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IMPACT OF PERSONALITY TRAITS ON STOCK INVESTMENT DECISION MAKING AND THE MEDIATING EFFECT OF FINANCIAL SELF EFFICACY

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ABSTRACT

This purpose of this research examines the influence of personality traits on individual stock investment decision-making and tests the mediating role of financial self-efficacy between the investors' traits and their stock investment decision-making in Sri Lanka. A questionnaire-based survey was conducted to collect the data from 460 registered individual investors at Colombo Stock Exchange (CSE). The regression analysis was adopted to examine the impact of personality traits on stock investment decision-making. Moreover, mediating analysis was done using sobel test. The results revealed that extraverted individual investors prefer stock investment. In contrast, the individual who possesses sympathy toward others, helpfulness, and personal warmth tend to follow others' advice, and those agreeable investors negatively impact stock investment decisions at CSE. Further, the case of financial self-efficacy fully mediates the relationship of extra version, conscientiousness, neuroticism, and openness to experience with stock investment decision making and partially mediates the relationship of agreeableness and stock investment decision making. The study has insights to investors, stockbrokers, and regulators as the crucial factors to recognize individual investors' traits and financial self-efficacy differences in making a sound investment decision.

Keywords: *Big five personality traits, Colombo stock exchange, financial self-efficacy, individual investors, investment decision making.*

1. Background of the study

The stock market plays a crucial role in the growth of any economy. However, the stock market movement and volatility affect the economic health of a country. The efficient market hypothesis is challenged from the literature on long-term stock market anomalies. Initially, investor's overreactions (anomalies) are explained by De Bond and Thaler's alternative behavioral explanation in 1985.

With this sense, these anomalies may be explained by behavioral finance in the extant literature. For example, Kahneman and Tversky (1979); Barber and Odean (1999); Barberis and Thaler (2003); Durand, Newby and Sanghani, (2008). Rzeszutek, Czerwonka, and Szyszka

(2015) suggest cognitive and emotional biases as essential factors that may influence individual's overreaction and underreaction to stock market information. Recent studies by Mishra, Lalumiere and Williams (2010) and Yang, Hsu, and Tu (2012) provide empirical evidence supporting this prediction in the context of developed countries. However, empirical investigation on the effect of individual behaviors on stock market anomalies is primarily limited in the context of emerging and frontier markets. In this study, the authors fill the literature gap by examining the effect of the big five personality traits on stock investment decisions in the Sri Lankan market. Also, exploring the mediating role of financial self-efficacy on the estimated relationship between personality traits and investment decision making.

Further, traditional theories in finance have been based on a transparent lens of risk and return, assuming that investors are rational and make rational decisions (Fama, 1970; Lintner, 1965; Sharpe, 1964). Later, behavioral finance theory debates that human nature can bound or limit rationality during investment decisions (Barber & Odean, 1999). Accordingly, in real life, investors behave irrationally due to their cognitive and emotional biases. Hence, behavioral and cognitive factors are of significant concern in their stock investment decision-making (Barber & Odean, 2000; Barberis & Thaler, 2003; Kahneman & Tversky, 1979). In addition, researchers found that distinctive characteristics shared by people with different personalities do affect the susceptibility to these behavioral biases (Durandet et al., 2008; Rzeszutek et al., 2015). In such a way, prospect theory (Kahneman & Tverskey, 1979) also explained that investors' psychological factors are the reason for the deviation of actual decision-making from rationality. Thus, investors often tend to make mistakes that would lead to inefficient investment decisions. Many such studies evidenced that irrational decision making guided by psychological and cognitive biases (Costa, Carvalho & Moreira, 2019).

Thus, personality can be regarded as a critical driver of human behavior (Heinstrom, 2003). In uncertain circumstances, personality traits are found to guide individuals' decision-making behavior (Back & Seaker, 2004). Crysel, Crosier, and Webster defined personality as "the way an individual interacts, reacts and behaves with others and is often exhibited through measurable traits" (as cited in Sadiq & Khan, 2019, p.2). Accordingly, Mc Crae and Costa's (1987) big five personality model is well accepted in the previous studies and considered in this study. As far as the developing countries perspective, a dearth of studies exists based on behavioral finance.

