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Does Family Domicile Changes Financial Planning Decision? - A Study on Retail Investor' Behaviour using TPB

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ABSTRACT

The paper attempts to understand the financial planning process, the attributes and its antecedence that define the financial behaviour of demographically different middle class families living as nuclear and joint families in the geographic limits of Odisha. This descriptive study is an applied financial behaviour research, that employs behavioural theory - The theory of planned behavior (TPB)- to elaborate motivation and behaviour towards financial planning, to achieve the financial goals set. Disguised Survey on 204 families, selected using convenient sampling from two strata – joint & nuclear families- was conducted. Structured questionnaire was administered to collect data. The collected data was statistically analysed for its relations and variance on the attributes ranging from random casual awareness to high investment affinity. The paper discusses issues relevant to predicting positive financial behaviour. Comparison on the behaviour of retail investors belonging to two different family structures in expected to highlight the factors that affect financial decisions- beyond the demographics and socio-economic factors.

Keywords: Investment planning process, Investment behavior, Financial planning, Theory of planned behaviour, Joint and Nuclear families, Behavioural Finance.

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Biographical note: Biswajit Acharjya, currently pursuing doctoral research in behavioural finance, is a Textile Engineer and post graduate in Business Administration. His work exposure to industry adds credit to his academic rigour and to his intense Behavioural research in Finance.

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1. INTRODUCTION

Personal and family financial planning includes a clear understanding of current and anticipated incomes and expenses of individuals and families, in future and setting a series of actionable plans to attain life goals. The financial goals of a family can be classified as funds or corpus created for cashflow management, debt management, emergency/contingency, insurable risk reduction, wealth creation or asset purchase, investment risk control, tax planning, retirement planning (Warschauer, 2008). Family financial planning is an economic activity of predicting and reducing risks and smoothening consumption through effective allocation of disposable income. It was initially termed as ‘Home economics’ (Peixotto, 1927) which is a set of practical life tips of running a successful family, financially. Later, time element was introduced in home economics, as ‘cost of time’ played a vital role in financial decisions, since the households need to optimise their decisions with limited wage and non-wage earning members and the opportunity cost is high. All the theories till then were based on ‘oneness’ of a family Samuelson’s (1956). Becker differed from Samuelson’s (1956) one-voice-family;

where the researcher claims that families share common selfless interests. Becker moderated the idea with a scenario that what-if there is an altruistic or a selfish person in a family, which lead to a new theme termed ‘New home economics’ by Feber and Brinbaum 1977. The bargaining approach within families (Manser, 1979), lead to research elaboration on complicated financial planning decisions within families; and that of intra-household allocations (Browning and Chiappori, 1998). It is also argued that the intra-allocation and bargaining approach is a counterpart to Agency theory (Jensen and Meckling 1976; Eisenhardt 1989).

This paper attempts to understand how nuclear and joint families in rural limits of India do personal and family financial planning. Validate the financial planning process using Theory of planned behaviour (Icek Ajzen, 1985). The economy of the state considered for the study –Odisha- has been highly progressive over the years. The average income of the state, measured in terms of per capita net state domestic product was at ₹21,282 in 2006-2007, spurted to ₹49,241 in 2012-2013. The Table 1 provides a quick glimpse of its growth in past years in absolute terms and in growth percentage.

Table 1
State/UT-wise Per Capita Income at current prices and corresponding percentage change

State/UT	Per Capita Income (₹)			Percentage change in Per Capita Income over previous year		
	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Odisha	49227	52559	59229	13.26	6.77	12.69

Source: For Sl. No. 1-33 -- Directorate of Economics & Statistics of respective State/UT.

The economic growth of the state can be attribute to the Government's planned industrialisation, increase in literacy level, control over the anti-societal activities and many other spill-over effects. Increase in per capita income implies increase in consumption, savings and investment. This study aims to understand.

- (a) How families – Joint and Nuclear- approach financial planning; their purpose and process
- (b) How does their decision differ with type of families?
- (c) Befit the behaviour into TPB model for a comprehensive evaluation

2. LITERATURE REVIEW:

Based on the literature survey it is found that, there are various factors, which are responsible for individual investment behaviour. Financial planning, is the decision making of individual in terms of saving and investment. the purpose of investment and purpose of saving of each individual is different in different context. Various literature on individual household investment behaviour are reviewed to find out the factor responsible for investment behaviour.

Financial planning decision is positively affected by Age (Bruin et. al, 2012), past work skill (Juliusson et. al, 2005) and intellectual bias (Stanovich et. al, 2008). Knowledge of financial instrument and appropriate investment options are required for improved financial planning (Gaurav et. al, 2011). Demographic factors like age, gender, knowledge level, marital status, religion, income, qualification and socio economic factors like income of family, Tax aids, risk, return, safety are accountable for the financial investment decision (Dahiya et. al, (2016), Halek et. al. (2001), Sahi, (2013)). Male are giving more effort and wealth than female with less prone for adviser advise. Married people prefer to trade more than unmarried people. Nature of investment and period of investment have positive impact on the financial satisfaction level of the individual (Sahi, 2013).

Education, Occupation, Job Experience have no such relationship for the selection of investment avenues. Middle income people are more likely risk averse they are most likely to invest in a safe and secure ways like bank deposits, real estate, Insurance etc. Real Estate is most preferable way of investment option and Fixed deposits is least preferable investment option as per Oman house hold investor. Market rumour is the most influential element than Government rules and regulation for financial investment decision making (Sharma et. al). Indian women are preferring to keep their surplus in a secured way i.e. fixed deposit and insurance. Almost 34 % Indian women are not interested to invest in any of the financial product (Paluri et. al, 2016). The authors stated women are classified into four important clusters such as: Judicious, Conservative, Acquisitive, Unsure. The interest of women is the vital factor towards financial planning for determining these clusters.

