CHAPTER 1
INTRODUCTION

1.1 Introduction

Decision making is a cognitive process that results in the selection of one among several alternatives to achieve a specific objective (Wang, 2007). Individuals generally use techniques and heuristics such as flipping a coin, simple prioritization, satisficing, etc. The present life demands taking a variety of decisions such as political, personal, medical, career, investment, etc. Investment decision-making involves specification of where, when, how, and how much income to spend or earn profits. Investment decision making has become a very crucial task for investors during the past few years due to increased uncertainty and unpredictability in stock markets. Stock market participation is the most important aspect of investment decision making. It is linked to a variety of public policies ranging from taxation issues to retirement plans and financial regulation as well as risk premium, gains, and wealth of the investors. Therefore, it is imperative, both at a collective as well as an individual level, to understand why people engage in, or shy away, from stock market participation. The 2008 stock market crash in India led to increased volatility and fluctuations in the stock market, which shattered the confidence of the investors. Such catastrophes can be significant causes for disengaging investors from stock market participation, because investors may perceive uncertainty and risk in the stock market.

Extant literature informs that risk aversion, psychological abilities and demographic characteristics have significant effects on stock market participation. Risk aversion decreases the probability of investing in stocks. Investors’ eagerness to take risk in their investments depends upon their risk aversion behavior as well as the investment opportunities available in the market (Markowitz, 1995; Sharpe, 1964). Recently, researchers have shown increased interest in the role of psychological characteristics (cognitive ability, emotional intelligence, and self-esteem) and demographic variables on stock market participation and risk preferences of the investors. Carroll (1993) defines ‘Cognitive ability’ as “any task in which correct or accurate processing of mental information is critical for successful performance” (p. 10)
Salovey & Mayer (1990) defined ‘Emotional Intelligence’ as “the subset of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (p. 189). McEachron (1993) defines ‘Self-esteem’ as the “judgment one makes about their self-concept” (p. 67).

Christelis, Jappelli, and Padula (2010), using a sample of 11 European countries, reported that the probability of investing in stocks significantly increases for individuals with high cognitive ability. Grinblatt, Keloharju, and Linnainmaa (2011), using Finnish data, showed that stock market participation is monotonically related to the Intelligence Quotient (IQ) even when the economic and demographic characteristics were controlled. Similarly, Ameriks, Wranik, and Salovey (2009) found that emotional intelligence and other psychological characteristics are associated with the different aspects of investment decision making such as the frequency of transactional activity of the decision maker, his or her decision to invest in stocks and how he or she actively manages mutual funds.

Several theorists proposed that self-esteem also affects individual investment decisions in a variety of contexts. Josephs, Larrick, Steele, and Nisbett (1992) reported that in the domain of monetary decisions, individuals with lower self-esteem take less risk in the gain scenarios as compared to individuals with higher self-esteem. Individuals with higher self-esteem are more likely to invest in assets that give high yield and multiply their wealth than those with lower self-esteem (Chatterjee & Finke, 2009). The research literature clearly shows that cognitive abilities, emotional intelligence, and self-esteem have significant influence on an individual’s stock market participation.

Almenberga and Dreber (2011) explored the link between financial literacy and the gender differences in stock market participation. They found that women typically participate less in the stock market than men, and explained the gender differences in stock market participation on the basis of numeracy. In addition, they also found that men were more risk taking than women. Wang and Hanna (1997) examined the survey of consumer finances to find the effect of age on risk tolerance. They reported that if other variables such as income are controlled then risk tolerance increases with age. Age, gender, and income had indirect relations with risk tolerance (Hallahan, Faff & McKenzie, 2009).
However, the precise channel through which psychological characteristics (cognitive ability, emotional intelligence and self-esteem) and demographic variables (age and gender) are connected to individuals’ stock market participation and risk preferences is still not clear.

Empirical studies also show (i) the linkage of psychological characteristics (cognitive ability, emotional intelligence and self-esteem) and demographic variables to behavioural biases and (ii) the relationship of behavioural biases to stock market participation and risk tolerance. Behavioural biases refer to systematic errors in judgment. For example, Albaity, Rahman, and Shahidul (2014) reported that individuals with low cognitive ability are more impatient and are more conservative as compared to individuals with high cognitive ability. Hopfensitz and Wranik (2008) found that individuals with low self-efficacy show more myopic loss aversion as compared to individuals with high self-efficacy. Joseph, Larrick, Stelle, and Nisbett (1992) reported that individuals with low self-esteem make more regret minimizing choices as compared to high self-esteem individuals. Loss aversion in both the riskless and risky choice task is highly significant and positively correlated with each other. It was also found that loss aversion increases with age, income, and wealth while it decreases with education (Gächter, Johnson, & Herrmann, 2010). Dimmock (2005) reported that individuals who show more loss-aversion participate and allocate less in risky assets. Chin (2012) found that four psychological biases such as beliefs, self-confidence, regret, and snakebite affect the investment decision making of Malaysian stock market investors.

