

# RATIONALITY AND BEHAVIOURAL FACTORS EFFECTS ON INVESTORS INVESTMENT DECISION MAKING IN PSX

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## ABSTRACT

*The Present study investigated the influence and correlation of rationality & behavioral factors in financial investment decision making in PSX. The study uses a descriptive research design based on the survey method through developed structured questionnaire and used convenience sampling technique for data collection. The population of this study of small investors of PSX. The sample size is 384 w.e.f. January 2019 to January 2020. Collected data are analyzed using SPSS23.0 and (SEM) using AMOS22.0. The findings reveal that rationality (1-problem identification), (2-information search), (3-alternative evaluation) and four behavioral factors (1-overconfidence), (2-herd behavior), (4-anchoring) have a statistically significant positive Effects on investors' Investment decision Making. Accordingly, the results of the path analysis showed a significant positive Effects of rationality factors 1-problem identification ( $\beta=0.31$ ) 2-information search ( $\beta=0.41$ ) 3-evaluation alternatives ( $\beta=0.13$ ) on investors' investment decisions formation at  $p<0.001$ . Similarly, path analysis results also showed a significant positive Effects of behavioral factors 1-overconfidence ( $\beta=0.32$ ) 2-gaming behavior ( $\beta=0.31$ ) 3-anchoring ( $\beta=0.49$ ) on investors' investment decisions at  $p < 0.001$ . This study also established a significant positive correlation between rationality 1-problem identification 2-information search 3-evaluation of alternatives) and behavioral factors 1-overconfidence 2-herd behavior 3-anchoring). These findings help individual and Organizational investors to be aware of various factors and develop "adaptive toolkits" for rational and consistent investment decisions in PSX.*

**Keywords:** R & B Factors, Rational Decision Making, Behavioral Decision Making, Rational Finance, Traditional Finance, Behavioral Finance, PSX, Investor's Decision-Making.

## INTRODUCTION

Development inside Country Liu & Sinclair, (2008) and Masoud, (2013) businesses, therefore, person traders are one of the principal stakeholders that substantially contribute to the technology of charge variety for the fulfillment and boom of businesses. Individual traders make investment decisions as regards to allocating their capital to buy, promote and exchange stocks/stocks of publicly traded businesses. the ones investments are made with the expectation of excessive returns inside the future, lengthy-term capital increase, financial savings, safety of wealth from inflation and taxes, and maximization of earnings (Ngoc,

2014; Zuravicky, 2004). As a result, funding alternatives play a crucial position inside the influx and outflow of capital and determine traits within the stock market that have an effect on the economic machine. Funding choice-making is a complicated technique due to the ambiguity and volatility of the inventory marketplace, which increase the risks associated with investments traditionally buyers are definitely thought of as rational, dispassionate and unemotional in their monetary choice making. Due to the fact they make selections primarily based on the amassed and evaluated essential information from the market place to select the gold standard option to acquire maximum profit. The number one funding goal of rational investors is to maximise utility or go back on funding inside a suitable level of hazard (Daniel & Titman, 2000; Lin, 2011b; Simon, 1979).

Previous studies empirically helps and validates the belief of conventional finance. Researchers have discovered that human investors act rationally and point to all to be had information within the decision-making technique (Malkiel & Fama, 1970), which yielded top-quality consequences and wealth maximization (von Neumann & Morgenstern, 2007). In addition, studies claims that individuals aren't motivated by using their emotions or biases (Statman, 1999) and discovered it systematic and logical (Robbins & Coulter, 2003) to location more importance on the trade-off among hazard and go back (Robbins & decide, 2010).

But, behavioral economists have challenged the belief of conventional monetary idea and identified a number of psychological factors that have an effect on financial selection-making (Camerer & Loewenstein, 2004; Tversky & Kahneman, 1974). Several studies research have shown that traders do no longer observe full rationality while making investment choices to the probability of restricted cognitive skills, of facts, and reminiscence errors (Kumar & Goyal, 2015). In this regard, Kumar & Goyal (2015) examine to examine the links among and behavioral factors of person investor trade in India and additionally to analyze the position of person investor profile.

