

Role of Self-Monitoring on Individual Investors' Investment Decisions, The mediating Role of Sensational Attitude

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Abstract

Purpose - Previous studies on investors' financial behavior have revealed that a number of factors can have influence on the financial behavior of investors causing deviation from a normal and rational financial attitude. On this basis, this study has been conducted to analyze the impact of self-monitoring along with the mediating role of sensational attitude of investors on their investment decision making behavior.

Research Approach - For this research, a structured questionnaire related to selected variables has been filled by 303 individual investors having distinctive backgrounds on the basis of their gender, age, education and occupation from different stock exchanges of Pakistan as a targeted sample population. Data has been examined by using AMOS 22 and applying it on structural equation modeling.

Findings - Results of this study have found that self-monitoring quality of investors has direct influence on their decisions. In case of mediator; sensational attitude fully mediates the effects of self-monitoring while studying

its relationship with individuals' investment behaviors.

Limitations – This study has been specifically conducted to analyze the Pakistani individual investors' financial behavior with limited sample size. The findings for same study may vary from these if it would be conducted in any other geographical area with different sample size.

Originality - This study helps to understand the behavior of individual investors having self-monitoring bias in their personalities under certain circumstances. It is a precise resource to have familiarity about investors psyche with self-monitoring feature while making financial decisions in Pakistani culture.

Keywords – Behavioral Biases, Self-monitoring, Sensational attitude, Investment Behavior

Paper Type – Research Paper

Introduction

Financial behavior of individuals as well as corporates has been a new and diverse area for researchers to explore it from different aspects. It is supposed that in behavioral

finance, there are many factors including investors' traits and behavioral biases which influence their investment decision making behavior under different circumstances. Behavioral finance is defined by (Shleifer, 1999) as "a rapidly growing area that deals with the influence of Psychology on the behavior of financial practitioners." Behavioral finance suggests that psychology of individuals has an important role to shape their investing behavior in market as it clarifies the reasons of their trading activities under certain attitudes (Al-Tamimi, 2006). The reason behind such financial behaviors is the influence on their investing attitudes as a result of their perceptions, emotions and different financial behavior biases while choosing financial opportunities (Onsomu, 2014). BF involves psychological factors having impact of individuals' emotions on their economic decisions to explain their behavioral deviations from normal and logical financial choices. There are number of studies which have involved investors' financial behavior biases, different personality traits and investment attitudes to explain various subjects of their financial behaviors. Some recent studies also confirmed the significant role of self-monitoring on investment decision making as Bon A. C. *et all.* (2017),

Aamir S. *et. all.* (2016) and Jhansi R. B. and Sunitha G. (2018).

In viewpoint of Nofsinger (2001), people are assumed to behave in a logical way by making financially achievable results showing their unbiased decisions at all the time regarding their future predictions (Subash, 2010) and (Thaler & Richard H., 2005). **Self-monitoring** as a behavioral bias plays a significant role in changing investors' financial decisions. Numerus studies and theories related to self-monitoring have revealed that under varying financial circumstances, there is a difference between financial decision making behaviors of high self-monitors and low self-monitors (Gangestad & Synder, 2000). This construct has identified that people with self-monitoring ability are sensitive to their surroundings and they change their behaviors in accordance to the varying conditions and happenings in their environment.

Sensational attitude of an individual is a personality trait that can influence his financial behaviors. By (Zukerman M., 1979) , it is defined as "the need for varied, novel, and complex sensations and experiences; the willingness to take physical and social risks for the sake of such experiences". Previous studies on

sensational seeking have found that people with high sensational seeking attitudes are more involved in risk taking activities as compared to others (Stephenson & Southwell, 2006).

This research study is proposed to measure the impact of self-monitoring and sensational attitude as a mediator on individual investors' investment decision behaviors participating in different stock exchanges (KSE, LSE & ISE) of Pakistan.

Hypotheses Development

Self-Monitoring

Self-monitoring as by latest research is defined as a variety of behaviors which includes readiness, distraction, mindfulness of individuals and the act of following different directions and commitments. Also according to this study self-monitoring of a person can be helpful in reducing certain problems related to behaviors along with other factors (Sheffield, Waller, & Raymond J., 2010).

