

Behavioural Finance: Investment Pattern Among the Small Investors With Reference to Tamilnadu State

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Abstract

Investment is a way for commitment of funds for future periods against a return which is adequate to induce to part with money, which is in a wide variety of contexts namely, investment in 'house' or investment in mutual funds or investments in securities and in other forms. This individually visualise a pay-off by putting their money in productive avenues. Thus is a form of postponed consumption. For example, an employee who contributes a part of his salary to buy shares, or in any others, his current consumption is curtailed and the return on shares/securities realised in future time periods would be available for future consumption. Here it is known, a person postpones his current consumption to future. Individuals are guided by "time preference theory". An investor would not invest his money if it does not yield a positive rate of return. Thus to him "turn over off" will offer larger quantity of money. The present paper find out the Behavioural finance: investment pattern among the small investors with reference to the Tamil Nadu State of selected districts. A sample of 500 respondents in Tamil Nadu State selected one hundred from each district namely, Cuddalore, Trichy, Coimbatore, Chennai, Tirunelveli on the basis of convenient sampling technique. Their investment pattern, attitude, behaviour, perception and mode of investment issues are taken as prime and necessary data collected by direct structured interview using questionnaire. Then descriptive statistics, differential, correlation and regression analysis were applied. The results revealed that the majority of the investors are more aware of high return as well as they also give more priority for low risk.

Keywords: *Investment Pattern, Small Investors, Behavioural Finance, Risk & Return and Mutual Funds.*

In Introduction

An individual invests or "postpones current consumption" only in response to a rate of return which must be suitably adjusted for inflation and risk. This basic postulate, in fact, unfolds the nature of investment decisions. It is made as a form of several systems. People are subject to behavioural biases during decision making. These biases prevent people from making rational (normal) decisions. Behavioural economists said that most human choice is not made intentionally and knowingly by evaluating all the variations and transformations. Investors can seriously harm their wealth by allowing the Behavioural biases to affect their decision making. As a result of inherent biases built in our brains and bodies, human beings make suboptimal decisions (Gordon, 2011). Although emotional and cognitive weaknesses or biases affect all people but traditional and standard finance ignores these biases because it assumes

that people always make rational decisions (Statman, 1995).

Many researchers in the field of behavioural finance conducted research and suggested that investors do not always behave rationally when making investment decisions (Abiola Ayopo and Kehinde Adekunle, 2012). Behavioural finance observes how people actually behave in financial settings. Investors have to make variety of investment decisions. As defined by Hersh Shefrin, bias is nothing else but the inclination towards error. In other words, bias is unfairness or propensity to make decisions while already being influenced by a fundamental belief. There are several factors or behavioural biases which affect decision making. Overconfidence is the propensity for people to overestimate their knowledge, cognitive abilities and the precision of their information (Bhandari & Deaves, 2006). Illusion of control is defined as it is the propensity of people to believe they can control and/or influence outcomes but in reality they cannot control the outcomes of their decisions (Shefrin, 2007). Loss aversion bias was developed by Kfimean & Amos Tversky (1979) as part of the original prospect theory. It is the tendency that people generally feel a stronger impulse to avoid losses than to acquire gains.

Investment Process

After understanding the concept of investment decision, one might now like to know as to how an investor goes about the task or business of investing. How much to invest at any moment? And when to make the investment? These questions essentially relate to the investment process (Exhibit 1). A typical investment decision undergoes five step procedures which are as follows:

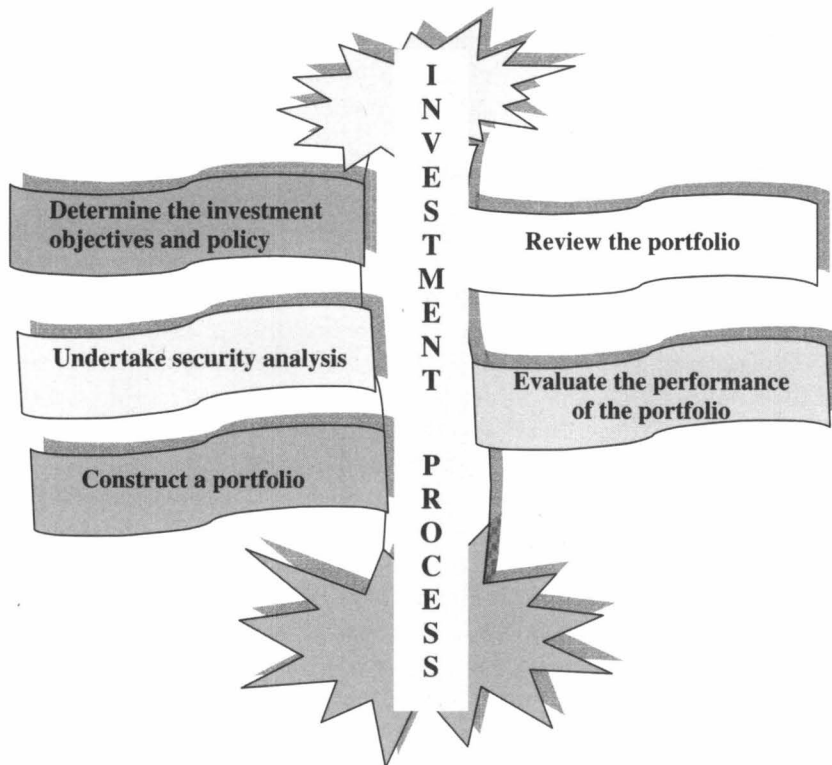


Exhibit - 1 Investment Process

And, it follows to design objectives and policy towards develop investment of their own and consideration of economic parameters.