Similarly, an examine by way of Lin (2012) included the distinct dimensions of rational behavioral financial fashions and supported that rational (identity of demand, evaluation of alternatives) and behavioral biases (overconfidence) are interrelated in decision making. Even as the confined wide variety of studies could not provide a complete and effective clarification of the applicable phenomena. Therefore, deep gaining knowledge of and massive-scale investigations need to be planned to investigate the integrated role of rationality and behavioral biases in the selection making of individual investors, mainly in the Pakistan inventory alternate (PSX). Therefore, the goal of this study is to have a look at the relationships between man or woman traders' rationality and behavioral factors inside the context of investment selection-making inside the Pakistan inventory alternate (PSX).

## Problem Statement

There is a big frame of scientific literature that demanding situations the software of rationality and demanding situations the results of the behavioral finance version in financial decision making. However, little research has shown that rationality also exists alongside behavioral biases among person buyers (Kumar & Goyal, 2016; Lin, 2011; Mushinada & Veluri, 2019; Subramaniam & Velnampy, 2017); however, this restrained quantity of research could not explain the related phenomena comprehensively. Further, PSX is a huge inventory marketplace, which is likewise affected by anomalies, fluctuations and unstable conditions and impacts the behavior of traders.

Consequently, there is a dearth of literature that theoretically integrates the 2 paradigms, i.e., rational and behavioral economic models, and almost applies them to provide

an explanation for the investment selections of man or woman traders in the PSX stock market. Consequently, with a purpose to recognize and provide stable evidence to provide an explanation for the behavior of character investors in the inventory market, a complete take a look at is wanted to look at how rationality and behavioral elements influence the investment selections of investors within the Pakistan inventory trade (PSX).

### **Study Objectives**

The prevailing study has following research targets and studies questions.

1. To investigate the Effects of rationality factors on investor's Investment decision making in Pakistan Stock Exchange.
2. To investigate the Effects of behavioral biases factors on investor's Investment decision in Pakistan Stock Exchange.
3. To discover correlations among rationality & behavioral elements in investment decision making in Pakistan Stock Exchange.

### **Research Study Question**

1. Do the rational Factors have Effects on the investor's investment decision making at PSX?
2. Do the behavioral biases Factors have Effects on the investor's investment decisions at PSX?
3. Is there any correlation between R & B biases Factors during investors' investment decision - making process at PSX?

### **Justifications and Significance of the Study**

In Pakistan, a handful studies have individually investigated the application of rational as well as behavioral finance models for the investment decision-making at stock exchanges. However, to the best knowledge of the researcher, this is the first attempt in Pakistan that have theoretically integrated and employed both theories including rationality as well behavioral finance in this study collectively. This study is attempted to investigate the Effects of R & B factors on investors' investment decision-making and correlation rationality and behavioral factors.

This study provides a theoretical framework for examining emotions and behaviors (overconfidence, market influence, and competitive advantage) to explain investor's action capital in the stock market. This study can also help bridge the gaps in the financial management literature.

As a general knowledge search, it is a specialized study involving the use of models of financial decision making to find value (identifying problems, seeking information, measuring alternatives) and finding negative attitudes (overconfidence, anchoring, herd effect, and disposition effect).

### **Definition of the Key Terms Used**

The important terms used in this study are defined in the following.

#### **Pakistan Stock Exchange**

The Pakistan Stock Exchange stand for (PSX).

## **Psychology**

Psychology is the study of the mental, physical, and external environment that influences business decision-making behavior and psychological processes (Pompian, 2006).

## **Behavioral Finance (BF)**

Behavioral Finance (BF) is a field of finance that deals with stock market uncertainty and volatility and analyzes emotional and psychological factors (Shiller, 2003; Statman, 1999).

## **Behavioral Factors or Biases**

False awareness or the uses of personal influence or emotion have been reported to be associated with negative behaviors (Pompian, 2006; Shefrin, 2002).