In the view of the Sri Lankan stock market is mainly unique as it is identified as having a unique setting with low capitalization and high variance in performance levels (Peter & Senaratne, 2013). It is also stressed that the amount of studies that have focused on the investor behavior in frontier markets like Sri Lanka is found to be significantly less (Sewwandi, 2016). Because socio, cultural, and institutional factors seem to influence the formation of individual risk preferences towards financial investments (Ferreira, 2018), it is necessary to study the Sri

Lankan context separate from other empirical studies. Therefore, the research gap examines the influence of personality traits on individual stock investment decision-making and tests the mediating role of financial self-efficacy between these constructs in the Sri Lankan setting. Consequently, this study seems to be timely and pertinent to the frontier market like Sri Lankan stock market. The market has continued to expose greater volatility on trade volume and market capitalization, based on the market fundamentals (Duruthu, 2011). Investors at CSE have much faith in their forecasts, leading to bias in their actions (Pathirawasam & Idirisinghe, 2011). Therefore, it is noteworthy to study the personality traits of investors in the Sri Lankan market. Empirical findings of this study supported personality traits such as extraversion and agreeableness influence investment decisions. Further, the significant full mediating relationship is brought by financial self-efficacy between personality traits (extraversion, neuroticism, consciousness, and openness to experience) and investment decision making, while partially mediated between agreeableness and investment decision making.

The rest of the paper contains as follows: section 2 discusses the existing literature on personality traits, stock investment decision making, and financial self-efficacy, while section 3 explains the data and methodology employed in the current study. Section 4 provides a comprehensive analysis of data and discussion, whereas section 5 offers the conclusion of the study, and finally, section 6 concludes the implication, limitation, and direction for further investigation.

2. Literature review

2.1 Rational decision making

The basic assumption behind traditional finance is that people always make rational investment decisions. However, this does not happen in real-life practices (Kahneman & Tversky, 1979). In practice, irrational behavior would endorse by the fact that stock market anomalies are still not answered. In 1980s onwards, it is referred to as behavioral finance. Behavioral finance studies the psychological aspect of financial decision-making and explains the irrationality of investors in investment decision-making.

Consequently, Kahneman and Tversky (1979) put forward the prospect theory and explain how the investors make decisions based on the probabilistic alternatives involving risk when the probable outcome of investment decision is known. Then, De Bondt and Thaler (1985) assert that investors behave irrationally in the financial market, resulted towards sub optimal decision. Further, Nair and Antony (2015) interpret behavioral finance as not a replacement to traditional finance theories but understand the irrational investor behavior and reasons for sudden rise and fall in the market. Over the time, in the literature, scholars have spoken two decision models: rational and bounded rationality models. The bounded rationality model refers to the fact that human cognitive abilities are unbounded; generally, stock market representatives are also not irrational; they are bounded rational due to incomplete information and human beliefs. Irrational behavior would result in a suboptimal decision.

2.2 Personality traits and investment decision making

Most of the prior studies have explored that personal traits and emotions are essential factors influencing investment decision-making (Yang et al., 2012). Investor personality has a considerable role and effect on his/her psychology which may influence on decisions. The five-factor theory on personality is considered a prototype for the new generation of personality theories (McCrae & Costa, 1987). It offers a comprehensive yet manageable guide to personality traits. The Five-Factor Model (FFM) is the most applied empirical model in personality psychology in the past (Rizvi & Fatima, 2015). Supporting this, Tauni, Fang, and Iqbal (2017) claimed that trading decisions include investor personality in making financial choices. FFM is deemed to be capturing major dimensions of personality common to most personality scales. The fact that FFM accounts for the variance common to scales derived from widely different theoretical perspectives is the most striking evidence of its comprehensiveness. FFM describes personality in five dimensions extraversion, neuroticism, agreeableness, consciousness, and openness to Experience (Weller, J. &Thulin, E., 2012).

An extraverted individual would possess pleasant, Assertiveness, energetic, excitement seeking, positive emotions, warm and are not restricted by rationality. They are optimistic and make positive decisions. These characteristics would lead to a loss in the financial market due to the overestimation of forward-looking (Sadi, Asl, Rostami, Gholipour, & Gholipour, 2011). The main characteristics of neurotic individuals include impulsiveness, depression, anxiety, and anger. They are self-centered and are on the lookout for superior goals (Sadi et al., 2011). Investors with this personality tend to be nervous, anxious and emotionally unstable, and scared to make a decision (Jamshidinavid, Chavoshani, & Amiri, 2012). Individuals who are low agreeable generally tend to follow peer recommendations in investment decision-making, resulting in herding effects (Jamshidinavid et al., 2012). A conscientious person would be depicting characteristics of competence, organization, achievement striving, self-discipline, and deliberation (John & Srivastava, 1999).

