Role Of Subjective Norm In Investment Decision Making Of Casual Investors

** Meenakshee Sharma*
*** Dr. Sumeet Gupta*

INTRODUCTION

The concept of investment is not a new one. Indians are known for making investments in real estate and in animals (such as cows, buffaloes, horse, etc.). These investments were considered riskless and yielding good returns. However, in the modern scenario, investment has taken a different form. People hardly think about investing in animals, unless they have any specific business in mind. Investment in real estate is also being made available through mutual funds, which invest specifically in real estate. On a lookout for higher returns, investors are looking for stock markets which, though risky, yield high returns. Moreover, the trend is toward quick rich methods. And to cater to investor's demands, a number of avenues have been opened up such as, share markets, real estate, insurance, etc.

Although the form of investment is a change, the dilemma behind any investor is the same, i.e., Risk Vs Return. Investors want higher returns with minimal risk. However, high returns mean higher risk. The recent share market crash was a lesson in point. Within no time, the share market dropped from BSE 21000 to BSE 9000. Many investors lost their significant savings in an attempt to gain higher returns. To prevent such drastic incidents in life, investors being risk averse, develop an efficient portfolio for hedging against risk. Every investment instrument has some level of risk associated with it. For making optimal portfolio, investors have to include high-risk and low risk instruments. In general, investors are risk averse (Thaler, 1985) and hence, look for investments that offer high return on low risk.

A number of portfolio management theories have been proposed to develop an optimal portfolio. Prominent among them are: Markowitz Portfolio Utility Theory (Markowitz 1952, 1959), Sharpe Single Index Model (Sharpe, 1963) and Capital Asset Pricing Method (Markowitz and Sharpe, 1964). These theories consider only risk and return as the major factor in identifying an optimal portfolio. However, a number of studies (e.g., Alexander et al., 1997; Capon et al, 1994) reveal that risk and return are just two of the factors that influence investors investment decision. In fact, risk and return should be seen as a part of the framework of investment decision making. In other words, identifying an efficient portfolio is not enough for an investor to be able to make an investment decision. Moreover, a casual investor usually does not have access to these financial theories to make an investment decision (e.g., Al-Azmi, 2008; Alexander et al., 1997; Wilcox, 2003; Capon et al., 1994), nor are they sufficiently motivated to make elaborate calculations based on the above-mentioned theories. Other factors, such as peer influence (including close friends, relatives, etc.), recommendation of financial advisors (including those who sell policies), and market trends also play an important role in investment decision of a casual investor. This list is not exhaustive, and there may be other factors that influence the decisions of investors. In practice, a casual investor (whose decision-making is not a result of elaborate financial planning) rarely utilizes these theories to make an investment decision.

Theories from social psychology (e.g., theory of reasoned action, theory of planned behavior) give a more elaborate account of consumer decision making. Since an investor is also a consumer of financial instruments, these theories in conjunction with financial theory can help explain investment decision-making of casual investors. Therefore, the objective of this paper is to study the investment decision-making of casual investors based on financial theories and social psychology theories (theory of planned behavior). Specifically, we identify the factors that influence casual investors' decision making based on these theories and study their influence on their decision making. The results of this study would help understand casual investors' decision making better. Moreover, the financial instrument sellers will be able to make a more targeted offering to their customers.

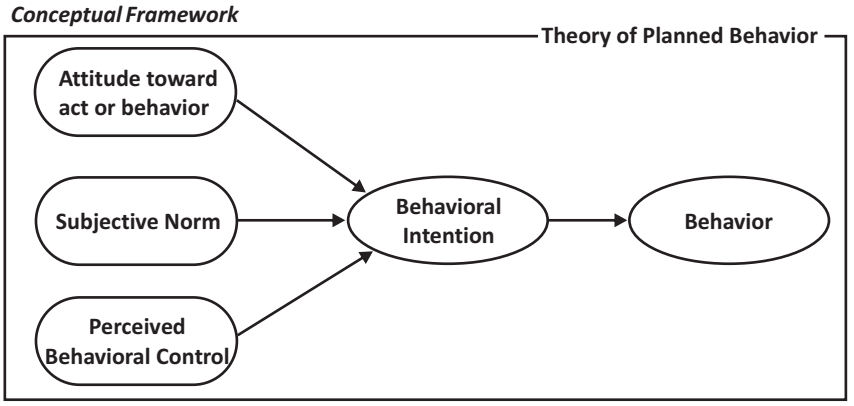
* *Lecturer,* Department of Business Administration, Shri Shankaracharya College of Engineering and Technology, Junwani, Bhilai, Dist.- Durg, Chhattisgarh - 490020. E-mail : meenakshee.sharma@gmail.com
** *Associate Professor,* Department of Business Administration, Shri Shankaracharya College of Engineering and Technology, Junwani, Bhilai, Dist. Durg, Chhattisgarh - 490020. E-mail : sumeetguptadr@gmail.com