## **Rationality**

The Theory of rationality is considered the foundation of traditional finance. DeBondt & Thaler (1985) proposed the "*utility model of choice at risk*", which is mostly used in finance because its logic influences the "*best interests*" principle. Rationality involves the collection and processing of information, and the development of expectations appears to be intelligent, efficient, and resourceful (von Neumann & Morgenstern, 2007).

## **Traditional Finance Theory**

Traditional finance theory refers to the financial decision-making process provides a basis for making decisions that maximize the investor's utility or value. A traditional financial model is one that has full information in the stock market to make investment decisions (Kahneman, 2003; Statman, 1995).

## **Rule of Thumb (Heuristics)**

In BF, many investors follow the "*1/N rule*" This means that if investors has three more stocks to invest in their account, they will be willing to allocate 1/3 of their money to each Portfolio, (Kahneman et al., 1982; Pompian, 2006).

## **Overconfidence**

Overconfidence bias is a propensity of people to overestimate their knowledge and abilities that leads to ignore the risk associated to investment. For example, the literature on financial behavior suggests that men generally have higher self-esteem than women, but women tend to be more successful in life than man (Pompian, 2006).

## **Herd Behavior**

Herding bias urges people to follow crowd behavior rather than to decide independently. This behavioral phenomenon refers to copy and follow the judgments of others while making decisions.

## **Anchoring**

Anchoring is cognitive bias, the tendency for investors to rely on initial information when making investment decision. They often fail due to extra data collection and this analysis, and make decisions based on facts or images, ignoring important data (Statman, 1999).

## **Dispositions-Effect**

Behavioral consequences are another important behavior that people know to progress but not lose. Thus, positive results are the tendency of investors to realize their profits too early and hold their losses for too long (Pompian, 2006).

## **Individual-Investors**

A person or stockbroker who buys stock, shares or funds for his own account rather than an organization or organization.

## **REVIEW OF LITERATURE**

Modern financial models often emphasize the belief that traders/entrepreneurs are efficient and use all available information to make market decisions, so capital markets are profitable, efficient and committed to reflecting all the information needed for the stock market. Given the degree of rationality, decisions can be divided into three types. First, “*pure justice*” known as maximal rationality, where the best decision is made using unlimited resources, time and skill, is smart (Gianakis, 2004). The latter is optional and is called “*incremental*”. This type of instant comparison has other ways of deciding. Finally, the combination of these two types of rationality creates another type called “*bounded rationality*”, which represents the achievement of certain goals in limited contexts. In general, economic rationality is related to eternal rationality or pure rationality. Therefore, reasoning requires setting and knowing goals, having all the information needed to make decisions from unethical behavior, and making consistent choices (Simon, 1982; Subramaniam & Velnampy, 2017).

## **Rationality as financial model of decision making**

The right model helps business people make the best and most effective decisions. Gigerenzer (2000) defines the term rationality as a behavior that is appropriate within a set of conditions and rules to achieve goals. In addition, the hypothesis includes two perspectives, including financial investors who receive new information to update and expand their beliefs, as recommended by Bayes' law of method. Second, the recognition decision is made by investors (Barberis & Thaler, 2003; Thaler & Barberis, 2005). In order to understand and examine effective decision making, Mintzberg et al. (1976) proposed a three-step Rational Financial decision making process was used in our study. The phases of the framework include (i) defining the problem (ii) finding key information and (iii) evaluating alternative solutions. The first stage of the problem analysis model is concerned with defining the nature of the problem and finding/finding relevant information. The second is to generate solutions. Lastly, evaluating alternative solution is based on final decision which is taken after the evaluation of all possible choices. In this step, all the possible options are evaluated in order to achieve the best optimal and feasible choice that is best for final decision.