Investment Objectives and Policy

The investor will have to work out his Investment objectives first and then evolve a policy with the amount of Investible wealth at his command. An Investor might say that this objective is to have "large money". He will agree that this would be a wrong way of stating the objective. He would recall that the pursuit of "large money" is not possible without the risk of "large losses". Hence, the objectives of an investor must be defined in terms of risk and return. The next step in formulating the Investment policy of an Investor would be the identification of categories of financial assets he/she would be interested in. It is obvious that they in turn, would depend on the objectives, amount of wealth, and the tax status of the investor.

Security Analysis

This step would consist of examining the risk-return characteristics of individual securities or groups of securities identified under step one. The aim here is to know if it is worthwhile to acquire these securities for the portfolio. Now, this would depend upon the extent to which a security is "mispriced". And there are two broad approaches to find out the "mispriced status" of individual securities. One approach is known as "Technical Analysis". The analyst studies past movements in prices of securities to determine the trends and patterns that repeat. Then he studies more recent price movements to know about some emerging trend. The two are then integrated to predict if a given trend will repeat in future. The current market price is compared with the predicted price and the extent of "mispricing" only if the current price is equal to the predicted price. The second approach is "Fundamental Analysis". The analyst works out a true or intrinsic value of a security and compares it with the current market price. The intrinsic value is the present value of all cash flows that the owner of the security expects to receive during and at the end of his holding period.

Portfolio Construction

This consists of identifying the specific securities in which to invest and determining the proportion of the investor's wealth to be invested in each. For example, a conservative individual may decide to invest, say 60 per cent of his cash in debentures and the remaining 40 percent in equity shares. On the other hand, and individual who is prepared to assume greater risk may like to put, say, 60 percent of his cash in equity (note that this expectation may or may not materialise) and the balance 40 per cent in debentures with a relatively assured returns. And within these broad groups of equity shares and debentures, he may specifically select specific firms. This problem of specific identification is known as the problem of selectivity. It is obvious that the issue of selectivity will have to be based on micro-level forecasts of expected cash flows from specific shares/debentures of different companies. The investor will use security analysis approaches for this. Then, he must determine the timing of his investment and for this he will have to observe the forecasted price movements of shares relative to debentures at the macro level. Finally, he will make all possible efforts to minimise his risk for a given expected level of average return of his potential portfolio. This he would be able to achieve when the returns of shares and debentures which would comprise his portfolio are not positively correlated to each other. The resultant portfolio would be known as a "diversified" portfolio. Thus, portfolio construction would address itself to three major problems through selectivity, timing, and diversification.

Portfolio Revision

As time passes, the investor would discover that new securities with promises of high returns and relatively low risk. In view of such developments it would be necessary for him to review the portfolio. He would liquidate the unattractive securities and acquire the new stars from the market. In a way, he repeats the first three steps of the investment process. He sets new investment policy, undertakes security analysis afresh, and re-allocates his cash for the new portfolio.

Portfolio Performance Evaluation

A rational investor would constantly examine his chosen portfolio both for average return and risk. Measures for doing so, must be developed. Also the calculated risk-return positions must be compared with certain yardsticks or norms. This step in the investment process, thus, acquires considerable significance since the tasks involved are quantitative measurement of actual risk and return and their evaluation against objective norms.

Financial Investments

Investment decisions to buy/sell securities taken by individuals and institutions are carried through a set of rules and regulations. There are markets-money and capital-which function subject to such rules and established procedures and are, in turn, regulated by legally constituted authority. Then there are securities or financial instruments which are the objects of purchase and sale. Finally, the mechanism which expedites transfers from one owner to another comprises a host of intermediaries. All these elements comprise the investment environment. Investors have to be fully aware of this environment for making optimal investment decisions, namely on investments, institutions and markets.

Investment Horizons

Investors have varying investment horizons ranging from 5 months to 5 years and beyond. Exhibit shows how the appropriate percentage allocation to the 'stock' component of the portfolio is influenced by the two basic factors, namely risk tolerance and investment horizon. To obtain the corresponding percentage allocation to the 'bond' component of the portfolio, simply subtract the number given from 100. (Exhibit 2) One will find this matrix helpful in resolving ones asset mix decision. In applying this matrix, the zero per cent, given for the cell low risk tolerance/ short time horizon, may be raised to 10 per cent or so. In a similar manner, the hundred per cent, given for the cell high risk tolerance/ long time horizon may be lowered to 90 per cent. These modifications will help the investor in realizing the benefit of diversification across 'stocks' and 'bonds'. For the sake of simplicity, here it is assumed that there is a single investment horizon. In reality, an investor may have multiple investment horizons corresponding to varied needs. For example, the investment horizons corresponding to various goals sought by an investor.

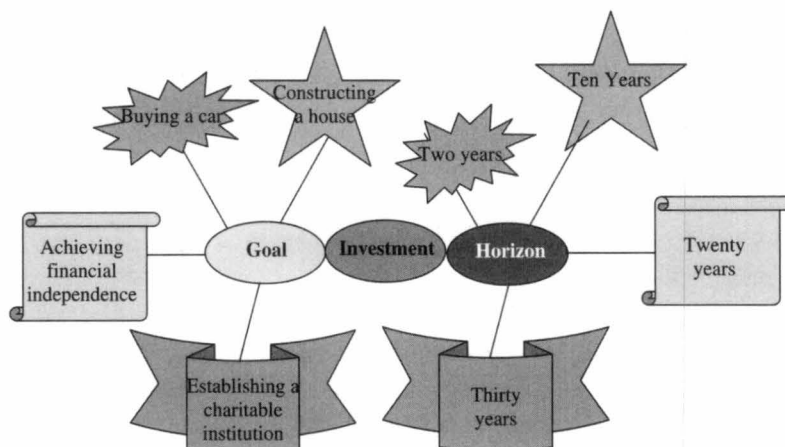


Exhibit - 2 Investment Horizons

Obviously, the appropriate asset mix corresponding to these investments, goals would be vary in accordance with the environmental pattern.

