Demographic Factors, Awareness, Perceived Risk Attitude and Investment Behaviour – A Discussion

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2.1. Demographic Factors

Demographic factors of an investor indicate his or her gender, age, marital status, education, income, occupation and so on. Every investor is unique in all aspects due to such demographic factors. So, he/she cannot rely on the decisions already taken by others. Earlier studies conclude that women’s portfolios are more conservative than those of men. Women’s investment has historically been lower than men’s for several reasons, including social and various demographic concerns. According to Korniotis and Kumar (2011), older and experienced investors are more likely to follow ‘rules of thumb’ that reflect greater investment knowledge. However, older investors are less effective in applying their investment knowledge and exhibit worse investment skill, especially if they are less educated, earn lower income and belong to minority racial/ethnic groups. Overall, the adverse effects of ageing dominate the positive effects of experience. These results indicate that older investors’ portfolio decisions reflect greater knowledge about investing, but investment skill deteriorates with age due to the adverse effects of cognitive ageing. So from the study, we can say age is an important consideration when deciding how much risk to assume. Portfolio assets that are riskier and that will fluctuate more over time may be appropriate for younger investors but not for others. An individual who does not expect to liquidate the assets in his or her portfolio for a number of years has more time to recover from a market downturn while an investor close to retirement may be more likely to prefer stable assets and capital preservation. Age also affects the choice between income-earning securities and those oriented towards capital gains. An investor who is employed and near peak earning power will probably want to minimise paying taxes and will therefore lean towards investments that do not provide current income. Age may also affect how much risk you can assume: as
you become older, you have less time to recover from poor investment results, and your appetite to take risk may change, and your wealth and circumstances will probably change too. We may also have different risk tolerances for different parts of our portfolio. Das and Jain (2014) also emphasise the fact that demographic variables indeed play a role on the mindset of the investor community and are driven by age and educational qualification. Education is the process of developing the capacities and potential of the individual so as to prepare him/her to be successful in a specific society or culture. From this perspective, education primarily serves an individual development function. It refers to the process by which society transmits to new members the values, beliefs, knowledge and symbolic expressions to make communication possible within society. In this sense, education serves a social and cultural function to shape behaviour. Occupation also can affect investment behaviour and investment decision. Some people earn stable incomes from their occupation, and there may be some certainty of earning some income after a certain period of time when other people may not be able to earn stable income and there may not be that certainty of earning certain amount of income. Both absolute income level and income requirements influence investment objectives in several ways. First, income, like age, influences the choice between dividend-paying or interest-paying investments and those whose primary return is in the form of capital gains. We may prefer income-producing investments if we need to supplement or replace earned income. Income level also affects our investment choices because it determines our tax rate. Low-tax-bracket investors, who generally have lower income, will be more likely to prefer income-producing investments. High-tax-rate investors are more likely to choose tax-deferred or tax-sheltered assets. Income also may influence risk preferences. High-income investors may be more willing to choose more risky investments since they can more easily contribute additional investment capital should they sustain losses. We also must rely on our portfolio to meet income needs; we may be limited in the size of positions we can take in illiquid, no income-producing investments. The study of Nguyen and Noussair (2014) brings out the association between the investment experience and investment decision-making. Investors with an investment experience of over five years tend to be more willing to take risks while those with an investment experience of less than five years often make a safe decision in trading stocks. This result is a new discovery for the Vietnamese stock market. This result was also not obtained in other studies. The reason is that the investors with an investment experience of less than
five years always want to participate to survey the market, and when they accumulate enough experience of five years or more, they are prone to invest aggressively and willing to take risks because they can forecast the market movement. We can also associate knowledge with experience as well. Agarwal, John, Xavier, and David (2007) found that mostly financial blunders are made by individuals who are exposed to the lowest amount of financial knowledge. To some extent, poor financial decisions are the reason of failure to appreciate economic vulnerability. Education can solve the issue by providing knowledge and financial decision-making skills (Bernheim & Garrett, 1996). To understand the basic features of their retirement plans, retirement-age adults must be financially literate (Lusardi & Mitchell, 2009). Moreover, Bernheim, Garrett and Maki (2001) conclude that middle-aged individuals who took a personal financial management course in high school save a higher proportion of their incomes. Many households do not invest in equity market because they have less knowledge of shares, the working of the stock market and the pricing process of assets. Grable and Lytton (1999) suggest that from a financial planning perspective, tolerance related to financial risk has a critical part in directing individuals towards a psychologically satisfactory and suitable investment. Xiao and Anderson (1997) predict a significant relationship between risk tolerance and one demographic element such as age and base their description on the assumption that, other things being equal, age is a proxy for wealth. A research on the hardships that an individual may face in making decisions for pensions and tackling the complications of making plans of saving proved those hardships as true and to be considered. Financial counselling impacts financial decision-making towards good saving and investment decisions (Lusardi & Mitchell, 2005). Lack of experience sometimes leads towards lack of innovation in decisions and a high level of risk exposure. As several studies suggest people do not save enough for retirement and consequently gather more debt besides not taking the benefits of financial breakthroughs (Campbell, 2006; Lusardi & Mitchell, 2007). People with less literacy are most likely to depend on family and friends as their main source of financial counselling. The financial condition of today’s youth shows high levels of debt. The heavy impacts of gathering more levels of liabilities include bankruptcy (Roberts & Jones, 2001). According to Agnew and Szykman (2005), a mismatch existed between what individuals believed they knew and how concisely they measured their financial knowledge.

