

## Investigating the Investment Behavior of Entrepreneurs in Stock Market of Pakistan

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**Abstract:** Financial decisions pertaining to stock market investments are not only influenced by rational factors, but are also effected by numerous psychological factors that influence individual behavior toward stock market investment. In this view, the study seeks to investigate the impact of impact of psychological elements including attitude, subjective norm, and perceived behavioral control on people's intentions in the Pakistan stock market by capitalizing on a decomposed version of theory of planned behavior (TPB). Furthermore, the study seeks to understand the investment decisions from the perspective of entrepreneurs particularly located in Peshawar Khyber Pakhtunkhwa. The population of the study is comprised of the registered corporate members from the Sarhad Chamber of Commerce from which a sample of 217 out of 487 was taken. The data was collected for analysis after the sample was drawn from the population using the proportionate stratified random sampling procedure and questionnaires. The study used SmartPLS3 software to analyze the data, and the findings revealed that attitude, subjective norms, and perceived behavioral control have a positive significant impact on intention to invest in the Pakistan stock market. The current study has broken down attitude, subjective norms, and perceived behavioral control into various components in order to better understand individual behavior. These numerous components were found to have a substantial positive link with attitude, subjective norms, and perceived behavioral control in the study. The study's findings will have a significant impact on academia as well as practitioners.

**Keywords:** Entrepreneur's investment, Pakistan Stock Market, and Theory of Planned Behavior

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### 1. Introduction

Until 1950s, the traditional portfolio approach was considered one of the most common approaches used for investment in stock markets. As mentioned by Civan (2007) that the most leading approach for investment in the market is traditional portfolio approach. He argued that traditional portfolio approach is

effortless, and realistic in nature. Similarly, it was argued by Demirtaş & Güngör, (2004) that investors who believe in traditional investment approach are of the opinion that investment in various different securities reduced the risk associated without taking into consideration the relationship of yields from those securities.

However, previous studies failed to highlight the influence of behavioral aspect for using rational models. Most of the studies argued that the process of selection amongst different securities and the risk associated is the outcome of conflict in the behaviors of normal individuals. Consequently, this led to the emergence of novel approach, behavioral finance, as a replacement for the traditional approach. As stated by Guarani & Ibrahim (2019) that studying individuals' behavior parallel to the concept of behavioral finance considered a new strategic approach in market. They further stated that the deficiencies exist in conventional financial theories, like efficient market hypothesis, has been much refined by this novel concept, and also the inclusion of psychological factors were considered by then (Zwick & Mahon 2017).

This new approach helped to explain the individuals' behavior which was being neglected in conventional financial theories while making important financial decisions. Kumari et al., (2017) also argued that the behavioral factors associated may influence the investments in stock market. Similarly, Kumari et al., (2017) and Chakraborty et al., (2018) stated that the influence of psychological factors on investments are the key interest area for many of the researchers in recent times. Such views nevertheless gained the attention of the researchers to conduct a thorough research study in order to understand the influence of behavioral aspects in the investment decisions.

The emergence of behavioral finance approaches also led to the development of new theories while studying the behavior of individuals. For instance, the Theory of Planned Behavior (TPB) was developed which was used to study the human behavior. Lai et al., (2010) further added that this theory is considered one of the most important theories for studying human behavior in financial aspects. Therefore, the present study has utilized this theory and thereby adopted the decomposed version of TPB to investigate the effect of psychological factors such as, attitude, subjective norm, and perceived behavioral control on intention towards behavior of the individuals in the Pakistan stock market. Furthermore, the study focuses on entrepreneurs located in the district of Peshawar. The goal behind the focus on entrepreneurs is their importance in the economy and their decisions about investing in the stock market.