Individuals possessing a high openness to experience are adjustable and succumb to novel ideas and unique values. They tend to take a high risk (Mayfield, Perdue,& Wootan, ,2008). Among the traits, prior studies mainly explained that extraversion and openness to experience positively affect making risky investment decisions as contrasting to neuroticism, agreeableness, and consciousness (Mayfield et al., 2008; McCrae & Costa, 1997). Therefore, the following hypotheses are formulated based on the theoretical and empirical literature to test each personality trait's impact on stock investment decision-making.

$H1_a$: There is a significantly positive association between extraversion and investment decision making.

$H1_b$: There is a significantly positive association between neuroticism and stock investment decision making.

$H1_c$: There is a significantly negative association between agreeableness and investment decision making.

$H1_d$: There is a significantly positive association between consciousness and investment decision making.

$H1_e$: There is a significantly positive association between openness to experience and investment decision making.

2.3 The mediating role of financial self-efficacy between personality traits and investment decision making

There is a rising concern among behavioral finance researchers' in grinding the effect of self-efficacy beliefs in individuals' decision-making behavior in various contexts (Chen et al., 1998; Zhao et al., 2005; Hepler & Feltz, 2012b). Accordingly, Financial Self Efficacy was found to be one major factor affecting financial behavior and has been identified as a much more consistent predictor of behavior and behavioral change (Bandura et al., 1986; Zhao et al., 2005; Mindra & Moya, 2017). In the study of Husnain et al. (2019), financial self-efficacy confirmed mediating impact on the relationship between neuroticism and conscientiousness and investment decisions. Hence, it was revealed that highly conscientious individuals are self-confident in their analytical skills and possess a high level of financial self-efficacy since they are meticulous and thoughtful in their approach. Due to their high self-efficacy levels, they delay short-term gratifications and tend to invest in long-term financial instruments. Neurotics were risk-averse because they are threatened by environmental clues, specifically when it comes to stock market investments. They are very pessimistic and have a low level of financial self-efficacy Durand et al., (2008). Individuals who possess low financial self-efficacy may result in safer long-term investments, which may also bring higher returns. Based on the empirical discussion, hypotheses are framed as follows.

$H2_a$: Financial self-efficacy significantly mediates the relationship between extra version and investment decision making.

$H2_b$: Financial self-efficacy significantly mediates the relationship between neuroticism and investment decision making.

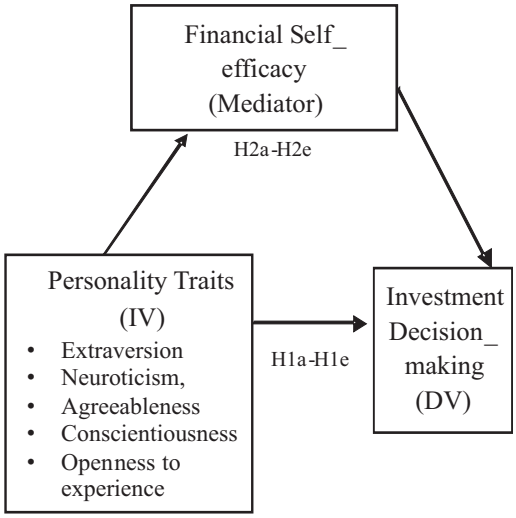
$H2_c$: Financial self-efficacy significantly mediates the relationship between agreeableness and investment decision making.

H2d: Financial self-efficacy significantly mediates the relationship between consciousness and investment decision making.

$H2_e$: Financial self-efficacy significantly mediates the relationship between openness to experience and investment decision making.

Based on the objective of the current study, the following conceptual model is derived using the theoretical and empirical pieces of evidence compiled in the literature review by illustrating the impact of traits of personality on stock investment decision making where this relationship is mediated by financial self-efficacy.