An important consideration in setting investment objectives is our time horizon. We expect to earn the income from the investment in the
short or long run. How long we can wait to recover from a declining market, or whether we do aim for capital preservation to meet an immediate financial need, determines the importance of time in our investment decision. Liquidity is the ease with which we can convert the assets to cash at the fair market value. Since greater liquidity generally results in lower returns, it is necessary to give serious consideration to the inherent trade-offs. According to Bebchuk and Stole (1993), short-term objectives and imperfect information may also lead to overinvestment. When investors cannot observe the level of investment in the long-run project, suboptimal investment will happen. However, when investors can observe investment but not its productivity, overinvestment will happen. In making any investment decision, occupation and financial literacy play a major role. Dhanaiah and Ram Prasad (2015) provide a review of over 60 articles and highlight the issues of investor attitude towards savings, impact of demographic factors on investment decisions, awareness about financial instruments and behavioural biases of individual investors. The objectives of their review were to identify the current status of studies on investors’ perception in financial markets and also to delineate trends and research gaps in the extant literature on investor perception. They find that ANOVA, factor analysis, structural equation modelling (SEM) and regression analysis are the most frequently used methodologies when judgemental sampling, convenience sampling and snowball sampling are predominantly used in the surveyed studies. According to them, most of the studies focused on mutual funds and equities and did not consider derivatives (futures and options), and investor risk tolerance levels and perceptions need to be researched further. Jani and Jain (2013) reveal that age, gender, occupation, educational qualification, income and so on have significant impact on the buying pattern of rural and urban investors. Moreover, for the priorities of the investors, both categories give the first priority to financial planners and second to the risk–return profile, third to past performance, fourth to tax consideration and fifth to the brand. Lutfi (2010) explores the relationship between demographic factors such as gender, age, marital status, education, income and family size and the investor’s risk tolerance as well as investment preference. First, he attempts to reveal the relationship between the investor’s demographic factors and his or her risk behaviour (risk seeker or risk averse). Second, he tries to see the relationship between the investor’s demographic factors and types of investment (bank products, capital market instruments and physical assets). Finally, he endeavours to uncover the relationship between the investor’s demographic factors and types of
investment. He shows that demographic factors explain the investors’ risk tolerance and their investment preference. He also reveals a significant relationship between investors’ risk tolerance and their investment preferences. He concludes that investors’ demographic characteristics positively correlate with investors’ behaviour and type of investment chosen. Paul and Bajaj (2012) find that most of the existing equity investors possess a moderate level of awareness about the equity market. They also observe that gender and age of the existing equity investors and level of awareness about the equity market are not significantly associated. However, there is a significant association between occupation and income and level of awareness about the equity market. Thus, investment in stock market by the retail investors is influenced by their occupation and income. Obamuyi (2013) finds that the socio-economic characteristics of investors (age, gender, marital status and educational qualifications) statistically and significantly influence the investment decisions of investors in Nigeria. Sivarethinamohan and Aranganathan (2013) observe that there is a significant association between the respondents’ age and the various factors such as terms, conditions and benefits and ease of transacting. Also there is a significant association between the respondents’ profession and factors such as awareness and knowledge, tax exemptions and affordable brokerages. Jain and Mandot (2012) explore the relationship between level of risk assumed and demographic factors of the investors belonging to the Indian state of Rajasthan. According to them, there is a negative correlation between marital status, gender, age, educational qualification and occupation of the investors and their risk-taking ability. At the same time, income level and investment knowledge of the investors correlate positively with their risk-taking ability. They also conclude that there is no relation between city of residence and risk-taking ability.