LITERATURE REVIEW AND CONCEPTUAL BACKGROUND

❁ **A Casual Investor:** Previous studies on investment decision making (e.g., Al-Azmi, 2008; Alexander et al., 1997; Wilcox, 2003; Capon et al., 1994) argue that investors should not be treated as one homogeneous group. Al-Azmi (2008) argues that men and women as investors should be treated as separate market niches, each with its own needs and requiring targeted marketing strategies. Investment companies and financial service marketers should design investment programs to respond to the particular needs of women investors, men investors, investors with particular education and age levels, wealthy investors, and expatriate investors. Alexander et al. (1997) assert that financial literacy plays a significant role in investor's decision to invest in mutual funds. According to Wilcox (2003), investors with a greater knowledge of basic finance are less likely to make reasonable fund choices. Categorization can be made based on income, age, risk aversiveness, gender, etc. Previous research has attempted to classify investors according to their specific study. For example, Capon et al. (1994) studied the differential characteristics of affluent investors (liquid assets > 1.0 million) and typical investors for developing marketing strategies. In this study, the researchers consider a casual investor as one whose decision-making is not a result of elaborate theoretical considerations (Wilcox, 2003). Thus, casual investors do not undergo a thorough financial analysis for making their investment decisions, and the value of their investment is comparatively low (liquid assets < 1.0 million).

❁ **Research On Investment Decision Making:** Literature in investment decision making is abound with theories that attempt to minimize risk and maximize returns. Among such theories are Markowitz Portfolio Model (Markowitz, 1952, 1959), Sharpe Single Index Model (Sharpe, 1963), Capital Asset Pricing Theory (Sharpe, 1964) and Arbitrage Pricing Theory (Ross, 1976). These theories discuss optimizing the value of a portfolio of investments based on risk and return. Capon et al. (1992) explored the extent to which investors make purchase decisions consistent with these theories and revealed that risk, and return are only two of a set of attributes, the importance of which varies across consumers. They argued that it would be better to consider a multi-attribute framework within which we can consider risk and return as two attributes of decision making. In reality, these theories are accessible to those who have some basic knowledge of finance. Most of the casual investors do not really consider using these theories before making investments. In fact, most of their decisions are based on their own past experience, the trends in the market, the experience of close friends / relatives / experts, etc., Moreover, the choice of investment is carefully governed by the existing policies of the company and the expertise of the agents selling the policies of these companies. The implication is that a casual investor is not really equipped with tools for in-depth decision making for making investment decision. The influence of one's own experience and other's experience (friends, relatives, etc.) has a profound effect on his/her decision making. Theories from psychology (e.g., Theory of planned behavior) are used widely to explain consumer behavior. As a casual investor is also a consumer of shares, policies, etc., theory of planned behavior can be used to explain their investment decision behavior. However, there is one difference. There is an element of risk involved in investment decision making. Normal consumer decision making does not involve an element of risk and hence, is not included in the theory of planned behavior.

Figure 1: Theory Of Planned Behavior (Source: Ajzen, 1991)



The framework for the theory of planned behavior is shown in Figure 1. Theory of Planned Behavior (TPB) (Ajzen, 1991) was developed from Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975). According to TRA, if people evaluate the suggested behavior as positive, and if they think their significant others (Friends, relatives, advisors etc.) wanted them to perform the behavior (subjective norm), this results is a higher intention (motivation) and they are likely to do so. Although a high correlation of attitudes and subjective norms to behavioral intention and subsequently to behavior has been confirmed in many studies, a counter argument against the high causal relationship between behavioral intention and actual behavior has also been proposed as a result of some studies because of circumstantial limitations. The TPB has improved the predictability of intention in various health-related fields such as condom use, leisure, and dieting. Other usage of this theory include investigating acceptance of IT system such as telemedicine technology (Chau & Hu, 2002), internet purchasing (George, 2004), music piracy on the web (d'stous et al., 2005) and expert decision support system use (Workman, 2005).