Figure 1: Conceptual framework



3. Research design and methodology

3.1 Data and sample

A self-administered questionnaire is being used for gathering the primary data for research. For this purpose, a survey has been conducted via online to the registered individual investors at CSE. Out of this population, 550 questionnaires are distributed randomly from May to July 2019 through stock brokering companies as online survey web links. Only 476 questionnaires are received, and a total of 460 valid questionnaires are considered for analysis after removing the incomplete questionnaires.

3.2 Measures

A self-administered questionnaire is being used, which comprises 53 questions following the five point Likert scale to measure the three constructs identified in the conceptual framework.

Mediating variable

Section A comprises a set of five questions used in assessing the financial self-efficacy of investors (mediating variable) as adopted from Montford and Goldsmith (2016) and the financial self-efficacy scale developed by Lown (2011). FSE is the beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives It contains of five questions ranging from 1 to 5 as "Strongly Disagree," "Disagree," "Neither Agree nor Disagree," "Agree," and "Strongly Agree". A high score specifies a tendency of high financial self-efficacy and vice versa.

Dependent variable

Section B comprises of a set of questions (6 questions) for assessing the dependent variable, which is stock investment decision making by investors with considering the risk, return, and social benefit considered by investors in their stock investment decision making (Mayfield et al.,2008; Pasewark & Riley, 2010).

Independent variables

The dimensions of personality can be identified as the big five personality traits explained by John and Srivastava (1999). Section C comprises 42 questions for assessing that big five personality dimension namely, extraversion, neuroticism, agreeableness, conscientiousness and open to experience. Questions are adopted from the big five personality model have been subject to cross validation across cultures and situations (Rizvi & Fatima, 2015). Which are the Independent variables in this study where eight questions are used to test extraversion characteristics such as sociable, energetic and excitement seeking etc… for example: *I see myself as someone who is talkative.*

A person who is high in Agreeableness would reflect characteristics of Trust, straightforwardness and modesty. Eight questions are adopted for agreeableness. For example: *I see myself as someone who is generally trusting*

Conscientious individuals are efficient, organized and self_discipline. This dimension is captured through nine questions like *I see myself as someone who tends to be lazy (negative question).*

A neurotic individual would possess characteristics of anxiety, hostility and depression etc. covers in eight questions for neuroticism. For example: *I see myself as someone who worries a lot.*

Individual possess the character of opennness to experience normally have ideas, wide interest over the things and unconventional. Nine questions for openness to experience are used. For example: *I see myself as someone who is curious about many different things.*

Finally, in section D, the demographic information of the respondents was recorded.

3.3 Respondents profile

The respondents' demographic attributes display in table 1. The result shows that male respondents accounted for 318 (nearly 69%) of the respondents, whereas 142 (nearly 31%) were female. The results show that 171 (37%) of the respondents were between the ages of 18 and 30 years old, 124 (27%) were 31 years and below 40, 106 (23%) were between 41 and 50 years old, 59 (13%) were in the range of 51 - 60 years, and none of them were above 60 years. Among the respondents, 242 (52.6%) were unmarried, and 203 (44.1 %) were married, and 15 (3.3 %) of the respondents are in the category of divorced/separated. When considering education qualifications, 50 respondents (10.9%) have Advanced Level (A/L) as their highest educational qualification, and 128 Table 1: Respondent Profile.

Category	Percent	Valid %
Gender		
Male	318	69.1
Female	142	30.9
Age		
18 - 30	171	37.2
31 - 40	124	27
41 - 50	106	23
51 - 60	59	12.8
Marital status		
Unmarried	242	52.6
Married	203	44.1
Divorced / Separated	15	3.3

Educational qualification		
Advanced Level (A/L)	50	10.9
Undergraduate	128	27.8
Bachelor	179	38.9
Master	103	
Experience in the Stock market		
Less than 3 Years	164	35.7
3-5 Years	158	34.3
6-8 Years	94	20.4
9-11 Years	22	4.8
Above 11 Years	22	4.8

(27.8%) were undergraduates. 179 (38.9%) were having a Bachelor's degree, and 103 (22.4%) were qualified with a Master's Degree. None of the respondents were qualified with a Ph.D. or under Ordinary Level (O/L). Stock market experience of the individual investors shows that the majority is with an experience of 5 or less number of years where 164 (35.7%) of them had any experience of fewer than 3 years in the stock market, and 158 (34.3%) were with 3-5 years of experience. 94 respondents (20.4%) had 6-8 years of experience while 22 (4.8%) were with 9 -11 years of experience, where just 22 respondents (4.8%) were having the longest tenure of more than 11 years in the stock market.