## **2. Literature Review**

The review of the previous studies helped to organize the literature in a number of themes which tends to highlight the hypotheses for the current study;

### **a. Investment Behavior**

Investment decisions are contingent upon the investors' life stages. Shahbaz et al., (2019) highlighted the significance of psychological factors affecting the decisions regarding the investment of individuals. Hence, it was important to study and understand the factors especially the psychological ones for the companies and those who have the involvement like broker, households in business. Similarly, the studies conducted by Cai et al., (2019) and Shin et al., (2018), stated that different individuals behavior must be assessed through the use of TPB in multiple cultural environment because of its dominant use. It was found in the study of Wang et al., (2018), that using TPB for the assessment of individuals behavior has a huge importance. Moreover, Shanmugham & Ramya,

(2012) and Ajzen & Fishbein, (2005) also found a herd behavior during the downswing and upswing of the market. This shows the connection between investors decisions to market stress and emotions.

**H10, H11, H12.** *There is significant direct impact of individual's attitude, subjective norms and perceived and perceived behavioral control on their behavior.*

**b. Intention towards behavior**

Ajzen, (1985) argued that the intention of individuals is an important independent variable for studying the behavior. It is the perception of someone to perform a specific behavior (Fishbein, n.d.). In their study they further stated that, individuals first make an intention and then execute a certain behavior. These arguments are in line with the studies of (Davis, 1989; Venkatesh & Davis, 2000), (Ajzen, 1991), (Fishbein, 1974), (Taylor & Todd, 1995), (Chau & Hu, 2001).

**H13, H14, H15.** *Individuals Intentions used as mediating variable for attitude, subjective norms and perceived behavioral control with the behavior of the investors.*

**H16.** *There is significant impact of individual's intentions on their behavior.*

**c. Attitude**

In the study of Fishbein & Ajzen, (1980) attitude was defined as the feeling of someone's about like and dislike to perform certain actions. It was related to intentions and behavior, directly and indirectly respectively (Fishbein, n.d.). There is significant impact of attitude on intention towards behavior Ramayah & Jantan, 2004); Rhodes & Courneya, (2003); Athiyaman, (2002); Davis, (1989); Chan & Lu, 2004; Gopi & Ramayah, 2007; Mathieson, 1991), (Ma'ruf et al., 2005; Nasurdin & Ramayah, 2003; Ramayah, Siron, et al., 2002).

**H1.** *There is significant impact of attitude towards investment on investor's intentions.*

**d. Subjective Norms**

According to Fishbein & Ajzen (1980) that individuals' behavior cannot be measured as it is more of subjective in nature. Studies showed that the impact of subjective norms on intention and then on behavior was found insignificant by Davis, (1989); Lewis et al., (2003); Chau & Hu, (2001; Mathieson, (1991), while significant effect was found in the studies of (Ma'ruf et al., 2005; Nasurdin, et al., 2002; Taylor & Todd, 1995; Gopi & Ramayah, 2007; Ramayah, Venkatesh & Davis, 2000), Nasurdin & Ramayah, 2003; Ramayah et al., 2004; Wafa et al., 2003; Yulihasri, 2004).

**H5.** *There is significant impact of subjective norms in favor of investment on investor's intentions.*

**e. Perceived Behavioral Control (PBC)**

Perceived behavioral control (PBC) is considered as the extended factor of the TPB in the study of (Ajzen, 2002), in which he defined PBC as the someone's control on performing the certain behavior. In their study Ajzen & Fishbein, (2005) stated that performing certain behavior under difficult conditions is known as PBC. Similarly, strong behavioral control of individuals have greater chances to perform certain actions vice versa (Ajzen & Fishbein, 2005). In their studies (Fu et al., 2006; Mathieson, 1991; Shih & Fang, 2004) found strong relationship between PBC and Intention of the individuals.

**H7.** *There is significant impact of perceived behavioral control on investor's intentions.*

The decomposed version of TPB was first introduced by Taylor & Todd, (1995) in their study. It was stated in their study by them that introducing various components for attitude, Subjective norms and PBC leads to find the connection in a more specific way. The components are defined in various are as follows.

