

GENDER ATTITUDES AND INVESTOR BEHAVIOUR: EVIDENCE FROM INDIVIDUAL INVESTORS IN NORTH WESTERN PROVINCE

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Abstract

Individual investment behaviour has become more sophisticated in past decades. Some scholars have explored how various demographic factors, predominantly gender, influence individual investor behaviour. Besides, they have concluded that there are three behavioural factors affecting the investment decisions of individual investors, such as cognitive factors (i.e. overconfidence, anchoring, hindsight bias, gambler's fallacy, investor optimism), emotional factors (i.e. mental accounting, endowment effect, loss aversion, regret aversion), and herding factors (i.e. following the habits of other investors in buying, selling, choice and trading of investments). This paper discusses the influence of investors' gender attitudes on investor behaviour, and in turn, their impact on the selection of different investment avenues in the Colombo Stock Exchange (CSE) in Sri Lanka. It reports the views of 97 (N=97) individual investors in the CSE, randomly selected from the North Western Province (NWP). The results reveal that, though people accepted the importance of investing in the CSE, less investors actually have an appropriate plan to invest in shares a majority of them male. The results validate that individual gender attitude differences significantly influence cognitive factors, emotional factors, and herding factors, and in turn, individual investor behaviour in CSE. These findings also illustrate that there seems to be a strong correlation among the investor's demographic factors, market factors, risk-bearing capacity, lifestyle characteristics, and behaviour.

Key Words: *Behavioural Finance, Colombo Stock Exchange, Gender, Investor Behaviour*

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INTRODUCTION

The financial sector is among the most vital sectors contributing the economic growth of a country, and in turn, economic growth is a fundamental factor affecting quality of life. Today the financial services sector has become highly diversified offering the investor with a wide range of investment avenues. From this perspective, Anuradha and Anju (2015) argue that with proper behavioural strategies investors can increase personal wealth which will contribute to higher economic growth.

Individual investment behaviour is concerned with choices about purchases of securities on one's own account. While, expected utility theory explains the individual investment decision as a tradeoff between immediate consumption and deferred consumption, conventional financial theory views investors as rational decision makers, and their investment strategies as taking place purely on the basis of the risk-return consideration. However, in practice, the level of risk investors are willing to undertake are not the same, and depend mainly on personal attitudes to risk and other factors. Supporting this argument, Lubna and Moid (2013) held that investors have a different mindset when they decide about investing in a particular avenue. Every individual wants his saving to be invested in the most secure and liquid way. However, individual investor decisions vary depending on risk aptitude.

Nofsinger and Richard (2002) explain individual investor behaviour as an individual's concerns with choices about purchases of small amounts of securities on his or her own account. No matter how much an investor is well informed about the stock before investing, he also behaves irrationally with the fear of loss in the future (Ambrose and Vincent, 2014). This behaviour in individual investors is caused by various factors which compromise investor rationality. Due to this reason, individual investors' behaviour has drawn the attention of academics and investment practitioners globally.

The attitudes and expectations surrounding gender roles are typically based not on any inherent or natural gender differences, but on stereotypes about the attitudes, traits, or behavioral patterns of women or men. Gender stereotypes form the basis of sexism, or the prejudiced beliefs that value males over females (www.boundless.com). To create interaction terms, research centered each gendered attitude on the mean value of male and female. On the other hand, research findings by Anuradha and Anju, (2015), which examined the investors' saving and investment behaviour, suggested that three behavioural factors affect investment decisions in the capital market (i.e. cognitive factors, emotional factors, and herding factors).

This study examined the impact of gender attitude differences on individual investor behaviour in the Colombo Stock Exchange (CSE) in Sri Lanka. For this purpose, the

behaviour of individual investors is measured using cognitive, emotional, and herding factors.

