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Factors Affecting the Individual Decision Making: a Case Study of Islamabad Stock Exchange

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Abstract

In recent era, stock market trading has increased rapidly; rapid trading can give benefits to brokerage firms. Stock market of country is an indicator of economic growth and development of country. Individual investment decision making is increasing rapidly so it is necessary to know the behavior of individual investors. The study identifies the factors that affect the investment decision making. The study used adapted questionnaire to gather the primary data from 253 individual investors of Islamabad stock exchange. The advanced econometric techniques are used to conduct in-depth analysis of gathered data with the help of SPSS 22. The descriptive statistics, regression analysis and exploratory factor analysis are employed. The findings of present study reveal positive significant relationship between advocate recommendations, neutral information, self-image/firm image coincidence and individual investor investment decision making. The study did not find any evidence on relationship between accounting information, classical wealth maximization and personal financial needs. It can say that most of investors in Pakistan are not making rational decisions on the basis of accounting information and most of times their decisions depend on the recommendations of stock brokers, co-works, friends and family. It is suggested that higher authorizes should focus on this issue because stock markets can be easily manipulated if investors rely on other recommendations while making investment decisions.

Keywords: Pakistan, Islamabad, investment, stock exchange, econometric, SPSS.

1. Introduction

Stock market provides platform of human interaction (Hirschey & Nofsinger, 2008) and plays a vital role in development of economy. It pools fund from the individuals and institutions and channelize towards business and industries. The main role in the market is that of individual investor, whose behavior is studied for academic as well as professional reasons. Coming to the specific Pakistani context Individual investors might acquire information from friends, family, colleagues, print media, and electronic media and then invest accordingly in the stock market. In addition to this an individual might also obtain information from bankers, brokers and financial planners. Individual investors are different from each other and might take different investment decision, and yet there always seem to be a pool of investors who have similar investment pattern. Number of Investors is increasing rapidly so there is need to understand the behavior of investor in multiple ways like how investors invest? What are the behavioral factors that affect stock market? How is the investor's psychology behind decision making?

Investment behavior of investor is emerging area of behavioral finance .Behavioral finance focus on individual's psychological factors which contributes towards effective decision making (Ritter, 2003). Investors habitually invest with the help of social interactions, friends and family. Subjective norms influence investor decision making. Social influence leads to investor behave irrationally. Investors do herding some time and it leads to wrong decision making and investor suffer from losses. Media also influences decision making of investor (Shiller, 2000). Now internet trading also increases individual investors usually do trading with the help of internet (Barber & Odean, 2000). Mostly investors invest in the stock market due to long term growth they want to become owner of the firm and get capital gain when share prices increases (Croushore, 2006). Investors who hold major portion of shares of any company can participate in strategic decision making. In recent era, stock market trading is increased rapidly; rapid trading can give benefits to brokerage firms. It is reported that 20 percent active investors who treaded more and regularly can get average return of 7.2 percent which is less than return of passive investors (Barber & Odean, 2000). The behavior of individual investor has been discussed in theory of planned behavior and reasoned action. The primary focus of this study is to judge factors affect the investor trading behavior, its attitude. Prior researches have been done to judge the behavior of investor, investor's portfolio different model to study investor behavior but it did not predict accurately. In this research, theories are incorporated to study the investor behavior though it is complex process to judge physiological factors of investor behaviors. These theories mainly include prospect theory, theory of reasoned action and theory of planned behavior. The major parts of decision making like subjective norms, attitude and perceived behavioral control comes under theory of planned behavior are major part of decision making and it leads investor perform actual behavior. Thus there is strong association between intention to perform certain behavior and actual behavior (Ajzen, 1991). Hence, social interaction positively influences investment decision making and to perform certain decision (Shanmugham & Ramya, 2012).

The study is focusing on the investment decision making factors that influence investor; investor behavior is emerging area of behavioral finance. Investor traded more often in capital market. It means, investors' are overconfident (Barber & Odean, 2001). The over confidence of investors can create hand sight bias, self-attribution bias and illusion of knowledge bias. Investors with these behaviors when earns profits and returns, they give credit to their own abilities and incase of failure they blames their friends and others. In 2003, the Ritter argued and divided illusion in two type's i.e. mental framed illusion and heuristic decision making illusion. It is noticed that stock market plays a pivotal role in development of economy of so there is need to examine investor behavior in the stock market which factors influence investment decision making. Thus, the investor decisions play an important role in explaining market trend that is predictor of economic growth of any country.

Decision making is the cognitive process and before taking a final decision, we evaluate number of alternative, weight them and finally select the best alternative. While taking the decision we are influenced by different factors and change our behavior. Same is the case for the investor's decision making process. The most influencing factors found was stock marketability, past performance of the stock, recent price fluctuation, risk minimization, wealth maximization, social responsibility and expert recommendation. There has been a plethora of research literature

available on determinants of individual investment decision making in stock market of Western countries. It has also been documented in existing literature that individuals' behavior varies from context to context. People raised in Asian cultures trapped by behavioral biases more, than in Western cultures (Yates et al. 1989). Asian cultures tend to base on collectivist paradigm (Hofstede, 1984). It has been argued that collectivist societies cause individuals to be trapped more by behavioral biases (Kim & Nofsinger, 2008). Prior studies have also been documented that people are trapped by behavioral biases when they make stock market investments. Understanding of an investor's psychology helps in better understanding of investment decision making patterns (Sahi et al., 2013).