Self-Monitoring and Investors' Financial Behavior

(Snyder, 1974), referred self-monitoring as a behavior of individuals who consider expressive motions around them and mold themselves to the specific atmosphere. He

found that different persons behave differently in certain situations as they are monitoring their behaviors by controlling themselves in diverse manners. A research study on business students in 1994 regarding impact of self-monitoring trait in their personalities on their career mobility has shown that individuals with high level of self-monitoring are more successful in their careers as compared to those having low level of self-monitoring. High level quality of self-monitored people makes them more active and adapted to their environment changes (Kilduff & Day, 1994). (Wolfe, 1997), suggested that to have changes in on-task behavior of disabled students, self-monitoring plays a significant role. (William G. & Bryant, 1998), concluded that self-monitoring of individuals may have direct dependence on external signals in assessing their own emotions. Some recent studies also confirmed the significant role of self-monitoring on investment decision making as Bon A. C. *et all.* (2017), Aamir S. *et. all.* (2016) and Jhansi R. B. and Sunitha G. (2018).

(Day & Deidra J., 2006), suggested that high self-monitored people were more accepted by others as fulfilling their expectations and also they were better at job performance and leadership tasks as compared to those having

low self-monitoring trait in their personalities. In another research, persons with high self-monitoring quality feel motivated and satisfied by generating social images of them concerning their social status and they go in a way to enhance their social values by creating world in the surrounding according to their perceptions. Develop self-congruency is the basis for low self-monitors who are motivated by creating social world under their self-images (Leone, 2006). A research made on self-monitoring in Schizophrenia; a severe mental condition affecting individual's way of thinking, feelings and behaviors in different situations, has found that change in self-monitoring can affect Schizophrenia patients severely as it has been said that self-monitoring helps people to control themselves by self-presentation and their behavioral expressions (Farrer & Franck, 2007).

(Howlett, Kees, & Kemp, 2008), has stated that consumers with higher level of self-orientation for future, financial knowledge and self-regulation as a moderator effect are more willing to invest and participate in retirement plans as compared to those having lower future orientation moderated by self-regulation to take certain financial decisions regarding retirement. (Evans,

2008), has studied the effect of self-monitoring of individuals as their personality trait on their selection of job and found that self-monitoring may have influence on people's way of career assessment but self-monitoring along with job structure mayn't effect their job selection. This study also reveals a chance that low self-monitors not selecting jobs with less structure whereas high self-monitors may not choose jobs with more structure. (Oh & Kilduff, 2008), have found that persons with high self-monitoring abilities were more capable to present themselves in accordance to external environment and taking certain brokers positions in Korean markets as compared to those having low self-monitoring levels making them not much adaptive to their atmosphere.

(Wilmot, 2011), found that at organizational level, self-monitoring as a result of higher education and emotional intelligence, has a significant role in effecting job performance and achievement, leadership qualities and working approaches. In addition, it has been stated that team work is the main basis for self-monitoring attitude of a person as it's referred to a self-management of a person adaptive to his surroundings while

controlling his emotions and behavior (Murase, 2011).

In another study, it has been revealed that individuals with higher self-monitoring levels having low job performance and quality relationship with their executives gained higher ratings as compared to those who had high job performance and relationship with their managers but lower self-monitoring in their routine matters (Duarte & Goodson, 2012). All these previous findings based on self-monitoring and investors' investment decision making behaviors under specific situations, it might be supposed that:

H1. Self-monitoring has direct relation to individual investors' investment making behavior with positive intentions.

According to social and personality concept, self-monitoring refers to constant personality differences in a manner in which different people have an opinion about themselves and their surroundings. Individual differences regarding changing behaviors on different events and in certain situations is the basis of self-monitoring while others remain relax by not monitoring themselves under various circumstances like previous type of people (Leone, Self-Monitoring, 2015). In decision making

process, different group types have higher confidence as compared to individuals (Schuldt, Chabris, Woolley, & Hackman, 2015). An investigation made on self-monitoring has found that persons having high self-monitoring abilities in their personalities are strong at their impression management and were more inclined to achieve their objectives through certain effective strategies as managers (Eanes, 2015). On the basis of these studies, it might be said that:

H2. Self-monitoring in investors is influenced by their sensational attitude while measuring their investment behavior.

