

## **Impact of Financial Knowledge and Investor's Personality Traits on Investment Intention: Role of Attitude and Financial Self Efficacy**

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In recent years, there has been an upsurge in stock market investment intentions. Researchers are therefore becoming more and more eager to look into the factors that influence investors in general, and individual investors in particular to engage in stock market activities. Under the assumption of the theory of planned behavior this study looked at investor's intentions to invest in the stock market. The study primarily focusses on the impact of financial knowledge, personality traits, subjective norms, attitude, and financial self-efficacy on the stock market investment intentions of individual investors. To gather information from individual investors, the study used a cross-sectional research approach, on the population sample of 298 individuals. The data is collected from the Pakistani investors, from three big cities, i.e. Islamabad, Lahore and Karachi, also considered as business centers of the country. The respondents include both the salaried workers and business owners. The findings indicate that attitude and financial self-efficacy were significant mediators for investors' investment decisions. The results imply that people with a favorable outlook on investing in the stock market, risk-taking and innovative personalities, and financial expertise are more likely make investments. Those who have a mindset towards investing and financial self-efficacy also have more intentions .

**Keywords:** stock market, attitude, financial self-efficacy, financial knowledge,

Despite the enormous research the theoretical and empirical evidence is equivocal about the relationship between the determinants of intention to invest in stock exchange. It has focused on various aspect such as, the extent to which individuals have intention to invest in stock market (Akhtar & Das, 2020). Therefore, the literature into this stream of research has grown substantially. It is inevitable that the financial system, which includes the banks and financial markets, play an important role in the economic development of a country (Khan *et al.*, 2023; Libich & Lenten, 2022; Khan, 2022; Khan, Bashir & Islam, 2021). Many researchers have focused on the relationship between deferent antecedents of investment intention in financial markets, particularly the stock market (Yang, *et al.*, 2021; Hamid, Mardhiah, & Midesia, 2019). Investors are no longer bound by national borders due to the expansion of economic markets and globalization. Financial securities and instruments are two areas where investors can be benefiting from this.

A wide range of financial products are available to investors, including stocks, bonds, commodities, real estate investments, and various sorts of derivative instruments. Investors can select from a wide variety of investment options that are compatible with their investment

objectives. A country's stock exchange reflects the state of its economy and forecast its future performance. The existing empirical literature provides a linkage between the performance of financial markets and economic activities (Khan, 2022; Chowdhury, Khan & Dhar, 2021; Al-Mutairi, Naser, & Saeid, 2018). The role of financial markets has always remained important for individual as well as institutional investor in contemporary economy. In particular, investments in stock market has remained a focal area of interest. Several studies focus on the institutional investors, but recently the role of individual investors' in the financial markets has gain considerable attentions. It is observed that individual investors' participation in financial markets has significantly increased, and existing literature highlights several reasons for this increase (Calvet *et al.*, 2016). For instance, financial markets are considered as in important mean of "making money" and are providing reasonable returns from the capital investment (Akhtar & Das, 2020). In addition, financial markets are flexible intruments that can be liquidate quickly, thereby provides the investors an opportunity to get the benefit from the investment as needed. Also, financial markets provide the opportunity to the individual investors to fund assets that fits their investment objective from the large number of available financial assets.

In the existing literature, couple of studies like, Khawar and Sarwar (2021); Awais *et al.*, (2015) examined the role of financial literacy on investment decisions. But no study as per authors' knowledge has explored the role of financial knowledge and personality traits of investors in their investment decision in the context of Pakistan. Hence, to contribute to the existing gap, this study examines the role of investors financial knowledge and personality traits to make investment decision. It further uses the mediating role of investors' attitudes and financial position on their investment decisions. Individual's behavior and attitude plays an important role in investment decision, which is the center of behavioral sciences studies. It is assumed that the findings of the study contribute to the body of knowledge by providing the policy recommendations that could enhance the investors knowledge and encourage them to invest in the PSX.