In 2012, the researcher conducted a study to examine the investor's demand of disclosing the social responsibility information in annual reports of companies (Sultana, 2012). The researcher also analyzed the advantages and usefulness of disclosing the information in annual reports. The findings of his study documented that most of researchers had demand for disclosing the information about quality and safety of products for two reasons. The demand for safety is for the safety of their investment and quality for generating the revenue and earning profits and goodwill. The findings of his also documented the demand and audit of disclosing the information regarding employee's relation, business practices, corporate social responsibility and code of ethics.

In a study, researcher investigates does the market over react? Study gave the evidence that most of the people overreact to the dramatic news (Epstein, 1994). Investors‟ reaction to the bad news creates the mispricing of the stock traded on the NYSE. Bond (1985) analyzed investor desires to be rational and believe that they are behaving rationally as they sought advice from the professional traders. However, individual sometime select those alternative that are not maximizing their utility. This is due to the fact that human beings are emotional creatures which in themselves are barrier to rationality.

Current study considers social, behavioral and economic determinants to explore their influence on investment decision in collectivist culture of Pakistan. The current study attempts to address, unexplored area of Pakistan where influence of behavioral factors on investment performance may considerably high than Western countries due to collectivism. Because, in collectivist culture investor decisions are subjective to social influence and peer pressures rather processing of private information. It has been argued that stock market investment is influenced by social interaction (Hong et al., 2004). The author of the view that individuals are trapped more by behavioral biases in collectivist cultures because of mimic behavior of individuals, social influence and family members or friends' pressure in making decisions. In context of Pakistan most if not all, investors tend to invest if family members or friends are investing in stock market rather processing their private information (herding behavior). Similarly, investors' judgments about a problem by framing it into positive or a negative ways is strongly influenced in Pakistani context because of the less sophisticated investors (framing effect). To authors' best knowledge, despite interest of researchers on behavioral, social and economic determinants of stock market investment performance, the majority of studies conducted in Western countries, is limited in regions such as Pakistan. So it should be considered that how behavioral, social and economic determinants influence investment decision making, in turn, how these decisions affect investors' stock market performance in collectivist societies, particularly Pakistan.

2. Literature Review

2.1 Theory of Planned Behaviour (TPB)

In 1985, this theory is introduced by Ajzen. It is widely used in antedating human behavior and is considered as the one of most important theory in social psychology. The theory of planned behavior is developed from the theory of reasoned action (TRA) (Ajzen & Fishbein, 1980). According to TRA theory, the behavioral intention is considered as one of the motivator for individuals to perform behavior.

Over the past 20 years, the theory of planned behaviour has been validated and experimentally supported by hundreds of studies that apply and examine the theory (Armitage and Conner 2001; Michael, 2011). In previous literature, a number of researchers documented that this theory can be used in prediction of unethical behavious (Chang, 1998), business behaviours (Krueger & Carsrud, 1993) or intention to quit smoking (Hu & Lanese, 1998). The researchers also

applied this theory in estimation of managerial decisions and some researchers documented it in prediction of knowledge sharing behavior (Cordano & Frieze, 2000; Carpenter & Reimers, 2000; Ryu, Ho et al. 2003; Lin & Lee 2004). The theory also has various applications in analyzing behaviours within information system literature, such as forecasting Internet usage (Hsieh, Rai et al. 2008), consumer adoption of e-commerce (Pavlou & Fygenson, 2006), or consumer adoption of household technology (Brown & Venkatesh, 2005). The predicting applications also include information technology ethical behaviour intentions (Leonard, Cronan et al. 2004) and factors influencing the convenience use of credit card (Rutherford & DeVaney, 2009). Regarding its application in finance market and stock market, Gopi and Ramayah (2007) utilized TPB to predict intention to trade online. The study proved the positive impacts of AT, SN and PBC on behavioural intention of Internet stock trading and that TPB could be a useful model for explaining changes in behavioural intention and actual usage. In another research by East (1993) on stock investment decision in privatized British industries, TPB was also proved to accurately foresee investment decision which was indicated by measured intention. Besides, TPB was also applied in analysing banking behaviour in using information technology such as internet banking (Chan & Lu, 2004; Shih & Fang, 2004) and analysing intention of tax payers in electronic tax filing (Fu, Farn et al. 2006). In a word, results from experiments with TPB provided evidences of its predicting power regarding behavioural intention (Chatzisarantis, Hagger et al. 2007). In other word, it presented a comparatively complete model of motivation.

According to Ajzen (2005), this theory presented the intention of people by positively evaluating it during social pressure and when they believe that they have resources to do so. This view of motivation indicates a possibility to explain the principal factors influencing individual investing behaviour.

