

# A STUDY OF INVESTMENT BEHAVIOUR BASED ON DEMOGRAPHICS

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**Abstract** *The purpose of the study is to help the investment managers understand the context of their client (individual investor) better and thereby be better placed to help the clients make conscious positive change in their investments. This study attempts to find changes in investment decision with age, gender, income, education level, occupation, annual income, no of dependents.*

**Keyword:** *Psychological Factors, Behaviour Pattern, Investment Avenues*

## INTRODUCTION

Behavioural finance is a recent field that seeks to pool ideas of cognitive and behaviour psychological theory with traditional learning of finance and economics to provide clarifications for irrational decision making. In this study I have made attempt that only concepts like fundamental analysis which includes economic, industrial and company analysis do not only influence decision but psychology of the investors also play an important role.

The main purpose of behavioural finance is explaining why investors make systematic errors, fault subset returns and prices, creating market inefficiencies. It also considers how other investors take benefit (arbitrage) of these market inefficiencies.

Thus, behavioural finance studies how people actually behave in a financial setting. It the study of how psychological biases affect investors.

Some behaviours like overconfidence, emotions, risk taking ability play an important role in taking investment decisions. Behaviour finance contradicts the theory of EMH and fundamental analysis of EIC (Economic Industry and Company) analysis which says that quantified numbers play an important role.

Following are some attributes of behaviour influencing investments:

- **Overconfidence:** Psychologists have determined that overconfidence causes people to overestimate their knowledge, underestimate risks, and exaggerate their ability to control events. People are more overconfident when they believe they have control over the outcome. Examples: illusion of knowledge, regret, and pride
- **Social Interaction and Investing:** Conversation plays a significant role with the exchange of ideas, information, opinions, suggestions, emotions etc.,

hence both individual and institutional investors talk and form groups, talk to friends, family members, neighbours, colleagues about investing. Stakeholders such as stock brokers and analysts converse with other forms of stakeholders such as other brokers, executives, managers and end up forming various local groups and associations.

## THE REVIEW OF LITERATURE

In this prospect theory, importance is given to gains and losses based on the decision. Concave curve shows the gains and convex shows the losses. People with gains are generally risk averse and convex are risk takers (Martin Sewell University of Cambridge, February 2007 (revised April 2010).

Behavioural finance has grown over years. Some of the recent studies on behavioural finance are:

Saxena's (2013) study based on demographic and psychographic factors tries to anticipate the preferred portfolio of an investor in Jhansi. It was found that high income group was willing to invest in high risk securities and young investors are looking for wealth maximisation and hence they invest in lump sum maturity amount. Gold and real estate are considered as the safest and investors were not very keen on pension plans.

Das's study (2012) is an empirical study conducted on the middle class household's investment behaviour at Barak valley in Assam to understand the various investment options available to investors and tries to analyse the common problems faced by investors. The study found that the bank deposits remain the most popular investment option followed by insurance and small savings. It was found that people preferred investment options with fixed investment bearing options. The insurance options were preferred for tax benefits, life protection and average profitable investment avenues. As regards the income criteria was concerned, the

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high income group preferred to invest in shares and securities and middle or average income group preferred insurance as a preferred avenue. It further confirmed the earlier findings that the income and savings, and age and risk tolerance are directly related.

Sheik *et al.* (2012) examine the level of importance considered by the retail equity investors in Krishna district, Andhra Pradesh, based on socio-economic variables (age, gender, marital status, education, size and members of family, market experience, place of residence, family income, type and category of investor, type of market operation) and selective investment profile factors like liquidity, capital appreciation. The investors were divided into two groups namely, Hereditary and New generation investors and were categorised into long term investors and day traders.

Samudra & Burgate (2012) tried to analyze the influence of the age of the head of the family, along with the other demographic variables, as an important factor in decision making, and the reasons for increase in savings and change in the investment pattern, in Nagpur, Maharashtra.

Giridhari & Debashish (2011) analyse the investment perceptions among urban investors in Cuttack and Khurda in Orissa. Their study indicates that there is significant role of income and occupation in selecting investment avenues and the male investors are more active in selection avenues than female investors. Various psychological biases were considered – overconfidence, home bias, and sensation seeking attitude, competence effect, and herding, anchoring, heuristics. The study gave suggestions to include geographical horizon of investors along with other demographic variable to design financial investment avenues.