3.4 Validity and Reliability

The initial questionnaire was formulated and was directed to two senior academics of the university and one industry expert to confirm the content validity. The Kaiser-Meyer - Olkin (KMO) and Bartlett's test of sphericity measure of sampling adequacy were used to assess the questionnaire's suitability. The results reveal that each construct exceeded the acceptable level (0.5) on the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy, and Bartlett's test of sphericity is significant($p<.001$), indicating factorability of the correlation matrix. The results revealed that KMO=0.963 and Bartlet's test is significant ($p<.001$), indicating the suitability of conducting exploratory factor analysis (Kaiser, 1974). Finally, the total variance explained (TVE) of each variable should satisfy a minimum of the acceptable level of 50 percent (Kothari, 2004). The results revealed that TVE exceeds the acceptable level of (50%). Reliability of each variable shows that cronbach's alpha of above 0.7 proves a satisfactory level of reliability (Nunnally, 1978) (refer to Appendix 2). The good internal consistency of reliability of each variable of the study is achieved.

3.5 Correlation Analysis

Correlation analysis would aim to test the relationship between the big five personality traits (agreeableness, extra version, consciousness, neuroticism, and openness to experience) and investment decision-making of individual investors at CSE. By observing the matrix below in

table 2, all correlation values are less than 0.8 and can be inferred that there is no problem of multicollinearity with the data. Further Variance inflation factor (VIF) values prove the non-existence of multi colliniearity (to refer Appendix 5).

Table 2: Correlation matrix between personality traits and investment decision making

IDM	AGR	EXT	CON	NEU	OPEN	FSE
IDM	1					
AGR	-0.395	1				
EXT	0.397	-0.776	1			
CON	0.148	-0.171	0.205	1		
NEU	-0.28	0.492	-0.54	-0.149	1	
OPEN	0.163	-0.389	0.334	0.07	-0.168	1
FSE	0.426	-0.791	0.843	0.238	-0.649	0.349

3.6 Multiple Regression analysis

A Multiple Ordinary Least Squares Regression Model would be utilized for achieving the objective. The regression model used could be indicated as below.
Equation 1

$$IDM_i = \alpha + \beta_1 EXT_{i1} + \beta_2 AGR_{i2} + \beta_3 CON_{i3} + \beta_4 NEU_{i4} + \beta_5 OPEN_{i5} + \varepsilon_i$$

Where, α = Constant, IDM = Investment Decision Making (Dependent Variable), EXT= Extraversion (Independent Variable 1), AGR= Agreeableness (Independent Variable 2), CON= Consciousness (Independent Variable 3), NEU= Neuroticism (Independent Variable 4), OPEN=Openness (Independent Variable 5), i= i th case in the n sample of observations, i = error term

Diagnostic tests of Heteroscedasticity, Autocorrelation, Multicollinearity and normality are conducted to validate the robustness of the results (refer Appendix 3, 4, 5 and 6).

4. Results

In order to test the primary objective of whether there is an impact of the each of the big five traits on investment decision making, a multiple ordinary least squares regression model was used. The explanatory power of the model is 18.4% as indicated by R squared statistic. The F statistic of the model is significant at 95% level of confidence meaning that the model fit is achieved for the purpose of analysis. In

this study, the DW statistic is 2.3 indicating that there is no severe autocorrelation issue with the data. Further, the variance inflation matrix (VIF) values are less than 10 indicating that there is no issue of multicollinerity with the data.