The attitude came from behavioral beliefs, while the influence of social or subjective norms came from normative beliefs. Alleyne and Broome (2010), in their research, stated that attitude, the reference group, the confidence, and the opportunity had a significant effect on the willingness to invest. While Baghdadabad, Tanha and Halid (2011), in their research, stated that the financial statements, risk, government policy, the conditions were the factors that significantly affected the behavior of investors in making the investment decision in the Capital Market of Kuala Lumpur.

2.2 Investment Theories

It is evident that expected utility model that was presented by Neumann and Morgensten in 1953 is base of modern investment theories. According to this model, the investment and financial decisions are based on tradeoff between risk and return. The investment decision reflects the investor's behavior towards risk. It is also considered that rational investors always try to optimize utilization of their fund and expect maximum return on these funds. In this context, the most applied model is expected utility model of choice under risk (DeBondt, 1998). Its justification is based on maxims that underlies on expected utility maximization.

2.3 Portfolio Theory

On the basis of expected utility model presented by Naumann and Morgenstern, this theory addresses tradeoff between risk and return. A number of researchers argued about the wisdom of diversified portfolio (Markowitz, 1952; Roy, 1958; Tobin, 1958). According to their research, mean variance depends upon the allocation of investor's wealth among various diversified portfolios. According to research, the portfolio which has maximum expected return for a minimum variance is call efficient portfolio. This is because the go down in one asset is offset by gain in another asset. It is usually happen with securities belong to different industries with different business cycle. Markowitz, (1952) has made a good explanation of phenomena of portfolio through diversification. Some researchers make some assumptions and extended the mean variance framework of Markowitz to develop the relation of expected return (Sharpe, 1964; Lintner, 1956; Mossin, 1966).

2.4 The Efficient Market Hypothesis (EMH)

The Rationality and Efficient Market Hypothesis (EMH) predominated theory and practice in the financial markets starting 1960"s to 1980"s.Fama (1970) describes an efficient market as one where a large number of rational investors intent to maximize profit, compete with each other in trying to predict future values of individual securities and one where current information is almost available to all participants. In an efficient market, the security prices are presumed to reflect the effects of information based on past, current and future events. However in a study conducted by

Lee et al., (2010) investigating the inertia of real stock prices for 32 developed and 26 developing countries, the researchers in their finding report that stock markets may not be efficient after all.

2.5 Behavioural Finance

It is noticed that investment decision making based on utilitarian theories doesn't address the behavior of individual investor decision process. According to utilitarian theories, the individual maximize their utility on classic wealth criteria by making choice of consumption through investment time (Merikas et al., 2003). Competing theories to the utility theory contend that investors maximize geometric mean returns, concentrate on avoiding bad outcome and make investment decisions free from the assumptions about utility functions or probabilities (Nagy & Obenberger, 1994). The researchers presented a new theory and assumed that there are cognitive and emotional factors that influence the choice of person under certain conditions (Kahneman & Tversky, 1979). In literature, the researchers defined the behavioral finance as the study of impact of psychology on behaviors of subsequent effect on market and financial practitioners. According to researchers, it describes the inefficiency of market and reason behind this inefficiency (Sewell, 2010). It is also evident that supporters of behavioral finance believed that deviation from expected utility occurs when they evaluate the risk lie between them (Popescu, 2008). It is also noticed that psychology of decision making defines the depart of people form expected utility while evaluating risk.

2.6 Prospect Theory

It is found in previous literature that investors evaluate the risk according to expected utility framework. It is also found that people violate the framework systematically while choosing among risk gambles. Kahnemanand Tversky (1979), advocate a new theory known as prospect theory. According to this theory, people emaciated outcomes that are purely feasible in comparison with certain outcomes. The value is assigned rather than losses and gains than to final assets. This theory also envisages a distinct pattern of risk aversion, risk attitude, losses of low probability and gains of moderate to high probability and losses of moderate to high probability and risk seeking for gains of low probability.

According to researchers, the disadvantages and losses have larger impact on preference than advantages and gains (Kahneman & Tversky, 1991). Households and individuals use set of cognitive operations to evaluate, organize and keep track of financial activities (Thaler, 1985). The process of placing investment into separate mental compartments, arbitrarily and reaction to investment is called mental accounting.

2.7 Heuristic Driven Biases

The process of using data by rule of thumb is called heuristics driven biases. In this, people use trial and error approach to process data. Kahneman and Tversky (1974) descried uncertainty, availability and anchoring, and representatives. Other heuristics include herd behavior, overconfidence and over and under reaction. Representativeness is a heuristic wherein commonality between objects of similar appearance is assumed. People have a tendency of inferring a single observation to be representative of the entire population (stereotyping). When people are asked to judge the probability that an event or object A belongs to class or process B, probabilities are evaluated by degree to which A resembles B (Kahneman & Tversky, 1974). Overconfidence is defined as the tendency of human beings to more confident in their physical characteristics and attributes than they should to be. According to researchers, overconfidence may be in two parts from stems. One is hindsight bias and other is self-attribution bias (Barberis & Thaler, 2003).