Risk and return, Prevailing market price, Investment timing, share price, Financial counsellor's services are the key financial policies for the small investor in diminishing order. For motivational factor, administration excellence, Business track record, final outcomes, encouragement of mediators, and media advertisement are key factors in diminishing order are responsible for short term investor's decision making (Deene et. al. 2013).

Investors success and failure are determined with the two important factors i.e. knowledge and sentiment which determine the investors behaviour. From the analysis, it is found that different investment sentiment has adverse effect on the investors behaviour (Charles et. al, 2014).

For the stock selection, societal concern and personal features are having positive impact. From the analysis, the authors found that women are more over searching for policies and schemes allotted for selecting the stocks. Younger investors are moreover environmental concern; they are not preferring companies with bad environmental records. Demographic voters are mostly searching schemes and policies available for women and minority category. homosexual people are not interested to opt for immoral stocks. Religions have also significant impacts on stock selection. Not all social responsible investors have similar kinds of investment interest. Preservation, judgement, and redemption are key factors for the stock selection (Hood et. al, 2014).

Social responsible investors are likely to be unmarried young females and they have better knowledge of investment than Non-social responsible investors. It was also found that social responsible investors are less affluent and more like to independent (Junkus et. al, 2010). Tax benefits, wealth obligation, return on investments are the key factors to attract the investors to choose the particular investment option (Geetha et. al, 2014). From the analysis, the authors found that the investors behaviour towards various investment avenues have changed because of various new financial institutions came to the market. Investment motives of women are in decreasing trend if the fund assortment size of mutual fund increases but in case of man, its showed opposite result i.e. the risk-taking ability and investment motives is increasing if fund assortment size of mutual fund increases. Women are more risk averse than man and man are more over return oriented when fund assortment of mutual fund is high in case of 401 k retirement plan (Morrin et. al, 2011).

Investors behavioural intension is positively exaggerated with reference to investors attitude, subjective norms and perceived behavioural control. Few psychological factors are identified like bullishness, excessive hopefulness, thinking of risk and herd behaviour have positive affect on individual behavioural intension (Phan and Zhou, 2014).

Investors want to keep their fund where safety and good return on investment is there. They prefer financial investment where they can draw their money easily as when required. There should be more advertisement and awareness program on new schemes which have recently launched into the market with the key benefits of investing (Malviya et. al, 2015). Female investors, aged investors and investor those are investing huge wealth are seeking advice from the financial advisors. People, those are taking financial advice generally have more revenue than those who are not taking any help from the financial advisors (Zhang, 2014).

Optimism have positive relation with the individuals saving behaviour (Lim et. al, 2011). Technical analysis is one of the key factors for determining short term investment decision. Most of the fund managers look into the past price behaviour before predicting future price movement (Menkhoff, 2010). The author proved in his study that technical analysis is more important factor than fundamental analysis for taking short term financial investment decision internationally in five different countries. Technical analysis is the most profitable way for predicting the price of asset and it is used mostly in foreign exchange market (Menkhoff et. al, 2007). Herd behaviour is highly significant factor for investment decision making (Bikhchandani et. al, 2000).

3. THEORIES OF FINANCIAL PLANNING

Theoretical practice for making financial planning has started long ago. Some critics are disagreeing with the practicality of theory for making financial decision but theory improvise the depth knowledge which

in return provide the proper outline for exhibiting matured behaviour (Britt et. al, 2015). To encapsulate knowledge for financial planning, the fundamental steps is the clear understanding about the theories (Shoemaker et. al. 2004). There would be restricted research outcome without the application of theories in financial planning (Bengston et. al, 2005).

Behavioural finance theories predict the better result for predicting behavioural intention than any other prediction without the support of behavioural finance theories (Glanz et. al, 2010). Self-generated theories predict the behavioural intention of individual and family in a better way in comparison to various other observation methods of predicting the behaviour (Ajzen et. al, 1980). In many instances, it was proved that prediction of human behaviour difficult on the basis of observation result without the support of theories. Theoretical base support helps the analyst to predict accurate result with a lesser time interval. Behavioural finance theory is the most challenging area of research in current trends. There have been research going on related to behavioural finance theories and models. Some models have already developed and researcher are still doing more detail research to develop the appropriate models and test their applicability. Some of the theories are classified into three clusters based on the similarity like motivational perspective, predicting behaviour perspective and multi-step perspective (Armitage et. al, 2000). TPB and TTM, two behavioural finance theory have mostly used in the health care and education sector (Glanz et. al, 2010) and these two theories can be used for predicting behaviour in financial planning (Xiao, 2008). In this paper, the author studied about one behavioural finance theories TPB for predicting the behaviour of the two demographically segment families- Nuclear and Joint family.

The authors feel, application of TPB could give better understanding about family investment decisions and its antecedents. TPB can be used to predict the key motivating factors of a family for making financial decision. Financial planning is the discipline which deals with the attitude and behaviour of the individual towards management of money (Xiao, 2008). Financial decision is based on the behaviour and that vary individual to individual (Bhushan and Medury, 2013). Individuals financial behaviour is not related to the final consequence i.e. the gain or loss (Ajzen et. al, 1980). The final consequence is affected by various other factors and situations. If the individual financial behaviour is favourable with the situations and factors that may lead to better consequences. For example, suppose someone want to invest for becoming rich and he or she do not have single pie of money to save and the total income of the individual is managed anyhow for the family bearing. Hence if that person has sufficient money he or she can invest their saving for becoming rich. Financial understanding and knowledge is the key factors of the individual for better financial planning. The individual those have knowledge can take more polished decision for financial planning which leads to better consequence in the end (Hasting et. al, 2012).