The study by John K. C., Sasi Kumar & Vikkraman (2011) was an effort to understand if there exists a relationship between risk tolerance level dependent variable and age, gender of an individual investor (independent variables) on the basis of the survey, while discussing the characteristics of the Indian individual investors with a sample size of 150 share brokers and 450 individual investors. It was concluded that the responsibility lies with the stock exchanges and the government to utilise this potential.

Shaikh & Kalkundarikar (2011) measure the how investors in Belgaum, Karnataka behave and it exposes that information level considerably influences the revenues on the investments and there is a negative correlation between the two variables, profession of retail investor and the risk level. Cross analysis and correlation analysis are the tools used for the study. The research makes a pertinent revelation that the level of investment knowledge significantly leverages the returns on the investments.

Shane Oliver (2011) opines that stock market is based on the fundamental theory. Investor consciousness plays an important role. This helps explain the reason behind asset

prices fluctuating. Studies have shown that investors are not rational and have a tendency to suffer from various gaps. The study discusses the psychological factors which affect investor behaviour like - extrapolating the present into the future, overconfidence and play an important role in decision making. The study confirms that the investors are driven by crowd psychology and how investors are influenced by friends and a general tendency that share prices only go up and not come down, and how the investors react for bubbles and busts. It concludes that markets are determined additionally by biases than just fundamentals. The crucial point for shareholders is to be aware of the role of investor thinking and the influence that psychological delusions can have on both the market and themselves.

Kabra, Misra & Dash (2010) studied the key factors which influence the investment behaviour and how it affects the risk tolerance level and decision making across generations in India as per age and gender. Security, opinion, awareness, hedging, duration, and benefits were considered to be the main factors which influence the decision making process. Three to five models were constructed using regression analysis and two models each for male and female gender were created to understand the impact of the six perceptual factors.

Tamrakar & Mani (2007) studied the growth of Indian economy from 1984 -85 to 1995 -96 about how economic liberalisation has promoted savings through life insurance and pension schemes and stressed on the need to bring a competitive environment by allowing private participation.

Kiran & Rao (2005) studied the demographic and psychographic factors and divided the investors into four categories namely, professional investors who are risk taking, strong in IPOs, moderate in SIPs and weak in insurance investments; high return ambitious investors who are strong in high short term returns, moderate in long term appreciation and flexibility of investment and weak in tax saving; steady return cautious investors who are strong in regular income schemes like recurring deposits; and highly cautious investors who are strong in retirement planning schemes, moderate in tax saving and weak in real estate.

Kindleberger & Aliber (2005) present a lively description of what happens in a bubble. They state that bubbles emerge because people buy assets-securities, commodities, or real estate, not because of the expected rate of return on the investment but in anticipation that these can be sold to someone else at an even higher price. They call this phase “mania”, meaning a frenzied pattern of purchases. Markets at this point are in a state of what has been called “irrational exuberance.” “There is a pervasive sense that it is ‘time to get on the train before it leaves the station’...”

Ghazali & Othman's (2003) study attempts to delineate the demographic and lifestyle characteristics of active and passive investors in Malaysia. The two groups are compared using eight demographic, five psychographic, and five

activity dimensions. The results indicate that there were significant differences in terms of gender, age, occupation, monthly personal income, and monthly household income between the two investor groups. In terms of psychographic dimensions, active investors were more risk takers or innovative than passive investors.

John & P Vikkraman's (2011) study finds the potential with the small and medium investors for investment in stock market, the fear of risk aversion prevent them invest. It was concluded that the responsibility lies with the stock exchanges and the government to utilise this potential.

A Compton & S Ozler (2011) suggested different models like psychoanalytic approach based on conflict/compromise model put forward by Freud, then articulated by Brenner, and unconscious group functioning models integrated with Keynes's psychologically minded views can provide a framework towards explaining the recent housing bubble that cannot be explained by mainstream economic models.

## STATEMENT OF PROBLEM

The behaviour of investors is not always rational, so investment managers should also consider that the psychology factors of a person play a substantial role in the behaviour of financial market. But, modern finance theories have almost completely ignored the role of complex motivational and cognitive factors that influence investor's decision making. A careful study on the investment analysis and portfolio management can provide a sound framework for managing and investing wealth.