2.8 Relationship between Classical Wealth Maximization and Individual Investment Decision Making

The first study in the field of investor's behaviors in the capital market, are referred to decade 70. Cohen et al (1997) represented the risk removing the experimental documents in wealth increase time in valuable stock in the world. Also, Riely and Cho (2000) understood that there is a meaningful relation between risk removing and age, income, wealth and education. By increasing the income, wealth and education of the persons increase the risk degree. But there is an opposite relation between age of the people (Cohen et al 1997). Olweny and Kimani (2011) conducted a study to determine the relationship between economic growth and stock market in Keyna. They found that an increase in NSE 20 index indicates potential signal of higher dividends, economic growth and higher profit. The study concludes that the stock market had a positive effect on economic

growth. Adudaet al., (2012) findings show that there were varied behaviors and financial performance of individual investors in Kenya with some investors exhibiting rational behavior while making investment decisions.

2.9 Relationship between Accounting Information and Individual Investment Decision Making

Financial information is considered to influence an investor in making a decision to invest in stocks as an individual would evaluate the underlying movements of the key indicators of interest. Merika (2008) and Easley et al., (2010) find that financial information and expected corporate returns do have a significant effect on the decision to invest in shares. Tenaiet al., (2011) investigated the factors that affected on Initial Public Offer pricing (IPO) in Kenya and their findings conclude that public information disclosed in the prospectus was not significantly reflected in IPO prices and the rational theory therefore cannot explain the effect of investor sentiment in IPO market in Kenya. EMH has steadily become deficient to provide explanation for the market behavior, more dramatically perhaps, the drastic drop in United States share prices by over 30 per cent during a two month period that preceded the crash of October 1987 (Mosomi & Ghayekhloo, 2011). The availability of financial information has been postulated as one of the variables that could influence investor behavior while making investment decisions on the investment option to select. Financial information refers to accounting reports, general information relating to accounting reports, generic information related to firm reputation, price movements, status of firm, past performance of the firm stock, and expected performance of firms (Chong & Lal, 2011). The researchers also found that interviews and annual reports are most important source of information in assessing the value of company and therefore informing the equity selection process. Investment decision makers use financial statements of different firms for financial decision making purposes (Gentry & Fernandez, 2008).

2.10 Relationship between Self-Image/Firm-Image Coincidence and Individual Investment Decision Making

Lebreana al., (1995) study confirmed that the risk of the persons is taken from inner factors and doesn't have any relation with external market. The achievement of Lolyn, Lees and Sklarbam (2003) showed that there is a meaningful relation between age, sex and education of the persons. Barnyol in his studies understood that he can predict the investor's behavior in the market based on the specifications of the life style and removing risk and the job of the persons. Eshpitean (2004) studied the effect of the social information on the behavior of the real investor. Bennet et al. (2011) conducted a study on attitude towards equality stocks in Tamil Nadu. The findings of their study revealed five factors that have significant influence on investment attitude of retailers. According to their findings, these factors include media focus on stock market, tolerance risk, and strength of economy, government policy and political stability towards business.

2.11 Relationship between Neutral Information and Individual Investment Decision Making

Totoket al., (2007) investigated the nature of indicators having influence on motivation and needs of investors in Jakarta Stock exchange and the findings showed that investors used specific tools to predict the value of share in emerging markets. The researchers argue that the metric provides a basis to ascertain the interrelationships among fundamentals, external risks, and value of the shares influencing the quality of fundamental decisions.

In 2009, the Rashid et al conducted a study to examine the satisfaction of investors on efficiency of market by considering the different factors in Bangladesh. According to Easley et al., (2010), investors consider financial position of company by measuring the earning per share and return on equity before investing in particular company. Chong and Lai (2011) explains that in making an investment decision, rational individuals are likely to seek information on performance as well as the behavior of other investors. The timing and delivery of the information about the market had substantial effect on how investors made their decisions (Hughes, 2008). Chong & Lal (2011) assert that analysis of the available financial information provides a technical basis to evaluate the past and projected performance of a firm. In this respect various criteria can be used, including financial ratios which can then be compared across the industry to support making an informed investment decision. The selected statistical indicators including (EPS, DPS, D/E) ca be used to forecast and measure the economic and financial trends. In technical analysis, these trends indicators are extensively used to predict the price patterns and stock trends. To provide the future

profitability perception of potential stocks, economic indicators are extensively used to quantify the current industry and economic conditions.

2.12 Relationship between Advocate Recommendation and Individual Investment Decision Making

Kaleem et al. (2009) conducted a research in Pakistan to investigate the determinants of financial advisor perception. In Pakistan, it is found that religious, social, personal and advisors recommendations have great influence on investment decision making of individual investors and most of times this lead individual investor towards irrational and on optimal decision. The survey of existing literature on Bangladesh reveals that there is a lack of study that emphasizes on areas of behavioral finance; investors' awareness of capital market and the expected and actual services rendered by the brokerage houses. The role of income, age, language and education can't ignore in determining the investment style of investor.

As investors are the customers of brokerage houses, they expect their brokerage house to provide them with the best services such as, advice on investment, reasonable commission rate, managing portfolio etc. In general, customers tend to purchase particular products and services or patronize specific firms on an ongoing basis.