Statement of the Problem

A traditional view of investment theory is that investors are rational beings who always attempt to maximise expected returns based on their expectations of future risks. By opposing this standpoint, the research findings by Anuradha and Anju, (2015), which examined the investor saving and investment behaviour have proved that investors are irrational in investment decision making. They have identified various factors, including investors' behavioural factors, which influence their decisions to save and invest. Other prior research also have suggests that individual investment decisions depend on many factors such as demographic factors, market factors, lifestyle characteristics, risk-bearing capacity of investors, and investor behaviour (Ambrose and Vincent, 2014; Chakraborty, 2014; Chandra and Kumar, 2011; Robert and Robert, 1994).

Literature suggests that individual investment decisions need to undergo a thorough analysis of the prevailing situation based on a number of factors. Although thorough analysis of individual investor behaviour in the CSE helps to mitigate the risk associated with the investment decision, and in turn, to investment in the CSE, there has been surprisingly little research conducted in this area, particularly in Sri Lanka. Against this backdrop, this study sought to fill the gap by determining the gender-attitudes differences that appear to influence individual investment behaviour in the CSE an emerging stock market in Asia.

Objectives

1. To identify important factors influencing investment behaviour at the CSE
2. To assess the influence of demographic variables on investment behaviour
3. To discover the degree of correlation between investor's gender and cognitive, emotional, and herding factors

REVIEW OF LITERATURE

Behavioural Finance

Standard finance theory and economic models draw heavily from two basic assumptions, namely, rationality and market efficiency. The assumptions of traditional economists portray humans as rational beings who always strive to maximise utility. The proponents of behavioural finance continuously challenge this assumption and

believe that numerous factors, including both rational and irrational thinking, drive investor behaviour. They believe that market price is not always a fair estimate of the underlying fundamental value of the firm, and that investor psychology can drive market prices and fundamental value very far apart (Shefrin, 2000; Mishra and Mary, 2015).

Today, behavioral finance has achieved impressive strides in explaining the behavioral aspects of investment decisions in three major frames: prospect theory, regret aversion and self-control. Each of these elements captures behavioral attributes of individual investors. Considering the challenging progression of behavioural finance, behavioural scientists have commenced empirical research and studies in the 1970s (Ambrose and Vincent, 2014). Most of this research on investor behaviour have shown the existence of irrational thinking in investor decision making.

Behavioural scientists brought in their knowledge of human behaviour to explain the reasons for instances of over- and undervaluation of shares in the market, and therefore, individuals' investment behaviour has been explored through a large body of empirical studies over the past three or four decades. These findings establish that investment behaviour of an individual may be contingent on many factors. For instance, Potter (1971) identifies six factors: dividends, rapid growth, investment for saving purposes, quick profits through trading, professional investment management and long-term growth, as affecting individual investors' attitudes towards their investment decisions, while Anuradha and Anju, (2015) categorise investor-influential factors into six groups: demographic factors, market factors, risk bearing capacity, lifestyle characteristics, behavioural factors, and other factors. Hussein (2007) found that expected corporate earnings, get rich quickly, stock marketability, past performance of the firm's stock, government holdings, and the creation of organised financial markets are investor considerations. Further, Thu Ha (2011) had concluded that there are five behavioural factors affecting the investment decisions of individual investors such as herding, market, prospect, overconfidence, gamble's fallacy, and anchoring-ability bias.

In light of the above contradictions in literature, the researcher wanted to test the following hypothesis:

H₁: Influence of investor's demographic factors on investor's behaviour in CSE is substantial than market factors, risk bearing capacity, and lifestyle characteristics

Gender Attitude

It is generally believed that the investment decision is strongly correlated with individual investor demographics. Some scholars, therefore, have explored various

demographic factors such as gender, age, education, and income as influencing the individual saving and investor behaviour (Amiri, Nooredin and Gholam, 2013; Chakraborty, 2012; Parashar, 2010). They are of the view that gender attitudes affect the selection of different investment avenues.