### **Background of Pakistani Stock Markets**

The largest, most active, and oldest stock exchange in Pakistan is the Pakistan Stock Exchange (PSX), which was founded on September 18, 1947. On March 10, 1949, it was formally established as a company limited by guarantee under the name "Karachi Stock Exchange." In October 1970, Lahore stock exchange was opened. In order to assist investors in the nation's northern regions, the Islamabad Stock Exchange was established in October 1989. The Pakistani government finally consolidated the operations of three exchanges on January 11<sup>th</sup> 2016 to Pakistan Stock Exchange Limited (PSX). As of April 28, 2015, there were 854 companies listed on the Karachi Stock Exchange, with a market value of RS 10.807 billion. (KSE). The KSE-100, the most well-known index, serves as a standard for measuring market activity, that includes the performance of top 100 companies with largest market capitalization. The KSE-100 index closed at 41,472 points on May 16, 2023 According to this scenario, the stock market in Pakistan is highly unpredictable. Therefore, due to the importance of the PSX as a key market for the economy, this research scrutinized the factors that could assist to predict the investment intentions of the investors in the market.

### **Literature review**

#### **Behavioral Planning Theory**

The theory of planned behavior (TPB) refers to a person's assessment of the availability or absence of necessary opportunities or resources required to carry out a specific behavior. These opportunities or resources are required to engage in the behavior in question (Ajzen &

Madden, 1986). Hence, behavioral intention, functions as a mediator in the TPB between the effects that three different factors have on performance as a whole. These three distal ideas also mediate the effects of three conceptually distinct sets of beliefs, for a total of five. People's beliefs about their own behavioral control act as a mediating factor between the effects of control belief and perceived facilitation. Control belief, like self-efficacy (Bandura, 1977), is the ability to perform. Nevertheless, "perceived facilitation" refers to a person's assessment of how useful those tools were in actually attaining their objectives. The relationship between self-efficacy and control beliefs has been the subject of extensive study and writing by researchers (Ajzen & Madden, 1986).

Ajzen (2006) proposed a theory in the TPB that perceived behavioral control influences behavior both directly (by actual behavior) and indirectly (via behavioral intention). It is assumed that one's actual behavioral control corresponds to the straight line connecting the impression of their own behavioral control and their actual behavior. People's intentions to engage in the behavior, for example, may be low even if they have a positive outlook and/or subjective norms regarding its performance if they feel they have little control over engaging in it because they lack the necessary skills, knowledge of hardware or software, funds, time, documentation, data, and human assistance required to use an information system (Mathieson, Peacock, & Chin, 2001). However, upbeat and positive they may seem, is still true (Ajzen, 2006). Dari Ajzen created the concept of planned behavior in 1991. It builds on the work done by Ajzen and Fishbein, who introduced the idea of reasoned action in 1969, (Southey, 2011). This theory provides a model that analyses an individual's intentions to predict their behavior. Intention, is defined as a person's estimation of the likelihood that they will engage in a certain behavior (Gopi & Ramayah, 2007).

The three factors that come before purpose are attitudes, arbitrary standards, and the sense of one's own behavioral control. Ajzen and Fishbein (1977) defined attitude as the intensity of one's feelings towards a specific psychological item as either positive or negative. Subjective norms are a person's opinion of the likelihood that a group or other people will agree with or disapprove of a specific conduct that they intend to engage in. Finally, the idea that a person has faith in their capacity to control their conduct can be used to characterize perceived control behavior (Gopi & Ramayah, 2007).

### **Stock Market**

The stock market and its performance is a primary component in the market economy, because it helps to accumulate the domestic resources and convert these resources into productive investment. Hence, it has a significant and relevant association with the economic activities. In general, one can have one of the two perspectives regarding the connection. The first relationship examines the stock market through the lens of a leading indicator of economic activity in the nation. Whereas, the second observes the potential impact that the stock market may have on aggregate demand, in particular through aggregate consumption and investment. Both analyses are based on the idea that the stock market is a leading indicator of economic activity in the economy. Or it can be examined that whether changes in the stock market cause changes in macroeconomic variables, such as shifts in consumption and investment spending, GDP, the index of industrial production (IIP), and so forth.