TPB is used in this paper for finding the key antecedents and motivating factors of the families for taking financial decision.

3.1. Theory of Planned Behaviour (TPB)

A continued variant of Theory of Reasoned Action (TRA), bring into a refined form termed Theory of Planned Behaviour (TPB) (Ajzen, 1991). Fishbein in 1967 popularised TRA, later in 1970 this theory was developed and tested. TRA was encapsulated in a fiction in the year 1975 by two authors Fishbein and Ajzen. The idea behind TRA is to figure out individual behaviour, which can be resolute by the intention of the individual. Intension of individual subject to individual attitude, subjective norms and context between

them. Individual behavioural intention is difficult to predict by analysing the attitude and subjective norm (Ajzen et. al, 1980). Later Ajzen in 1991 again studied and extended TRA by accumulating one more variable perceived behavioural control and rechristened the model into Theory of planned behaviour (TPB). TPB explained, Behavioural intention of the individual is subject to individual attitude, subjective norm and perceived behavioural control (Ajzen (1991), Aizen et. al., (2012)). TPB explains how individual behaviour changes subject to change in behavioural intention and attitude of the individual. Attitude is individual's psychological feelings towards optimistic and adverse consequence of recent behaviour. Subjective norm is individual's insight towards the behavioural intention with the noteworthy social and reference group impact. Perceived behavioural control is the impact of individual acquaintance, previous skill, current skill and social encouragement towards the intention. If the behavioural intention is optimistic that leads to improved behaviour of the individual. If the individual get better idea from the past experience and social encouragement, that will give better perceived behaviour which have positive kin towards the behavioural intention in return it will show better behaviour. Perceived behavioural control have optimistic straight influence to the behaviour of the individual (Ajzen, 1991). TPB is used in different sector by various author. Individual attitude and perceived behavioural control are well interpreter then subjective norm for individual behaviour and individual attitude is the more effective than perceived behaviour to predict the behaviour of the individual (Armitage and Conner, 2001).

TPB is applied in predicating financial behaviour of the individual, family and organisation. East in 1993, explained TPB is various financial planning decision and explained peer group and relative's advice have strong impact on financial planning decision. Association between perceived behavioural control and behavioural intention, between perceived behavioural control and attitude and between subjective norm and attitude leads to better behavioural decision (Bansal and Taylor, 2002). Attitude of the individual and the perceived behavioural control have led to better decision making then subjective norm (Xiao et. al, 2006). Belief construct of TPB is break down into interlinked relevant beliefs in the amended model (Lim et. al, 2005). This model is applied in ecommerce business to find the online purchase intention of the consumer. Shim et. al, (2001) states internet surfing for fact finding perform as the refereeing variable among attitude, perceived behavioural control, past experience and behavioural intention towards online purchase. Fortin (2000) and Kang et. al., (2006) explained TPB for predicting behavioural intention into ecommerce business.

4. PROPOSED MODEL AND HYPOTHESIS

Numerous studies experimentally verified TPB in various sector and its applicability for computing the behavioural intention in past. Based on the literature the authors identified few construct and proposed an extended TPB model. The authors later checked the significance of these construct empirically by applying this model for measuring behavioural in tension of the retail investors of rural Odisha.

4.1. Behavioural Intension

Behavioural intention is the most vital determinant in TPB and it is considered to be the immediate forerunner for actual behaviour. Behavioural intention is the willingness to perform specific behaviour and it can else described as individual motivation for exhibiting certain behaviour (Ajzen, 1991). As discussed in the literature there are three important dimension for measuring Behavioural Intension of the individual are

there i.e. Individual attitude, Subjective Norms and Perceived Behavioural Control. Many authors proved the significance of these three construct in various sectors.

4.2. Attitude

TRA and TPB long before elucidated attitude as the key determinant for envisaging upcoming behaviour. If individual attitude is positive, he/she can more prone to exhibit that behaviour. Behaviour intension moreover depend on the favourable and unfavourableness of the attitude. Significance of attitude towards intension has explained by many studies by various authors (Ajzen and Fishbein (1980), Mathieson (1991), Teo and Pok (2003), Shih and Fang (2004), Ramayah and Suki (2006), Phan and Zhou (2014)).

H₁: Individual Attitude is significant for measuring Behavioural Intension.

4.3. Subjective Norm

Subjective Norm is another most important factor for predicting the future behavioural intension as explained earlier in TRA and TPB. Significance of subjective norm is proved by various author in their study for exhibiting certain behaviour. Societal motivation and encouragement have positive impact on behavioural intension (Venkatesh et. al., 2000, Fu et. al., 2006). Some authors proved lesser impact or insignificant nature of subjective norm towards behavioural intension (Lewis et. al., (2003), Phan and Zhou (2014)).

H₂: Subjective Norm is significant for measuring Behavioural Intension.

4.4. Perceived Behavioural Control

To overcome the limitation of TRA, TPB introduced Perceived Behavioural Control for predicting future behavioural intension. It is the control belief of individual which rheostat the forthcoming decision at the time of calm or tough time (Ajzen, 2005). Perceived behaviour is that behaviour we are getting from our previous experience, current analysis from our kin, friends etc. Several authors experimentally proved Perceived Behavioural Control have significant effect on Behavioural Intension (Mathieson (1991), Shih and Fang (2004), Fu et. al., (2006), Phan and Zhou (2014)).

H₃: Perceived Behavioural Control is significant for measuring Behavioural Intension.