## Development of Behavioral Finance as Model of Decision Making

Relatively, behavioral finance (BF) is an emerging scientific economic theory that combines social-psychology and economics to study the irrational behavior of investors and explain associated market outcomes and anomalies. Statman (1995) showed that the limitation of TF leads to the development and emergence of BF. Since the 1970s, the world of finance and investment has fundamentally changed. Transition from a traditional financial system (in which investors exhibit high returns and optimum business performance) (Malkiel & Fama, 1970) to a behavioral pattern in which investors' decisions are supported by their feelings, emotions, thoughts, feelings, and intuitions relationship.

In addition, heuristics that investors use in their investment decisions represent the contribution of financial behavior (Barberis & Thaler, 2003; Gilovich, 1991; Gilovich et al., 2002; Mellers et al., 1998; Plous, 1993; Tesfatsion, 2006).

Tversky & Kahneman (1974) published their research based on error and performance, which has a great impact on the financial market. Kahneman & Tversky contributed to the development of behavioral finance theory and are considered the fathers of BF. Kahneman & Tversky conducted research in the 1960s and introduced financial management theories in the 1970s. Often in decision theory, real-life psychological experiments are used. These researchers also began to distinguish between solution to real-life problems and specific answers obtained through experimentation. In this respect, while Tversky did the math of the theory, Kahneman worked on the difference between objective effect and thought, both based on body thought, in order to achieve the goals (Kahneman & Tversky, 1979).

### Evidences of RBFs in Literature

A survey-based study by Lucey & Dowling (2005) find out the impact of investor feeling on security prices and to build up a theoretical framework for understanding emerged findings in reference to financial decision-making and psychology.

Matthew (2006) has carried out a survey study to examine links between behavioral elements and rational decision-making as well as comparing the differences on account of three behavioral factors 1-disposition effect, 2-herding and 3-overconfidence alongside the mental cognition among trades. The results indicate that the traders follow systematic way of acquiring and analyzing information in rational decision-making process; however, the emerging behavioral biases compel the traders to make irrational decisions. Subramaniam & Velnampy (2017) conducted a retrospective study of financial information and behavior and concluded that financial models play an important role in people's lives and the development of society.

### Evidences of RBFs-A Snapshot from Pakistan

In Pakistan, individual investors also take part in stock markets by making transactions related to purchase and sell shares, stocks. Thus, various empirical studies locally produced have addressed the factors related to economic and behavioral motivation that affect their investment intentions or decisions at stock markets.

In this context, a study by Iqbal & Usmani (2009) examines the relationship between demographic, lifestyle and behavioral variables that affect investment decisions. The results of this study show that investors invest in order to maximize their profits.

A report by Awan & Arshad (2012) explores the nature of self interest when investing in the stock market and how investors behave in the five major stock exchanges in Pakistan.

The findings show that investors tend to be risk aversion, overconfidence, status quo bias, misrepresentation and neutral conservatism for their investment decisions.

A cross-sectional study designed by Khawaja et al. (2013) among teachers, students and specialists have investigated links between individual biases and efficiency of Pakistan stock exchange (PSX). The findings reveal that the many behavioral biases such as overconfidence, anchoring, framing, myopic loss, confirmation, loss aversion, and status quo are found positively associated with market efficiency. It was concluded that behavioral factors had an effect on the development of stock market. Thus, the study concludes that behavioral biases have great influence on the market development and market performs satisfactorily despite the behavioral element are also involved.

A survey study designed by Lodhi (2014) Karachi Stock Exchange which has showed that accounting information and financial literacy help the investors to lower information asymmetry and enable them to invest in risky instruments. Another similar study by Hayat & Anwar (2016) focuses on behavioral biases and shows that overconfidence, disposition effect and herd behavior have substantial impact on investment decision making of investors in Pakistan. Moreover, the study reveals a significant moderating impact of financial literacy on herding and overconfidence bias as the active traders have showed high overconfidence bias; Passive entrepreneurs, on the other hand, display more leadership (Zia-ur-Rehman et al., 2017). Using Marketing Research, Insights, and Employability to Examine the Effects of Behavioral Disorder on Long-Term Financial Decisions and Firm Performance.