To investigate the investment decision making of a casual investor, the researchers integrate theories from finance with the theory of planned behavior. The attitude in the theory of planned behavior is a result of the beliefs regarding usefulness of the object of behavior as well as the sacrifice involved in using the object of behavior. We derive these beliefs regarding investment decision making from financial theories (Markowitz, 1952, 1959). According to Markowitz (1952, 1959), investment decision making is a result of the evaluation of return and risk involved in the investment. Customers' evaluation of perceived returns and perceived risk in an investment will determine his attitude towards the investment and in turn, the behavioral intention. In this study, the researchers do not study the attitude to match with the tenets of financial theories. Thus, the attitude of TPB is replaced by perceived returns and perceived risk.

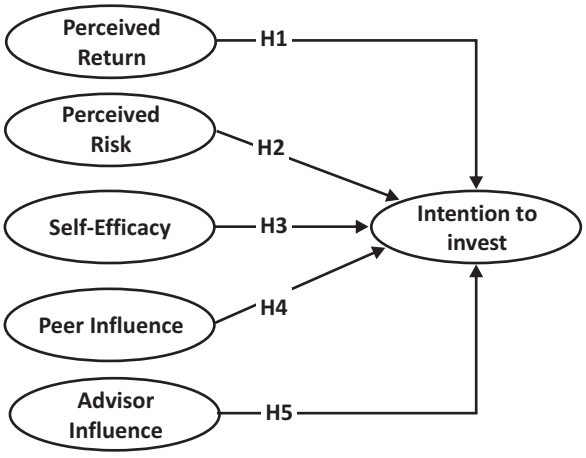
Subjective Norm is related to the influence of the society, such as friends, relatives, and other influential members on the behavioral intention of the decision maker. In case of investment decision making, two major influences are possible, namely, the influence of close friends or relatives, and the influence of the advisors. The advisors, here, include the policy agents who recommend various policies to the decision maker and attempt to provide a customized solution to each decision maker.

TPB introduced a new component, *perceived behavioral control*, defined as the individual's perception of the ease with which the behavior can be performed, to cover volitional behaviors for predicting behavioral intention and actual behavior. Perceived behavioral control is viewed as lying on a continuum from behaviors that are easily performed to those requiring considerable effort, resources, etc. Previous research (e.g., Davis et al., 1989) has modeled self-efficacy as a surrogate to perceived behavioral control. Self-efficacy is defined as an individual's judgment of how well one can execute a course of action required to deal with prospective situations (Bandura, 1982). The researchers have used self-efficacy to represent perceived behavioral control in this study.

RESEARCH MODEL AND HYPOTHESES

Based on the above discussion, the researchers have developed the research model as shown in Figure 2.

Figure 2: Research Model



Perceived return and Perceived Risk are two of the major factors in making an investment decision (Markowitz, 1952, 1959). In fact, the classic dilemma in front of the investor is that of risk Vs return. Investors prefer a high return with low risk. Since most casual investors tend to be risk averse, they end up making an investment with low return as the risk involved is low. As discussed earlier, the researchers have modeled perceived return and perceived risk as the beliefs that determine customer attitude and behavior towards an investment intention. Theory of planned behavior suggests a positive relationship between perceived return and behavioral intention and a negative relationship between perceived risk and behavioral intention. If the risk is high, a customer would be less inclined to invest. Hence, the researchers hypothesize that:

H1: Perceived return has a significant positive impact on the intention to invest.

H2: Perceived risk has significant negative impact on the intention to invest.

As discussed earlier, self-efficacy is related to the investors' ability to make an investment decision. Every investor knows how much he/she is able to take a decision regarding investment. Usually, casual investors lack knowledge of financial instruments and markets, and hence, their confidence in their investment decision is accordingly low or high. According to TPB, if a decision maker is under the control of his behavior, his intention to perform that behavior would be high. Similarly, if a casual investor is very confident of himself with regard to the investment decision, he/she is making, he/she would readily make the investment and vice versa. Hence, the researchers hypothesize that:

H3: Self- efficacy has a significant positive impact on the intention to invest.