Table 3: Impact of personality traits on investment decision making by using multiple regression model

Variables	Unstandardized Coefficients	
	B	SE
(Constant)	3.086***	0.512
Extraversion (EXT)	0.188***	0.070
Agreeableness (AGR)	-0.200***	0.069
Consciousness (CON)	0.076	0.051
Neuroticism (NEU)	-0.084	0.064
Openness to Experience (OPEN)	0.007	0.062
R2 of 18.4%, F-statistics 20.514*** , Durban Watson 2.342 *** Significant at 1% level; ** significant at 5% level, * significant at 10% level Note. Gender and age variables are controlled in the study		

According to the above table 3, among the personality traits, extraversion has a positive significant (β = .188, $p<.05$) impact on investment decision making. This finding indicates that more extraverted individual investors have a high-risk propensity to achieve higher returns at CSE, which is similar to Oehler et al. (2017). Negatively agreeable investors' further evidence at CSE cannot rely on the financial analyst's judgment and tend to take higher risk. Agreeableness is bringing in the highest impact on the independent variable, and negatively significantly (β = -0.200, $p<.05$), while influences on investment decision-making. On the other hand, consciousness and openness to experience have impacted investment decision making positively, and neuroticism has influenced investment decision making negatively. However, none of those factors (consciousness, neuroticism and openness to experience) have impacted significantly at the individual level.

According to the above results, the achievement of the study's primary objective and related hypotheses can be summarised as follows.

Hypothesis	p-value	Decision
Hypothesis 1a: There is a significantly positive association between Extraversion and investment decision making.	0.007	Accepted
Hypothesis 1b: There is a significantly negative association between agreeableness and investment decision making.	0.004	Accepted
Hypothesis 1c: There is a significantly positive association between Consciousness and investment decision making.	0.138	Not Accepted
Hypothesis 1d: There is a significantly positive association between neuroticism and invest ment decision making.	0.187	Not Accepted
Hypothesis 1e: There is a significantly positive association between Openness to Experience and investment decision making.	0.904	Not Accepted

4.1 The mediation role of financial self-efficacy

In testing the mediation role of financial self-efficacy (FSE) in the relationship between personality traits and investment decision-making, Baron and Kenny Approach (1986) has been used. Accordingly, three step procedure was adopted. Step one is to mediator was regressed on independent variable, second is to dependent variable was regressed to independent variable and lastly, dependent variable was regressed to both independent variable and mediator. At this stage, independent variable is controlled to test for full mediation. Further, sobel test (1982) is employed in testing the significance of the indirect path by using the Sobel z-test shown in equation 2. It tests whether the difference between the total effect and the effect without mediator is statistically significant. The standard test of sobel is recognized in the literature to scrutinize the significance of mediation (as cited by Veena Prabhu, Charlotte Sutton & William Sauser, 2008).

Equation 2

$$Sobeltest = \frac{b \times a}{\sqrt{b^2 \times Se_a^2 + a^2 \times Se_b^2}}$$

Where, a = Unstandardized regression coefficient for the relationship between Independent variable and Mediating variable,b = Unstandardized regression coefficient for the relationship between Mediating variable and Dependent variable, Sea = Standard Error of a, Seb = Standard Error of b

Extraversion

Table 4: Mediating role of financial self-efficacy in the relationship between extraversion and investment decision making.

	B	SE	Sobel test (z value)
Extraversion on investment decision making	0.393***	0.042	
Extraversion on financial self-efficacy	0.828***	0.025	
Financial self-efficacy on investment decision making	0.429***	0.042	
Extraversion and financial self-efficacy on investment decision making			
Extraversion	0.129	0.078	9.241**
Financial self-efficacy	0.378***	0.070	
*** Significant at 1% level; ** significant at 5% level, * significant at 10% level Accept if p<0.05 and if 1.96 <Sobel Test Statistic< -1.96			

In testing the mediation role of financial self-efficacy in the relationship between personality traits and investment decision making, three simple regression models and their p values are highly significant. Above table 4 shows that after regressing both extraversion and financial self-efficacy on investment decision making, only financial self-efficacy is significant at 1% level. Therefore, it can be concluded that FSE has a full mediation effect between extraversion and investment decision making. Further, the Sobel test provides evidence for significant complete mediation by financial self-efficacy. The above result supports the alternative hypothesis H2a.

Neuroticism

As shown in Table 5, the regression coefficient is significant for financial self-efficacy, contributing to investment decision making when neuroticism was controlled. This trait again shows that financial self-efficacy completely mediates the relationship between neuroticism and investment decision making. The Sobel test discovered the significant evidence of complete mediation by financial self-efficacy. The above result supports the alternative hypothesis H2b.