Investors take various types of decisions, some are simple while others are complex and require multi-step approach in making decisions. This study evaluates the existence and extent of behavioural situations that investors have to face at the time of decision making. Behavioural situation is defined as a pattern of variation in judgment that occurs in particular situations, which may sometimes lead to perceptual alteration, inaccurate judgment, illogical interpretation, or what is largely called irrationality. Decision making is the mental or cognitive process that results in the selection of a course of action among several alternative situations. Every decision making process comes to its end with a final choice. The output or final result can be categorised as an action or an opinion of choice. Fluctuations in the security prices expose investors to risk. To measure risk, the standard deviation a measure of dispersion of percentage price changes may be calculated. The standard deviation of a set of numbers is simply the square root of the mean of the square of deviations around the arithmetic average.

Study Review

Every research work is in position to undergo to find out the research gap and hence following reviews are collected. (Knoll, 2010) This article shows investment simulations with Brazilian MBA students and physicians indicating that the process of making investment decisions is based on the "Behavioural Economics" theory which uses the fundamental aspects of the Prospect Theory developed by Kahneman and Tversky (1979). The conclusion of this study demonstrates that the behavioural biases have great impact on the investment of physicians and business students (Frota Decourt, Accorsi, MAdeira Neto, 2007). H1: Behavioural biases effect decision making of students/employees. This research has found that people overestimate their control and also find that when their real control is zero or low then they overestimate their control. However, when their actual control is high, we find that they tend to underestimate it (Gino, Sharek and Moore, 2011).

Psychological research conducted by Barber and Odean (2001) that men are more overconfidence than women and theoretical models predict that overconfident investors trade excessively that is hazardous to the wealth. The result of their study suggests that men trade 45 per cent more

than women and as a result reduce their returns due to over confidence bias. H2: There is a significance difference between gender and overconfidence while making decisions. In this study the researcher find that overconfidence generally improves market efficiency over rationality provided overconfidence is not too high because it introduces information into the market while having a comparatively small effect in generating mispricing. This study also find out that a market with very high overconfidence can also have superior price quality to a rational market when there is a high amount of private information acquired relative to publicly available information (Jeremy KO, 2007). In a study a researcher reveal that the cognitive biases such as overconfidence bias impact on different level of managerial decision making.

Different level of management requires different level of skills, values and decision making processes and styles. By using statistical techniques this study found that there were differences in overconfidence bias between levels of management (Paluch, 2011). This research paper investigates a different type of Behavioural bias that also may influence merger and acquisition decisions. By using a unique experimental data set, this research provide evidence in support of the existence of confirmation bias in the merger decision making behaviour particularly with respect to the behaviour of actual corporate executives (Bogan, 2008). The study conducted by J. Park and Kumar (2010) demonstrates that investors with stronger confirmation bias exhibit greater overconfidence.

Confirmation bias leads investors to form higher expectations from their stocks performance. Findings in a study reveal that reproducing causes selectively erased loss aversion in men and in contrast the self-protective causes led both men and women to become more loss-averse. Overall loss aversion come into sight to be sensitive to evolutionarily-important reasons, telling that it may be a domain-specific bias operating according to an adaptive logic of recurring threats and opportunities in different evolutionary domains. Research shows that the classic bias of loss aversion make worse, erased, and even reversed when the decision context is the evolutionarily-important domain of mate-seeking (Jessica Li, 2006). In a study the large extent of loss aversion revealed by the loss adverse choices, the average loss premium is positive for most choice situations. Female subjects exhibit both a more frequent occurrence and a larger extent of loss aversion. This study finds a systematic relationship between loss attitude and assessment probability (Schmidty, Traub, 2001).

The results of another study reveal that the pattern predicted by the loss aversion assertion emerges only under very specific conditions. Losses appear to loom larger than gains in some environments but not in others. These and similar results can be captured with the assertion that the exact effect of losses is not a result of a stable value function rather than the effect of losses might depend on the similarity of the current decision environment to past experiences (Ert and Erev, 2010).

Research Gap

The literature reviewed above related to financial issues in relation to objectives, policy, financial position and employment of funds, overconfidence bias, illusion of control bias, loss aversion bias, conformity bias and familiarity bias and fluctuations in the financial security prices to investors. However, majority of literature has ignored the investors' behaviour, attitude and mode of investment in different economic sphere and thus this study realises to pave way for these parameters.

Research Process

Research design is purely and simply the framework or plan for a study that guides the collection and analysis of the data. The research design indicates the methods of research that is the method of gathering information and the method of sampling. Primary data were collected by conducting direct structured interview using questionnaire. All the respondents were asked the same questions in the same fashion and they were informed the purpose of study. The data were collected by using questionnaire as an instrument. Sample size of the study is selected from the sampling unit. A sample of 500 respondents in Tamil Nadu selected district in each district one hundred samples has taken from Cuddalore, Trichy, Coimbatore, Chennai, Tirunelveli on the basis of convenient sampling technique. The study area combats all forms of economic, cultural, social and technical issues in the population. The study period covers from April 2015 to July 2015. Small investors includes who investment Rs. 10,000 in a given period of time for analytical purpose the prime demographic variables namely age, education and occupation are playing key role in investment behaviour. The collected data on demographic variables were analysed using appropriate statistical techniques. The descriptive statistics, differential analysis, correlation and regression analysis were computed.

Study Objectives

The study has the following primary objectives for the research study

1. To study the investor behaviour and attitude of investment pattern
2. To emphasis the investors investment pattern and mode of investment
3. To analysis the perception of risk among the investors

Limitations of The Study

Though the research has been properly planned and well executed, there are certain limitations, which are inherent in nature and are out of the researcher's control. The effectiveness of the project is felt only when the results are read along with the limitations and constraints faced during the course of this study. The following are the limitations.