2.13 Relationship between Personal Financial Needs and Individual Investment Decision Making

The researchers also investigated the impact of anger on investment decision making, and found the positive relationship between anger and investment decision making. They also found that angary people take risky decisions to get higher returns on their investment. In literature, researchers argued that anger increased the inclination towards perceived situation as expected. The angry people feel enthusiastic and safe while making investment decision. This situation become the cause of investment in risky projects (Ellsworth et al, 2003; Loewenstein, G., 2000; Quingley, 1996).

2.14 Relationship between Behavioural Factors and Investment Decision Making in Stock Market

Olsen (1998) acquainted the concept of behavioral finance explaining the behavioral expressions of psychological and economic principles for the improvement of individual financial decision-making process. Peterson (2007) analyzed the role of behavioral factors on financial decisions. It was evidenced that the existence of separate behavioral pattern was responsible for risk-taking and risk-avoiding behaviors in financial settings.

Parsaeemehr et al., (2013) attempted to interpret the behavior factors and perceptions of the investors in Iran inclining to make the investment decision. Rauf (2014) considered overconfidence, representativeness, loss aversion, regret, and group behavior as the constructs to examine the behavior of investors. There was a positive association between regret and herding behavior in making investment decisions. Considering the role of emotional behavior in investment decisions that has attracted attention in economics, in the recent years, there have not been many efforts to associate emotions with investment decisions (Frank, 1988; Elster, 1996; Hopfensitz and van-Winden, 2005; Loewenstein, 2000). Apparently, financial decisions are impacted by human emotions. Positive emotional makes people empower more by accepting the risk and the reverse for negative emotional (Kuhnen and Knutson, 2011; Wu, Bossaerts, and Knutson 2011). Bhat and Dar (2012) distinguished the psychological factors in the investment decision process by contemplating the new area of research to empathize the modifying emotional behavior. It was established that the emotions play a vital role in investment decisions. Brundin and Gustafsson (2013) found that emotional factors increase the tendency to continue investments even in uncertainty. In the most cases the behavior of the investors in the stock is non-rationally and identifying the behavioral stimuli will not be possible. But researchers believe that persons behavior in the stock have, though it is not rational has biases that we can explain these behaviors and understand them (Pompian, 2008).

It is also noticed that most of people incline to observe losses or gains and they defined these losses and gains to a reference point. Individual adopts a risk seeking behavior when their outcomes are below the target level and risk-aversion behavior when their outcomes are above the target level (Fiegenbaum, 1990). According to researchers, the process of giving weights to risks and association of payments to choices are called framing effect (Loewenstein et al., 2001).

Existing literature has been documented four models in regard of herd behavior. The information based herding and Cascades, which occurs when it is optimal for individual to observe the actions of others, those ahead of him rather own private information in making decisions (Bikhchandani et al., 1992). The second model is called Information Acquisition Herding, based on the notion that investors decides to follow the same source of information or same set of stocks. Early informed investors (who discover the information) behave aggressively and take reverse position in next trading period for getting profits from reverse position and late informed (noise) traders appears to follow the leaders (Hirshleifer et., 1994). Third model is known as Principal-Agent Based Model of Herding, developed by Scharfstein et al. (1990), they were of the view that when principals are uncertain about the ability of agents in picking right stocks, under such circumstances, agents or managers simply mimic the investment decisions of other managers or agents instead of using their private information. Fourth model discusses that institutional investors share preferences towards stocks with certain attributes such as liquidity, riskiness and size (Gompers & Metrick, 2001). Investors' decisions of buying and selling, choice of stocks and volume of stocks to trade influences by others. The buying and selling decisions are significantly influences by herding but choice of stocks and volume of stocks to trade are seem to be less influences by herding (Waweru et al., 2008). If market participants follow the masses' action, the volatility of returns might be forced, which results in destabilizing financial markets specifically during a crisis situations (Demirer & Kutan, 2006).

Investors become so conscious now a days that they consider different factors before taking any investment decision like analyzing securities, consider relative valuation techniques. Most of scholars who have studied individual's decisions making behavior found contradictory results about risk perception and framing effect. In conclusion of prospect theory, negatively framed situation leads to risk seeking behavior while positively framed situation leads to risk aversion due to protecting prior gains. However, several studies have contradiction with these results. The outcomes of an individual's prior risk seeking behavior leads to future risk behavior (Osborn & Jackson, 1988). It is to be said that whatever the situation (negatively or positively framed) is, individuals' past risk seeking behavior leads to future risk behavior. If individual has risk taking behavior in past, in future his behavior will be risk taking and vice versa.

2.15 Relationship Between Financial Literacy and Investment Decision Making

Financial literacy has been defined as the ability to make educated decisions about using money in the present and in the future (Hetling & Postmus, 2014). In herding behavior, the individual investors imitate the victorious investors or market gurus, when using their private information incurs more cost (Amirat & Bouri, 2009). Less sophisticated investors' earnings judgments are more influenced by positive framing than highly sophisticated investors (Zhou, 2013). It has also been argued that financial literacy refers to a person's capability for managing money (Remund, 2010). The ability of consumers to make informed financial decisions improves their ability to develop sound personal finance (Klapper et al., 2013). Financial literacy benefits the consumers in making investment decisions by allowing them to increase the returns on wealth (Jappelli & Padula, 2013). Prior literature is showing the facilitating role of financial literacy with behavioral factors and investors' decision making.