## Theoretical Framework

Focusing on financial values and financial behavior, this study aims to compare the two strategies while exploring energy use and negative behaviors when making business decisions in PSX populations.

Wherein, an important step in rationality is problem identification which is the process of identifying the nature of a problem and understanding why decision-making is important to achieve maximum utility. The second step involves with searching and locating information related to the problem. An effort is made to collect complete information from the reliable internal and external sources before making an investment decision. Henceforth, the process of searching information can probably identify several alternatives to solve a problem. Thus, the last step is related to evaluate alternative solutions to make an optimal choice.

The first stage of Mintzberg's et al. (1976) model has been adapted from "*problem identification*" to "*demand identification*" in order to explore the phenomenon of rationality in traditional as well as behavioral finance models for financial decision making (Kumar & Goyal, 2016; Lin, 2011b; Mushinada & Veluri, 2019; Subramaniam & Velnampy, 2017). Thus, the present study has adopted the rational decision-making model as used in previous research (Kumar & Goyal, 2016; Lin, 2011).

## Rational Decision-Making Model

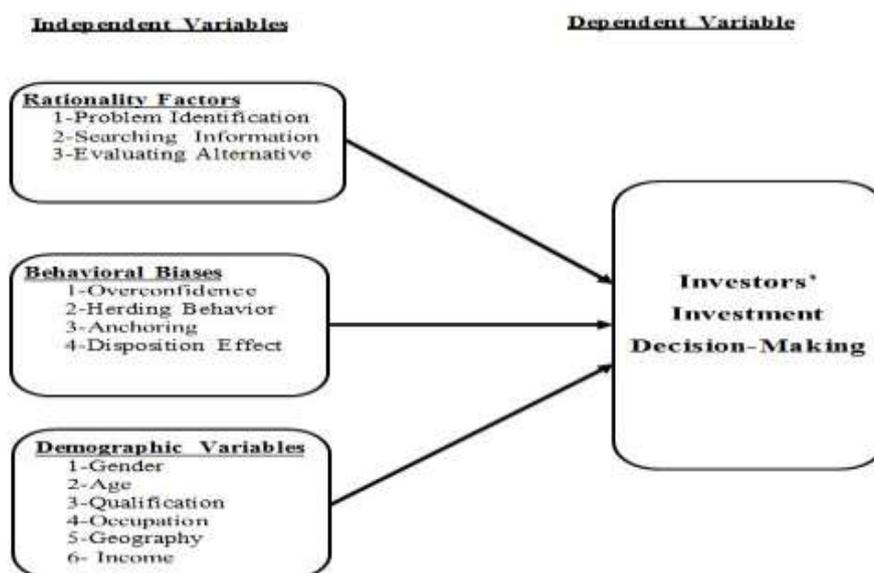


Figure 1  
CONCEPTUAL THEORETICAL FRAMEWORK OF THE STUDY

## METHODOLOGY

### Research Design

The present research study has adopted a descriptive correlational research design to address the objectives and test the hypotheses of research. Descriptive correlational studies describe the variables and the relationships that occur naturally between and among them.

### Research Method

The prevailing observes has used survey technique for the gathering of information from the pattern.

### Population and Sample of the Study

To achieve this goal, all small operators of the Pakistan Stock Exchange (PSX) constitute the entire set of this study. For cross sectional data collection, this study explores small entrepreneurs investing for them or entrepreneurs investing for others.

### Sample collection time period

The present study collected the sample size is 384 w.e.f. Jan-2019 to Jan-2020.