### **Intention towards Investment in Stock Market**

Bird (1988) defined intention as "a state of mind that focuses a person's attention (and, consequently, experience and action) towards a particular object (goal) or a path in order to accomplish something (means)." Reilly and Brown (2006) defined investment as "the commitment of funds for a specified time horizon in the hope of generating a rate of return that would compensate the investor for the time the funds are invested for, for the anticipated rate of

inflation during the investment horizon, and for the uncertainty that is involved." Some researchers proposed that we can understand people's actions through the prism of their intentions (Ajzen, 1991). So it can be observed that investor may invest or his/her behavior may change in the future depending on their intentions. As a result, a person's intentions, such as the intention to invest, might predict that how their behavior may change in the future.

Similarly, Bird (1988) argued that the motivations of the business's founder or owner shape the enterprise's early decisions and shape its first structure. The term "intentions" was defined in a variety of ways in the existing literature. In most contexts, it is referred to an individual's signal of their intended behavior in the future. The wish or plan of an individual to carry out the anticipated action at a later time is referred to as their intention. Because people's intentions provide an intelligent account of the directions they will take in the future. Additionally, attitudes, beliefs, and intentions typically coincide with one another.

### **Financial Knowledge**

As per Bowen (2002) financial knowledge /literacy refers to a person's comprehension of the fundamental financial ideas and terminology that are necessary for investors to comprehend in order to make wise investment decisions. It is also considered as one of the most important factors in determining appropriate financial behavior, (See. Mountain *et al.*, 2021). According to Robb *et al.*, (2015) a higher level of financial literacy enables individuals to apply their knowledge and reach on an appropriate decision for the effective management of their financial resources and investments.

### **Personality Traits**

Conventional theories of finance make the assumptions that investors are logical people who base their investing decisions on relevant information. But Ritter (2003) concluded that in reality, when faced with uncertainty, investors typically choose their investments using investment heuristics. However, contrary to the argument of investors as logical individuals, existing studies such as, Ackert, (2014); Bloomfield, (2010); highlighted that investors are viewed as normal in traditional finance, whereas traditional finance views investors as rational in their decisions.

### **Subjective Norms**

According to Ajzen (1986), subjective norms "refers to the perceived social pressure to perform or not to perform the behavior." The subjective norm concept in the financial literature in relation to investment was initially articulated by East (1993), stating that as per theory of reason action, subjective norm is one of the two determinants of the intention that relates to investors' behavior. Afterwards, various studies looked into the connection between investing in the stock market and subjective norms. Such as, Tokuoka (2017); Alqasa *et al.*, (2014) discovered that people's intentions to buy stock can be influenced by subjective norms, and association between investors' attitude and subjective norms.

### **Attitude of individual Investor**

Ajzen (2011) has defined attitude into two broader categories. The first dimension defines, attitude as an instrument that indicates that a behavior is crucial, destructive, and important, whereas the second dimension considers attitude as a pleasurable and enjoyable state. Therefore, when people have positive attitude regarding a specific behavior, it is more likely that they will have favorable intention to exhibit that particular behavior (Wijekoon & Sabri, 2021). As per Trabucchi, *et al.*, (2020) and Jothilingam and Kannan (2013), investment attitude, is referred to individual investors' attitude that can reflect a behavior about their interest in

investments. Similarly, Norouzi *et al.*, (2022), stated that individuals develop their attitude about investment based on their particular circumstances and past experiences.