2.2. Awareness

Awareness refers to the consciousness about a given aspect. There are two types of investors: aware and unaware. Aware investors may know, for example, the existence and characteristics of risky assets (bonds and stocks) and have information on the probability distribution of their returns. Others are not aware of stocks. Hence, they can only invest in bonds, regardless of the entry costs. The hidden cost of ignorance is the expected higher return forgone. In stock markets, information is usually transmitted from issuers to investors through several channels,
mainly through mandatory public disclosure by issuers and voluntary public or private disclosure by issuers; however, investors can also privately acquire information from sources other than the issuer, such as by purchasing research reports from stock analysts, examining the firm’s products or services and consulting the firm’s competitors, among others.

In the case of small investors, information relied upon is mainly from public disclosure, whereas professional investors use all channels. In particular, some professional investors are selected by the issuer to receive material information, for example, through quarterly analyst conference calls. Many issuers favour such selective disclosure for practical reasons, such as concealing information from their competitors leading to an information gap within the financial market.

Similarly, awareness of stocks is exogenous to the investor’s set choice. Therefore, the question about the size and composition of the investor’s portfolio choice depends on how aware he or she is. Issuers and distributors of financial assets have strong incentives to inform the pool of potential investors.

Besides learning from issuers and distributors, individuals often learn about investment opportunities from peers who have been informed by financial intermediaries (social learning), and this often occurs depending on the specific process of social learning and on how people interact.

According to Merton (2007), individuals who were exposed to economics during their schooling may be more likely to have friends (perhaps their classmates) that invest in the stock market. Because of ‘peer effects’ in investing, respondents exposed to these friends may themselves be more likely to invest in the stock market. Several studies have documented that ‘peer effects’ can be pretty powerful determinants of portfolio choice (Brown, Ivkovich, Smith, & Weisbenner, 2007; Hong, Kubik, & Stein, 2004). The educational level of peers does matter for stock ownership. Those who have friends that have a college degree are more likely to own stocks. Thus, there may be information provision and learning via social interaction. Newspaper readership has a positive impact on awareness, and its coefficient is always highly significant. Increasing readership raises the probability of awareness of stocks, mutual funds and corporate bonds (Guiso & Jappelli, 2005). Awareness is strongly correlated with education, year of birth, wealth, long-term bank relations, newspaper readership and the index of social learning. On the other hand, awareness can be through financial awareness which is majorly determined by the investor’s resources (income, financial
wealth), age and education status. Bernheim (1995, 1998) points out that not only do most households fail to perform very simple calculations and lack basic financial knowledge but also that the saving behaviour of many households is dominated by crude rules of thumb. In more recent works, Bernheim et al. (2001) and Bernheim and Garrett (2003) show that those who were exposed to financial education in high school or in the workplace saved more. Similarly, Lusardi and Mitchell (2006, 2007) show that those who had low literacy were less likely to plan for retirement as well as less likely to make investments and, as a result, accumulate much less wealth. Agarwal et al. (2007) further show that financial mistakes are prevalent among the young and elderly, who are the ones with the lowest amount of financial knowledge. Brown et al. (2007) provides evidence of causal community effects in the context of stock market participation, an economic behaviour that has very important implications for individual welfare and numerous public policy outcomes. Using an instrumental variables strategy that employs variation in the stock ownership in the states in which one’s ‘non-native’ neighbours lived at the time they applied for their social security numbers (which is generally the state in which they were born), combined with individual and community fixed effects, time-varying individual and community characteristics and state-by-year effects, they demonstrate that a 10 percentage point increase in community stock ownership makes an individual approximately four percentage points more likely to participate in the stock market. For perspective, this magnitude is comparable to the effect of one’s parents switching from not participating in the stock market to becoming participants upon one’s own equity ownership decision. Consistent with a ‘word-of-mouth’ interpretation, we find that this community effect is stronger in more ‘sociable’ communities. One ramification of these findings is that ‘externalities’ to policies that promote stock ownership, either directly (e.g. the introduction of personal accounts in social security) or indirectly (e.g. financial education), may exist. The results of the study suggest that an initial increase in the average stock ownership level in a community may have a ‘multiplier’ effect, making it more likely that other individuals will also begin participating.