Since we are living in the society, social environment affects the casual investors' investment decision. According to TPB, subjective norms play an important role in consumer decision making. For example, investment in stocks was not considered to be a good investment a few decades ago and even if a stock investment would be considered to be better than any other investment, people would not go for it, because the society would not permit it. Subjective norms can stem from the environment, particularly those who influence one's behavior such as friends, experts, etc. Before effecting an investment, a decision-maker gathers information regarding the investment from various sources, especially from friends and relatives. If past experience of these sources is not favorable towards an investment decision, a decision maker thinks more deeply about it, and may even refrain from making the investment. Similarly, a decision maker may seek advice from experts in the field of investment. He may even be advised by various policy agents who sell specific policies of the company, or he may seek advice of a share broker before making an investment. Also, on the basis of expert recommendation, an investor may invest money in the market or switch from one instrument to another instrument. Hence, the researchers hypothesize that:

H4: Peers' recommendation has a significant positive impact on the intention to invest.

H5: Advisors' recommendation has a significant positive impact on the intention to invest.

RESEARCH METHODOLOGY

We choose survey method for this study, as it is the most suitable and easy method for establishing generalizability. The researchers conducted a survey in Tier III cities of India, where most of the investors are less informed about financial instruments. In other words, the investors in these cities are most likely to be casual investors. To further ensure that the investors were casual, the researchers surveyed members of middle-class families in these cities (Capon et al., 1994).

❁ **Instrument Development:** The researchers developed the survey instrument by adopting existing validated questions wherever possible. Items for Investment intention were adapted from Mathieson (1991). Items for perceived returns, peer influence and advisor's influence were adapted from Venkatesh and Davis (2000). Items for perceived risk were adapted from Dinev and Hart (2006). The researchers developed items for self-efficacy to suit the Investment context better. The survey instrument is shown in Table 1.

❁ **Data Collection:** The empirical data for the study was collected from casual investors over a period of one month. The researchers had planned to collect 150 responses, but within the available time, the researchers could collect only 127 valid responses. Table 2 shows the demographic characteristics of the respondents.

Table 2 shows that about 70% of investors were male. In India, investment decisions, particularly in middle class families, are usually taken by the male members. Investors were fairly spread over three age groups. The annual income of most of the investors was between ₹ 1 and 5 lakhs, which is a fairly common figure among Indian middle

Table 1: Survey Instrument			
VARIABLES	**ITEMS**	**SCALE**	**SOURCES**
Intention to Invest	IINT1	I want to invest in risky market instruments, rather than in a riskless one.	Mathieson (1991)
	IINT2	My intentions are to invest in risky market instruments. rather than in a riskless one.	
	IINT3	If I could, I would like to invest in risky market instruments.	
Perceived Return	RTRN1	Investment in risky market instruments is beneficial for me.	Venkatesh and Davis (2000)
	RTRN2	By investing in risky instruments, I can earn more money than by investing in Riskless market instruments.	
	RTRN3	Investment in Risky Market Instruments will give me higher returns.	
	RTRN4	Investment in Risky Market Instruments will increase my overall wealth.	
	RTRN5	Investment in Risky Market Instruments will be of good value.	
Perceived Risk	RISK1	It is risky to invest in a Risky Market Instrument.	Dinev and Hart (2006)
	RISK2	I may lose substantial amount of money by Investing in a Risky Market Instrument.	
	RISK3	My savings would be in danger if I invest them in a Risky Market Instrument.	
Self-Efficacy	EFCY1	I know how to plan my wealth well.	Self-Developed
	EFCY2	I don't need the help of any financial planner to manage my wealth.	
	EFCY3	I am skillful in managing my wealth.	
Peer Influence	NORM1	I prefer the advice of my friends on investing in a Risky Market Instrument.	Venkatesh and Davis (2000)
	NORM2	Most people who influence my decision think that I should invest in a Risky Market Instrument.	
	NORM3	My peers advice me to invest in a Risky Market Instrument.	
Advisor's influence	FAIN1	For investment decisions, I consult financial planners (e.g., Share Brokers, CA).	Venkatesh and Davis (2000)
	FAIN2	Financial Planners influence my decision to invest in a Risky Market Instrument.	
	FAIN3	Financial Planners play a significant role in my decision to invest in a Risky Market Instrument.	
	FAIN4	I prefer to follow the advice of financial planners to invest in a Risky Market Instrument.	