Rogers (1983), classified three components for attitude in his study named; relative advantage, complexity, and compatibility. ***Relative Advantage*** was defined as investing in ones product as compare to other considered more beneficial. Similarly, ***Compatibility*** was defined as certain activity specifically (investment) in this study considered a good fit to the personality and life style of the individuals. Furthermore, ***Complexity*** was explained as the level of understanding by the individuals for certain activity

**H2.** There is positive impact of relative advantage on attitude towards the behavior.

**H3.** There is positive impact of compatibility on attitude towards the behavior.

**H4.** There is positive impact of complexity on attitude towards the behavior.

In the current study the only one components was incorporated for subjective norms named; ***normative influence***. It was defined as specification of those who strongly influence the individuals behavior (Cialdini et al., 1990).

**H6.** There is significant impact of normative influence on subjective norms.

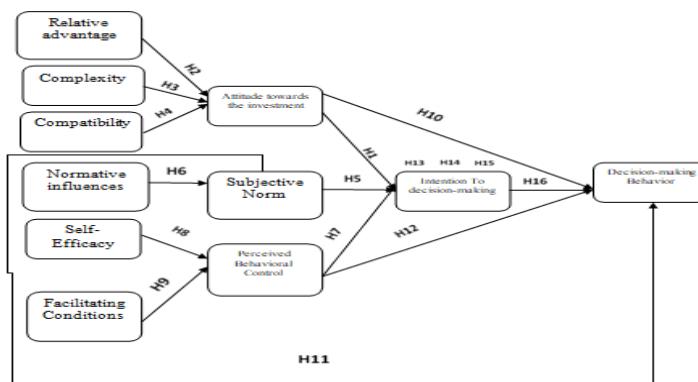
The PBC was decomposed into two basic components named; self-efficacy and facilitating conditions.

In the study of (Bandura, 1977, 1982) and Ajzen, (1991), ***self-efficacy*** was defined as the confidence and ability of someone's to perform a certain action. It was positively related to the behavior of someone's. Similarly, according to the study of (Triandis, 1979), facilitating conditions was explained the resources and facilities available to someone for performing a certain behavior. It was also positively related to behavior of the individuals.

**H8.** There is significant impact of self-efficacy on perceived behavioral control.

**H9.** There is significant impact of facilitating conditions on perceived behavioral control.

### Theoretical Framework



Sources: (Triandis, 1979), (Bandura, 1977, 1982), (Ajzen, 1985, 1991), (Cialdini et al., 1990)(Davis, 1989), Bumkrant & Page Jr, (1988), (Rogers, 1983), Allen, (2000), (Taylor & Todd, 1995).

### 3. Methodology

Positivism philosophical foundation was used in the study, for which the study follows deductive approach. Similarly, surveys was used a strategy and data was collected through mono-method. Further, cross sectional method was used in the study as data was collected at single time horizon. Primary data was collected in the study by using the questionnaire. Standardized questionnaire was used to define clearly the question to the respondents.

#### Variables details

S.No	Variables	Items	Source
1	<b>Attitudes towards Investment</b>	5	
2	Relative Advantage	3	(Ajzen, 2002b;
3	Compatibility	2	Dahiya &
4	Complexity	2	Gayatri, 2017;
5	<b>Subjective norms statements</b>	4	Gangwal &
6	Normative influences	2	Bansal, 2016; Y.
7	<b>Perceived behavior control statements</b>	3	Y. Shih & Fang 2004)
8	Facilitating Conditions	4	
9	Self-Efficacy	3	
10	<b>Intention to invest statements</b>	3	
11	<b>Investment behavior decision</b>	1	

#### a. Sample and Sample Technique

The study used proportionate stratified random sample technique which was also used for studying the impact of psychological factors on individuals investment behavior of the students at the university named; United States International University" in Kenya. The owners of registered member's corporations in Sarhad chamber of commerce for the year of 2019-2020 was considered as population from which the sample of 217 out of 487 was taken (Morgan 1971).

### 4. Analysis and Results

The study used different statistical tools for analysis and testing hypothesis. SmartPLS 3.00 software was used for analysis.

Table.1 and Table.2 showed the demographic characteristics and descriptive statistics used in the study for complete information about the measurement of the frequency distribution of the respondents from Peshawar city. Table.2 values indicated normality in the data used for the analysis as its skewness and kurtosis are near to zero.