## Pakistan stock exchange (PSX)

PSX was established on September 18, 1947. Currently, 7 indices are listed on PSX. Pakistan Stock Exchange comprised of the following trading floors;

1. (KSE)
2. (LSE)
3. (ISE)
4. (HSE)
5. (PSE)
6. (QSE)

## Sampling Technique and Sample Size

Random convenience sampling technique is employed among six floors of PSX. Thus, taking into account the aforesaid constraints, following formula is recommended to determine the sample size for unidentified or infinite population (Nargundkar, 2003) and also used Calculator by Raosoft, Inc. Using this formula determines a sample size of n=384. Although the sample size of this study was determined as n=384; however, the researcher has decided to distribute 400 paper-based questionnaires among the participants in order to diminish sampling error, potential biasness and to enhance power of generalizability.

$$n = \left(\frac{z}{e}\right)^2 p(1 - p)$$

$$n = \left(\frac{1.96}{0.05}\right)^2 0.50(1 - 0.50)$$

$$n = 384.16$$

## Measurement Instruments

Based on this thought, bad behavior, decision making, etc. By combining the concepts of the concepts, a questionnaire design was developed with the help of literature review and expert opinion Tables 1 to 4 and Figure 2.

SN	Key constructs	No. of Items	Scale Used
	Covering Letter	-	-
<b>RB</b>	<b>Rationality Factors</b>		
1	Demand Identification	3	5-point likert scale
2	Searching Information	4	
3	Evaluating Alternatives	3	
<b>BB</b>	<b>Behavioral Factors</b>		
4	Overconfidence	11	5-point likert scale
5	Herd Behavior	7	
6	Anchoring	7	
7	Disposition Effect	8	
<b>DM</b>	<b>Decision Making</b>		
8	Decision Making	6	5-point likert scale
<b>DGV</b>	<b>Demographic Variables</b>		
9	Gender, Age, Qualification, Occupation, Income, Geographic Location	6	Categorical
	<b>Total items</b>	<b>56</b>	

## RESULTS

Factors	Coefficients									
	ANOVA		Model Summary		Unstandardized		Standardized		t-stat	p
Rationality (IV)	F	Sig	R	R <sup>2</sup>	B	SE	β			
DI	254.76	.000	.629	.396	.479	.030	.629		15.96	.000
SI	286.37	.000	.651	.424	.602	.036	.651		16.92	.000
EA	235.44	.000	.614	.377	.467	.030	.614		15.34	.000
<b>Rationality (overall) (PI+SI+EA)</b>	469.35	.000	.739	.547	.702	.032	.739		21.66	.000

Dependent Variable (DV): Decision Making (DM)

Independent Variables (IV): Determinants of Rationality (i.e., DI, SI and EA)

†. Accumulative or Overall Rationality

Factors (IV)	Coefficients									
	ANOVA		Model Summary		Unstandardized		Standardized		t-stat	p
Behavioral Biases	F	Sig	R	R <sup>2</sup>	B	SE	β			
OC	220.55	.000	.602	.362	.660	.044	.602		14.85	.000
HB	445.46	.000	.731	.534	.805	.038	.731		21.15	.000
ANC	506.11	.000	.752	.565	.848	.038	.752		22.49	.000
DE	0.230	.632	.024	.001	.023	.048	.024		0.48	.632
<b>Behavioral biases (Overall)</b>	534.71	.000	.763	.581	1.22	.053	.763		23.12	.000

Dependent Variable (DV): Decision Making (DM)