1. The responses from the respondents could be casual in nature. This may be due to lack of interest or time on their part and some of the information provided by the respondents might not be correct.
2. Getting timely responses from the respondents was a difficult task.

Discussion and Results

This paper furnishes the analyses and interpretation of the collected data for "Behavioural Finance: Investment Pattern among the Small Investors with Reference to Tamilnadu State". Various statistical procedures such as F-test, correlation and regression analysis were applied.

Table - 1 Showing Mean, SD and F-ratio for Fixed Deposits on the basis of Demographic Variables

<i>Demographic variables</i>	<i>Sub Samples</i>	<i>Number of Samples</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>F-value</i>	<i>Level of Significance</i>
Age	Below 30	120	20.40	2.11	8.69	0.01
	30 - 40	120	20.60	2.11		
	40 - 50	124	21.17	2.97		
	Above 50	136	18.11	2.64		
	Total	500	19.80	2.81		
Education	Schooling	116	18.50	1.86	5.67	0.01
	Graduate	128	19.71	2.76		
	Professional	136	21.11	2.26		
	Others	120	18.60	3.47		
	Total	500	19.80	2.81		
Occupation	Government Job	116	22.25	0.45	11.63	0.01
	Private Job	148	20.25	3.06		
	Business	116	18.25	1.98		
	Others	120	18.00	1.95		
	Total	500	19.80	2.81		

Source: Primary data

Ha: There is a significant difference between fixed deposits on the basis of demographic variables. From the analysis in Table 1, it is revealed that, Mean, SD and F-ratio for fixed deposits on the basis of age. The table inferred that the calculated F-value (8.69) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between fixed deposits and age. Therefore 30-40 years of age groups have high level of investment of fixed deposits than the other groups. The Mean, SD and F-ratio for Fixed Deposits on the basis of Education. The table inferred that the calculated F-value (5.67) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between fixed deposits and education. Therefore professional qualified groups have high level of investment of fixed deposits than the other groups.

The Mean, SD and F-ratio for Fixed Deposits on the basis of Occupation. The table inferred that the calculated F-value (11.63) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between Fixed Deposit and occupation. Therefore government job respondents groups have high level of investment of fixed Deposit than the other groups.

Table - 2 Showing Mean, SD and F-ratio for Saving in Post Office on the basis of Demographic Variables

<i>Demographic variables</i>	<i>Sub Samples</i>	<i>Number of Samples</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>F-value</i>	<i>Level of Significance</i>
Age	Below 30	120	20.00	1.72	0.41	NS
	30 - 40	120	19.60	3.65		
	40 - 50	124	19.50	3.16		
	Above 50	136	19.00	3.94		
	Total	500	19.44	3.33		
Education	Schooling	116	17.75	2.35	2.59	NS
	Graduate	128	20.29	3.25		
	Professional	136	19.11	4.13		
	Others	120	20.20	1.64		
	Total	500	19.44	3.33		
Occupation	Government Job	116	22.50	2.37	7.54	0.01
	Private Job	148	18.92	3.70		
	Business	116	17.75	2.35		
	Others	120	19.60	2.01		
	Total	500	19.44	3.33		

Source: Primary data

Ha: There is a significant difference between saving in post office on the basis of demographic variables.

From the Table 2 given about on Mean, SD and F-ratio for saving in post office on the basis of age. The table shows that the calculated F-value (0.41) which is not significant. The stated hypothesis is rejected. So it is concluded that there is no significant difference between saving in post office and age.

Besides, the Mean, SD and F-ratio for saving in post office on the basis of education. The table shows that the calculated F-value (2.59) which is not significant. The stated hypothesis is rejected. So it is concluded that there is no significant difference between savings in post office and education. The Mean, SD and F-ratio for saving in post office on the basis of occupation. The table inferred that the calculated F-value (7.54) which is significant at 0.01 level. Hence the stated hypothesis is accepted. So it is concluded that there is a significant difference between savings in post office and occupation. Therefore government job respondents groups have high level of investment of savings in post office than the other groups.

Table - 3 Showing Mean, SD and F-ratio for Debentures on the basis of Demographic Variables

<i>Demographic variables</i>	<i>Sub Samples</i>	<i>Number of Samples</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>F-value</i>	<i>Level of Significance</i>
Age	Below 30	120	14.60	4.75	13.99	0.01
	30 - 40	120	16.80	3.75		
	40 - 50	124	10.67	1.40		
	Above 50	136	12.89	2.85		
	Total	500	13.48	3.86		
Education	Schooling	116	12.25	4.09	2.75	0.01
	Graduate	128	14.71	3.60		
	Professional	136	13.89	4.39		
	Others	120	12.00	2.05		
	Total	500	13.48	3.86		
Occupation	Government Job	116	16.75	4.22	12.56	0.01
	Private Job	148	14.08	3.70		
	Business	116	10.00	0.73		
	Others	120	12.20	2.71		
	Total	500	13.48	3.86		

Source: Primary data

Ha: There is a significant difference between debentures on the basis of demographic variables. From the analysis in Table 3, it is revealed that, Mean, SD and F-ratio for debentures on the basis of age. The table inferred that the calculated F-value (13.99) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between debentures and age. Therefore 30-40 years of age groups have high level of investment of debentures than the other groups. It also shows Mean, SD and F-ratio for debentures on the basis of education. The table inferred that the calculated F-value (2.75) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between debentures and education. Therefore graduate qualified groups have high level of investment of debentures than the other groups. The shows Mean, SD and F-ratio for debentures on the basis of occupation. The table inferred that the calculated F-value (12.56) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between debentures and occupation. Therefore government job respondents groups have high level of investment of debentures than the other groups.