4.5. Extension Of TPB

TPB is a basic framework containing three major factors as discussed earlier i.e. attitude, Subjective Norm and Perceived Behavioural Control but these major construct delivers restricted assessment of affiliation towards the behavioural intension. The attitudinal belief, Normative belief and Control belief motivates Attitude, Subjective Norm and Perceived Behavioural Control respectively (Ajzen, 1991). Several authors proved and extended some construct to get a more accurate relationship towards behavioural intension (Taylor and Todd (1995), Phan and Zhou (2014)). Based on some literature the authors decomposed attitude in four other dimensions like Over Confidence, Investor Optimism, Investor Effort and Risk Appetite. To measure Perceived Behavioural Control the author have taken three more control belief like Technical Analysis, Fundamental Analysis and Market Psychology.

4.5.1. Over Confidence

In the financial market, it is seen that over confidence have major role for decision making. In many instance, it was seen that out of over confidence people take wrong decision in share market and gambling (Barberis et. al, 2006). Various authors proved that many people feel they know better than others and this over confidence has significant impact on Behavioural Intension (Gervais and Odean (2001), Wang (2001), Gervais et. al., (2002), Phan and Zhou (2014)).

H₄: Over Confidence have significant impact on individual attitude.

4.5.2. Optimism

Excessive positive ness of the individual has impact on the decision making. Out of over confidence many time people feel the harmful impact does not have any affect to them. Due to positivity, they feel they will get better result every time. Many instance, it was found that due to excessive optimism people get loss in future in highly risky investment. Several studies proved optimism have impact on attitude which in return help for better decision making (Wang 2001, Gervais et. al., 2002, Johnsson et. al., 2002).

H₅: Optimism have significant impact on individual attitude.

4.5.3. Investor Effort

Effort is how much an individual person dedicated to the goal. Sometimes people invest money for getting return quickly but some other people try to understand the situation before or during investment. Investor effort weather he or she actively involved or not have impact on the behavioural intension. Some author proved investor effort have significant impact on the attitude of the individual (Reid et. al., 1997, Acland 1976).

H₆: Investor Effort have significant impact on individual attitude.

4.5.4. Risk Appetite

Risk is the uncertainty in getting outcomes. Generally, people want to get risk less gain in the investment. If risk is more in the investment the return will be more. Some people have tendency for taking risk in the market for getting more return out of investment. For financial investment people, do not want much risk. Many studies proved that risk appetite have significant impact on the behavioural intension (Tversky and Kahneman (1992), Bennet (2011)).

H₇: Risk Appetite have significant impact on individual attitude.

4.5.5. Technical Analysis

For forecasting the future price or for predicting the price of asset in future we need to look into past price movement over years. Technical Analysis is the inductive analysis of past price movements like past profit/Loss, past trend etc. Some studied described significance of technical analysis towards perceived behavioural control (Menkhoff (2010), Menkhoff et. al., (2007)).

H₈: Technical Analysis have significant impact on perceived behavioural control.

4.5.6. Fundamental Analysis

The current changes in the market may give some information for the future price movement. The analysis of current price structure like volume turnover etc. for predicting the future price movement is called fundamental analysis. Some studies explained the significance of fundamental analysis in financial market (Abarbanell and Bushee (1997 1998), Dechow et. al., (2001)).

H₉: Fundamental Analysis have significant impact on perceived behavioural control.

4.5.7. Market Psychology

Information from market rumour, news, media help to perceive some knowledge which in return affect our behavioural intension. The information we are getting from the market through news, rumour, Gossip is called market psychology. Various studies proved the impact of market psychology towards perceived behaviour which controls the behavioural intension (Glaser (2004), Bondt and Thaler (1985)).

H₁₀: Market Psychology have significant impact on perceived behavioural control.

Based on the above literature some sub variables are identified and with this sub variable a frame work of proposed model is given below.

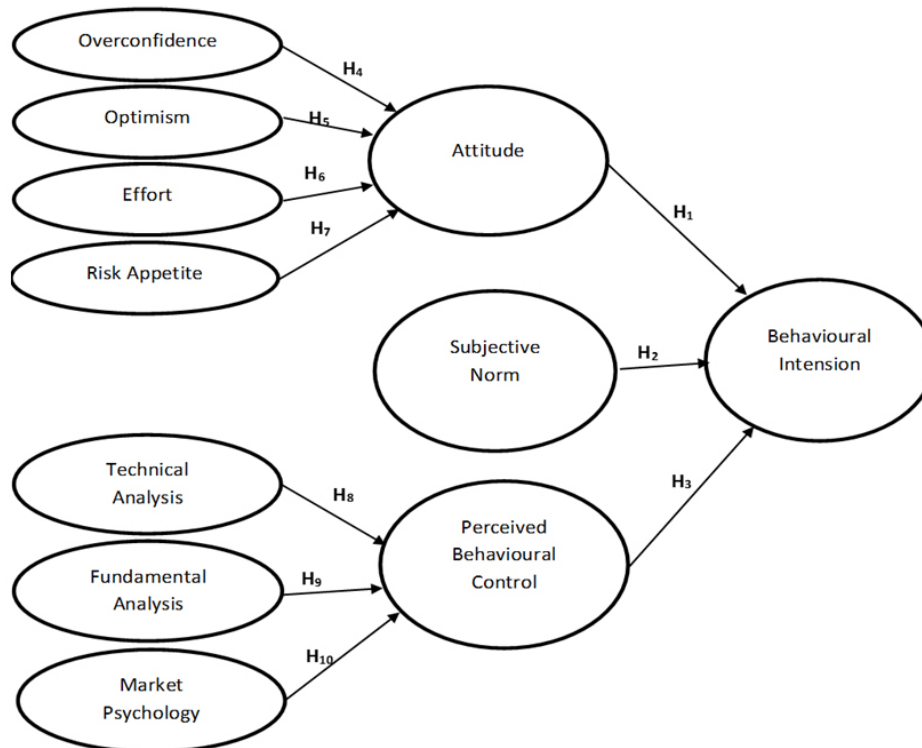


Figure 1: Model for measuring Behavioural Intension of Financial Investment

5. RESEARCH GAP

This research is an offshoot from the research gap identified by Shalini Kalra Sahi, (2013), “Demographic and socio-economic determinants of financial satisfaction”, Emerald insight, International Journal of Social Economics, Vol. 40 Issue 2 pp. 127 – 150 and first of its type to introspect the domicile of family structure.