Table 2: Descriptive Statistics Of Respondent Characteristics			
Item	**Measure**	**Frequency**	**Percentage**
Age (years)	20-29	46	36.2
	30-39	47	37
	>=40	30	23.6
	Missing	4	3.1
Gender	Female	33	26
	Male	90	70.9
	Missing	4	3.1
Annual Income	< ₹1lakh	22	17.4
	₹ 1-3lakh	43	33.9
	₹ 3-5lakh	36	28.4
	>= ₹ 5 lakh	21	16.5
	Missing	5	3.9
Investment Experience	<1 year	16	12.6
	1-3 year	30	23.6
	3-5 year	42	33.1
	5-10 year	17	13.4
	>10 year	7	5.5
	Missing	15	11.8
	Total	**127**	**100%**

class families. Most of the investors had investment experience between 1-5 years. The above data fairly represents the characteristics of casual investors.

DATA ANALYSIS AND RESULT

❁ **Principal Component Analysis with VARIMAX Rotation Using SPSS 16.0 :** The principal component analyses with VARIMAX rotation was conducted to examine convergent and discriminant validity (Table 3). The analysis reveals 5 neatly loaded factors with Eigen-value greater than 1.0 in the initial solution (without rotation. The means (μ),

Table 3: Principal Component Analysis Using SPSS 16.0

	μ	σ	α	1	2	3	4	5	6
IINT1	3.81	1.96	0.90	0.358	0.235	**0.736**	-0.310	-0.013	0.033
IINT2				0.438	0.198	**0.691**	-0.220	-0.045	0.085
IINT3				0.248	0.039	**0.883**	-0.063	-0.021	0.045
RTRN1	4.30	1.44	0.91	**0.759**	0.017	0.444	0.071	0.027	0.055
RTRN2				**0.709**	0.061	0.392	-0.053	-0.133	0.230
RTRN3				**0.730**	0.201	0.297	0.188	0.057	0.132
RTRN4				**0.901**	0.062	-0.003	-0.094	0.017	0.147
RTRN5				**0.857**	0.151	0.122	-0.158	0.011	0.128
RISK1	5.10	1.47	0.81	-0.129	0.057	0.087	**0.831**	0.188	0.031
RISK2				-0.044	-0.162	-0.172	**0.826**	0.062	-0.004
RISK3				0.110	-0.043	-0.366	**0.783**	0.116	0.033
EFCY1	4.43	1.41	0.82	0.038	0.200	0.098	0.142	**0.860**	-0.093
EFCY2				0.036	-0.147	-0.168	0.155	**0.854**	-0.018
EFCY3				-0.072	-0.315	-0.001	0.056	**0.813**	-0.088
NORM1	3.76	1.34	0.83	0.079	0.150	0.125	0.180	-0.176	**0.835**
NORM2				0.174	0.240	0.143	0.055	-0.003	**0.847**
NORM3				0.288	0.144	-0.139	-0.201	-0.031	**0.772**
FAIN1	3.42	1.57	0.92	-0.052	**0.864**	0.207	0.104	-0.153	0.050
FAIN2				0.146	**0.882**	0.063	-0.205	-0.089	0.186
FAIN3				0.198	**0.837**	0.053	-0.126	-0.009	0.184
FAIN4				0.136	**0.863**	0.043	0.021	-0.010	0.150
Total Eigen Values (Rotated)				**6.60**	**2.93**	**2.69**	**1.94**	**1.42**	**1.12**
% of Variance (Rotated)				**31.44**	**13.94**	**12.81**	**9.22**	**6.74**	**5.34**
Cumulative %				**31.44**	**45.39**	**58.19**	**67.41**	**74.15**	**79.49**

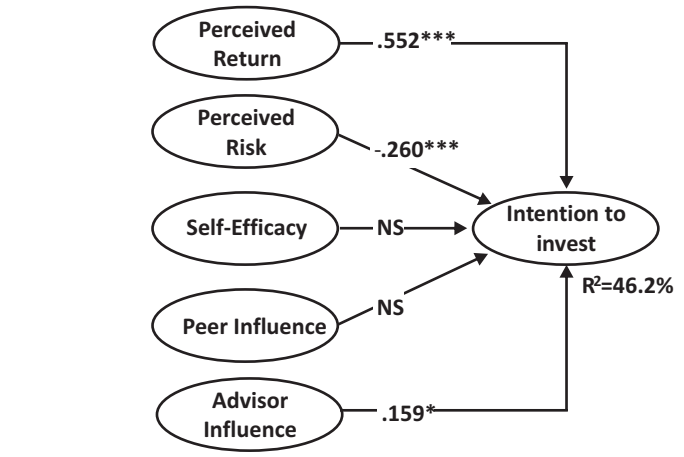
Table 4: Pearson Correlation Between Latent Variable