Sensational Attitude and Investors' Financial behavior

(Arneit, 1994), using a new scale named "Arnett Inventory of Sensation Seeking (AISS)" rather than "Sensation Seeking Scale (SSS)" used by Zukerman made a conclusion that sensation seeking having intensity and novelty as its main components has an influence on risk taking behavior of youngsters while making financial decisions. A research conducted on risk taking behaviors of individuals under certain circumstance has found that risk taking decision is influenced by individuals'

sensation seeking under different investment conditions and opportunities (Zaleskiewicz, 2001).

(Hunter & Kemp, 2003), making analysis on investors' personality effect on their risk taking behavior concluded that younger investors investing in e-commerce company financials were more experience-seeking, exposed and more spontaneous in financial matters due to their specific personality characteristics as compared to investors having shares in traditional company of New Zealand. A study on financial behaviors of males and females in gambling to measure their risk attitudes, it has been concluded that males have higher level of sensation seeking in their personalities which made them more acceptable towards risk related to investment decision making (Eckel & Grossman, 2008).

(Sjoberg & Engelberg, 2009), studying financial behavior of students under impact of their personality factors found that they have more risk taking behavior by investing more money showing high levels of sensation seeking and they were not much concerned about money while giving low level preference to altruistic ethics. A study conducted to analyze the role of sensation seeking as a mediator in the age and financial behavior relationship of investors

having different age groups concluded that younger investors having higher sensation seeking levels are more risk tolerated persons in making their investment preferences as compared to older people having lower levels of sensation seeking (Zabel, Christopher, Marek, Wieth, & Carlson, 2009). According to another study while taking number of variables like wealth, age, income, occupation, number of shares constant, it has been shown that investors with higher overconfidence and sensation seeking levels tend to invest more frequently as compared to others having lower levels of overconfidence and sensation seeking in their personalities (Grinblatt & Keloharju, 2009).

(Lauriola, Panno, Levin, & Lejuez, 2013), studying personality and risk taking behavior relationship, it has been stated that age of an individual being moderator has impact on investors' personality. Investors have high sensational seeking and impulsive behavior in financial decision making in early age of adolescence as compared to later stage of their life having declined sensational seeking and impulsive risk taking attitudes. (Sunder, Sunder, & Zhang, 2014), have found that CEOs of corporations having higher sensation seeking trait in their personalities were more

willing to invest in innovative and risky corporate activities even when there were no incentives for them as a motivational source for them to have risk taking economic behavior.

In a study examining relation between different personality traits and risk tolerance behavior of people, it has been revealed that sensation seeking having a very significant impact on risk tolerance and financial behavior of a person was not diminished by other factors like age, gender and academic performances of that person (Wong & Carducci, 2015). (Nunen, Reniers G., K. Ponnet, & V. Cozzani, 2015), have concluded that high sensational seeking persons have high risk seeking levels as compared to those having low sensation seeking element in their personalities while making financial choices. (Lucarelli, Uberti, & Brighetti, 2015), making analysis on risk tolerance of investors through different tests have explained that peoples' feelings and biases in their personalities at a time of financial decision making have influence on their risk taking behaviors. In a research on risk taking behavior of gamblers, it has shown that if there was easy access of gamblers to casinos in areas near to them, they were more willing to accept risk and ready to diversify their investments (Liaoy,

2015). (Khodarahimi, 2015), investigating the effect of sensational attitude on risk accepting behavior of Iranian youngsters, has concluded that sensation seeking has a noteworthy influence on their financial risk taking activities where males individuals have higher levels risk acceptance as compared to females. These findings suggest that it might be accepted that:

H3. Sensational attitude of individual investors has a direct impact on their investment decision making behavior.

Methodology

This section includes the technique and procedure for data collection for analysis purpose.

Sample and Sampling Technique

In this study, "convenient sampling technique" has been applied for data collection. 400 questionnaires as suggested by (Wolf, Harrington, Clark, & Miller, 2013) were floated to individual investors in the three stock exchanges of Pakistan, out of which 303 investors; 196 from ISE, 67 from KSE and 40 from LSE, responded in a manner essential for this analysis. As these numbers of responses were received in a complete form making more than 65 % response of the total questionnaires sent, so

it's acceptable to continue further analysis (Luu, 2010, 2011).