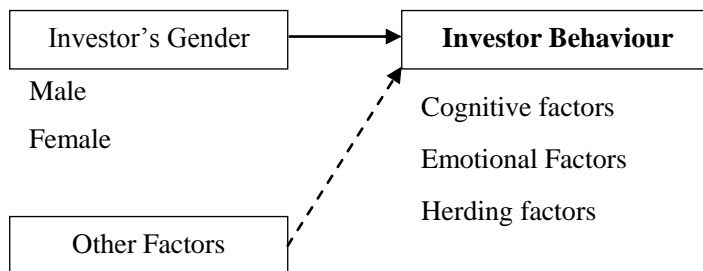
Most of the past research on gender and investing has found that females tend to have greater risk aversion when compared with males in investing decisions (Graham, et.al. 2002). In contrast with these findings, more recent research on gender and investment show mixed results (Arano *et.al*, 2010), while few empirical studies have shown that men and women are both overconfident in investment behaviour (Anuradha and Anju, 2015). Yet, it is a common belief that females are more risk averse than males, and in behavioural finance literature, there are many sources that show males are more overconfident than females with respect to risk taking in investment.

Researchers have exposed that men have a stronger tendency towards overconfident behaviour than women, and this overconfidence is dependent on the task involved (Lundeberg, *et.al*, 1994; Mishra and Mary, 2015). Pompian and Longo (2004), in their study to create investment programmes, based on personality type and gender to produce better investment outcomes found that many personality types and both genders are differently disposed to numerous behavioural finance biases. Supporting this argument, Wang (1994) says that ‘*since females are perceived to be more risk averse than males, investment brokers tend to urge females to invest in less risky portfolios, which results in lower expected returns*’. Further, Beyer (1990, cited in Mishra and Mary, 2015) shows that men are more prone to self-attribution bias than women are. In line with the above inquiry, the following hypotheses are formulated:

H₂: Individual’s demographic variables are significantly and positively correlate with investor’s behaviour factors

H₃: Individual’s gender attitude significantly influences investor’s cognitive, emotional, and herding factors

Conceptual Framework



MATERIALS AND METHODS

To test the above-mentioned hypotheses, primary data were collected from a sample of 97 individual investors. The sample was chosen randomly from among individual investors who visited a CSE branch in Kurunegala District, North-Western Province. To collect data the researcher used a structured and pre-tested questionnaire that was personally administered to respondents. The researcher visited investors according to appointments fixed with them at CSE Kurunegala, and filled up the interviewer-administered questionnaire with feedback from respondents. Data collection went on for few weeks between October and December 2015.

The questionnaire was structured into two sections. Section A sought to capture the demographic data of the investor. Section B was concerned with data on factors which affect individual investment behaviour. The section represented three aspects of investor behaviour: cognitive, emotional, and herding (Table 1).

Table 1: Independent and Dependent Variables

Independent Variables		Dimensions	
A. Investor's Gender	Male	Female	
Other Variables	Marital Status	Type of investor	Experience
	Education	Occupation	
Dependent Variable		Dimensions	
B. Behavioural Factors	Cognitive factors	Emotional Factors	Herding factors
Cognitive Factors	Heuristics	Confidence	Anchoring
	Hindsight bias	Gambler's fallacy	Optimism
Emotional Factors	Mental accounting	Endowment effect	Loss aversion
	Regret aversion		
Herding Factors	Following the habits of other investors in buying , selling , choice and trading of investments		

Respondents were asked to indicate the degree of how they are influenced by each of the items on the five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). This data was coded and tabulated for analysis. Data was analysed using frequencies, mean scores, standard deviations, percentages, correlation test, and analysis of variance (ANOVA) techniques. The ANOVA test was applied to test the significant difference between gender, level of education, marital status, type of investor, occupation, and

investor experience (independent variable) with the dependent variable, investor behaviour. The correlation between the gender of individual investors and investor behaviour was carried out to find the degree of association between the two.

A chi-square test also has been done to examine whether there exists any dependency between investment and each demographic factor such as age, income and gender separately.