2.3. Perceived Risk Attitude

Perceived risk attitude addresses a person’s judgement (belief and opinion) towards taking or avoiding risk when making decisions under
uncertainty. Investing is clearly risky, and people routinely have to make decisions under uncertainty due to incomplete information. The amount of information an investor has regarding various stocks in the stock market determines one’s risk perception. The perceived degree of uncertainty by individuals affects their decisions regarding consumption, saving and investing. Perceptions encompass psychological and emotional aspects, which subsequently guide judgement and decision-making. And this makes perceived risk attitudes of investors to be more subjective rather than objective to risky situations. Therefore, the attitudes we form and express are likely to be influenced both by emotions and a more ‘logical’ cognitive assessment. So there are two components of perceived risk attitude: affect and cognition. Affect is the emotional component, whereas cognition is the mental process involved in gaining knowledge and comprehension including thinking, knowing, remembering, judging and problem-solving. Elster (1989) defines emotion as a physiological state of arousal triggered by beliefs about something. On the other hand, emotion can be seen as ‘the felt tendency towards anything intuitively appraised as good (beneficial), or away from anything intuitively appraised as bad (harmful)’ (Arnold, 1960a, 1960b). However, Solomon (2000) addresses emotions as a complex influence that combines cognitive, physiological, social and behavioural aspects of an individual. Further, emotions are addressed as evaluative rather than cognitive judgements (Frijda, 2000). Emotions are evaluative in that they evoke positive or negative valences about an object, for example, being unhappy or happy or pessimistic or optimistic (Bradley & Lang, 2000). Despite the lack of a unified definition, there is some agreement on the set of emotions that exist. According to Elster (1998), some states such as anger, hatred, guilt, regret, fear, pride, elation, joy and love are clearly emotions. According to Peter (2003), elements of emotion such as feelings of control, dread and knowledge imply risk and always contain an emotional or affective bias. Survey evidence indicates that such emotional factors as control and dread figure prominently in the perception of financial risks, and that emotional bias such as dread is important in the perceived risk of financial gambles. According to Lucy, Chater and Hahn (2003), cognition refers to an individual’s belief towards an object. The beliefs we form can either be positive or negative depending on aspects such as knowledge, moral values, intelligence, inspiration, dishonesty and being weak among others (Levine & Zervos, 1998). The examination of cognitive aspects of financial behaviour in isolation is troublesome and may be misleading. Emotional reactions or evaluations occur at a very early stage and are more basic than
cognitive evaluations (LeDoux, 1996; Zajonc, 1980). Furthermore, theorists recognise that emotion and cognition are interdependent, rather than competing, influences (Simon, 1967). Emotions are seen to be triggered by beliefs; hence, an investor regrets an investment decision because he or she believes that bad outcomes could have been avoided. In the stock market, it appears that an investor is more concerned with the financial risk and the opportunity loss risk than other risks. The financial risk is concerned with the outcome that will harm the investor financially, whereas the opportunity loss risk is the outcome that by buying stock A, the investor will miss out on buying stock B he would really prefer buying. When an investor makes an investment decision, the investor’s perception of these two risks can be a deciding factor. If the investor is risk averse, he/she will take steps to minimise risk, for example, by diversifying his/her investment in various stocks; if he/she is a risk-taker, he/she will not tend to diversify his/her portfolio; for example, he/she will invest in one stock, expecting to get a high return on investment. Therefore, investors with various degrees of perceived risk attitudes, namely, perceived risk averse, perceived risk neutral or perceived risk takers will behave differently.