Table.1 Demographic characteristics

Peshawar						
Characteristics	Frequency	% of Sample	Cumulative %	Characteristics	Frequency	% of Sample
<b>Age</b>				<b>Business Types</b>		
21 to 30	0	0	0	Services	37	17.1
31 to 40	11	5.1	5.1	Merchandise	70	32.3
41 to 50	64	29.5	34.6	Manufacturing	53	24.4
50 and above	142	65.4	100	Hybrid	31	14.3
<b>Gender</b>				Other	26	12
Male	205	94.5	94.5	<b>Share %age</b>		
Female	12	5.5	100	20-Oct	10	4.6
<b>Education</b>				21-40	60	27.6
Bachelors	45	20.7	20.7	41-60	50	23
Master	122	56.2	77	above 60	97	44.7
M.Phil	9	4.1	81.1	<b>Income</b>		
Ph.D	0	0	81.1	0-30K	12	5.5
Other	41	18.9	100	31K-60K	60	27.6
<b>Marital Status</b>				61K-90K	35	16.1
Single	12	5.5	5.5	Above 90K	110	50.7
Married	205	94.5	100			

Table.2 Descriptive Statistic

	Descriptive Statistics								
	N	Minimu m Statistic	Maxim um Statistic	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic	Std. Error	Std. Error
		c	c	c	c	c	c	c	c
ATI	217	1.00	5.00	4.1051	.69843	-.543	.165	-.280	.329
RA	217	1.00	5.00	3.9002	.84423	-.649	.165	.242	.329
COM	217	1.00	5.00	3.5576	1.02069	-.441	.165	-.568	.329
COMP	217	1.00	5.00	4.2719	.81069	.247	.165	.704	.329
SNS	217	1.00	5.00	4.4666	.85917	.038	.165	.885	.329
NI	217	1.00	5.00	4.0369	1.16906	.175	.165	.370	.329
PBC	217	1.00	5.00	4.4040	.70209	.672	.165	.460	.329
FC	217	1.00	5.00	4.4009	.68464	.533	.165	.653	.329
SE	217	1.00	5.00	4.3134	.83340	-.417	.165	.734	.329
IIS	217	1.00	5.00	4.2919	.73481	.034	.165	.459	.329
Valid N (listwise)	217								

Table.3 indicated that there is no multicollinearity problem as the values for variance inflation factor (VIF) between 1.00 and 3.00 (Devie et al., 2019). Factors loading were used to check the contribution of each item to the construct (Ramayah et al., 2009). Table.4 showed the values which are greater than .70 as stated in their study by (Phan & Zhou, 2014), which reflecting that each item used in the study contributed to the construct.

Table.3 Collinearity statistics

Variables	VIF
ATI	1.245
COM	1.356
COMP	1.624
RA	1.135
SNS	2.841
NI	1.023
PBC	1.785
FC	1.425
SE	1.632
IIS	1.956

**Table.4 Factor Analysis**

<b>Items</b>	<b>Factor loadings</b>	<b>Items</b>	<b>Factor loadings</b>
<b>ATI</b>		<b>IIS3</b>	<b>0.819</b>
ATI1	0.752	<b>NI</b>	0.744
ATI2	0.821	NI1	0.843
ATI3	0.714		
ATI4	0.735	<b>PBC</b>	
ATI5	0.745	PBC1	0.788
<b>COM</b>		PBC2	0.769
COM1	0.689	PBC3	0.799
COM2	0.782	<b>RA</b>	
<b>COMP</b>		RA1	0.746
COMP1	0.825	RA2	0.744
COMP2	0.711	RA3	0.731
<b>FC</b>		<b>SE</b>	
FC1	0.815	SE1	0.689
FC2	0.729	SE2	0.823
FC3	0.852	SE3	0.811
FC4	0.714		
<b>IBD</b>	1.000	SNS1	0.699
<b>IIS</b>		SNS2	0.765
IIS1	0.766	SNS3	0.716
IIS2	0.842	SNS4	0.733

Construct reliability and validity of the data was checked and found correct as the values in Table.5 for Cronbach Alpa, Composite reliability and Average Variance Extracted (AVE) are greater than 0.70, 0.70, and 0.50 respectively (Phan & Zhou, 2014).