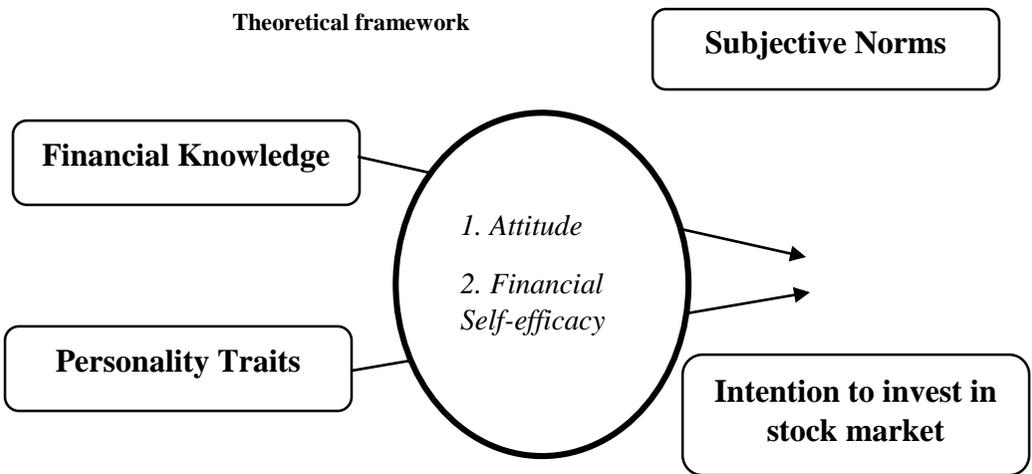
**Financial Self-Efficacy**

Self-efficacy is the view by which, one can achieve their objectives and be successful in their endeavors. An essential element of self-confidence is the belief that one can conquer a variety of problems (Bandura, 2006). A person who has a high level of self-efficacy has faith in their ability to do a certain task. According to Bandura (2006), even if a person has a high level of self-efficacy generally, their perception of their own talents may change significantly from one endeavor to the next. The study by Farrell *et al.*, (2016) concluded that self-efficacy is a significant factor that influence the financial behaviors such as investments and savings.

**Hypothesis**

Based on the existing literature following hypothesis are established

- H1: *Financial knowledge and the desire to invest in the stock market are positively correlated.*
- H2: *Personality trait and intention to invest in the stock market are positively correlated.*
- H 3: *The intention to invest in the stock market is positively correlated with subjective norms / standards.*
- H 4: *Attitude mediates the association between financial knowledge and intention to invest in the stock market.*
- H5: *Financial self-efficacy acts as a mediator in the association between this personality attribute and the intention to invest in the stock market.*



**Figure 1:** *Proposed theoretical framework*

**Method**

**Questionnaire design**

A structured questionnaire has been designed by following the guidelines offered by Sekaran and Bougie (2010) to achieve the study objectives. For qualitative research self-administered and reported questionnaires are considered as one of the effective means to collect the data (Babin & Zikmund, 2015). In this regard, the wording of the questionnaires was selected considering the target-level respondents. The questionnaire was designed in English language because this language is commonly understood in Pakistan. An introduction about the research was given at the start of the questionnaire in the form of covering letter, which was

followed by the next sections. Prior to the distribution of survey questionnaire, experts from the field of study reviewed the questionnaire to confirm the content and face validity. As Kline (2011) suggested 10 samples per item, as study total items are 13 so 298 final sample meet the priori condition.

After considering the recommendations of the experts, questionnaire was modified and finalized. Structural Equation Modeling (SEM) technique is used on data to test multiple relationships simultaneously. This technique simultaneously performs multiple analyses such as factor analysis, regression analysis and path analysis (Gefen *et al.*, 2000). Variance-based SEM was employed to explore the statistical relationship.

### **Measurements of the Variables**

One dependent, three independent, and two mediating variables are used to achieve the objectives of study. Variables are measured by closed-ended questions that were adopted or modified from earlier studies. The questionnaire included 25 items in addition to the demographic factors. Demographic information made up the first portion of the questionnaires, and the primary study constructs were covered in the second part. A 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), was used to evaluate each item. According to Torkzadeh and Van Dyke, (2001) self-reported surveys can be used to record respondents' subjective feelings, using 5-point Likert scales are practical. The variables in this study, such as the intention to invest in the stock market, subjective norm, financial knowledge, personality, attitude, and self-efficacy, have all been carefully operationalized, taking into account the objective and nature of the research.

### **Investment Intention**

Individual stock market investment intentions as a dependent variable basically serves as a gauge of someone's propensity to engage in a particular behavior (Yadav & Pathak, 2017). This construction has only one dimension. The construct of investing intention was measured using Chen's (2007) three-item scale. This measure's sample item is "I will frequently invest in the stock market." This construct has a 0.87 Cronbach's alpha reliability score.