In the most recent study (Sonir et al., 2012) the impact of five types of behavioral biases on stock market investment decisions; their results have shown that both professional and nonprofessional investors of stock market display modest degrees of behavioral biases; however experienced investors are less affected by these biases than less experienced investors. They also concluded that investment decisions of female investors are most likely affected by behavioral biases as compared male investors. In literature, it is found that investors in Bangladesh invest their money with high expected return from the securities. At the same time investors are very price sensitive. This "expected" return is directly related with the "perception" of price and actual "performance" of a particular security. This expectation-perception-performance relationship eventually reflects in investors' satisfaction and dissatisfaction. Most of the previous authors focus on psychological aspect of behavior in individual investors. For instance, they buy those stocks that grab their attentions (Berbar et al. 2006), tend to sell winner and buy losers (Grinblatt & Keluharju; 2000), gain higher return when their sentiment is low, but when sentiment is high these patterns attenuate (Baker & Wurgler; 2003), irrationality is another feature that traced when they are making investment decision (Hilfisher, 2001; Ritter, 2003). Furthermore, cognitive errors like

self-deception, disposition effects are found in their behavior (Hilfisher, 2001). Trading too much, reluctance to realize loses are some other qualities of individual investors (Odean, 2001; Shuet all, 2005). Other scholars revealed that many investors have lack of data analysis and interpretation skills (Shiller, 1993; Khaneman, 1973).

2.14 Relationship between Social Factors and Investment Decision Making

Mehmood et al., (2011) conducted research in the stock market and studied effects of socio economic variables and its determinants such as variations in regulations, sensational attitudes and their marital status on risk perception in stock market. In the case of Pakistani Stock Exchange Market it is observed that while making any financial decision an investor perceives to invest in those stocks or shares where investor assumes low risk and high benefits according to his/her own perception and available information. Investor perceives that there is a negative relationship between risk and benefits. Some other factors also effect an investor decision making like fear, anger and his personal emotions. For example fear of political instability in Pakistan prohibits an investor to invest in stocks more frequently without any proper analysis. Butt et al., (2011) conducted a research and used representativeness and anchoring and adjustment and leniency in their model but they did not incorporate effects of affect heuristic in their model. Present study is an extension to these studies which will cover by previous aspects of theories and the empirical evidences from Pakistani stock market effects of affect heuristic, anger and fear on the single investor behavior.

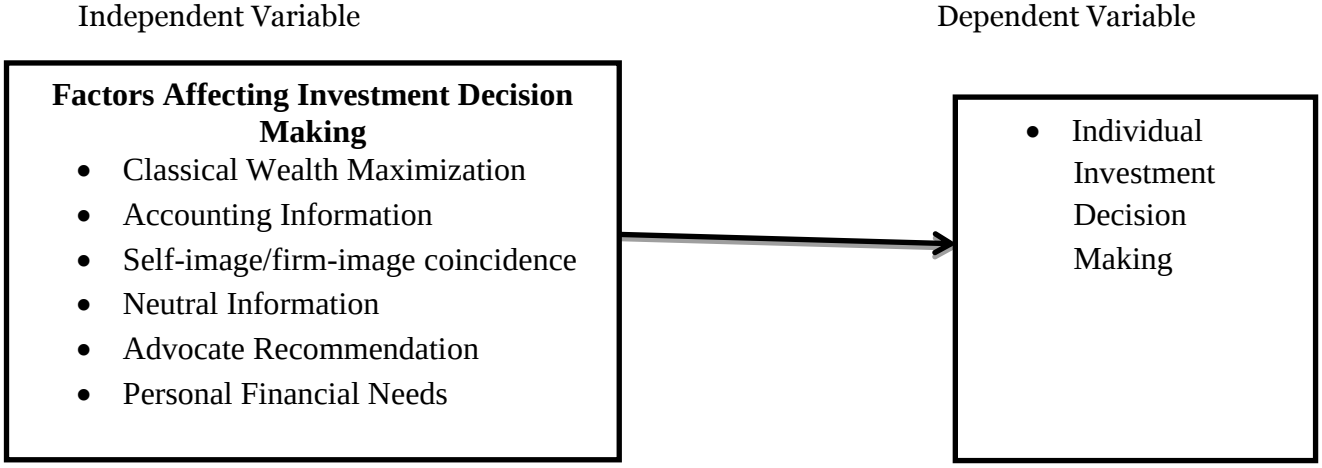

Figure 1. The research model of behavioral factors of individual investors

3. Research Methodology

3.1 Research Method

The research paradigm of present study is positivism. The approach of present study is deductive which is consistent with previous studies. The research strategy is cross section which is employed to carry out ontological questions. The justification of selected methodology for present study is well supported by empirical studies (Greco, 2011).

The unit of analysis for present study is individual because the purpose of this study is to investigate the factors affecting individual decision making.