AMOS (Analysis of Moment Structures); an add-on module for SPSS, has been used as research tool for data analysis and has been applied on structure equation modeling (SEM); as a quantitative research technique in this study. AMOS is the most used data analysis technique by the researchers (Islamoglu, Apan, & Ayveli, 2015) conducting studies on financial behaviors of investors... To identify the model fitness values of the study, AMOS is best to apply on SEM (Khoa Cuong Phan J. Z., 2014). SEM is the combination of confirmatory factor analysis (CFA) and path analysis as described by (Meydan & Sesen, 2011).

Measurements

A structured questionnaire has been used as a data collection instrument where a number of participants; individual investors, have filled the **questionnaire** by answering different questions covering independent and dependent variables. Respondents seem to be more honest by giving information through questionnaire especially when there is some sensitive information required (Bryman & Bell, 2007, p. 242). This questionnaire is consisted of 20 items including five items related to basic

demographics and others as five point Likert scale questions; strongly disagree, disagree, somewhat disagree, agree and strongly agree. It is divided into following sections covering relevant variables:

► Five items of self-monitoring selected from 18 items-scale developed by (Gangestad & Synder Mark, 2000) having coefficient in Alpha values 0.801.

► Five items scale developed by (Ali, 2011) for measuring sensational attitude with reliability 0.88 to 0.95 has been used.

► Five items related to investment decision making behavior as a dependent variable (Arif, 2015).

The answers of individual investors are collected with brief details and objective written on the top of questionnaires for conducting this research study.

Results and Discussion

This section presents descriptions of data. SPSS has been used for demographic statistics and correlations among different variables while AMOS has been applied on SEM with different tests to have statistics of Model fitness, path analysis of variables, covariance among different variables and other statistics presenting complex relations with mediator. SEM is the combination of

confirmatory factor analysis (CFA) and path analysis as described by (Meydan & Sesen, 2011). SEM is used due to mediation effect in the study and for simultaneous estimation and testing of relationships among different variables. It expresses linear and complex relationships between different variables. Causal process is represented by a series of structural equations that can be modeled graphically to help in conceptualization of theoretical framework (Byrne, 2001).

Demographic questions have been filled by investors having different backgrounds and on this data basis demographic statistics have been found for the purpose of explanatory study. On the basis of the results, frequencies of different items reveal that males with 81.2 % participate more in financial activities as compared to females having low percentage. Also people with age group 36- 45 mostly linked with finance and investment related work as 64.4% and having high frequency of 195, are more interested in making investments as compared to other groups. Education level

has showed that mostly investors are educated having high percentages i.e. 44.2% and 48.5% at bachelor and graduate level respectively. Mean values show the categories of investors who are more active in investments like 1.36 mean value of work activity shows that mostly investors have their background in investments or banking work. Standard deviation values of the data shows their deviation level from the mean value.

Reliability Statistics

Table 1 presents the values regarding an item's factor loading, Cronbach's Alpha and composite reliability for each construct. Standards suggest that reliability value must be from 0.60 to 0.90. (Schmitt, 1996), described that by tradition, the satisfactory level of alpha to measure reliability of the items has been round about 0.70 or above this value. It has been found that all the values for Cronbach's Alpha, CR and factor loadings of scale items are in standardized ranges making this model acceptable for further analysis.

Table 1 Reliability Statistics

Item	Factor Loading	Cronbach's	CR
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		Alpha	
Self-monitoring (SM)		0.73	0.78
SM1	1.00		
SM2	0.79		
SM3	0.63		
SM4	0.60		
SM5	0.84		
Sensational attitude (SA)		0.79	1.08
SA1	1.00		
SA2	1.04		
SA3	1.71		
SA4	0.98		
SA5	1.67		
Investment Decision Behavior (ID)		0.76	0.69
ID1	1.00		
ID2	1.00		
ID3	0.72		
ID4	0.68		
ID5	0.70		

Notes: SM _ Self-monitoring; SA _ Sensational attitude; ID_ Investment decision; CR _ Composite Reliability

In the Table 2, correlation values have been shown. Standards indicate that the values for Positive values show the direct relation while negative correlation values identify the negative relation between different

variables of the study. These values show that they have moderate relation strength.