Table - 4 Showing Mean, SD and F-ratio for Mutual Funds on the Basis of Demographic Variables

<i>Demographic variables</i>	<i>Sub Samples</i>	<i>Number of Samples</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>F-value</i>	<i>Level of Significance</i>
Age	Below 30	120	18.60	2.21	5.48	0.01
	30 - 40	120	18.20	5.25		
	40 - 50	124	14.50	4.63		
	Above 50	136	17.00	2.57		
	Total	500	16.96	3.98		
Education	Schooling	116	19.75	2.96	3.45	0.01
	Graduate	128	16.57	3.77		
	Professional	136	16.56	5.06		
	Others	120	16.00	0.65		
	Total	500	16.96	3.98		
Occupation	Government Job	116	18.25	7.98	2.11	NS
	Private Job	148	16.17	2.70		
	Business	116	18.50	2.78		
	Others	120	16.60	1.79		
	Total	500	16.96	3.98		

Source: Primary data

Ha: There is a significant difference between mutual funds on the basis of demographic variables. From the analysis in Table 4, it is revealed that, Mean, SD and F-ratio for Mutual Funds on the basis of age. The table inferred that the calculated F-value (5.48) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between mutual funds and age. Therefore, below 30 years of age groups have high level of investment of mutual funds than the other groups. The Mean, SD and F-ratio for Mutual Funds on the basis of Education. The table inferred that the calculated F-value (3.45) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between Mutual Funds and education. Therefore schooling groups have high level of investment of Mutual Funds than the other groups. The Mean, SD and F-ratio for Mutual Fund on the basis of occupation. The table shows that the calculated F-value (4.11) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between mutual funds and occupation. Therefore Government Job respondents groups have high level of investment of mutual fund than the other groups.

Table - 5 Showing Mean, SD and F-ratio for Shares on the Basis of Demographic Variables

<i>Demographic variables</i>	<i>Sub Samples</i>	<i>Number of Samples</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>F-value</i>	<i>Level of Significance</i>
Age	Below 30	120	18.40	2.95	5.50	0.01
	30 - 40	120	16.00	1.45		
	40 - 50	124	16.67	2.26		
	Above 50	136	15.89	2.41		
	Total	500	16.60	2.49		
Education	Schooling	116	18.50	3.31	5.30	0.01
	Graduate	128	15.57	1.71		
	Professional	136	16.56	2.58		
	Others	120	16.60	1.68		
	Total	500	16.60	2.49		
Occupation	Government Job	116	18.00	2.63	3.94	0.01
	Private Job	148	15.92	2.56		
	Business	116	17.50	2.58		
	Others	120	16.40	1.39		
	Total	500	16.60	2.49		

Source: Primary data

Ha: There is a significant difference between shares on the basis of demographic variables.

From the analysis in Table 5, it is revealed that, Mean, SD and F-ratio for shares on the basis of age. The table inferred that the calculated F-value (5.50) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between shares and age. Therefore below 30 years of age groups have high level of investment of shares than the other groups. The Mean, SD and F-ratio for Shares on the basis of Education. The table inferred that the calculated F-value (5.30) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between Shares and education. Therefore schooling groups have high level of investment Shares than the other groups. The Mean, SD and F-ratio for Shares on the basis of Occupation. The table inferred that the calculated F-value (3.94) which is significant at 0.01 level Table 5. Hence the stated hypothesis is accepted. So it is concluded that there is a significant difference between shares and occupation. Therefore government job respondents groups have high level of investment of shares than the other groups.

Table - 6 Showing Mean, SD and F-ratio for Gold on the Basis of Demographic Variables

<i>Demographic variables</i>	<i>Sub Samples</i>	<i>Number of Samples</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>F-value</i>	<i>Level of Significance</i>
Age	Below 30	120	21.80	3.00	4.34	0.01
	30 - 40	120	19.20	4.23		
	40 - 50	124	22.50	1.64		
	Above 50	136	22.00	3.64		
	Total	500	21.52	3.45		
Education	Schooling	116	20.25	3.68	3.91	0.01
	Graduate	128	20.71	4.86		
	Professional	136	23.00	1.59		
	Others	120	21.00	2.60		
	Total	500	21.52	3.45		
Occupation	Government Job	116	21.00	3.79	2.75	0.05
	Private Job	148	22.50	3.13		
	Business	116	20.25	3.68		
	Others	120	20.60	3.28		
	Total	500	21.52	3.45		

Source: Primary data

Ha: There is a significant difference between gold on the basis of demographic variables.

From the analysis in Table 6, it is revealed that, Mean, SD and F-ratio for gold on the basis of age. The table inferred that the calculated F-value (4.34) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between gold and age. Therefore 40 - 50 years of age groups have high level of investment of gold than the other groups. The Mean, SD and F-ratio for Gold on the basis of Education. The table inferred that the calculated F-value (3.91) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between Gold and education. Therefore professional qualified groups have high level of investment of Gold than the other groups. The Mean, SD and F-ratio for Gold on the basis of Occupation. The table inferred that the calculated F-value (2.75) which is significant at 0.05 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between gold and occupation. Therefore private job respondents groups have high level of investment of gold than the other groups.