### **Attitude towards investment in stock market**

The study used people's attitudes as a mediating factor. This variable was measured using a three-item Taylor and Todd measure (1995). "Investing in the stock market is a good idea" is an example item from this metric. This construct has a 0.85 Cronbach's alpha reliability score.

### **Financial Self-Efficacy**

Financial self-efficacy was used as a mediator. An individual's perception of his or her financial capacity to make an investment is known as financial self-efficacy. This study has adopted or adapted a six-item financial self-efficacy measure created by Lown (2011). An example item would be "It is difficult to move towards my financial goals." This construct has a 0.92 Cronbach's alpha reliability score.

### **Financial Knowledge**

Financial knowledge is used as first independent variable. Financial knowledge, as per Alvarez and González (2017), is the ability to solve financial problems through the application of one's financial awareness and comprehension of financial concepts and practices. This study used a multifaceted approach to test financial knowledge. Risk diversification, inflation, numeracy (interest), and compound interest were the four key ideas that were used to test

financial understanding through four statements following the Klapper *et al.*, (2015) study. This construct has a 0.82 Cronbach's alpha reliability score.

### **Subjective Norms**

Subjective norms are used as second independent variable. It is people's perceptions of the world and the decisions they make based on those perceptions. Three items adapted from Taylor and Todd (1995) were used to measure subjective norms essentially people's perceptions of the world and the decisions they make based on those perceptions. "Those whose opinion I value would" is an example response from this questionnaire. This construct has a 0.90 Cronbach's alpha reliability score.

### **Personality Traits**

Third independent variables used is personality characteristics. Individuals' permanent personal characteristics, or personality traits, are made up of their thoughts, behaviors, and feelings (Blickle, 1996). Personality is measured as a multidimensional construct that includes willingness to take risks and desire for innovation. The study has adapted a six-item Hyrsky and Tuunanen (1999) measure. Three of the six items on the scale show a predilection for creativity, and the remaining three assess a person's tendency for taking risks. This construct has a 0.88 Cronbach's alpha reliability score.

### **Sampling and data collection**

Data is collected in standard form from respondents, the active investors. The targeted population was the individual investors from three major cities of Pakistan namely, Lahore, Islamabad, and Karachi, specifically, targeting two types of individuals. One those who were running their own business (self-employed), and second the job holders at both private and government. These cities are major cities of Pakistan, and are the centers of business activities. Individuals from these were assumed to have more knowledge about stock exchange, thereby they may have more intention to invest the stock exchange. Study followed non-probability sampling method and used snowball sampling technique, to collect information from the respondents. Response rate, demographic analysis, descriptive statistics, factor analysis, reliability and validity analysis, correlation analysis, and structural equation modelling results are presented below.

### **Response Rate**

A total of 500 questionnaires were distributed among individual investors who planned to invest in the PSX. Out of 500 given out questionnaires 305 responses were collected, with a 61% response rate. Seven incomplete responses were eliminated from the final sample. Finally, 298 valid completed responses with response rate of 60% were used for analysis. Results summary of the response rate is given in table 1.

**Table 1**

#### *Response Rate*

Total distributed questionnaires	500
Total questionnaires received back	305
Total questionnaires useable	298
Total questionnaires excluded	07
Total response rate	61%
Total response rate of useable questionnaire	60%

*Source: Authors' compilation*

## Demographic Analysis

### Gender of the respondents

While collecting the data, the information regarding the gender of the respondents was also collected. It is found that the majority of the respondents were male with the percentage of 77.9 percent and females were 22.1 percent, results are given below in table 2.

**Table 2**

*Gender of the participants*

		Frequency	Percent	Cumulative Percent
Valid	Male	232	77.9	77.9
	Female	66	22.1	22.1
	<b>Total</b>	<b>298</b>	<b>100.0</b>	<b>100.0</b>

*Source: Authors' compilation*

### Age of the respondents

The data on age of the respondents has also been collected. Age is an important factor with reference to individual investor having intention in the stock market. Considering the Pakistani culture, aged people have more resources than the young, therefore, they have more inclination to make investments. The results presented in table 3 shows that the majority of the respondents belongs to the age group between 41-50 years with percentage of 40.9 % followed by the age group of 31-40 with 31.9%. The lowest category was respondents from the age group of 20-30.