	IINT	RTRN	RISK	EFCY	NORM	FAIN
IINT	1	0.604**	-0.34**	-0.109**	0.219*	0.326**
RTRN	0.604**	1	-0.107	-0.032	0.381**	0.275**
RISK	-0.34**	-0.107	1	0.274**	0.004	-0.135
EFCY	-0.109	-0.032	0.274**	1	-0.177*	-0.189*
NORM	0.219*	0.381**	0.004	-0.177*	1	0.387**
FAIN	0.326**	0.275**	-0.135	-0.189*	0.387**	1

****: Correlation is significant at the 0.01 level (2-tailed)**
***: Correlation is significant at the level 0.05 (2-tailed).**

standard deviations (σ) and reliabilities (α) of the research variables are shown in Table 3. The scales show good reliabilities with all Cronbach's alphas greater than 0.70. The ratio of observations to variables is around 6:1, which is within acceptable limits (> 5:1). Also, the sample size of 127 provides an adequate basis for the calculation of the correlations between variables. All the items were loaded on a distinct factor and explained a total variance of 79.49%. Thus, the convergent and discriminant validity of the constructs is established.

Figure 3: Results Of Hypotheses Tests (H1 To H5)



NS=Not Significant; *: p<0.05; **: p<0.01; ***: p<0.001

Table 4 shows the Pearson Correlation Analysis. Most of the correlations are significant and the below 0.6 (Carlson et al. 2000). If correlations are greater than 0.6, there are chances of multicollinearity.

❁ **Hypothesis Testing:** Next, the researchers conducted hypothesis testing through multiple linear regression using SPSS 16.0. The results of the test are shown in Figure 3. Figure 3 shows that perceived return, perceived risk and advisor's influence had significant influence on intention to invest, thus supporting H1, H2 and H5. The influence of self-efficacy and advisor influence on intention to invest was not significant, thus, not supporting H3 and H4. The total variance explained by independent variables in intention to invest was 46.2%.

DISCUSSION AND IMPLICATIONS

In this research, the researchers investigated investors' intention to invest based on theories from finance and psychology. Based on theories of finance, the researchers identified perceived risk and perceived return and found that they had a significant influence on investment intention of a casual investor. Based on TPB, the researchers added friends' influence, advisors' influence and self-efficacy as additional variables to explain investment intention. However, the researchers found that only advisors' influence had a significant influence on casual investors' investment intention. Self-efficacy did not have a significant influence on investment intention of a casual investor. This could be because although every investor has basic knowledge about the market, but only basic knowledge is not sufficient to evaluate the actual value of investment. This also shows that casual investors are usually not confident of their abilities to make investment decisions.

Peer-influence did not have a significant influence on investment intention of a casual investor. Casual investors are not rational investors. They take suggestions from their peers, but as their investment objectives are different, they do not necessarily heed to the advice of their friends. In case of investment decisions, where a significant amount of ones' saving might be involved, they might prefer to take the advice of an expert before making an investment decision. Hence, peer-influence is not a significant factor in a casual investor's investment decision making.

❁ **Implications For Theory And Practice:** In this research, the researchers integrated theories from finance and psychology. The research supports the researchers assertion that just perceived risk and perceived return are not sufficient to make an investment decision for a casual investor. The influence of an advisor has also a significant bearing on a casual investor's decision making. One may argue then that the financial advisor makes calculation based on risk and return. Although, this may be true, the researchers found that many financial advisors are motivated by

their own objectives of selling shares or policies and are less bothered whether the investor makes money. According to TPB, subjective norm plays an important role in one's decision making. In this research, the researchers found that financial advisor's influence is significant, but the role of friends and relatives was not significant. This implies that applying TPB to decision making involving a risky decision, subjective norm is important only when the norm is based on experts and not on any novice or friend etc. In practice, findings of this research suggest that financial advisors, particularly, agents, chartered accountants, share brokers etc. should put their efforts in influencing the trust of casual investors. As casual investors form a major chunk of investors, by gaining their trust, financial advisors would be able to influence their investment decisions.