DATA ANALYSIS AND FINDINGS

This study sought to determine the influence of gender attitudes of individual investors on investment behaviour in CSE. Hence, the investor's responses across gender were studied. Moreover, their responses across level of education, type of investor, marital status and investor's experience were also studied. Investors with less than one year of investment experience were considered as less experienced investors (or newcomers to the market), and those with above two years of experience were considered experienced. Whereas, investors with one to two years of investment experience were considered to be moderately experienced investors.

Descriptive Statistics

The demographic profile of the respondents is depicted in Table 2. Out of the hundred (N=100) investors targeted, only three (N=3) investors failed to fill the questionnaire acceptably. All other investors provided all details requested; therefore giving a response rate of 97%. 74% of the sample is male, while the remaining 25% is female. Most of the respondents (52%) are married and nearly 69% have studied beyond secondary level of education [GCE (A/L)]. Interestingly, 81% investors are occupied in the non-finance sector, while the remaining 19% work for finance sector.

Out of the total sample, 38% fall in the age group of 18 to 35 years while the remaining population falls in the age group of over 35 years. Further, 37% of the total respondents stated that they had been investing in the CSE for the last two years while 24% were new to the CSE, with less than one year of experience.

Table 2: Demographic Profile of the Respondents

Gender	Count	Percent	M. Status	Count	Percent	Education	Count	Percent	Age	Count	Percent
Male	72	74.2	Married	52	53.6	G.C.E. (OL)	00	0.0	18-25	17	17.5
Female	25	25.8	Unmarried	45	46.4	G.C.E.(AL)	30	30.9	25-35	20	20.6
						Professional	48	49.5	35-45	35	36.1
						Degree	19	19.6	45-55	17	17.5
								55<	8	8.2	
Total	97	100.0	Total	97	100.0	Total	97	100.0	Total	97	100.0
Mean (\bar{x})		1.2577	Mean (\bar{x})		1.4639	Mean (\bar{x})		2.8866	Mean(\bar{x})		2.7835
SD		0.43966	SD		0.50129	SD		0.70528	SD		1.17462
Occupation	Count	Percent	Experience	Count	Percent	Type	Count	Percent			
Finance	18	18.6	< 01 years	23	23.7	Direct	9	9.3			
Non- finance	79	81.4	01 - 02 yrs	36	37.1	Indirect	88	90.7			
			02 < years	38	39.2						
Total	97	100.0	Total	97	100.0	Total	97	100.0			
Mean (\bar{x})		1.8144	Mean (\bar{x})		2.1546	Mean (\bar{x})		1.9072			
SD		0.39078	SD		0.78183	SD		0.29164			

Test Validity and Reliability

The reliability of the measures was assessed using Cronbach's alpha. Reliability in the current study ($\alpha = .82$) was acceptable, compared to that reported by Thompson and Pleck in 1986.

Data Analysis

The data were analysed using descriptive statistics, correlation analysis, and ANOVA techniques with the help of SPSS, which enabled data interpretation, and statistical inferences. Respondents were asked to indicate the response which best described their feeling against each item in the second part (Section B) of the questionnaire. The questions were based on cognitive, emotional, and herding factors. Views of the respondents were rated on a 5-point scale ranging from "strongly disagree" (1) to "strongly agree" (5). To create interaction terms, research centered each gendered attitude on its mean, and coded sex as 1 = male, 2 = female.

Table 3 shows the views of the respondents on factors that influencing individual investor behaviour in CSE. The mean score given by the investors for demographic factors is 4.052 (SD 0.7822), and is followed by market factors ($\bar{x} = 3.763$; SD 0.8632), lifestyle characteristics of respondent ($\bar{x} = 3.608$, SD 0.7087), and risk bearing capacity ($\bar{x} = 3.515$, SD 0.7087). Based on these findings, the researcher confirmed that the influence of investor's demographic factors on investor's behaviour in CSE is more substantial than other factors than previous empirical evidence had indicated.