**Table 3**

*Age group of the respondents*

		Frequency	Percent	Cumulative Percent
Valid	20-30	27	9.1	9.1
	31-40	68	22.8	22.8
	41-50	122	40.9	40.9
	More than 50	81	27.2	27.2
	<b>Total</b>	<b>298</b>	<b>100.0</b>	<b>100.0</b>

*Source: Authors' compilation*

### Marital Status

Marital status of people is an important demographic factor that play critical role in making investment decisions. The findings of frequency distribution shown in table 4 suggests that unmarried or single respondents are 41 (13.8%), married are 202 (67.8%), divorced are 46 (15.4%), and widow are 9 (3%).

**Table 4**

*Marital status of the respondents*

		Frequency	Percent	Cumulative Percent
Valid	Unmarried	41	13.8	13.8
	Married	202	67.8	67.8
	Divorced	46	15.4	15.4
	Widow	9	3.0	3.0
	<b>Total</b>	<b>298</b>	<b>100.0</b>	<b>100.0</b>

*Source: Authors' compilation*

### Education

The data on the education of respondents is given in table 5 shows that 14 (4.7%) individual investors were having qualification of matric, 26 (8.7%) respondents were having education of intermediate, 112 (37.6) were having qualification of undergraduate, and 146 (49%) were having postgraduate qualification.

**Table 5**  
*Educational qualification of respondents*

		Frequency	Percent	Cumulative Percent
<b>Valid</b>	<b>Matric</b>	14	4.7	4.7
	<b>Intermediate</b>	26	8.7	8.7
	<b>Undergraduate</b>	112	37.6	37.6
	<b>Postgraduate</b>	146	49.0	49.0
	<b>Total</b>	<b>298</b>	<b>100.0</b>	<b>100.0</b>

*Source: Authors' compilation*

### Profession

Data about the profession of the respondents given in table 6 shows that government jobs holders also have intention to invest in the stock market, and they were 25 (8.1%). Self-employees were 178 (59.7%), private Job holders were 95 (31.9%).

**Table 6**  
*Professional categories of the respondents*

		Frequency	Percent	Valid Percent	Cumulative Percent
<b>Valid</b>	<b>Government Job</b>	25	8.1	8.1	8.1
	<b>Self-Employee</b>	178	59.7	59.9	68.0
	<b>Private Job</b>	95	31.9	32.0	100.0
	<b>Total</b>	<b>298</b>	<b>100.0</b>	<b>100.0</b>	

*Source: Authors' compilation*

### Income Level

Income level of the respondents also plays an important role in the investment intention in the stock market. The data on monthly income level presented in table 7 depicts that 51 (17.1%) respondents were having income of less than 50,000, 139 (46.6%) were having income in the range of 51,000 to 100,000, 108 (36.2%) have income level of more than 100,000.

**Table 7**  
*Income level of the respondents*

		Frequency	Percent	Cumulative Percent
<b>Valid</b>	<b>Less than 50000</b>	51	17.1	17.1
	<b>51000-100000</b>	139	46.6	46.6
	<b>More than 100000</b>	108	36.2	36.2
	<b>Total</b>	<b>298</b>	<b>100.0</b>	<b>100.0</b>

*Source: Authors' compilation*

### Descriptive analysis

The descriptive statistics of this study is presented in table 8. The descriptive statistics provides findings on sample, maximum and minimum values, mean, standard deviation, skewness, and kurtosis.