Table - 7 Showing Mean, SD and F-ratio for Real Estates on the Basis of Demographic Variables

<i>Demographic variables</i>	<i>Sub Samples</i>	<i>Number of Samples</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>F-value</i>	<i>Level of Significance</i>
Age	Below 30	120	20.20	4.47	1.48	NS
	30 - 40	120	18.60	3.35		
	40 - 50	124	18.00	7.62		
	Above 50	136	20.56	4.36		
	Total	500	19.48	5.23		
Education	Schooling	116	22.25	4.34	1.85	NS
	Graduate	128	19.00	3.36		
	Professional	136	18.78	6.99		
	Others	120	19.20	3.75		
	Total	500	19.46	5.23		
Occupation	Government Job	116	21.00	4.13	6.43	0.01
	Private Job	148	19.50	4.57		
	Business	116	22.50	4.47		
	Others	120	15.80	6.17		
	Total	500	19.48	5.23		

Source: Primary data

Ha: There is a significant difference between real estates on the basis of demographic variables. From the analysis in Table 7, it is revealed that, Mean, SD and F-ratio for Real Estates on the basis of age. The table shows that the calculated F-value (1.48) which is not significant. The stated hypothesis is rejected. So it is concluded that there is no significant difference between real estates and age. The Mean, SD and F-ratio for Real Estates on the basis of education. The table shows that the calculated F-value (1.85) which is not significant. The stated hypothesis is rejected. So it is concluded that there is no significant difference between Real Estates and education. The Mean, SD and F-ratio for Real Estates on the basis of occupation. The table inferred that the calculated F-value (6.43) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between real estates and occupation. Therefore business respondents groups have high level of investment of real estates than the other groups.

Table - 8 Showing Mean, SD and F-ratio for Lending Private Parties on the Basis of Demographic Variables

<i>Demographic variables</i>	<i>Sub Samples</i>	<i>Number of Samples</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>F-value</i>	<i>Level of Significance</i>
Age	Below 30	120	13.20	4.42	4.46	0.01
	30 - 40	120	13.40	4.28		
	40 - 50	124	11.33	1.83		
	Above 50	136	10.67	2.48		
	Total	500	11.88	3.41		
Education	Schooling	116	13.00	3.50	1.69	NS
	Graduate	128	12.29	4.59		
	Professional	136	11.78	2.13		
	Others	120	10.60	3.22		
	Total	500	11.88	3.41		
Occupation	Government Job	116	14.75	3.82	5.91	0.01
	Private Job	148	11.67	2.87		
	Business	116	11.50	3.61		
	Others	120	10.40	3.02		
	Total	500	11.88	3.41		

Source: Primary data

Ha: There is a significant difference between lending private parties on the basis of demographic variables.

From the analysis in Table 8, it is revealed that, Mean, SD and F-ratio for lending private parties on the basis of age. The table inferred that the calculated F-value (4.46) which is significant at 0.01 level. The stated hypothesis is accepted. So it is concluded that there is a significant difference between Lending Private Parties and age. Therefore 30 - 40 years of age groups have high level of investment of lending private parties than the other groups. The Mean, SD and F-ratio for lending private parties on the basis of education. The table shows that the calculated F-value (1.69) which is not significant. Hence the stated hypothesis is rejected. So it is concluded that there is no significant difference between Lending private parties and education. The Mean, SD and F-ratio for lending private parties on the basis of occupation. The table inferred that the calculated F-value (5.91) which is significant at 0.01 level. Hence the stated hypothesis is accepted. So it is concluded that there is a significant difference between lending private parties and occupation. Therefore government job respondents groups have high level of investment of lending private parties than the other groups.

Table - 9 Showing Mean, SD and F-ratio for Government Bonds on the Basis of Demographic Variables

<i>Demographic variables</i>	<i>Sub Samples</i>	<i>Number of Samples</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>F-value</i>	<i>Level of Significance</i>
Age	Below 30	120	14.40	6.04	2.85	0.01
	30 - 40	120	14.80	4.96		
	40 - 50	124	11.17	2.24		
	Above 50	136	14.11	5.05		
	Total	500	13.60	4.88		
Education	Schooling	116	13.00	3.79	1.57	NS
	Graduate	128	15.29	5.78		
	Professional	136	12.89	5.18		
	Others	120	13.00	3.18		
	Total	500	13.60	4.88		
Occupation	Government Job	116	14.50	4.70	0.67	NS
	Private Job	148	13.92	5.72		
	Business	116	13.25	4.22		
	Others	120	12.40	3.02		
	Total	500	13.60	4.88		

Source: Primary data

Ha: There is a significant difference between Government Bonds on the basis of demographic variables.

From the analysis in Table 9, it is revealed that, Mean, SD and F-ratio for Government Bonds on the basis of age. The table inferred that the calculated F-value (2.85) which is significant at 0.01 level. Hence the stated hypothesis is accepted. So it is concluded that there is a significant difference between Government Bonds and age. Therefore 30 - 40 years of age groups have high level of investment of Government Bonds than the other groups. The Mean, SD and F-ratio for Government Bonds on the basis of education. The table shows that the calculated F-value (1.57) which is not significant. The stated hypothesis is rejected. So it is concluded that there is no significant difference between Government Bonds and education. The Mean, SD and F-ratio for Government Bonds on the basis of occupation. The table shows that the calculated F-value (0.67) which is not significant. The stated hypothesis is rejected. So it is concluded that there is no significant difference between government bonds and occupation.

Table 10 Correlation Analysis for Investor Behaviour of Investment Pattern on the Basis of their Demographic Variables

<i>Demographic variables</i>	<i>Respondents opinion about investment pattern</i>
Age	-.094*
Education	.129*
Occupation	.102*

Source: Primary data

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

Table 10 infers that significant correlation between investor behaviour of investment pattern and demographic variables. Result shows that there is a positive and significant correlation between investor behaviour of investment pattern and demographic variables. The correlation value is gender ($r=0.094$), education ($r=0.129$) and occupation ($r=0.102$).

Table 11 Stepwise Regression Analysis Predicting Investor Behaviour of Investment Pattern

<i>Sl.No</i>	<i>Step/Source</i>	<i>Cumulative R2</i>	$\Delta R2$	<i>Step t</i>	<i>P</i>
1.	Age	0.035	0.034*	3.182	0.01
2.	Education	0.062	0.055*	2.642	0.01
3.	Occupation	0.075	0.068*	2.055	0.01

Source: Primary data

* $P < 0.01$

Constant value = 16.928

Three variables namely, age, education and occupation have significantly contributed for predicting the investor behaviour of investment pattern. The variable age predictive value of investor behaviour of investment pattern seems to be 0.035, when paired with the variable education it is 0.062 and with occupation 0.075. The predictive value of these variables separately is 0.01.