2.4. Investment Behaviour

According to Gerald Appel (2006), investor behaviour relates to their search for purchasing, using, evaluating and disposing off goods, services, ideas or experience to satisfy their needs and desires. Individual investor behaviour is influenced by four types of biases such as heuristic bias, prospect bias, market bias and herding bias. Heuristics are defined as the rules of thumb which make decision-making easier, especially in complex and uncertain environments by reducing the complexity of assessing probabilities and predicting values to simpler judgements (Kahneman & Tversky, 1974; Ritter, 2003). According to Kahneman and Tversky, there are three factors of heuristic behaviour, namely, representativeness, availability bias and anchoring. Waweru, Munyoki and Uliana (2008) also list two factors such as gambler’s fallacy and overconfidence. Representativeness refers to the degree of similarity that an event has with its parent population (DeBondt & Thaler, 1995) or the degree to which an event resembles its population (Kahneman & Tversky, 1974). Representativeness may result in some biases such as people placing too much weight on recent experience and ignoring the
average long-term rate (Ritter, 2003). Representativeness also leads to the so-called ‘sample size neglect’ which occurs when people try to infer from too few samples (Barberis & Thaler, 2003). In the stock market, when investors seek to buy ‘hot’ stocks instead of poorly performing ones, representativeness is manifested. This behaviour is an explanation for investor overreaction (DeBondt & Thaler, 1995). The belief that a small sample can resemble the parent population from which it is drawn is known as the ‘law of small numbers’, (Rabin, 2002; Statman, 1999) which may lead to a gambler’s fallacy (Barberis & Thaler, 2003). More specifically, in the stock market, gambler’s fallacy arises when people predict inaccurately the reverse points which are considered as the end of good (or poor) market returns (Waweru et al. 2008). In addition, when people are subject to status quo bias, they tend to select suboptimal alternatives simply because it was chosen previously (Kempf & Ruenzi, 2006). Anchoring is a phenomenon that occurs when people use some initial values to make an estimation. It is biased towards the initial ones as different starting points yield different estimates (Kahneman & Tversky, 1974). In the financial market, anchoring arises when a value scale is fixed by recent observations. Investors always refer to the initial purchase price when selling or analysing. Thus, today prices are often determined by those of the past. Anchoring makes investors to define a range for a share price or company’s income based on the historical trends, resulting in underreaction to unexpected changes. Anchoring has some connection with representativeness as it also reflects that people often focus on recent experience and tend to be more optimistic when the market rises and more pessimistic when the market falls (Waweru et al., 2008). When people overestimate the reliability of their knowledge and skills, it is the manifestation of overconfidence (DeBondt & Thaler, 1995; Hvide, 2002). Many studies show that excessive trading is one effect of the investors. There is evidence showing that financial analysts revise their assessment of a company slowly, even in case there is a strong indication proving that assessment is no longer correct. Investors and analysts are often overconfident in areas that they have knowledge about (Evans, 2006). Overconfidence is believed to improve persistence and determination, mental facility and risk tolerance. In other words, overconfidence can help to promote professional performance. It is also noted that overconfidence can enhance others’ perception of one’s abilities, which may help to achieve faster promotion and greater investment duration (Oberlechner & Osler, 2004). Availability bias happens when people make use of easily available information excessively. In stock trading
area, this bias manifests itself through the preference of investing in local companies which investors are familiar with or can easily obtain information about, despite the fundamental principles of so-called diversification of portfolio management for optimisation (Waweru, Kabiru, Mbithi, & Some 2003).

In this research, we have explored the effect of demographic factors, awareness and perceived risk attitude on five factors of heuristic bias, namely, representativeness, overconfidence, anchoring, availability bias and gambler’s fallacy, related to investment behaviour in the stock market.

Prospect theory describes some states of mind affecting an individual’s decision-making processes including regret aversion, loss aversion and mental accounting (Waweru et al., 2003). Loss aversion refers to the difference in the level of mental penalty people experience from a similar-sized loss or gain (Barberis & Huang, 2001). There is evidence showing that people are more distressed at the prospect of losses than they are pleased by equivalent gains (Barberis & Thaler, 2003). Moreover, a loss coming after a prior gain is proved less painful than usual while a loss arriving after a loss seems to be more painful than usual (Barberis & Huang, 2001). Risk aversion can be understood as a common behaviour of the investor; nevertheless, it may result in bad decisions affecting the investor’s wealth (Odean, 1998a, 1998b). Mental accounting is a term referring to ‘the process by which people think about and evaluate their financial transactions’ (Barberis & Huang, 2001). It allows investors to organise their portfolio into separate accounts (Barberis & Thaler, 2003; Ritter, 2003). In this research, the effect of demographic factors, awareness and perceived risk attitude on the three factors of prospect bias, namely, loss aversion, regret aversion and mental accounting, have been explored with respect to investment behaviour in the stock market. Waweru et al. (2008) identify the market factors that have an impact on investors’ decision-making: price changes, market information, past trends of stocks, customer preference, overreaction to price changes and fundamentals of the underlying stocks.

In this research, we have explored the effect of demographic factors, awareness and perceived risk attitude on factors of markets bias in relation to investment behaviour in the stock market.

Herding effect in the financial market is identified as the tendency of investors to follow others’ actions. Individual investors follow the crowd in making investment decisions more than institutional investors do (Goodfellow, Bohland, & Gebka, 2009). Waweru et al. (2008) identify
stock investment decisions that an investor can be impacted by others’
decisions: buying, selling, choice of stock, length of time to hold stock
and volume of stock to trade. In this research, we have explored the
effect of demographic factors, awareness and perceived risk attitude on
the four factors of herding bias, namely, buying and selling pattern,
choosing stock type, choosing stock volume and speed of herding
related to investment behaviour in the stock market.
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