CONCLUSIONS AND LIMITATIONS OF THE STUDY

In this study, the researchers examined the factors which influence the investor decision making process and they applied theory of planned behavior for knowing investors' behavior and it was found that TPB had a significant influence investor's decision making process. But casual investors' are influenced from return on investment, risk in investment and most of the investors are influenced by financial advisers' recommendation because they don't have in-depth knowledge about the market. The generalizability of the results of this study is, however, subject to its limitations. Many of the respondents were unwilling to provide their responses. The questionnaire was in English language, which could have caused a problem in explaining the questionnaire itself. The data for this study was collected from the casual investors. Weather is also very big problem for collecting the data. The results of the study were also limited by time and ,therefore, the researchers had to collect the data over a limited period of time. Lastly, the number of responses for this study were rather low and may influence the results significantly.

REFERENCES

1) Ajzen, I. (1991). "The Theory of Planned Behavior," *Organizational Behavior and Human Decision Processes,* 50(2), pp. 179-211.
2) Al-Azmi, J. Y. (2008). "Risk Tolerance of Individual Investors in an Emerging Market," *International Research Journal of Finance and Economics*, 17, pp. 15-26.
3) Alexander, G. J., Jones, J. D., and Nigro, P. J. (1997). "Investor Self-Selection: Evidence from Mutual Fund Survey," *Managerial and Decision Economics*, 18(7/8), pp. 719-729.
4) Bandura, A. (1982). "Self-Efficacy Mechanisms in Human Agency", *American Psychologist*, 37(2), pp. 122-147.
5) Capon, N., Fitzsimons, G. J., and Weingarten, R. (1994). "Affluent Investors and Mutual Fund Purchases," *International Journal of Bank Marketing*, 12(3), pp. 17-25.
6) Chau, P. Y. K., and Hu, P. J. H. (2002). "Investigating healthcare professionals'decisions to accept telemedicine technology: an empirical test of competing theories". *Information & Management, 39*(4), pp. 297-311.
7) Davis, F. D., Bagozzi, R. P., and Warshaw, P. R. (1989). "User acceptance of computer technology: a comparison of two theoretical models". *Management Science, 35*(8), pp. 982-1003.
8) Dinev, T., and Hart, P. (2006). "An Extended Privacy Calculus Model for E-Commerce Transactions", *Information Systems Research*, 17(1), pp. 61-80.
9) d'stous, A., Colbert, F., and Montpetit, D. (2005). "Music Piracy on the WebHow Effective are Anti-Piracy Arguments? Evidence from the Theory of Planned Behavior". *Journal of Consumer Policy, 28*(3), pp. 289-310.
10) Fishbein, M., and Ajzen, I. (1975). *"Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research"*.
11) George, J. F. (2004). "The theory of planned behavior and Internet purchasing". *Internet Research,* 14(3), pp. 198-212.
12) Mandel, D. R., and Lehman, D. R. (1996). "Counterfactual Thinking and Ascriptions of Cause and Preventability," *Journal of Personality and Social Psychology*, 71, pp. 450-463.
13) Markowitz, H. (1959). "*Portfolio Selection: Efficient Diversification of Investments*," New York: John Wiley and Sons.
14) Markowitz, H. M. (1952). "Portfolio Selection," *Journal of Finance*, 7(1), pp. 77-91.
15) Mathieson, K. (1991). "Predicting user intentions: comparing the technology acceptance model with the theory of planned behavior," *Information Systems Research*, 2(3), pp. 173-191.
16) Ross, S. A. (1976). "The Arbitrage Theory of Capital Asset Pricing," *Journal of Economic Theory*, 13(3), pp. 341-360.
17) Sharpe, W. F. (1963). "A simplified model of portfolio analysis," *Management Science*, 9(2), pp. 425-442.
18) Sharpe, W. F. (1964). "Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk," *The Journal of Finance*, 19(3), pp. 425-442.
19) Thaler, R. H. (1985). "Mental Accounting and Consumer Choice," *Marketing Science*, 4(3), pp. 199-214.
20) Venkatesh, V., & Davis, F. D. (2000). "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies". *Management Science,* 46(2), pp. 186-204.
21) Wilcox, R. T. (2003). "Bargain Hunting or Star Gazing? Investors' Preferences for Stock Mutual Funds," *The Journal of Business*, 76(4), pp. 645-663.
22) Workman, M. (2005). "Expert decision support system use, disuse, and misuse: a study using the theory of planned behavior". *Computers in Human Behavior, 21*(2), pp. 211-231.