All the individual investors, who participated in Islamabad Stock Exchange (ISE), are the target population of present study. The list of individual investors was taken from the brokers and questionnaire was mailed to individual investors. Furthermore, the self-administrated survey was conducted to gather data and enhancement of response rate. The 300 questionnaires were sent to investors. Out of 300 questionnaires, only 253 questionnaires were received. The 40 questionnaires were filled by using self-administrated survey. The overall response rate was 84.33%. The convenient sampling technique was employed due to time constraint.

4. Findings and Discussion

The first section presents the biographical information of respondents. The second section presents the results of regression analysis of present study. The third section presents the exploratory factor analysis. At the end, the study presents the discussion from the previous studies.

Biographical Information

Table 4.1: Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	83	32.8	32.8	32.8
	Male	170	67.2	67.2	100.0
	Total	253	100.0	100.0	

The table 4.1 presents the results of gender. The table shows that out of 253 respondents, the 67.2 % of respondents were male and 32.8% were females.

Table 4.2: Educational Background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's	36	14.2	14.2	14.2
	Master's	157	62.1	62.1	76.3
	Other	60	23.7	23.7	100.0
	Total	253	100.0	100.0	

The table 4.2 presents the results of education background of respondents. Results show that most of investors have master's degree and their percentage is 62.1. The 23.7 % of respondent have other degrees and qualifications. Only 14.2 % of respondents have bachelor degrees.

Table 4.3: Investment Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	58	22.9	22.9	22.9
	Yes	195	77.1	77.1	100.0
	Total	253	100.0	100.0	

The table 4.3 presents the results of investment education of respondents. Results show that most of investors have investment education and their percentage is 77.1% While 22.9% of respondents have no investment education.

Table 4.4: Investment Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 5 Years	36	14.2	14.2	14.2
	6 to 10 Years	161	63.6	63.6	77.9
	11 to 15 Years	56	22.1	22.1	100.0
	Total	253	100.0	100.0	

The table 4.4 presents the results of investment experience of respondents. Most of respondents have 6 to 10 years of experience. The 14.2 % of respondents have 1 to 5 years of investment experience. The 22.1 % of respondents have more than 10 years of investment experience.

Table 4.5: Employment Sector

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Private	190	75.1	75.1	75.1
	Public	63	24.9	24.9	100.0
	Total	253	100.0	100.0	

The table 4.5 presents the results of employment sector. The most of investors were belonged to private sector. The 24.9% of respondents were belonged to public sector.

Regression Analysis

This section presents the results of regression analysis. The model summary is presented in table 4.6. The result of ANOVA is presented in table 4.7 and results of coefficients are presented in table 4.8.

Table 4.6: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.987[a]	.975	.974	.10386

a. Predictors: (Constant), Avg_PFN, Avg_NI, Avg_AI, Avg_SIC, Avg_CW, Avg_AR
b. Dependent Variable: Avg_IIDM

Table 4.7: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103.678	6	17.280	1601.784	.000[b]
	Residual	2.654	246	.011		
	Total	106.332	252			

a. Dependent Variable: Avg_IIDM
b. Predictors: (Constant), Avg_PFN, Avg_NI, Avg_AI, Avg_SIC, Avg_CW, Avg_AR

Table 4.8: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.375	.094		-4.003	.000
	Avg_CW	.763	.023	.859	33.813	.000

Avg_AI	.296	.018	.255	16.322	.000
Avg_SIC	.139	.024	.092	5.835	.000
Avg_NI	.080	.029	.076	2.795	.006
Avg_AR	-.030	.033	-.026	-.904	.367
Avg_PFN	-.137	.031	-.098	-4.412	.000

a. Dependent Variable: Avg_IIDM

The regression analysis presents the effect of one variable on other variable. In present study, investment decision making is taken as dependent variable while classical wealth maximization, accounting information, self-image, neutral information, advocate recommendation and personal financial needs are taken as explanatory variables.. The table 4.7 presents that 97.5 % change in dependent variable is due to explanatory variables which are under consideration in this study. The remaining 2.5 % change is due to other variables which is not taken in this study. The value of adjusted R^2 is 97.4 which shows the penalization of any addition of extraneous variable in model. The value of std error of estimate is 0.10386 which is root mean of squared error.

The results of ANOVA is presented in table 4.7. The value of regression, residual and total are 103.678, 2.654 and 106.332 respectively, which looks the breakdown of variance in outcome variable. The degree of freedom is 6. The Regression degrees of freedom corresponds to the number of coefficients estimated minus .The value of mean squares is 17.280 and .011 which is Sum of Squares divided by their respective DF. The value of F statistics is 1601.784 and hence more than 20, it shows the fitness of model. The value of p is 0.000 which is less than 0.05; it means there is significant relationship between variables.

The table 4.8 presents that value of beta is 0.375. It means that explanatory variables has 37.5 times effect on investment decision making of investors. The value of beta coefficient of classical wealth maximization is 0.763; it means in every unit increase in classical wealth maximization, a 0.763 unit increase in investment decision making is predicted, holing other variables constant. The t stats (33.813) and p value (0.000) shows the significant relationship between classical wealth maximization and investment decision making.