Comparison on the behaviour of retail investors belonging to two different family structures in expected to highlight the factors that affect financial decisions- beyond the demographics and socio-economic factors.

5.1. Research Question

RQ1: How nuclear and joint families do personal and family financial planning?

RQ2: Is there any variation in decision making, between two family people: Joint and Nuclear?

RQ3: Can we validate the financial Planning process using TPB?

5.2. Research Objective

- To analyse the disparity in Investment behaviour statistically between the strata of families' types - joint and nuclear family.
- To determine the factors affecting Investment Behaviour of retail investors of rural Odisha.
- To describe significant variables for measuring attitude, subjective norm and perceived behavioral control under TPB for gauging financial behavior.

6. RESEARCH METHODOLOGY

6.1. Research Design

This descriptive study is an applied financial behaviour research. The study employs behavioural theory - The theory of planned behaviour (TPB) to elaborate motivation and behaviour towards financial planning and the positive actions at different stages, to achieve the financial goals set.

6.2. Sampling Design

Instruments distributed using convenience sampling technique to the sample size of 239 family members among which 217 respondents were responded, in which 204 sample are declared valid sample for the study on investment behaviour of- joint & nuclear families in rural Odisha.

Structured scale was administered to collect data. The collected data was statistically analysed for its relations and variance on the attributes ranging from random casual awareness to high investment affinity.

6.3. Measurement and Scale for Data Collection

TPB is considered as the base model for the study. The well-developed and extensively tested TPB scale of measurement was redefined to include relevant 'investment avenues'-obtained through extensive review of literature and the context- by pilot tested on 30 families.

The modified scale was later iterated by experts and tested for validity.

The structured scale intending to collect responses on 11 criteria and 42 items was reiterated to 39 item scale with five point Likert response ranging from strongly disagree to Strongly agree. All facts about measured scale items are specified in Table 2.

Table 2
Details about Measurement Scale

<i>Constructs</i>	<i>No. of scale items</i>	<i>Name of the author’s</i>
Subjective Norm	3 item	Hsu et. al, 2004
Behavioral Intension	3 items	Agarwal et. al, 2000
Overconfidence	4 items	Barber and Odean (2001), Barber et. al., (2009), Olsen (2007), Shiller (1999), Singhvi (2001), Phan and Zhou (2014).
Investor Effort	2 items	
Risk Appetite	4 items	
Technical Analysis	4 items	Brahmabhatt et. al., 2012, Olsen 2007, Shiller 1999.
Fundamental Analysis	4 items	
Market Psychology	5 items	

7. ANALYSIS AND DISCUSSION

The Table 3 represents the demographic distribution of the respondents.

Table 3
Demographical details of the respondents

<i>Characteristics</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Gender</i>		
Male	141	69.1
Female	63	30.9
<i>Family Type</i>		
Joint	105	51.5
Nuclear	99	48.5
<i>Age</i>		
Up to 20	3	1.5
21-30	89	43.6
31-40	39	19.1
41-50	17	8.3
51-60	53	26.0
Above 60	3	1.5
<i>Marital status</i>		
Single	86	42.2
Married	110	53.9
Widowed	8	3.9
<i>Occupation</i>		
Student	19	9.3
Employed	121	59.3
Retired	35	17.2
Unemployed	5	2.5
Self employed	24	11.8

<i>Characteristics</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Annual Income of Family</i>		
Below 1 Lakh	9	4.4
1-2 Lakh	38	18.6
2-3 Lakh	17	8.3
3-4 Lakh	53	26.0
4-5 Lakh	38	18.6
Above 5 Lakh	49	24.0
<i>Investment Decision</i>		
Myself	78	38.2
Family	65	31.9
Jointly	61	29.9
<i>Contribution</i>		
Up to 10 %	68	33.3
10%-15%	40	19.6
15%-20%	68	33.3
20% and above.	28	13.7
<i>Prime purpose for saving/ Investing</i>		
Tax reduction	41	20.1
Children education, marriage, Other occasion	43	21.1
Purchase of asset	12	5.9
Retirement Investment	32	15.7
Increasing financial wealth	76	37.3
<i>Trading Profile</i>		
Active Trader	23	11.3
Systematic investor	100	49.0
Un systemic Investor	17	8.3
Tax planner/evader	33	16.2
Passive Investor	31	15.2

Pearson correlation analysis was applied to estimate the significance of demographic details and behavioural Intension of individual investor.