Table 3: Factors influencing Individual Investor Behaviour

	Demographic Factors	Market Factors	Risk Bearing Capacity	Lifestyle Characteristics
Mean Score	4.052	3.763	3.515	3.608
Std. Deviation	0.782239	0.863293	0.708775	0.531443

This finding supports the first hypothesis of this study and it can be concluded that influence of investor's demographic factors on investor's behaviour in CSE is more substantial than other influential factors, such as market factors, risk bearing capacity, and lifestyle characteristics.

Table 4 shows the correlation between demographic variables of the respondents categorised on the basis of their behavioural factors. These findings reveal that, other than the investor's occupation (i.e. employment in finance or non-finance sector), other demographic variables are significantly ($p < 0.01$) correlated with at least one

behavioural factor. Therefore, the researcher confirmed that there seems to be a certain degree of correlation between investor gender and investor behaviour. So the second hypothesis is partially supported and it can be inferred that some demographic variables are significantly correlated with investor behaviour.

Table 4: Correlation between Investor's Demographic Factors and Behavioural Factors

		Cognitive Factors	Emotional Factors	Herding Factors
Marital Status	Pearson Correlation	-0.275**	0.178	0.284**
	Sig. (2-tailed)	0.006	0.081	0.005
Investor's Age	Pearson Correlation	0.003	0.177	-0.132
	Sig. (2-tailed)	0.975	0.083	0.198
Type of Investor	Pearson Correlation	-0.193	-0.334**	0.629**
	Sig. (2-tailed)	0.059	0.001	0.000
Experience	Pearson Correlation	0.471**	-0.404**	-0.391**
	Sig. (2-tailed)	0.000	0.000	0.000
Education	Pearson Correlation	0.387**	-0.061	-0.293**
	Sig. (2-tailed)	0.000	0.550	0.004
Occupation	Pearson Correlation	0.201	0.098	-0.060
	Sig. (2-tailed)	0.058	0.342	0.559
N		97	97	97

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

An analysis of variance (ANOVA) test was applied to test the significant difference between investor's gender (independent variable) with the dependent variable, investor behaviour (cognitive factors, emotional factors, and herding factors). The correlation between investors' gender and behaviour was also carried out to find the degree of association between the two.

Table 5 shows the correlation between individual investors' behaviour and gender. In statistics, the correlation coefficient measures the strength and direction of a linear relationship between two variables on a scatterplot. The correlation coefficient for 'emotional factor' is 0.536 ($p < 0.01$), which indicates a moderate positive linear relationship between individual investor's behaviour and investor's emotional factors. This is followed by 'cognitive factors' with a moderate negative linear relationship ($r = -0.454$, $p < 0.01$) and 'herding factors' with a weak positive linear relationship ($r = 0.351$,

$p < 0.01$). These figures imply that the relationship between investor behaviour and investor gender is statistically significant.

Table 5: Correlation between Investor Gender and Behavioural Factors

	Gender	Cognitive Factors	Emotional Factors	Herdng Factors
Pearson Correlation	1	-0.454**	0.536**	0.351**
Sig. (2-tailed)		0.000	0.000	0.000
Pearson Correlation		1	-0.554**	-0.427**
Sig. (2-tailed)			0.000	0.000
Pearson Correlation			1	0.535**
Sig. (2-tailed)				0.000
N	97	97	97	97

** . Correlation is significant at the 0.01 level (2-tailed).

Table 6 shows the views of respondents towards investment behavior, categorised by gender.

Gender and Cognitive Factors

The mean score for cognitive factors given by male investors is 3.741 and by female investors is 3.394. The ANOVA output shows the F-value is 24.667 and sig. value is 0.000. Since the sig. value is < 0.05 , the mean difference is significant which implies that difference in response based on gender is statistically significant.