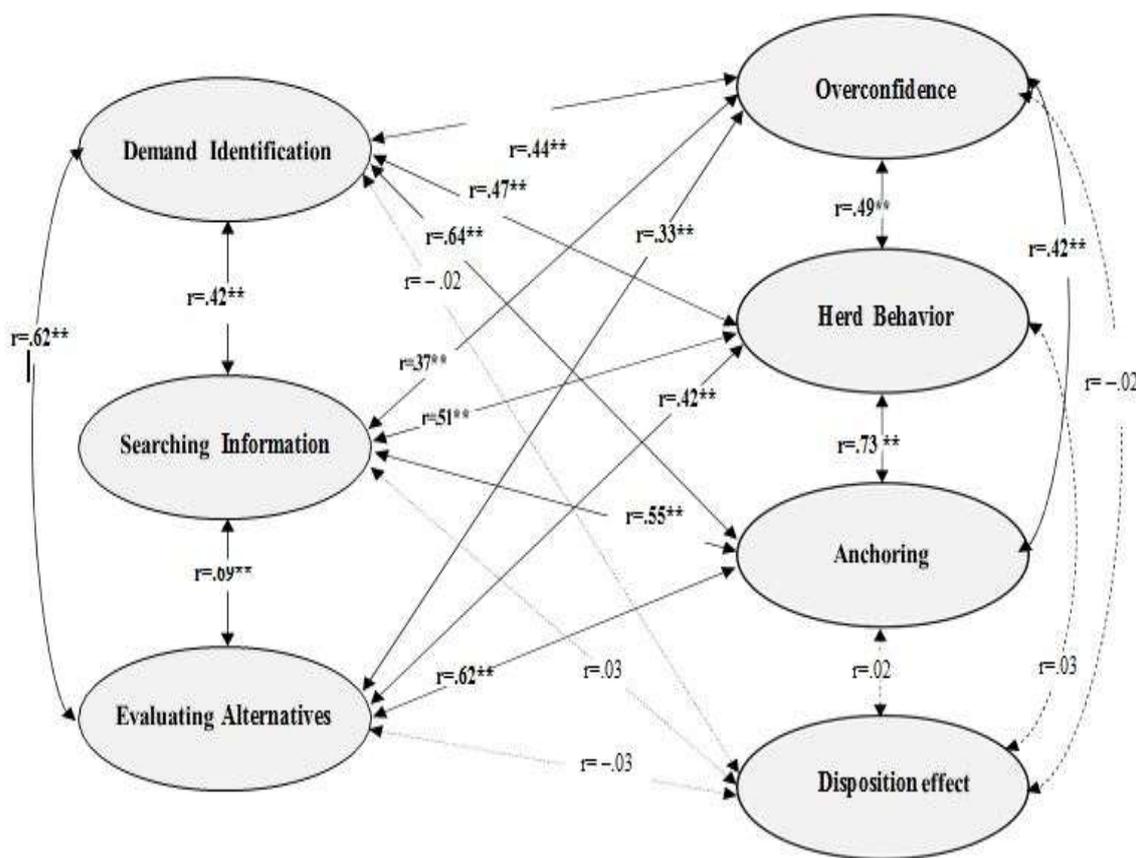
Independent Variable (IV): Behavioral Biases (i.e., OC, HB, ANC and DE) Behavioral Finance Model

SN	Factors	Rationality			Behavioral Biases				Overall	
		1	2	3	4	5	6	7	8	9
1	Demand identification	1								
2	Searching information	.423**	1							
3	Evaluating alternatives	.694**	.624**	1						
4	Overconfidence	.436**	.372**	.332**	1					
5	Herd behavior	.475**	.504**	.418**	.492**	1				
6	Anchoring	.640**	.548**	.618**	.415**	.728**	1			
7	Disposition effect	-0.019	0.034	-0.032	-0.016	0.026	0.024	1		
8	Rationality (overall)	-	-	-	-	-	-	-	1	
9	Behavioral Biases (overall)	-	-	-	-	-	-	-	.608**	1

Correlations matrix of rational and behavioral factors

\*\*Correlation is significant at p = 0.01.

\*Correlation is significant at p = 0.05



**Figure 2**  
**CORRELATIONS BETWEEN THE RATIONALITY AND BEHAVIORAL FACTORS**  
**Note:** dotted lines represent insignificant relationship between the variables.

**DISCUSSION**

**Effects of Rationality on Investors’ Decisions Making**

This study suggests that there is statistically strong positive impact of rationality on the investors’ decisions made at PSX floors.

Previous research also supports the findings of our study that the investors show rationality in investment decision-making as they identify their investment demands to gain maximum returns and increase their wealth. Subsequently, they make efforts to search information from several sources and follow suggestions from their friends and family as well as their past experiences. On account of collected information, the investors select best option after evaluating all the available alternatives. The research also provides empirical evidence that all the stages of rationality are significantly correlated to each other in investment decision making. Consequently, the rationality has significant positive impact on investors' investment decision making (Kumar & Goyal, 2016).