Correlation Statistics

Table 2 Correlation Statistics

		Correlations		
		SMT	SAT	IDT
SMT	Pearson Correlation	1		
SAT	Pearson Correlation	.397**	1	

IDT	Pearson Correlation	.327**	.494**	1
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Confirmatory Factor Analysis (CFA) for Relationship SM-ID

CFA has been applied to the relationship between SM and ID using AMOS diagram for this relation. Covariance between different unobserved values of items of variables has been inserted as it's required to make a model fit for further analysis. By applying CFA in different rotations, statistics obtained including standardize estimates; model fit values and other critical ratios have been found to follow standards

of different measures required to be fit model for analysis purpose. All these values are acceptable as they are above the threshold defined in standards. Along with these values of for this specific relation, their items factor loadings are also observed to check either they are in standard range or not. It has been found that all the items have good factor loadings required by the standards. In a figure 1 below, the graphical presentation for SM-ID relationship has been shown along with their loadings.

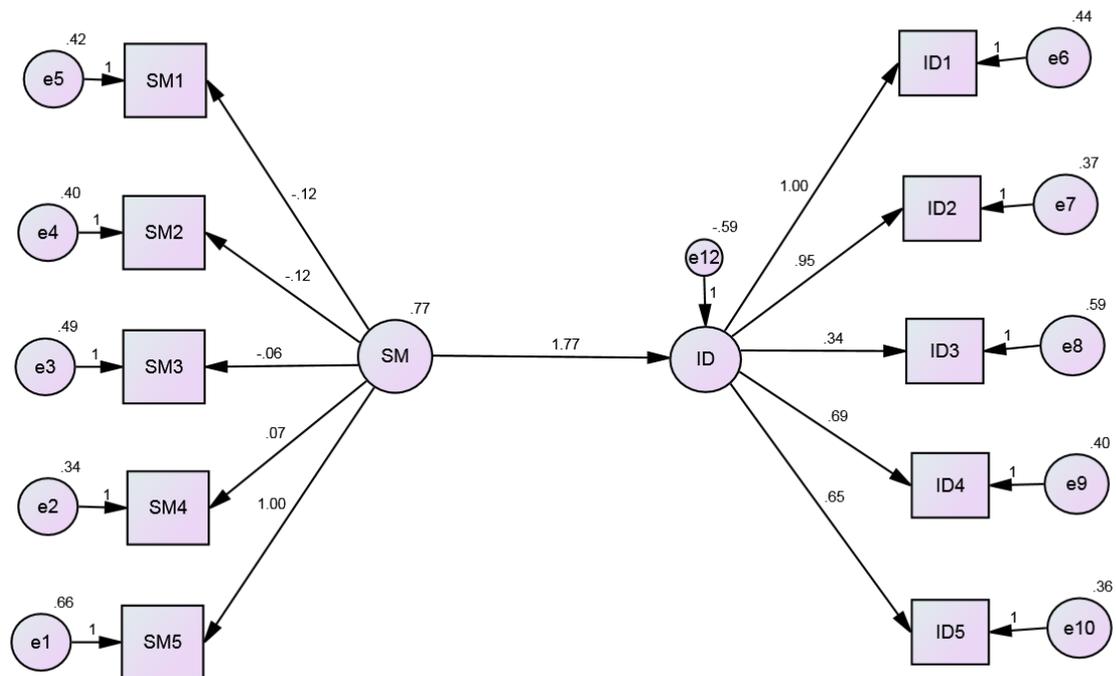


Figure 1 CFA for SM-ID

In order to analyze model fitness, , different values of GoF (Goodness of Fit) including different measures like GFI (Goodness of Fit Index), CFI (Comparative Fit Index), NFI (Normed Fit Index) and RMSEA (Root Mean Square Error of Approximation) are evaluated to see either the measurement model is fit or not (Tong, 2007). For observing the model fitness, the standard values suggested by (Hair & et. al, 2006)

have been used. According to standards, comparative fit index (CFI) should be higher as > 90 whereas values of the normed fit index (NFI), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI) and the non-normed fit index (NNFI) must be = or > than 0.90. Also the values of the root mean square error of approximation (RMSEA) must be < or = to 0.08; and the value of χ^2/df should be < 3.