## PURPOSE/NEED OF THE STUDY

The purpose of the study is to help the investment managers understand the context of their client (individual investor) better and thereby be better placed to help the clients make conscious positive change in their investments.

People make the best choices they can, given the limitations of their assumptions about themselves and their circumstances.

Understanding of the psychoanalytic orientations gives managers the opportunity to examine these assumptions, understand the origins of these assumptions in their client's lives, modify them if necessary, and help them make better choices for themselves.

## OBJECTIVES OF THE STUDY

- To study difference in perception of investors in the decision making of investing on the basis of age, gender, and marital status.
- To understand level of satisfaction towards investment, with respect to their education level, occupation,

annual income, no of dependents, and investment decision.

## SCOPE OF THE STUDY

The scope of this study is limited to Bangalore based on age of the respondents.

## HYPOTHESIS

H<sub>1</sub>: Psychoanalytic factors have significant relationship with satisfaction level of investment.

H<sub>0</sub>: Psychoanalytic factors have no significant relationship with satisfaction level of investment.

## RESEARCH METHODOLOGY

The research is based on the primary data which will be collected through questionnaires from the existing and potential investors in capital markets under various age groups living in Bangalore city. The secondary data will be collected from various journals, publications, articles published, other research papers, and economic and financial publications.

## Data Collection and Sample Size

Data are collected from 199 investors, between the age from 18 year to 70 years, from Bangalore by simple random sampling.

Table 1: Sample Based on Gender and Age

Gender	Age					Total
	18-30	31-40	41-50	51-60	60 and above	
Male	20	24	23	19	15	101
Female	25	19	17	21	16	98
	45	43	40	40	31	199

## Statistical Tools

For the purpose of analysing data with demography and amount of investment, descriptive statistics like cross tabs are used. To find out the level of satisfaction and psychoanalytical factor frequencies, ANOVA, post hoc test, factor analysis are used.

## DATA ANALYSIS AND INTERPRETATION

**Objective 1:** To analyse difference in perception of investors on the decision of investing on the basis of age, gender, marital status and no. of children.

**Interpretation:** From Table 2, it is found that a significant percentage of almost 54% of the investors relies on expert opinion while 29% take their own decisions. We see that of those who rely on expert opinion, there is an equal percentage of males and females.

From Table 3, it can be interpreted that 64 out of 199 i.e. 32% which is the highest, rate themselves moderate investor, while 22% each fall in category of beginner, knowledgeable, and experienced. Those who consider themselves moderate fall in age group of 31 to 40.

From Table 4, it is found that a high percentage of investors across all marital statuses prefer to invest monthly as ~58% of married person and 60% of unmarried person fall in the monthly investment category.

From Table 5, it is seen that 32 out of 50 i.e. 64% of the persons having no children yet, invest only up to 10% of their savings. Out of that (32), 18 i.e. 56.25% prefer government investments. This is ironic because this segment would probably have a higher flexibility to invest more and can take higher risk.

From the table, it can be clearly stated that 43% of the investors invest 11-20% of their income. From this sample group almost 40% have only 1 child as their dependent. Of this segment, 44.15% invest 11-20% of their savings.

**Table 2: Gender and Investment Perception of Investor**

Count					
Investment Decisions			Gender		Total
Male	Female				
Own initiative	Investment Perception	Govt	10	10	20
		Both-govt & private	10	9	19
		Private	6	7	13
	Total	26	26	52	
Expert opinion	Investment Perception	Govt	11	7	18
		Both-govt & private t	16	27	43
		Private	28	20	48
	Total	55	54	109	
Others	Investment perception	Govt	11	7	18
		Both-govt & private	6	7	13
		Private	3	4	7
	Total	20	18	38	
Total	Investment perception	Govt	32	24	56
		Both-govt & private	32	43	75
		Private	37	31	68
	Total	101	98	199	