**Table.5 Construct reliability and validity**

<b>Variables</b>	<b>Cronbach's Alpha</b>	<b>Composite Reliability</b>	<b>Number of items</b>	<b>Average Variance Extracted (AVE)</b>
ATI	0.752	0.745	5	0.535
RA	0.735	0.736	3	0.550
COM	0.701	0.724	2	0.673
COMP	0.821	0.792	2	0.575
SNS	0.827	0.817	4	0.730
NI	0.722	0.722	2	0.752
PBC	0.762	0.764	3	0.619
FC	0.741	0.820	4	0.611
SE	0.764	0.763	3	0.721
IIS	0.792	0.870	3	0.552

Results reflected in Table.6 that, each construct is divergent from the another one as the values for AVE is higher than the construct correlation which confirmed the Discriminant validity (Mayfield et al., 2008).

**Table.6 Discriminant validity**

<b>Constructs</b>	<b>ATI</b>	<b>RA</b>	<b>COM</b>	<b>COMP</b>	<b>SNS</b>	<b>NI</b>	<b>PBC</b>	<b>FC</b>	<b>SE</b>	<b>IIS</b>
ATI	<b>0.535</b>									
RA	0.358	<b>0.55</b>								
COM	0.245	0.458	<b>0.673</b>							
COMP	0.279	0.348	0.154	<b>0.575</b>						
SNS	0.361	0.145	0.025	0.045	<b>0.73</b>					
NI	0.056	0.425	0.458	0.154	0.425	<b>0.752</b>				
PBC	0.168	0.245	0.068	0.235	0.521	0.477	<b>0.619</b>			
FC	0.288	0.157	0.298	0.065	0.124	0.025	0.425	<b>0.611</b>		
SE	0.378	0.468	0.365	0.168	0.075	0.328	0.074	0.135	<b>0.721</b>	
IIS	0.499	0.188	0.245	0.185	0.199	0.154	0.175	0.425	0.154	<b>0.552</b>

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### Model Fitness

Analysis was performed by using the Structural Equation Model (SEM) in SmartPLS 3.00. For the better outcomes this estimation method was performed (Lei and Wu 2007). To match the results with the standardized values for fitness of the model some tests were performed. Table.7 indicated the values for the Standardized Root Mean Square Residual (SRMR), Normed fit index (NFI) and Chi-Square/df. The results revealing good fitness of the model for the study as the values are meeting the standard criteria.

**Table.7 Model Fitness**

Measures	Recommended Criterion	Structural Equation Model	Sources
SRMR	<0.08	0.046	(Sarstedt et al., 2014)
Normed fit index (NFI)	>0.9	0.982	(Hair Jr, 2006)
Chi-Square/df	<3.0	1.253	(Hair Jr, 2006)

Table.8 reflected the results of  $R^2$  as how much each independent variable brings changes in the dependant variable.

**Table.8  $R^2$**

Variables	R Square
ATIP	0.623
IISP	0.752
IBP	0.765
PBCP	0.746
SNP	0.616

Table.9 showed the results for hypothesis testing. As it indicated that hypothesis 3, 10 and 11 was rejected as its P-values are greater than 5%. The remaining hypotheses were accepted. Results from the study indicated that there is no significant positive impact of Compatibility on Attitude toward the investment of the individual investor in the city of Peshawar. Furthermore, it shows no significant direct impact of attitude and subjective norms on the behavior of individuals.