Table 3 Model Fit Statistics for SM-ID

χ^2	P	Df	χ^2/df	GFI	AGFI	CFI	NFI	TLI	IFI	RMSEA	P-close
45.753	.008	34	1.346	0.972	0.954	0.992	0.969	0.989	0.992	0.033	.879

All the values shown above in Table 1 are found to be in ranges of required standards mentioned above.

Table 4 Regression Statistics for SM-ID

Variables	Estimate	S.E.	C.R.	P
ID <--- SM	<u>1.768</u>	.307	5.767	***

In Table 2, the regression estimates presents the direct relation between self-monitoring and investment decision of investors. It shows that there is direct positive relation between them where self-monitoring has a

highly significant impact on financial behaviors of individuals.

Confirmatory Factor Analysis (CFA) for Relationship SM-SA-ID

CFA for this relation shows that all statistics obtained are in range of set criteria and

model values are fit for analysis. Different paths of relationship for SM-SA-ID are shown in the Figure given below. Tables of model fitness and tables representing regression weights, direct & indirect paths are also presented below. All calculations of these paths in SEM have been found fit from all of its aspects.

The values of model fitness were found to be as χ^2 116.987, df 52, χ^2/df 2.248, NFI_0.918, GFI_0.939, AGFI_0.908, IFI_0.949, CFI_0.920, RMSEA_0.064. As all these values are following standards so it is fit model to examine it further.

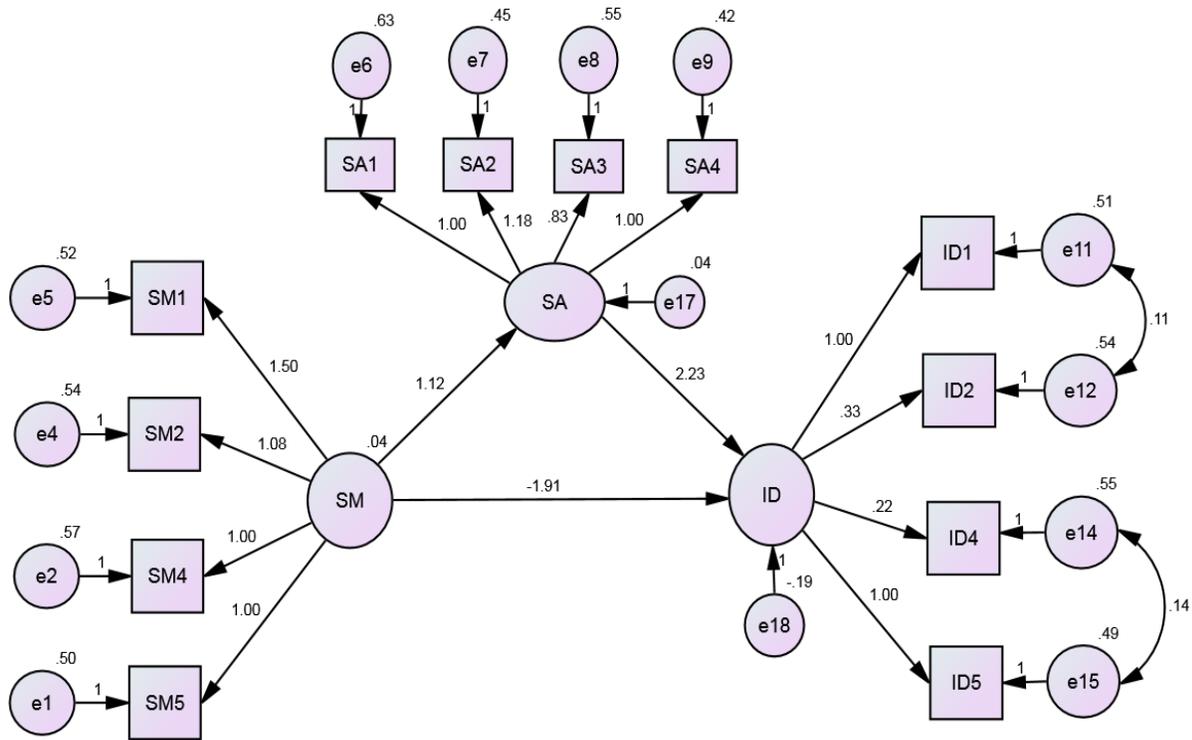
Table 5 Model Fitness Statistics for SM-SA-ID