Table 5: Mediating role of financial self-efficacy in the relationship between neuroticism and investment decision making

	B	SE	Sobel test (z value)
Neuroticism on investment decision making	-0.349***	-0.349***	
Neuroticism on financial self-efficacy	-0.807***	-0.807***	
Financial self-efficacy on investment decision making	0.429***	0.429***	
Neuroticism and financial self-efficacy on investment decision making			
Neuroticism	-0.060	0.070	-8.920**
Financial self-efficacy	0.426***	0.056	
*** Significant at 1% level; ** significant at 5% level, * significant at 10% level Accept if p<0.05 and if 1.96 <Sobel Test Statistic< -1.96			

Agreeableness

Table 6: Mediating role of financial self-efficacy in the relationship between agreeableness and investment decision making

	B	SE	Sobel test (z value)
Agreeableness on investment decision making	-0.392***	0.042	
Agreeableness on financial self-efficacy	-0.781***	0.028	
Financial self-efficacy on investment decision making	0.429***	0.042	
Agreeableness and financial self-efficacy on investment decision making			
Agreeableness	-0.153**	0.068	-9.590**
Financial self-efficacy	0.306***	0.066	
*** Significant at 1% level; ** significant at 5% level, * significant at 10% level Accept if p<0.05 and if 1.96 <Sobel Test Statistic< -1.96			

According to Table 6, the regression coefficient is significant for financial self-efficacy; subsequently, agreeableness and financial self-efficacy regressed on investment decision making. However, the significance of agreeableness decreased from -0.392 to -0.153 in absolute values. This decreased coefficient value indicated that financial self-efficacy partially mediates the relationship between agreeableness and investment decision making. The significant Z value of the Sobel test proves the partial mediation by financial self-efficacy. The above result supports the alternative hypothesis H2c.

Consciousness

Table 7: Mediating role of financial self-efficacy in the relationship between consciousness and investment decision making

	B	SE	Sobel test (z value)
Consciousness on investment decision making	0.174***	0.054	
Consciousness on financial self-efficacy	0.277***	0.053	
Financial self-efficacy on investment decision making	0.429***	0.042	
Consciousness and financial self-efficacy on investment decision making			
Consciousness	0.058	0.039	3.07**
Financial self-efficacy	0.417***	0.044	
*** Significant at 1% level; ** significant at 5% level, * significant at 10% level Accept if p<0.05 and if 1.96 <Sobel Test Statistic< -1.96			

Table 7 shows an insignificant coefficient for consciousness, while financial self-efficacy is significant when both these variables were regressed with investment decision making. This finding reveals the full mediation effect of financial self-efficacy in the relationship between consciousness and investment decision making. Sobel test significant value also witnessed the full mediation effect by financial self-efficacy. The above result supports the alternative hypothesis H2d.

Openness to experience

As presented in Table 8, in the case of both variables regressed, openness to experience on investment decision making is insignificant. Nevertheless, the financial self-efficacy (FSE) on investment decision- making is significant. So, this result is also ascertained the complete mediation by financial self-efficacy. The Sobel test z value establishes the significant mediation relationship brought by financial self-efficacy between openness to experience and investment decision making. The above result supports the alternative hypothesis H2d.

Table 8: Mediating role of financial self-efficacy in the relationship between consciousness and investment decision making

	B	SE	Sobel test (z value)
Consciousness on investment decision making	0.218***	0.062	
Consciousness on financial self-efficacy	0.465***	0.058	
Financial self-efficacy on investment decision making	0.429***	0.042	
Consciousness and financial self-efficacy on investment decision making			
Consciousness	0.021	0.060	6.306**
Financial self-efficacy	0.423***	0.045	
*** Significant at 1% level; ** significant at 5% level, * significant at 10% level Accept if p<0.05 and if 1.96 <Sobel Test Statistic< -1.96			

As the Sobel test statistic exceeds the critical value proves a significant mediating role of financial self-efficacy between each personality trait and investment decision-making. This study, therefore, provides evidence of the mediating role of financial self-efficacy in the relationship between personality traits and investment decision making.

4.2 Discussion

This study pioneers the investigation of personality traits in investment decision-making. Notably, individual investor personality is measured by the big five personality model. Investors' choices and preferences are essentially affected by their personality characteristics (Durand et al., 2008). The current study improves behavioral finance literature in a way. Primarily, five personality traits (such as extraversion, neuroticism, agreeableness, consciousness and, openness to experience) were empirically tested on investment decision making. Findings supported, as expected, extraversion and agreeableness impact the decision making of CSE's investors. However, previous literature discussed those personality traits of neuroticism, consciousness, and openness to experience influence individuals' investment decision making (Mayfield et al., 2008). The results of this study indicated that there is no such relationship empirically exist in Sri Lankan setting.