From the above it is clear that the stock market participation is affected by various factors such as (i) risk aversion, (ii) psychological factors such as cognitive abilities, emotional intelligence, self-efficacy, self-esteem, (iii) demographic variables such as age and gender and (iv) behavioural biases such as loss aversion and regret. Moreover, various intellective (cognitive abilities) and non-intellective (emotional intelligence) elements of intelligence were also found to have differential impact on behavioural biases. However, there has been little attempt to unravel the linkage between psychological factors, demographic variables, behavioural biases, risk preferences, and stock market participation of the investors. The purpose of the present study is to develop a conceptual framework for describing and explaining the
path through which psychological characteristics influence stock market participation of the investors.

1.2 Research Gap

Various studies concluded that psychological characteristics (cognitive abilities, emotional intelligence and self-esteem), demographic variables (age and gender), behavioural biases (loss aversion, regret), risk preferences and stock market participation of the investors are interrelated. However, previous studies have the following limitations (i) they focused on only one determinant or one area at a time, (ii) they did not identify the stronger predictor of stock market participation, and (iii) they did not explore the underlying mechanisms that relate the determinants to stock market participation. The present study is an attempt to address these three limitations.

In relation to the first limitation, this study investigates the effect of a wide range of variables, namely, cognitive ability, emotional intelligence, self-esteem, age, gender, loss aversion, regret, and risk preferences on stock market participation of the investors. The study attempts to analyze which of these are the stronger predictors of stock market participation. The study also attempts to fill the void due to the third limitation in the existing literature by investigating the underlying mechanisms that link cognitive ability, emotional intelligence, and self-esteem to stock market participation.

This research aims to explore interrelationships among the various variables included in the study and investigate how psychological characteristics (cognitive abilities, emotional intelligence and self-esteem) influence behavioural biases, how behavioural biases (loss aversion, regret) relate to risk preferences, and what impact risk preferences have on the stock market participation of the investors.

Since investment decisions are very crucial for an individual’s financial life, it is important to design a model that provides an appropriate combination of psychological characteristics and strategic constructs. The present study then investigates whether loss aversion, regret, and risk preference are appropriate explanatory constructs in the present context. That is, whether loss aversion, regret, and risk preference have a meditational role in the relationship between psychological characteristics and stock market participation as well as between demographic
variables and stock market participation. Mediation occurs when an independent variable has an indirect effect on another variable and there is little or no direct effect; the indirect effect is through a third variable, called the mediator. That is, a given variable functions as a mediator between the predictor variable and the outcome variable (Baron & Kenny, 1986).

1.3 Motivation for the Present Study

Stock market participation is one of the most important aspects of investment decision making. It is pertinent for a number of public guidelines related to taxes, retirement and various other financial rules. Investment in equities is also a crucial factor for long term profits for every investor. It is an important determinant of wealth and well-being of an individual. Yet, there is a significant difference in stock market participation among various individuals.

Frequent and unpredictable fluctuations in stock markets during the past few years have made financial decision making the most crucial challenge for investors. For a long time, investors relied upon various theories and models of efficient markets and standard finance while taking financial decisions. However, in recent years deviations from rational decision making have been observed in nearly every facet of financial activity. There could be three possibilities for this irrational behavior of the investors: (1) investors actually don’t care about making suboptimal decisions, (2) investors are not aware that they make suboptimal decisions and (3) investors are not aware that they are prone to different behavioural biases such as availability bias, anchoring, loss aversion, regret and others, which are the cause of their suboptimal decisions. Loss aversion makes investors risk averse and propels them to hold losing stocks twice as long as winning stocks in order to postpone the pain of realizing their losses for as long as possible. Similar to loss aversion, regret aversion also influences investors’ decision making. Bell (1982) and Sugden, (1985) have reported that investors base their decision not only on expected value of payoffs but also on expected regret. Thus, investors will try to make choices in future that minimize the amount of regret in the future.

From the above studies, it is clear that there are numerous drivers of stock market participation such as risk preference, cognitive skills, emotions, self-esteem, and behavioural biases (anchoring, trust, regret and others). But the search for
variables influencing the patterns of portfolio choice in microeconomic data continues on the empirical front. All these factors have motivated the researcher to undertake the present study. The focus of the present study is to investigate how cognitive abilities, emotional intelligence and self-esteem affect stock market participation through behavioural biases (loss aversion and regret) and risk preferences of the investors. In order to improve financial stability of the investors, we need to understand their behavioural and affective patterns and how these patterns influence their investment decisions.

1.4 An Overview of the Present Research

The present study surveyed 740 investors in terms of their cognitive abilities, emotional intelligence, self-esteem, loss aversion, regret, stock market participation, and risk preferences. The study demonstrated that cognitive abilities, emotional intelligence, and self-esteem affect loss aversion and regret, which in turn influence stock market participation and risk preferences of the investors.