**Table 8**  
*Descriptive statistics*

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Gender	298	1.00	2.00	1.2215	.41594	1.348	.141	-.183	.281
Age	298	1.00	4.00	2.8624	.91996	-.429	.141	-.641	.281
Marital Status	298	1.00	4.00	2.0772	.63888	.634	.141	1.333	.281
Education	298	1.00	4.00	3.3087	.81978	-1.142	.141	.837	.281
Profession	298	1.00	3.00	2.2383	.58627	-.101	.141	-.443	.281
Income Level	298	1.00	3.00	2.1913	.70615	-.289	.141	-.970	.281
Investment Intention	298	1.33	5.00	3.2629	.80209	.045	.141	-.478	.281
Financial Self-Efficacy	298	1.00	5.00	3.1331	.97672	.041	.141	-.588	.281
Personality Trait	298	1.00	5.00	3.2931	.93347	-.305	.141	-.534	.281
Financial Knowledge	298	1.00	5.00	3.2232	.83869	.052	.141	-.218	.281
Attitude	298	1.00	5.00	2.9340	.92464	.027	.141	-.333	.281
Subjective Norms	298	1.00	5.00	2.8177	1.17682	.168	.141	-.887	.281
Valid N (list wise)	298								

*Source: Authors' compilation*

The results indicate that skewness and kurtosis values are within the permissible range of +2 to -2, George and Mallery, (2010) suggested this range indicates that the data is dispersed normally, and recommends further statistical analysis.

### Analysis of Reliability

After checking for normal distribution, reliability analysis (internal consistency) of all the measures is measured. Cronbach's Alpha was calculated to measure the internal consistency of each variable. It is suggested that if a variable Cronbach's Alpha value is 0.7 or higher of, then this measure is considered as reliable. Table 9 presents the values of Cronbach's Alpha, which is also referred as the measure of internal consistency, and all the values cross the threshold value, thereby confirming the reliability of measures.

**Table 9**  
*Reliability analysis result of variables*

Construct	Number of Items	Cronbach's Alpha
1 Investment Intention	3	0.823
2 Attitude towards investment in stock market	3	0.813
3 Financial Self-Efficacy	6	0.948
4 Subjective norms	3	0.916
5 Personality traits	6	0.915
6 Financial Knowledge	4	0.858

*Source: Authors' compilation*

### Confirmatory Factor Analysis

As per Fornell and Larcker, (1981), in behavioral studies, it is important to determine that data is fitting to the proposed model appropriately or not, prior to performing the main analysis. A variable is considered valid when it adequately measures the targeted objective, with a reliable and valid scale (Hair *et al.* 2010). In order to confirm the item structure of exploratory

factor analysis (EFA), this study has performed the confirmatory factor analysis (CFA) to confirm the psychometric properties of all scales. According to Hu and Bentler, (1998) the most widely used fit-indices are CMIN/DF (<2 ideal; < 5 acceptable), RMSR/RMR (<.05ideal; <.08 acceptable), CFI (>.95 ideal; >.90 acceptable), TLI (>.95 ideal; >.90 acceptable), and RMSEA (<.05 ideal; <.08 acceptable)

### Analysis of Composite Reliability and Convergent Validity

Although the internal consistency analysis (Cronbach's alpha) carried out before confirmed the data's dependability, further evaluation of the reliability and validity of each variable is done. Average variance extracted (AVE) and composite reliability (CR) were evaluated for this aim. Fornell and Larcker, (1981). Suggested that the value of AVE must be greater than 0.50 in order to meet the requirements for convergent validity and the presence of CR, respectively. The results of the CR and AVE are displayed in table 10. The results show that both the CR and AVE values are higher than the threshold values, supporting the existence of the CR and its convergence validity.

**Table 10**

*Composite Reliability and Convergent Validity Outcome*

Construct	CR	AVE
Investment Intention	0.895	0.740
Attitude towards investment in stock market	0.889	0.727
Financial Self-Efficacy	0.959	0.795
Subjective norms	0.947	0.857
Personality traits	0.934	0.702
Financial Knowledge	0.904	0.707

*Source: Authors' compilation*

### Correlation analysis and discriminant validity

The discriminant validity of the variables is also measured. It is implied by discriminant validity that one measure is distinct from the other measure. According to Fornell and Larcker (1981), the square root of AVE must be greater than the correlation of the variables that appear on the diagonal of the correlation analysis in order for the discriminant validity criterion to be met. The square root of AVE values on the diagonal of correlation analysis are higher than the values of inter-correlation of variables, as per table 11 results support the existence of discriminant validity, moreover the correlation among variables are given in table. Cohen (1988), the correlation among variable will be small if the coefficient is 0.10, medium if the correlation coefficient is 0.30, and large if the coefficient is 0.50. shows that the strength of the relationship among variable is medium.