Table 4
Correlation Analysis

		<i>Correlations</i>						
		<i>Gender</i>	<i>Family Type</i>	<i>Age</i>	<i>Marital Status</i>	<i>Occupation</i>	<i>Gross Annual Income of the family</i>	<i>BI</i>
Gender	Pearson Correlation	1	-.076	-.238**	.072	-.012	-.138*	-.068
	Sig. (2-tailed)		.281	.001	.305	.861	.050	.335
	N	204	204	204	204	204	204	204
Family Type	Pearson Correlation	-.076	1	.068	.000	.022	.257**	.387**
	Sig. (2-tailed)	.281		.336	.995	.755	.000	.000
	N	204	204	204	204	204	204	204

		<i>Correlations</i>						
		<i>Gender</i>	<i>Family Type</i>	<i>Age</i>	<i>Marital Status</i>	<i>Occupation</i>	<i>Gross Annual Income of the family</i>	<i>BI</i>
Age	Pearson Correlation	-.238**	.068	1	.737**	.169*	.363**	.388**
	Sig. (2-tailed)	.001	.336	.000	.016	.000	.000	.000
	N	204	204	204	204	204	204	204
Marital Status	Pearson Correlation	.072	.000	.737**	1	.103	.228**	.319**
	Sig. (2-tailed)	.305	.995	.000	.141	.001	.000	.000
	N	204	204	204	204	204	204	204
Occupation	Pearson Correlation	-.012	.022	.169*	.103	1	-.069	.049
	Sig. (2-tailed)	.861	.755	.016	.141	.326	.486	.000
	N	204	204	204	204	204	204	204
Gross Annual Income of the family	Pearson Correlation	-.138*	.257**	.363**	.228**	-.069	1	.631**
	Sig. (2-tailed)	.050	.000	.000	.001	.326	.000	.000
	N	204	204	204	204	204	204	204
BI	Pearson Correlation	-.068	.387**	.388**	.319**	.049	.631**	1
	Sig. (2-tailed)	.335	.000	.000	.000	.486	.000	.000
	N	204	204	204	204	204	204	204

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

From Table 8, it is inferred that the following demographic factors -Family domicile, Age, Marital Status and Gross annual income - significantly and positively are related to investors’ behavioural intension. Thus, confirming that there is a disparity in investment behaviour between two families: joint family and nuclear family. The same is affirmed with statistical evidence by the authors using moderation effect using smart PLS tool, in the latter part of the research

Further, model estimation – a prerequisite to test the model that intends to detect the significant factors distressing individual investor’s behavioural variance, Structural Equation Model (SEM) using Smart PLS-2 was used. The model measurement tests include estimation of internal consistency, instrument validation for its convergence and discriminant analysis. The composite reliability of the constructs was measured using internal consistency, Cronbach’s alpha and Average variance extraction (AVE), and the test scores are given in Table 5.

Table 5
AVE, Composite Reliability and Cronbach’s Alpha

	<i>AVE</i>	<i>Composite Reliability</i>	<i>Cronbach’s Alpha</i>
BI	0.8606	0.9487	0.919
FA	0.7973	0.9402	0.915
IE	0.8399	0.913	0.8095
IO	0.7602	0.9269	0.8947
MP	0.7495	0.9373	0.9163
OC	0.7798	0.934	0.9057
RA	0.7639	0.9282	0.8968
SN	0.8439	0.9419	0.9076
TA	0.7479	0.9223	0.8876

Cronbach’s alpha as a measure of internal consistency is sufficient measure to validate internal consistency. The measure on internal consistency is more general and non-specific as it is unaffected by the scale length. However, Cronbach’s alpha represents a lower bound of composite reliability (Chin, 1998; Fornell & Larcker, 1981), with presumption that all constructs contribute equally and the loadings are set to unity. From table 5, the study indicates that the Cronbach’s Alpha value of all the items range between 0.8095 and 0.919, which is acceptable for an adopted scale (Fornell and Larcker, 1981). Hence the internal consistency of all the items are reliable in this context.

The composite reliability of all the items are more than 0.9 which is higher than the minimum standard value 0.7 (Bagozzi and Yi, 1988). The AVE (Average Variance Extracted) values for all the items are higher than 0.5 which is satisfactory for convergent validity (Bagozzi and Yi, 1988).

Table 6
Discriminant Validity

	<i>BI</i>	<i>FA</i>	<i>IE</i>	<i>IO</i>	<i>MP</i>	<i>OC</i>	<i>RA</i>	<i>SN</i>	<i>TA</i>
BI	0.927685	0	0	0	0	0	0	0	0
FA	0.8353	0.892917	0	0	0	0	0	0	0
IE	0.7717	0.7464	0.916461	0	0	0	0	0	0
IO	0.8165	0.8269	0.8726	0.871894	0	0	0	0	0
MP	0.854	0.8668	0.8137	0.8636	0.865737	0	0	0	0
OC	0.7874	0.7887	0.7607	0.8284	0.827	0.883063	0	0	0
RA	0.7985	0.7724	0.8086	0.8438	0.8239	0.8334	0.874014	0	0
SN	0.7394	0.732	0.6668	0.7087	0.7503	0.652	0.6817	0.91864	0
TA	0.8009	0.8567	0.7576	0.8328	0.8427	0.7734	0.7932	0.696	0.864812

For discriminant validity, all the latent variable correlation should be lesser than square root of AVE values (Fornell and Larcker, 1981). From the Table-5, it is vibrant that AVE value is higher than the latent variable correlations for each item, henceforth discriminant validity is confirmed in this context.