1.5 Research objectives of the study were as below:

1. To investigate the effect of cognitive abilities, emotional intelligence, and self-esteem on loss aversion and regret.

2. To study the effect of loss aversion and regret on financial decision making.

3. To identify the stronger predictor of financial decision making among the cognitive abilities, emotional intelligence, and self-esteem.

4. To study gender difference in loss aversion, regret, and financial decision making.

5. To study age difference in loss aversion, regret, and financial decision making.

6. To study the interrelationships between various independent and dependent variables

1.6 Conceptual Framework of the Study

Prior studies have investigated the relationship between psychological characteristics (cognitive abilities, emotional intelligence and self-esteem) and stock market participation; psychological characteristics and risk aversion; psychological characteristics and behavioural biases; demographic variables (age and gender) and
stock market participation; demographic variables and risk aversion (Beckmann, Lutje and Rebeggiani, 2007, Wang and Hanna, 1997; Hallahan, Faff and McKenzie, 2009); demographic variables and behavioural biases (Johnson, Gachter & Herrmann, 2006); behavioural biases, stock market participation and risk aversion (Dimmock 2005; Ngoc, 2014); and also the relation between risk aversion and stock market participation (Laakso, 2010; Alimohammasagvand et. al. 2012)

The present research identifies three mediators, namely loss aversion, regret and risk preferences as explanatory constructs that link psychological characteristics to stock market participation. More precisely, the present research is designed to investigate (1) the direct effect of the psychological characteristics on stock market participation, (2) the direct effect of loss aversion and regret on risk preference, and (3) the indirect effect of psychological characteristics and demographic variables on stock market participation mediated by (i) risk preference and (ii) loss aversion and regret through risk preference. The present study attempts to investigate the path that shows how psychological characteristics (cognitive ability, emotional intelligence and self-esteem) and demographic variables (age and gender) are linked to an individual's stock market participation through behavioural biases and risk preferences.

In order to illustrate these relationships, a conceptual framework is proposed and a mediation analysis is computed independently for each independent (predictor) variable (cognitive ability, emotional intelligence, self-esteem, age, and gender). A conceptual framework may be defined as “an end result of bringing together a number of related concepts to explain or predict a given event, or give a broader understanding of the phenomenon of interest – or simply, of a research problem” (Imenda, 2014, p189). The mediating variables in this study are three behavioural biases, namely, loss aversion, regret, and risk preferences in this study. The final outcome variable is stock market participation. Thus, three models were proposed which had the same meditational and the outcome variables, but different independent variables. The general model is presented in Figure 1.
Figure 1. The general proposed path model between psychological characteristics/demographic variables and stock market participation.
1.7 SIGNIFICANCE OF THE STUDY

According to the traditional theories of finance, it is assumed that investors are rational decision makers. While making any investment, individuals attempt to search for all the maximum relevant information and use all this information to make their decision. As capital asset pricing model of standard finance suggests, investors use this information to calculate risk and return to maximize their profits. However, investors have not been able to book profits since the 2008 stock market crash in India. Investors are not aware of the errors or biases they exhibit while taking any financial decisions. Biases caused by habits and emotions lead investors to overreact or underreact in the market. The present study is an attempt at highlighting the key drivers that influence stock market participation of the investors. This study will throw light on how the investors’ psychological characteristics affect their willingness to invest in stocks and their preferences for risk in their investment decisions.

The present study will help investors understand their own behavioural biases and how these influence their investment decisions. Moreover, it will also make them more cautious in selecting their investment managers by making them more sensitive to the biases inherent in the advice given by these managers for their investment decisions. It will also benefit investment companies and other financial institutions as they can take into account the influence biases of fund managers, whose decisions can influence the profits of their esteemed customers.

This study can also facilitate stock brokers, advisors, financial planners, and others in diversifying the portfolio of investors according to their personality characteristics and can guide them more effectively in their investment decision making.
1.8 Organization of the Thesis

The thesis contains six chapters.

Chapter One is Introduction. It incorporates the background and identification of the important aspects of the research under investigation.

Chapter Two is the Review of literature and formulation of hypotheses. It includes the impact of cognitive abilities, emotional intelligence and self-esteem on loss aversion and regret and their subsequent effect on stock market participation and risk preferences of the individuals. In addition, it also includes the proposed models along with their hypotheses.

Chapter Three is Method and design of the research. There is a description of the procedure, of the sample being measured, and of the measurement tools.

Chapter Four is Results. It provides results of impact of cognitive abilities, emotional intelligence and self-esteem on loss aversion and regret and their subsequent effect on stock market participation and risk preferences of the individuals.

Chapter five is the Discussion.

Chapter Six is the Summary, conclusions and implications of the research along with limitations of the study and suggestions for future research.

These are followed by a comprehensive list of references used and appendices related to the research methodology and design that complete this thesis.