**Table 11**

*Correlations Among l. vs. with sq. rts. of AVEs*

	1	2	3	4	5	6
Financial Self-Efficacy	<b>(0.892)</b>					
Personality traits	0.278***	<b>(0.838)</b>				
Financial Knowledge	0.290***	0.257***	<b>(0.8381)</b>			
Attitude	0.258***	0.299***	0.309***	<b>(0.853)</b>		
Subjective norms	0.294***	0.298***	0.256***	0.274***	<b>(0.926)</b>	
Investment Intention	0.322***	0.273***	0.249***	0.269***	0.235***	<b>(0.860)</b>

*Source: Authors' compilation. Note: Square roots of average variances extracted (AVEs) shown on diagonal. \*\*\* significant at 0.001.*

### Summary of the Hypotheses results and discussion

The results of the proposed hypotheses based on the analysis are summarized in table 12, all the hypotheses based on the analysis are accepted. The results suggest that the financial knowledge /literacy, personality traits and subjective norms of the Pakistani investors' positively influence their intention to invest in the stock market. It is further found that the financial self-efficacy and attitude of the investors mediate the investors' intention to invest.

**Table 12**

*Summary of hypotheses results*

No	Research Hypotheses	Results
H1	Financial knowledge and the desire to invest in the stock market are positively correlated.	Accepted
H2	Personality trait and intention to invest in the stock market are positively correlated.	Accepted
H3	The intention to invest in the stock market is positively correlated with subjective standards / norms.	Accepted
H4	Attitude mediates the association between financial knowledge and intention to invest in the stock market.	Accepted
H5	Financial self-efficacy acts as a mediator in the association between this personality attribute and the intention to invest in the stock market.	Accepted

*Source: Authors' compilation*

Findings of the positive impact of financial knowledge on intention to invest is in line with the findings of Mountain *et al.*, (2021); Robb *et al.* (2015); Bowen (2002). Which suggest that having better knowledge could help the investors to reach on an effective investment decision. The findings of personality traits are endorsing the results of Ackert, (2014); Bloomfield, (2010), and Ritter (2003). The relationship of subjective norms is similar to the findings of Tokuoka (2017); Alqasa *et al.*, (2014), and East (1993). The mediating role of financial-self efficacy is endorsing the results of Farrell *et al.* (2016) and Bandura (2006). While the investors' attitude results are in line with Norouzi *et al.* (2022); Trabucchi, *et al.*, (2020) and Jothilingam and Kannan (2013). Suggesting that the sufficient financial resources could positively influence the attitude of the investors and convincing them to make investment decisions.

### Conclusion

In recent years, there has been an upsurge in stock market investment intentions. Researchers are therefore becoming more and more eager to look into the factors that influence investors in general and individual investors in particular to engage in stock market activities. Under the assumption of the theory of planned behavior this study looked at investor's intentions to invest in the stock market. The study primarily focusses on the impact of financial knowledge, personality traits, subjective norms, attitude, and financial self-efficacy on the stock market investment intentions of individual investors. The findings indicate that attitude and financial self-efficacy were significant mediators for investors' investment decisions. The results imply that people with a favorable outlook on investing in the stock market, risk-taking and innovative personalities, and financial expertise are more likely make investments. Those who have a mindset towards investing and financial self-efficacy also have more intentions. It is assumed that the results are of significant importance for individual investors who are intended to invest in the stock market in way. They must have financial knowledge, personality traits like, risk taking and innovative personality, and subjective norms of individual investors are an important indicator of investment intention, that could result into a profitable return. The findings could be used as guidelines for individual investors who want to invest in PSX. Moreover, to enhance the flow of capital to capital markets both investment companies, banks and PSX could arrange the

workshops, seminars and conferences to enhance the financial knowledge and expertise of the investors. Which would support the investors' decisions to invest in PSX.

The limitation is the current research is that it targeted only individual investors as target respondents by excluding the expert and institutional investors. Therefore, in future by expanding the current model including the professional experts and institutional investors is recommended.

### Availability Statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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