The value of beta coefficient of accounting information is 0.296; it means in every unit increase in accounting information, a 0.296 unit increase in investment decision making is predicted, holing other variables constant. The t stats (16.322) and p value (0.000) shows the significant relationship between accounting information and investment decision making. The value of beta coefficient of self-image is 0.139; it means in every unit increase in self-image, a 0.139 unit increase in investment decision making is predicted, holing other variables constant. The t stats (5.835) and p value (0.000) shows the significant relationship between self-image and investment decision making.

The value of beta coefficient of neutral information is 0.080; it means in every unit increase in neutral information, a 0.080 unit increase in investment decision making is predicted, holing other variables constant. The t stats (2.795) and p value (0.006) shows the significant relationship between neutral information and investment decision making. The value of beta coefficient of advocate recommendation is -0.030; it means in every unit increase in advocate recommendation, a 0.030 unit decrease in investment decision making is predicted, holing other variables constant. The t stats (-.904) and p value (0.367) shows the insignificant relationship between advocate recommendation and investment decision making. The value of beta coefficient of personal financial needs is -0.137; it means in every unit increase in personal financial needs, a 0.137 unit decrease in investment decision making is predicted, holing other variables constant. The t stats (-4.412) and p value (0.000) shows the significant relationship between personal financial needs and investment decision making.

5. Conclusion and Recommendations

This chapter presents the conclusion and recommendations of present study. The first section presents the conclusion of present study. On the basis of findings, the second section

presents some recommendations and suggestions. At the end, the limitations and area for future study is presented.

5.1 Conclusion of Study

The main theme of present study was to examine the effect of different factors on individual investor's investment decision making. The study used the accounting information, classical wealth maximization, neutral information, self-image/firm image coincidence, personal financial needs and advocates recommendations as factors that are influencing the investment decision making of individual investors. According to researcher best knowledge, the literature on behavior of individual investor's investment decision making is very scare and only few researchers gave little attention to this area. Due to gap in literature, present study can be used as guideline for making important policy implications for academia and future researchers. The study also provides a policy guideline for many investors, professional and investment corporations. The study found mix results. The findings of present study reveal positive significant relationship between advocate recommendations, self-image/firm image coincidence, neutral information and individual investor investment decision making. The study did not find any evidence on relationship between accounting information, classical wealth maximization and personal financial needs. It can say that most of investors in Pakistan are not making rational decisions on the basis of accounting information and most of times their decisions depend on the recommendations of stock brokers, co-works, friends and family. The study also has important policy implications for education of investors regarding investment decisions. It is said that stock market is a gambling market. There is scope of manipulation to earn more profit. In manipulation major contribution is made by institutional buyers. Individual investor's decision is strongly affected by the broker's advice. Sometime investors are making decision on the basis of family and friends' opinion. That implies that they depend on rumor. In stock market peoples are investing on basically two types of information. One is fundamental information of a company and another is rumor. A significant percentage of population is investing on rumor basis as they have little bit ideas about stock market.

The role of media is correct and appropriate for our stock market. The media has an impact on the stock markets and the economy in general. Media can play a role in the recovery of the broken stock market. We think, just as the media has likely created an over bleak idea about the economy and created mass panic selling, when the slightest bit of good news hits, we will likely see this go in the other direction. In an objective, the study postulated that "financial information is positively correlated to an individual's‟ investment in shares". The study result found a significant influence and therefore the postulated hypothesis is accepted. The finding implies that investors did appreciate the importance of financial information while considering investment decisions. Given the premium attached to financial information, market participants should proactively inculcate knowledge on use of financial reports. It is premised that where financial literacy is high, generally the financial reports will be of substantive value in terms of supporting as an evaluating guide to investment decisions. Investors are expected to analyze financial reports to appreciate them and on that basis consider if the indicators are favorable (positive), and therefore make the decision to place more meaning; higher investments in shares of those companies they perceive more value. This thesis concludes that financial information acquisition has the potential to improve investors‟ decisions resulting on improved overall portfolio performance. Both the stock market regulators and financial advisers should therefore educate investors to improve their financial analysis knowledge, economic, and commercial skills as a means to encourage more. To this end it is recommended that Brokerage firms should establish capacities in their respective institution to be able to continuously train investors and whenever necessary assist them to interpret key financial indicators to support in informed decision making. The Managers of listed companies should deliberately endeavor to avail financial information to the public in a timely manner, preferably by posting the annual reports on the website as announcement updates. This will avoid information asymmetry and ensure the market operates in near perfect competition which will enhance confidence, and make market participants to fully appreciate the role of financial information in investment decision making.

5.2 Recommendations and Suggestions

Findings of the study are helpful for the agents and brokers who earn money by attracting people to invest in stock, bonds and other securities. They can come to know how investor

decisions can be affected and investors can be convinced. This study is also helpful for the different organizations who want to raise funds by attracting individuals to invest in their securities. It is also supportive for government policy purposes. The results of this study are most importantly applicable to the individual investors of developing economies where values are important part of their decision making as compare to the developed economies. Literature is available on values and decision making relationship but very little is available on investor decision making. This is the first study in Pakistan analyzing the impact of individual's values on its investment decision making.

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