χ^2	P	Df	χ^2/df	GFI	AGFI	CFI	NFI	TLI	IFI	RMSEA	P-close
116.987	.000	52	2.248	0.939	0.908	0.920	0.918	0.911	0.949	0.064	.064

Structural Equation Modeling (SEM) for mediation

SEM being a multivariate research technique is mostly used for a more precise relationship explanation and for analyzing mediation effect in as study. By using conceptual framework of the study, path diagrams representing relationship between

different variables and regression equations, SEM identifies and examined the complex relationships among diverse observed and latent variables (Gunzler, Chen, Wu, & Zhang, 2013).



For examining SM-SA-ID relationship, path diagram has been presented in the figure 1. Table representing regression weights, direct & indirect paths are presented below. All

calculations of these paths in SEM have been found fit from all of its aspects.

Figure 2 Path Analysis for SM-SA-ID

Table 6 Path Analysis Statistics for SM-SA-ID

Path	Std. Reg.	P	Effect			
			Direct	Indirect	Total	Mediation
SM-SA	.748	.006				
SA-ID	4.127	.046	-1.907**	2.50**	0.67**	Full
SM-ID	-2.347	.275				

Notes: SM_ Self-monitoring; SA _ Sensational attitude; ID_ Investment decision; ** $p < 0.001$; * $p < 0.05$

From the figure presented above and the path analysis table for analyzing the relationship of SM-SA-ID, it has been clear that there is full mediation impact of sensational attitude on self-monitoring while measuring decision making behavior of investors. Statistics values show that path is insignificant between SM and ID whenever SA is considered as a mediator between this them.

Conclusion and Implications

This research has been conducted to analyze the direct and indirect relationships between self-monitoring of individual investors their investment behavior with their sensational attitude as a mediator in this study. It has examined the impact of mentioned factors on investors’ decisions in choosing financial platforms and has studied how they influence the investors’ decisions for investment. It helps to find out the

significance of these factors on investors’ financial behavior providing a direction for improvement in specific areas to attract more investors positively. This research study is beneficial for financial managers, financial planners and financial investors to understand the financial behaviors under certain circumstances.

Descriptive of the study has shown that men are more involved in financial investment activities as compared to women as identified by (Carducci & Wong, 1998). Also individual investors are mostly educated connected to finance related occupation. Other people also invest but their percentage is low as they have low levels of financial knowledge and confidence in their investment patterns. Analysis on the data collected from 303 investors participating in the stock exchanges of Pakistan has found investors who have ability of self-monitoring in different situations made financial investments on frequent basis (Wong & Carducci, 2015).

Previous studies reveal the fact that investors' financial decisions are influenced by the self-monitoring quality of i.e. Bon A. C. *et all.* (2017), Aamir S. *et. all.* (2016) and Jhansi R. B. and Sunitha G. (2018). It has also been proved while studying direct relation of self-monitoring of investors with their investment decisions that there is a significant direct relation between the two. This proves that H1: Self-monitoring has direct relation to individual investors' investment making behavior with positive intentions, has been accepted. Further, the direct relation between sensational attitude of investors and their decision making behavior has found to be significant verifying H2: Sensational attitude of individual investors has a direct impact on their investment decision making behavior supported by (Sjoberg & Engelberg, 2009). But from the findings for this specific model, it has been concluded that in presence of sensational attitude as a mediator, self-monitoring of investors have no effect on behavioral patterns as sensational attitude mediates their impact completely while studying their relation with investment behaviors proving H3: Self-monitoring in investors is influenced by their sensational attitude while measuring their investment behavior.

For future researchers concerned with research on financial behavior of entities; individuals, retail investors, corporates or others, are suggested to continue this study either by adding other behavioral factors having impact on their financial behavior or by replacing the mediator with others like risk tolerance level of investors. The sample size of this study can be increased by using some other sampling technique like random sampling and by applying advanced tools for analysis. This study has been made specifically for Pakistani individual investors; same model of the study can be applied to investors in some other geographical area with different demographics. Investor type can be different from this one, like other researchers may apply this framework by examining responses from institutional investors or corporate financial behavior.

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