design with medium price is one of the most valuable distinguishing features of Zara, which means Zara mix the active product design and a premium strategy in the price dimension of positioning. It is one of the determinants which makes Zara's brand so strong; another one is unique product strategy. In comparison with other competitors, Zara can produce 11,000 different products per year. The speed of creating a new design and delivering it to Zara stores is fast. There is a special situation in that Zara does almost no advertising. However, this is not hindering Zara in becoming a very well-respected brand worldwide. Zara's strategy is to pay more attention to the feedback from consumers, and such feedback is reflected in its values, images and added values.

Therefore, good control of customers' feedback helps Zara to be stronger. For example, according to consumers' needs, Zara has launched a new collection called Mum line. This enhances a good image of Zara. Although brand image should be shown by consumers, fashionable design and unique product strategy have a salient effect on it. Moreover, as an independent and the most valuable concept of Inditex Group (a brand portfolio), Zara can become a powerful international brand more easily. Inditex's other endorsed brands assist Zara to compete against its rivals and achieve success in other markets. The triumphs of Zara Home have relied on Zara's strong brand (i.e. Zara's effective extension strategy). In a word, if these characteristics and strategies are well-managed, Zara can become a strong global brand.

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• MBA (2 Div.) • MCA • BBA • BJMC (1st & 2nd Shift)/ • MBA (PT) •

Vision

To emerge as one of the world's leading institutes by adhering to the highest academic standards, by developing strong industry-academia bond and playing a pioneering role in R&D, so as to serve the society by way of shaping professionals to conquer the present and future challenges, to the socio-economic fabric of our society by dissemination of relevant knowledge through structured learning system.

Mission

To build and nurture a new generation of well-rounded professionals who can work as positive change agents in the new millennium by helping the Indian industry attain and sustain global leadership. It will be our endeavor to assimilate and disseminate practical strategies to future professionals, to sharpen their strategic perception and thereby equipping them for the fast changing global business environment. We are committed to make significant contribution to society by providing opportunities to deserving candidates through world class professional education and to inculcate amongst them the feelings of fraternity and patriotism.

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- Regular Corporate Interactions with CEOs, MDs, Consultants, etc.

INFRASTRUCTURE

Institute comprised of State-of-the-Art fully AC Conference Hall, Class Rooms, Tutorial Rooms with Audio Visual Aids, Lifts and Ramps, Multi-Cuisine Cafeteria, Bank & ATM including...

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Meticulously selected collection of more than 42,000 books, 6175 Indian & International Journals alongwith subscription of e-resources. Library Automation through LIBSYS software with Bar-Code facility.

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Faculty with rich experience drawn from Industry and Academia alike, viz., FMS, Main University Campuses, IITs, MNCs, PSUs, having Ph.D, M.Tech, M.Phil., NET/GATE qualifications.

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Bridge Classes, SLM, Multimedia Approach in Lectures, Assignments, Presentations, Case Studies, Project Report, Workshops, Tutorial Counseling, Concept Classes, Guest Lectures.

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Soft & Technical Skills Training with certifications e.g. Lamp PHP, ASP.net, Tally-ERP, Foreign Language etc. to enhance Employability.

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PUBLICATIONS

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PROFESSIONAL CLUBS MEMBERSHIP

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MCA Deptt.:- Live Projects Club; Software Testing Club; Web Technologies Development Club; Software Engineering Club; IT Security Club; Database Mgt. Club; Networking Club; Multi Media Club; Operating System Club; SEO Club; CMS & ERP Club.

Management Deptt.:- Corporate Governance Club; Business Econometrics Club; Project Viability Club; Family Business Club; Venture Development Club; Public Speaking and Negotiation Skills Club; HR Development Club; Industrial Relations & Labour Law Club; Advertising Club; Publication Cell; Entrepreneurship Development Club; Soft Skill Development Club; Social Responsibility Club

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Chief Guest H.E. Sh. Jagannath Pahadia, Governor of Haryana, being felicitated by Mr. R. K. Gupta, Chairman, Tecnia Group and Mr. Gireesh Sanghi National President AIVF, Ex-MP at International Conference

Ms. Datinder Kaur (MBA) receives Gold Medal from Delhi's Lt. Governor Sh. Tejendra Khanna for topping the merit list of University

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