Table 7
Outer loadings and Indicator Reliability

	<i>BI</i>	<i>FA</i>	<i>IE</i>	<i>IO</i>	<i>MP</i>	<i>OC</i>	<i>RA</i>	<i>SN</i>	<i>TA</i>	<i>Indicator Reliability</i>
BI1	0.9063	0	0	0	0	0	0	0	0	0.8214
BI2	0.9435	0	0	0	0	0	0	0	0	0.8902
BI3	0.9328	0	0	0	0	0	0	0	0	0.8701
FA1	0	0.9125	0	0	0	0	0	0	0	0.8327
FA2	0	0.8789	0	0	0	0	0	0	0	0.7725
FA3	0	0.9171	0	0	0	0	0	0	0	0.8411
FA4	0	0.8620	0	0	0	0	0	0	0	0.7430
IE1	0	0	0.9139	0	0	0	0	0	0	0.8352
IE2	0	0	0.9190	0	0	0	0	0	0	0.8446
IO1	0	0	0	0.8544	0	0	0	0	0	0.7300
IO2	0	0	0	0.8842	0	0	0	0	0	0.7818

	<i>BI</i>	<i>FA</i>	<i>IE</i>	<i>IO</i>	<i>MP</i>	<i>OC</i>	<i>RA</i>	<i>SN</i>	<i>TA</i>	<i>Indicator Reliability</i>
IO3	0	0	0	0.8916	0	0	0	0	0	0.7950
IO4	0	0	0	0.8567	0	0	0	0	0	0.7339
MP1	0	0	0	0	0.8778	0	0	0	0	0.7705
MP2	0	0	0	0	0.8604	0	0	0	0	0.7403
MP3	0	0	0	0	0.8963	0	0	0	0	0.8034
MP4	0	0	0	0	0.8640	0	0	0	0	0.7465
MP5	0	0	0	0	0.8389	0	0	0	0	0.7038
OC1	0	0	0	0	0	0.8723	0	0	0	0.7609
OC2	0	0	0	0	0	0.9042	0	0	0	0.8176
OC3	0	0	0	0	0	0.8980	0	0	0	0.8064
OC4	0	0	0	0	0	0.8569	0	0	0	0.7343
RA1	0	0	0	0	0	0	0.8664	0	0	0.7506
RA2	0	0	0	0	0	0	0.8661	0	0	0.7501
RA3	0	0	0	0	0	0	0.8578	0	0	0.7358
RA4	0	0	0	0	0	0	0.9049	0	0	0.8188
SN1	0	0	0	0	0	0	0	0.9209	0	0.8481
SN2	0	0	0	0	0	0	0	0.9264	0	0.8582
SN3	0	0	0	0	0	0	0	0.9086	0	0.8256
TA1	0	0	0	0	0	0	0	0	0.8684	0.7541
TA2	0	0	0	0	0	0	0	0	0.8482	0.7194
TA3	0	0	0	0	0	0	0	0	0.8549	0.7309
TA4	0	0	0	0	0	0	0	0	0.8872	0.7871

Table 6 gives the outer loading and indicator reliability (IR) of each item. IR is calculated by squaring the outer loading values. As all the IR values are more than 0.7 (Hulland, 1999), the item scales are reliable in this context. In Table 4, 5 and 6, all reliability and validity test was validated and measurement model was proved valid in our context.

From the Figure 2, it is cleared that Attitude, Subjective Norm and Perceived Behavioural Control together contribute 79.4 % of positive effect on Investor Behavioural Intension. Perceived Behavioural Control contributes majority part i.e. 49.1 %, Attitude contributes 30.1% and Subjective Norm contributes only 14.5% for measuring the Investors behavioural Intension.

Individual Attitude is measured with equal percentage influence i.e. around 30% each from Over confidence, Investor Optimism and Risk appetite. Investor effort has only 15.9% influence for measuring Attitude. For measuring Perceived behavioural Control, Market Psychology have greater influence i.e.40.4% and influence by the Technical analysis and Fundamental analysis is 30.9% and 33.8% respectively.

Moderation Effect

To find out the effect of family types on investor behavioural intension, moderation analysis was done using smart PLS 2. For the analysis data are split into two data set i.e. Joint Family ($n = 105$) and Nuclear Family ($n = 99$), bootstrap analysis was done separately for each family using the same model. Overall t -statistic was calculated using the formula given by Wynne Chin’s PLS FAQ website as shown in Table 9.