**Table 3: Age and Investment Perception**

Investment Perception * Gender * Investment Decisions Cross-tabulation								
			Count					
Self-investment planning rating			Age					Total
			18-30	31-40	41-50	51-60	60 & above	
Beginner	Investment perception	Govt	4	5	6	1	0	16
		Semi-govt	4	4	5	0	1	14
		Private	0	3	6	7	0	16
	Total	8	12	17	8	1	46	
Moderate	Investment perception	Govt	6	8	6	8	9	37
		Semi-govt	5	5	2	2	1	15
		Private	3	3	3	3	0	12
	Total	14	16	11	13	10	64	
Knowledgeable	Investment perception	Govt	1	2	0	1	1	5
		Semi-govt	3	3	2	2	0	10
		Private	7	2	5	7	9	30
	Total	11	7	7	10	10	45	
Experienced	Investment perception	Govt	1	2	1	1		5
		Semi-govt	10	4	4	4	5	27
		Private	1	2	0	4	5	12
	Total	12	8	5	9	10	44	
Total	Investment perception	Govt	12	17	13	11	10	63
		Semi-govt	22	16	13	8	7	66
		Private	11	10	14	21	14	70
	Total	45	43	40	40	31	199	
			45	43	40	40	31	199

Table 4: Marital Status of Investors

Investment Perception * Age * Self-investment Planning Rating Cross-tabulation						
Count						
Frequency of investment			Marital status			Total
			1.00 Married	2.00 Unmarried	3.00 Other	
Monthly	Investment perception	Govt	21	6	0	27
		Semi-govt	38	9	0	47
		Private	34	3	5	42
	Total	93	18	5	116	
Quarterly	Investment perception	Govt	6	1	0	7
		Semi-govt	6	0	0	6
		Private	12	1	3	16
	Total	24	2	3	29	
Bi-annually	Investment perception	Govt	9			9
		Semi-govt	4			4
		Private	4			4
	Total	17			17	
Annual	Investment perception	Govt	2	8		10
		Semi-govt	10	0		10
		Private	2	0		2
	Total	14	8		22	
No regular schedule	Investment perception	Govt	3	0		3
		Semi-govt	7	1		8
		Private	3	1		4
	Total	13	2		15	
Total	Investment perception	Govt	41	15	0	56
		Semi-govt	65	10	0	75
		Private	55	5	8	68
	Total	161	30	8	199	

There are no instances of those having more than 3 children investing more than 30% of their savings. The mode for percentage invested decreases with the number of children.

**Objective 2:** To analyse the perception of level of satisfaction towards investment, with respect to their education level, occupation, annual income, no. of dependents, and investment decision.

From the results of Table 6, it can be seen that,

1. Levels of satisfaction towards their investment vary with the educational level of investors ( $F=3.784$ ,  $p=0.11$ ) at 5% level of significance  $p<0.05$ . Hence the null hypothesis is rejected and alternative hypothesis is accepted. It means that, education level brings change in psychological approach towards investment.
2. The purpose of investment varies with the occupation of investors ( $F=2.888$ ,  $p=0.037$ ) at 5% level of significance  $p<0.05$ . Hence the null hypothesis is rejected and alternative hypothesis is accepted.

3. The level of satisfaction towards investment varies with the annual income of investors ( $F=6.165$ ,  $p=0.000$ ) at 5% level of significance  $p<0.05$ , hence the null hypothesis is rejected and alternative hypothesis is accepted.
4. The level of satisfaction varies towards their investments varies with the no. of dependents of the investors ( $F=3.578$ ,  $p=0.15$ ) at 5% level of significance  $p<0.05$ , hence the null hypothesis is rejected and alternative hypothesis is accepted.
5. Investment decision differs significantly with respect to level of satisfaction ( $F=2.165$ ,  $p=0.0424$ ) at 5% level of significance  $p<0.05$ , hence the null hypothesis is rejected and alternative hypothesis is accepted.

## FINDINGS

**Objective 1:** It is found that a significant percentage of almost 54% of the investors rely on expert opinion while

**Table 5: No. of Children of Investors**

Investment perception * No. of children * Percentage of savings Cross-tabulation							
Count							
Percentage of savings			No. of children				Total
			0	1	2	3	
Up to 10%	Investment Perception	Govt	18	5	2	10	35
	Semi-govt		7	5	1	2	15
	Private		7	1	1	0	9
	Total		32	11	4	12	59
11% - 20%	Investment perception	Govt	0	3	4	5	12
	Semi-govt		5	10	20	0	35
	Private		8	21	1	9	39
	Total		13	34	25	14	86
21% - 30%	Investment perception	Govt	1	5	1	0	7
	Semi-govt		2	5	4	3	14
	Private		0	9	0	1	10
	Total		3	19	5	4	31
31% - 40%	Investment perception	Govt	1	0	1		2
	Semi-govt		1	1	7		9
	Private		0	9	0		9
	Total		2	10	8		20
40% above	Investment perception	Semi-govt		2			2
	Private		1			1	
	Total			3			3
Total	Investment perception	Govt	20	13	8	15	56
		Semi-govt	15	23	32	5	75
		Private	15	41	2	10	68
	Total		50	77	42	30	199