Gender and Emotional Factors

The mean score for emotional factors given by male investors is 3.382 and by female investors is 4.070. The ANOVA output shows the F-value is 38.264 and sig. value is 0.000. Since the sig. value is < 0.05 , the mean difference is significant which implies that difference in response based on gender is statistically significant.

Gender and Herding Factors

The mean score for herding factors given by male investors is 2.399 and by female investors is 2.810. The ANOVA output shows the F-value is 13.368 and sig. value is 0.000. Since the sig. value is < 0.05 , the mean difference is significant which implies that difference in response based on gender is statistically significant.

Table 6: Investor's Gender and Investor Behaviour

Behavioural Factor	Gender	N	Mean	Std. Dev.	F -value	Sig.
Investor Behaviour	Male	72	3.1750	0.25939	19.209	0.000
	Female	25	3.4244	0.20427		
	Total	97	3.2387	0.26846		
Cognitive Factors	Male	72	3.7411	0.31082	24.667	0.000
	Female	25	3.3936	0.27169		
	Total	97	3.6515	0.33652		
Emotional Factors	Male	72	3.3819	0.43194	38.264	0.000
	Female	25	4.0700	0.59739		
	Total	97	3.5593	0.56455		
Herding Factors	Male	72	2.3993	0.53842	13.368	0.000
	Female	25	2.8100	0.26300		
	Total	97	2.5052	0.51410		

Gender and Individual Investor Behaviour

Therefore, the mean score for the investor behaviour given by the male investors is 3.175 and by female investors is 3.424. The ANOVA output shows an F-value of 19.209 and the sig. value is 0.000. Since the sig. value is < 0.05 , the mean difference is significant which implies that difference in response based on investor gender is statistically significant.

These findings finally support the third hypothesis and it can be inferred that individual's gender attitude significantly influences investor's cognitive factors, emotional factors, and herding factors.

CONCLUSION AND RECOMMENDATIONS

Conclusion

It is generally believed that investment decisions are a function of several factors such as investor demographic factors, market characteristics, investor and individual risk profiles. Recent studies on individual investor behavior have shown that investors do not act rationally and that several factors influence investment decisions in the stock market. The objective of this study was to identify the influence of gender attitude

differences on individual investor behaviour on the CSE, in North-Western Sri Lanka. The results revealed by the sample of 97 respondents confirm that there seems to be a strong correlation between the investor's demographic factors, market factors, risk-bearing capacity, lifestyle characteristics, and individual investor's behaviour. Further, it was empirically proved that the influence of investor's demographic factors on investor's behaviour is substantial than other factors that identified in this study.

Then the researcher explored the relationship between investor behaviour and demographic factors such as gender, marital status, age, education, occupation, type of investing, and experience. The finding confirmed that there seems to be a certain degree of correlation between investor demographics and investor behaviour. Finally, the findings of this study endorse that individual gender attitude differences are significantly influence investors' cognitive, emotional, and herding factors, and in turn, on individual investor behaviour in CSE.

Policy Recommendations

The findings of this study infer that with proper individual investment behavioural strategies investor can strengthen their investment portfolio. Yet, most of the studies on investor behaviour have shown the existence of irrational thinking in investor decision making. Therefore, the researcher recommends that investment advisors in the CSE analyse investment behaviour of individual investors carefully using reasonable business knowledge before persuading them to make an investment decision. Moreover, since gender attitudes of investors are strongly correlated with investor behaviour, different strategies are to be formulated to serve the needs of male and female investors separately. The researcher strongly believes that, insight into the relationship between individual investor behaviour on the CSE and their gender attitudes will help policy makers to develop investor persuasion strategies.

Suggestions for Future Research

This study examined the individual investor gender attitude differences that appear to exercise the greatest influence on investor behaviour, and included only few factors investigated by previous studies and derived from prevailing behavioral finance theories. In future studies, researchers may employ more specific factors which can influence investment behaviour, such factors being generated through personal interviews and focus-group discussions.

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