In addition, some studies have shown that people are not as rational as economists think because their decisions are sometimes influenced by psychology (Sanfey et al., 2003), and behavioral biases also appear to influence investors’ decisions alongside the rationality (Matthew, 2006). Besides, the study of Lin (2011b) also corroborates that the investors’ decisions are anticipated by psychological factors which provide foundation for bounded rationality. Thus, the existence of complete rationality is impossible to be observed in

investors' investment decision making in real world (Asab et al., 2014).

### **Effects of behavioral Factors on Investors' Decisions Making**

Regression analysis and modeling results show that negative behaviors such as overconfidence, farming and promotion have a positive effect on investors' printing of investment decisions. Therefore, our study shows that negative attitudes have a positive effect on investors' investment decisions. However, the negative impact has little impact on investors' investment decisions on the PSX floor.

Research on the impact of negative behaviors on business decisions is also supported by previous research. Some previous studies have shown that overconfidence has a positive effect on investor selection (Bashir et al., 2013; Chin, 2012; Qadri & Shabbir, 2014; Qureshi et al., 2012). However, some studies have shown that trust can negatively affect investors' decisions (Kafayat, 2014; Kengatharan & Kengatharan, 2014).

### **Correlation between Rationality and Behavioral Factors**

Research has shown that the main reasons for "*the need to identify, seek information, and examine alternatives*" have a positive association with negative behaviors such as "*overconfidence, reproduction, and competition,*" respectively. But the negative behavior that is the effect of the behavior is not related to a good reason. A previous study has corroborated that the investors use previous information to evaluate alternatives, investors avoids publicly available information, overestimate their personal information overconfidently and ignore alternative opportunity or new evidence. Thus, rationality and behavioral factors are significantly correlated to each other (Chuang & Lee, 2006). Similarly, another study supports that behavioral bias like overconfidence has significant positive correlation with investors' rationality (Mushinada & Veluri, 2019). Additionally, the study of (Kumar & Goyal, 2016) provides empirical evidence of significant correlation among the factors of rationality (identifying the problem, seeking information and evaluating alternatives) and negative behavior (overconfidence and emotional behavior). This study demonstrates that the evaluation of alternatives has a direct impact on treatment. However, our study does show relationship between the factors of rationality and disposition effect bias. Moreover, this study has found insignificant correlation between the factors of rationality and herding bias, which is inconsistent to our findings.

## **CONCLUSION**

Following conclusions are drawn on account of the key findings of the study:

1. The study shows that small and medium sized businessmen are accustomed to express their investment needs, so their investment decisions are more rational; research and use information obtained from internal and external sources; Measure stock price changes across all of PSX trading platforms.
2. On the other hand, investors have different behaviors such as trust, profitability and influence while making investment decisions on PSX. However, the study concluded that minority businessmen do not want to expand the business and interfere with the products entering the business. In fact, it is the lack of influence to encourage investors' rationality in their investment decisions.
3. This study concluded that three core concepts such as "*problem identification, information seeking and alternative analysis*" have a positive and positive relationship with PSX men's business decision making.
4. Research studies have shown that there is a significant positive relationship between the three negative behaviors "*Overconfidence, Herding and Anchoring*" and PSX investors' decisions.
5. Regression analysis and model analysis results show that three reasons of "*needs analysis, data search and evaluation plan*" are effective for investors' decision.
6. Studies have consistently identified three negative behaviors: "*overconfidence, agriculture and transportation*" that are beneficial to traders making small investment decisions.

However, "*interference*" as well as negative behavior does not have a significant impact on investors' investment decisions.

### Limitations of Study

This study is limited to a reasonable sample and some behavioral abnormalities; therefore, it is recommended to include other social and economic factors in the financial model necessary to explain the successful behavior of small investors/themselves in PSX. Demographic and behavioral factors not included in this study may be very important.

### Future Research Directions

This study is a descriptive relational study investigating the impact of emotional and behavioral factors on personal financial decisions. There is also a need for research that explores the impact of any negative behavior on ability and decision making along with traditional financial models.

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