**Table 6: Results of ANOVA-test between Level of Satisfaction Towards Investment, with Respect to Their Education Level, Occupation, Annual Income, no. of Dependents, and Investment Decision**

Variable	Source of variation	Sum of Squares	Degrees of freedom	Mean sum of squares	F-value	P-value
Education Level	Between investors	1007.908	3	335.969	3.784	.011
	Within investors	17314.845	195	88.794		
	Total	18322.754	198			
Occupation	Between investors	779.475	3	259.825	2.888	.037
	Within investors	17543.278	195	89.966		
	Total	18322.754	198			
Annual income	Between investors	2066.415	4	516.604	6.165	.000
	Within investors	16256.339	194	83.796		
	Total	18322.754	198			
Financial responsibilities/ No. of Dependent	Between investors	955.994	3	318.665	3.578	.015
	Within investors	17366.760	195	89.060		
	Total	18322.754	198			
Investment Decisions	Between investors	159.710	2	79.855	.862	.0424
	Within investors	18163.044	196	92.669		
	Total	18322.754	198			

\*p&lt;0.05

29% take their own decisions. We see that they, who rely on expert opinion, have an equal percentage of males and females.

Age and investment perception: It is interpreted that 64 out of 199 i.e. 32% rate themselves moderate investor, while 22% each fall in category of beginner, knowledgeable, and experienced. They who consider themselves moderate fall in category of 31-40 age group.

It is found that a high percentage of investors across all marital statuses prefer to investment monthly as ~58% of married person and 60% of unmarried person fall in the monthly investment category.

It is seen that 32 out of 50 i.e. 64% of the person having no children yet, invest only up to 10% of their savings. Out of that, 18 i.e. 56.25% prefer government investments. This is ironic because this segment would probably have a higher flexibility to invest more and can take higher risk. It is found that 43% of the investors invest 11 -20% of their income. From this sample group, almost 40% have only 1 child as their dependent. Of this segment, 44.15% invest 11-20% of their savings. There are no instances of those having more than 3 children investing more than 30% of their savings. The mode for percentage invested decreases with the number of children.

**Objective 2:** To understand level of satisfaction towards investment, with respect to their education level, occupation, annual income, no. of dependents, and investment decision.

It is observed that levels of satisfaction towards their investment vary with the educational level of investors ( $F=3.784$ ,  $p=0.11$ ) at 5% level of significance  $p<0.05$ . Hence the null hypothesis is rejected and alternative hypothesis is accepted. It means that, education level brings change in psychological approach towards investment.

The level of satisfaction varies with the occupation of investors ( $F=2.888$ ,  $p=0.037$ ) at 5% level of significance  $p<0.05$ , hence the null hypothesis is rejected and alternative hypothesis is accepted.

The level of satisfaction towards investment varies with the annual income of investors ( $F=6.165$ ,  $p=0.000$ ) at 5% level of significance  $p<0.05$ , hence the null hypothesis is rejected and alternative hypothesis is accepted.

The level of satisfaction varies towards their investments varies with the no.of dependents of the investors ( $F=3.578$ ,  $p=0.15$ ) at 5% level of significance  $p<0.05$ , hence the null hypothesis is rejected and alternative hypothesis is accepted.

Investment decision differs significantly with respect to level of satisfaction ( $F=2.165$ ,  $p=0.0424$ ) at 5% level of significance  $p<0.05$ , hence the null hypothesis is rejected and alternative hypothesis is accepted.

## SUGGESTIONS

It is to be noted by the investment managers that real estate exists as one of the top two choices for people who are put off by volatility, and who like to put in effort to study and discuss their investment choices, and who feel confident about their decisions.

It is recommended that investment managers can suggest to their clients a balanced approach towards possibilities equity, bonds.

## CONCLUSIONS

The investment managers can weigh in the psycho-analytical orientations (as mentioned in above study) of the clients to understand them and their possible investment contexts better. With enhanced understanding of their psychological contexts, it would help them to engage with and realign their clients more effectively.

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