Factor Analysis

Factor analysis was done with the main objectives to find out the underlying common factors among 12 variables included in this study. Principal component factoring method with variance rotation was used for factor extraction. A six factors solution was derived using a score test.

Table 12 Factor analysis**Communalities**

	<i>Initial</i>	<i>Extraction</i>
Age	1.000	.198
Education	1.000	.826
Occupation	1.000	.719
Fixed deposits	1.000	.626
Saving in post office	1.000	.447
Debentures	1.000	.690
Mutual Funds	1.000	.786
Shares	1.000	.757
Gold	1.000	.566
Real Estates	1.000	.852
Lending private parties	1.000	.858
Government Bonds	1.000	.570

Extraction Method: Principal Component Analysis.

Source: Primary data

Total Variance Explained

<i>Component</i>	<i>Initial Eigen values</i>			<i>Extraction Sums of Squared Loadings</i>		
	<i>Total</i>	<i>% of Variance</i>	<i>Cumulative %</i>	<i>Total</i>	<i>% of Variance</i>	<i>Cumulative %</i>
1	2.861	20.436	20.436	2.861	20.436	20.436
2	1.792	12.803	33.239	1.792	12.803	33.239
3	1.582	11.300	44.540	1.582	11.300	44.540
4	1.174	8.383	52.923	1.174	8.383	52.923
5	1.052	7.514	60.437	1.052	7.514	60.437
6	1.023	7.307	67.743	1.023	7.307	67.743
7	.993	7.090	74.833			
8	.810	5.783	80.616			
9	.708	5.054	85.670			
10	.632	4.514	90.184			
11	.574	4.097	94.281			
12	.339	2.424	96.705			
13	.263	1.878	98.583			
14	.198	1.417	100.000			

Extraction Method: Principal Component Analysis.

Component Matrixa

	Component					
	1	2	3	4	5	6
Age	-0.064	-0.261	-0.016	.063	-.275	-.214
Education	-.111	.061	-.243	-.061	.813	.294
Occupation	.153	.173	.389	.196	.209	-.657
Fixed deposits	-.115	.402	.293	.555	.210	-.112
Saving in post office	.078	.506	.312	.251	-.146	.056
Debentures	-.258	-.532	-.045	.503	.290	-.041
Mutual Funds	-.653	-.019	.539	-.233	.090	.082
Shares	.132	.295	.117	.459	-.243	.607
Gold	.390	.588	-.133	-.149	.162	-.028
Real Estates	.729	-.325	.437	-.113	.063	.080
Lending private parties	.639	.233	-.520	.097	-.018	-.182
Government Bonds	.890	-.096	-.006	-.014	.100	.038

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

Table 12 shows that the results of the factor analysis. Name of all the 12 variables and their respective loadings in all the six factors are given in the table. An arbitrary value of 0.29 and above is considered significant loading. A positive loading indicates that greater the value of the variable greater is the contribution to the factor. On the other hand, a negative loading implies that greater the value, lesser its contribution to the factor or vice versa. Keeping these in mind, a study of the loadings indicates the presence of some significant pattern. Effort is made to fix the size of correlation that is meaningful, club together the variables with loadings in excess of the criteria and search for a concept that unifies them, with greater attention to variables having higher loadings. Variables have been ordered and grouped by the size of loadings to facilitate interpretation and shown in Table 12.

Factor analysis was done among 12 variables used in the study. The principal component analysis with varimax rotation was used to find out the percentage of variance of each factor, which can be grouped together from the total pool of 12 variables considered in the study. The factor, variance percentage for each factor is 2.861, 1.792, 1.582, 1.174, 1.052 and 1.023.

The factors are arranged based on the Eigen value namely

- F1 (Eigen value 2.861)
- F2 (Eigen value 1.792)
- F3 (Eigen value 1.582)
- F4 (Eigen value 1.174)
- F5 (Eigen value 1.052)
- F6 (Eigen value 1.023)

These eleven factors are described as "Investment Pattern among the Small Investors". This

model has a strong statistical support and the Kaiser-Maya-Olkin (KMO) test of sampling adequacy concurs that the sample taken to process the factor analysis is statistically sufficient (KMO value = 0.8421)

Result Analysis

Result shows that there is a significant difference between fixed deposits, saving in post office, debentures, mutual funds, shares, gold, real estates, lending private parties, government bonds on the basis of age, education and occupation. Result shows that there is a positive and significant correlation between investor behaviour of investment pattern and demographic variables. Three variables namely, age, education and occupation have significantly contributed for predicting the investor behaviour of investment pattern. These eleven factors are described as "Investment Pattern among the Small Investors". This model has a strong statistical support and the Kaiser-Maya-Olkin (KMO) test of sampling adequacy concurs that the sample taken to process the factor analysis is statistically sufficient (KMO value = 0.8421).

Policy Implications and Conclusion

Now-a-days in the Global World, the companies face lot of competitions. In order to retain their business, the companies try to introduce new strategies. Also the investors don't want to take more risk. So the companies try to give more securities for investors' investment. They also aware of convertibility and early liquidity sufficiently. Thus, the companies try to provide these facilities. The present study aimed to identify the attitude of small scale investors related to investment pattern. The researcher selected 500 samples on the base of convenient simple method. After collecting the sample, to test the characteristics of the data analysis of variance is used. The result found that majority of the investors are more aware of high return as well as they also give more preference for low risk and the result of also reveals that behavioural situations especially awareness on mode of investment and attitudes towards investment pattern are majority had its own complication in the economic scenario.