**Table.9 Hypotheses Testing**

S. No	Hypothesis	Path Coefficient	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( $ OSTDEV $ )	P Values	Status
1	ATIP $\rightarrow$ IISP	0.448	0.439	0.44	0.07	6.288	0.000	Accepted
2	RAP $\rightarrow$ ATIP	0.401	0.396	0.398	0.058	6.889	0.000	Accepted
3	COMP $\rightarrow$ ATIP	0.126	0.128	0.126	0.07	1.799	0.073	Rejected
4	COMPP $\rightarrow$ ATIP	0.392	0.389	0.392	0.064	6.114	0.000	Accepted
5	SNSP $\rightarrow$ IISP	0.179	0.181	0.183	0.065	2.769	0.006	Accepted
6	NIP $\rightarrow$ SNSP	0.611	0.621	0.616	0.047	13.122	0.000	Accepted
7	PBCP $\rightarrow$ IISP	0.261	0.252	0.251	0.073	3.453	0.001	Accepted
8	SEP $\rightarrow$ PBCP	0.295	0.282	0.305	0.126	2.337	0.020	Accepted
9	FCP $\rightarrow$ PBCP	0.415	0.418	0.411	0.124	3.338	0.001	Accepted
10	ATIP $\rightarrow$ IBP	0.135	-0.140	-0.138	0.091	1.477	0.140	Rejected
11	SNSP $\rightarrow$ IBP	0.083	0.089	0.095	0.087	1.022	0.307	Rejected
12	PBCP $\rightarrow$ IBP	0.443	0.440	0.441	0.09	4.889	0.000	Accepted
13	ATIP $\rightarrow$ IISP $\rightarrow$ IBP	0.752	0.702	0.751	0.095	7.916	0.000	Accepted
14	SNSP $\rightarrow$ IISP $\rightarrow$ IBP	0.652	0.652	0.635	0.085	7.671	0.000	Accepted
15	PBCP $\rightarrow$ IISP $\rightarrow$ IBP	0.662	0.605	0.602	0.098	6.755	0.000	Accepted
16	IISP $\rightarrow$ IBP	0.795	0.757	0.856	0.105	7.604	0.000	Accepted

## 5. Discussion

The results showed that individuals behavior having a significant influence in investing in the stock market which to the acceptance of the hypothesis 1. The same results was matched with the study of (Gangwal & Bansal, 2016; Phan & Zhou, 2014). The study found that a subjective norm was the significant determinants of individual's intentions. Normative influence considered the significant determinants of subjective norms. These results are in line with the various researchers including (Shih & Fang, 2004), and (Gangwal & Bansal, 2016; Phan & Zhou, 2014). The study reflected the significant relationship of perceived behavioral control with intentions and further self-efficacy and facilitating conditions are found significant determinants of perceived behavioral control. The same results were found in the studies of (Gangwal & Bansal, 2016; Pascual-Ezama et al., 2014), (Shih & Fang, 2004), and ( K. C. Phan & Zhou, 2014).

The direct impact was found significant in study for intention and perceived behavioral control while for subjective norms it was found insignificant with behavior of individuals. The results are supported by the studies of (Gangwal & Bansal, 2016; Pascual-Ezama et al., 2014), (K. C. Phan & Zhou, 2014; Y. Shih & Fang, 2004). Intentions of individuals was found a full mediating variable between subjective norms and behavior while it was found a semi mediating variable among attitude, and perceived behavioral control with the behavior of individuals.

## 6. Conclusion

Psychological factors nevertheless have a strong influence on the intentions and behavior of the individuals. It was found in the study that entrepreneurs investment decisions are affected by the psychotically factors. Hence, the brokerage firms must consider the psychological aspects of the individuals. Similarly, the study revealed that huge amount is transferred from one country to another due to less information. Therefore, the government must provide enough information related to the stock market for understanding the process of investment in stock market to increase the investment. The rewards and benefits must be increase to the investors for encouragement.

Future research studies may include other variables as elements of intentions for investing in stock markets. The same study may also be conducted in other cities where the target may be the individuals having more potential to invest in stock market. Theory of planned behavior may be checked in other investment areas for increasing the investment in the country and provide guidelines to the government to construct policies. The future studies may also target specific individuals who have already invested in stock market to understand more about the psychological aspects and its effect on their behavior.

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