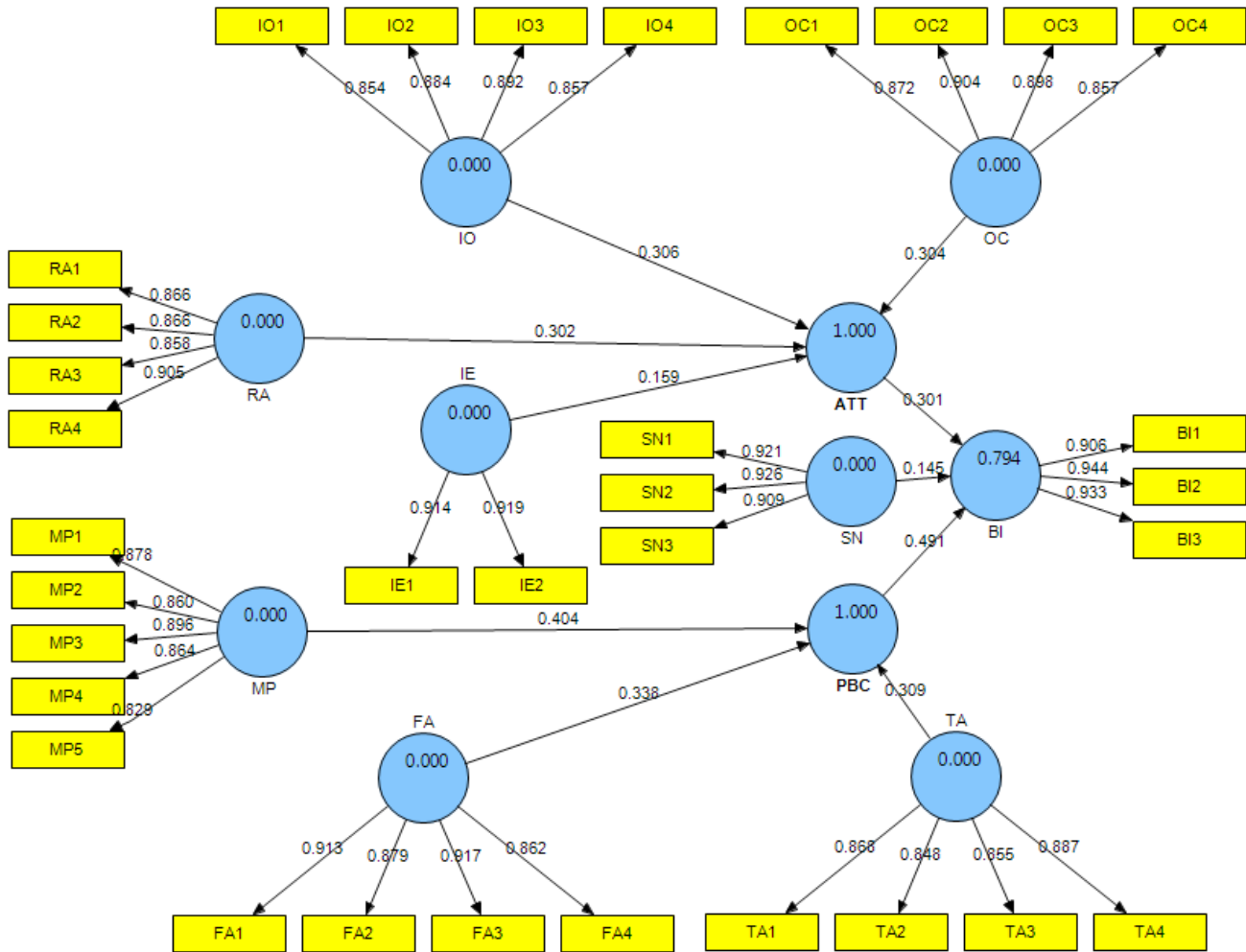


Figure 2: SEM model using smart PLS

Table 8
Hypothesis Testing

	<i>T Statistics</i>	<i>Status</i>	<i>Hypotheses</i>
ATT → BI	2.4547*	Accepted	H ₁
SN → BI	1.9867*	Accepted	H ₂
PBC → BI	3.7626**	Accepted	H ₃
OC → ATT	21.9842**	Accepted	H ₄
IO → ATT	27.1486**	Accepted	H ₅
IE → ATT	25.8167**	Accepted	H ₆
RA → ATT	26.8582**	Accepted	H ₇
TA → PBC	31.289**	Accepted	H ₈
FA → PBC	31.533**	Accepted	H ₉
MP → PBC	36.1364**	Accepted	H ₁₀

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 9
Moderation Effect

	<i>ATT-BI</i>		<i>SN-BI</i>		<i>PBC-BI</i>	
	<i>Joint</i>	<i>Nuclear</i>	<i>Joint</i>	<i>Nuclear</i>	<i>Joint</i>	<i>Nuclear</i>
Sample Size	105	99	105	99	105	99
Regression Weight	0.306	0.2963	0.2026	0.097	0.4345	0.549
Standard Error (S.E.)	0.01458	0.0263	0.023	0.0399	0.0147	0.04072
t-statistic	0.329095525		2.33727608*		2.718357431**	
p-value (2-tailed)	0.742424442		0.020403931		0.007131174	
Moderation effect	NO		YES		YES	

**Significance at 0.01 level (2- tailed).

*Significance at 0.05 level (2-tailed).

From the above analysis it is clear that, effect of subjective norm (0.05 level) and perceived behavioural control (0.01 level) towards investors behavioural intension is significantly different between joint family and nuclear family; whereas, the effect of attitude is not significantly different between the two families.

8. FINDINGS

From the analysis, it is found that over confidence, Investors optimism, Risk appetite and Investor effort have significant, almost equal and positive effect on the attitude of investors. Technical analysis, Fundamental analysis and Market psychology have significant and positive effect on Perceived Behavioural Control; with Market psychology having relatively a greater impact for investor’ perceived behavioural control.

Individual attitude, Perceived Behavioural Control and Subjective Norm have positive significant impact on rural investors’ behavioural intension. Perceived Behavioural control has greater impact on behavioural intention than attitude and subjective norm for rural investors.

Demographic factors- age, family types, marital status and annual income- significantly and positively affect Investors’ behaviour.

The research indicates that rural Indian investors are systematic investors, which implies that they are not high risk takers and not margin traders. The prime purpose of financial investments by rural Indian investors’ –given in order- are to increase the financial wealth, save or invest for children education, marriage, plan for tax and retirement. These characteristics imply that they are driven by family commitments and social bindings. However, the research has also clearly highlighted the divide in investment behavioural pattern based on the family domicile - Joint and Nuclear families.

8.1. Scope and Limitation

The model tested in this research can further be extended to study the investors behaviour towards specific financial products. Investor knowledge can be added as another variable for measuring attitude of the individual investors. This study was confined to the rural retail investors of India; where respondents have failed to do conscious financial planning. The financial fluency and knowledge of the respondents were poor. Many a times, during the data collection process, the researcher had to explain the questions to elucidate responses; thus, leading to response bias, which is considered as a limitation.

9. CONCLUSION

This research is radically different from all the other previous researches, as, it had intended and succeeded in understanding the impact of family type on financial decisions. Though family domicile across the world tends to be nuclear, there are communities with strong joint family values. Their financial decision varies with social and family influence, market proficiency, self-efficacy and the consulting partners. The research also indicates the behavioural intension vary with the pre-set financial notion of the respondents.

This research provides granular insight on the dynamics of financial planning with the demographical bifurcation. The methodology used in this study can further be applied for gaining valuable insights on different dimension of behavioural finance.

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