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Role of Industrial Sector and Society for Sustainability and Innovation In Global and Indian Economy

Elana Bhandari

Abstract

Milton Friedman's views were profits are chief purpose of any business. In today's globalized era business brings innovation with sustainability in society as well as in market place. This helps in facilitating growth, innovation, employment, investment etc. Small change in perception and attitude can make a big difference in Indian and World Economy. This paper deals with the following issues.

Industrial sector is the second most important sector in Indian Economy. All economic theories revolve directly or indirectly around Industry only. This shows importance of this sector. Moreover, India is targeting double digit growth rate which is not possible, without this sector. As we are aware that Industrial environment of India is facing many problems if we need to compare it with globalised environment. For the same reason we need to mingle Innovation with sustainable development. Sustainability is which can go on for a long period of time without disturbing social, ethnic and climatic change.

This is an opportunity for Indian Economy to grow with sustainability. This can increase per capita income, real GDP will increase, Qualitative and skilled manpower as per requirement of Industrial Sector and many more.

This is an opportunity for Indian Economy to grow with sustainability. Society can give better manpower and customers for a healthy Industrial environment. This can also give innovation in Industrial sector for over all development of economy. We Indians need to grow together proving demographic dividend before the world.

Keywords: *Industrial Sector, Sustainability, Global Economy, Indian Economy*

Introduction

In 21st century definition of the organization has changed a lot. In this competitive era stakeholders became more important rather than just profit making. Milton Friedman's views were profits are chief purpose of any business. Industrial Sector has large influence on the economy and life in personal. Industrial organizations are founded and run for economic purpose which requires skilled management to develop social relations to achieve economic goals. This shows how important society is for any Industry to grow and develop. In today's globalized era business brings innovation with sustainability in society as well as in market place. This helps in facilitating growth, innovation, employment, investment etc. Small change in perception and attitude can make a big difference in Indian and World Economy.

This paper purposes that how industrial sector should mingle with society in order to achieve sustainability with innovation in global and Indian Economy. It further more explains how business motives can be achieved with complete interaction with the Indian Society. Role of SMEs and cottage industry is more in order to achieve India's growth in terms of per capita income and real GDP.

Role of Industry

Industrial sector is the second most important sector in Indian Economy. All economic theories revolve directly or indirectly around Industry only. This shows importance of this sector. There are so many entrepreneurs who believe that being sustainable they will be out of market. They won't be competitive in long run. This will add to cost and will no longer be profitable. Sustainable doesn't always mean to be environment friendly only. It means a lot more. Sustainability mean, which can go on for a long period of time without disturbing social, ethnic and climatic change. If anything is going on for a long period of time certainly it will be revenue generating and beneficial in short and long run.

In order to be sustainable with innovation we need to think out of the box. There are many cottage industries and SMEs where they work on ethnic products. Just we need to do is find all those industries or fields where we can work. These industries are at local level only where their products doesn't generate high revenues. Only thing is to be done is all those who work in large sectors should purchase these products as part of CSR and sell them in big market where these products can cater large revenues. This is the initial step by the corporate. Govt. should also purchase these products and should sell in big markets or even help them to sell these products in International Market.

Role of Society

After Industry, society has a key role in Development. It is we humans for whom development is taking place. It is we humans who are thinking of development. If development is interlinked with the Innovation and sustainability attitudinal changes are required. We need to think out of box in the competition era with scarce resources. For this writer has described role and need of different section of society in Innovation and sustainable development.

- Role of Think Tankers- They have to contribute in different ways. We need to think about our own ethnic values which we are inheriting from ages but at the same time we are ignoring them because we can't think its relevance in this competitive era. According to Robert K. Merton some people deviate not from pathological personalities but from culture and structure of society itself. Share of success and giving an equal opportunity to every section of society. We need to create such a healthy competitive environment in Indian Society which is today running a race to win a medal of backwardness.
- Role of Education- The present education system is boon or curse of Britishers. With the change of need of hour there is vacuum created in Indian Education System with Industrial requirements. Which we need to fill it. If it remains vacuum for a long period of time then we are in trouble for sure. Emile Durkheim's view has to be considered interacting with today's need of education in Indian Society keeping in mind the global competition.

Impact on Indian Economy

This is an opportunity for Indian Economy to grow with sustainability. At present share of manufacturing sector is stagnated to 17% of the GDP which is required to increase. The Growth

Rate is around 9 to 10 percent per annum whereas requirement is 12 to 15 percent. By opening innovating ethnic industries we can cater this growth easily. This will not only increase the employment opportunities but we can develop private industrial sector competitively. We need to push our investments in those fields which are Indian by origin but have never thought of that. For Example make Indian Snacks available at International market and earn fame and huge revenues as MAC-D.

With the increase in employment we can increase per capita income which will automatically increase living standards of the individuals. Through this process we can also increase our ranking in HDI and we can easily cater international markets as Indian Diaspora is the second largest and is spread across the globe. This can prove to be boon on Indian Industrial Sector.

Conclusion-

Sustainability in Business is a form of upcycling, retaining high quality in a Business cycle. There are examples world wide entrepreneurs who thought of sustainability and about stake holders they not only earned high revenues but also earned high customer satisfaction coupled with customer loyalty. This is one thing which is dream of every entrepreneur.

Successful sustainable innovation in Industry can prove to be beneficial to society at large. It provides long term holistic, economic and environmental benefits to the current and future residents. Experts' views are that in low income society economic growth transforms into large gains in life satisfaction if the resources generated by growth are used to satisfy basic needs. The establishment of communities in which people desire to work, live and play, and to which commercial businesses are attracted to market opportunity, provide incentives for stakeholders and business to grow its roots in the society in large.

Thus, it is not only beneficial for Indian Society but also applies to world as a whole. This can be treated as a thread which ties all of us together. Gone are the days to show hard power it is time to use are soft skills to make us grow.

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