In addition, potential mediating role of financial self-efficacy was empirically studied. Self-efficacy is also a personality construct resulting from cognitive psychology explaining the individual's confidence to achieve successful behavior by mobilizing cognitive resources and motivation (Bandura, 1977). Financial self-efficacy fully mediated the relationship between extraversion, neuroticism, consciousness, and openness to experience with investment decision making and partially mediated the relationship between agreeableness and investment decision

making at CSE. Till today, there are tiny shreds of evidence on this aspect in the developing countries, and further research needs to get a better understanding of this evidence.

5. Conclusion

This study is the first kind of study to examine the impact of personality traits on investment decision making and the role of financial self-efficacy of different individual investors in Sri Lanka. Big five personality traits are investigated by collecting the data from 460 individual investors trading at CSE. Overall, results revealed that extraversion and agreeableness have a significant influence on investors' sock investment decisions at CSE among the traits of personality. Additionally, the results also conclude that agreeableness is the most influential factor in individual investors' investment decision-making. These outcomes proposed that individuals who are sociable, active, and enthusiastic are willing in stock investment. Notably, financial self-efficacy also confirmed that it has a significant mediating role on the relationship between personality traits such as extra version, agreeableness, consciousness, neuroticism, openness to experience, and stock investment decision making. However, only the agreeableness has the partial mediation role, and all other selected traits of individual's investors are fully mediated by financial self-efficacy on stock investment decision making in the context of Sri Lanka.

6. Implication, limitation, and suggestion for further study

This study contributed to the behavioral finance literature, particularly personality traits and financial self-efficacy influence, by empirically validating the relationship in the context of emerging markets and necessary implications to individual investors in Sri Lanka. Further, the findings of this study benefit financial advisors, stockbrokers, investors, researchers, and regulators to be aware of the importance of personality traits and financial self-efficacy in making a stock investment decision. The current study could appeal to the government of Sri Lanka to consider the factors of individual traits and financial self-efficacy to develop the capital market. Thus, the results would help to design the investors' training programs appropriately.

Apart from these implications, the study has specific limitations. The responses are from the Sri Lankan investors and generalizations to other countries carefully. Further, the respondent may bias in their response which may lead to inaccurate results. Therefore, results are dependent on respondents' honesty. This study is limited to personality traits. Further study could focus on other factors such as family background, financial conditions, and individual life experiences that could significantly influence investment decisions.

Finally, in Sri Lanka, very few studies have been done on this area, and this study widens the knowledge for Sri Lankan academicians and research scholars for further investigation.

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Appendices

Appendix 1: Total variance explained

Variable	Items	Factor Loadings	KMO	TVE (%)	Sig	Cronbach's alpha
Investment Decision Making (IDM)	IDM 1	0.854	0.925	88.792	0.000	0.974
	IDM 2	0.84				
	IDM 3	0.903				
	IDM 4	0.915				
	IDM 5	0.889				
	IDM 6	0.927				
Agreeableness (AGR)	AGR 1	0.898				
	AGR 2	0.905	0.966	90.887	0.000	0.985
	AGR 3	0.91				
	AGR 4	0.915				
	AGR 5	0.891				
	AGR 6	0.906				
	AGR 7	0.927				
	AGR 8	0.918				
Extraversion (EXT)	EXT 1	0.887	0.96	88.887	0.000	0.982
	EXT 2	0.9				
	EXT 3	0.892				
	EXT 4	0.902				
	EXT 5	0.892				
	EXT 6	0.874				
	EXT 7	0.869				
	EXT 8	0.895				
Consciousness (CON)	CON 1	0.95	0.931	80.974	0.000	0.938
	CON 2	0.915				
	CON 3	0.831				
	CON 4	0.915				
	CON 5	0.894				
	CON 6	0.89				
	CON 7	0.907				
	CON 8	0.914				
	CON 9	0.927				
Neuroticism (NEU)	NEU 1	0.805	0.951	75.147	0.000	0.9
	NEU 2	0.826				
	NEU 3	0.878				
	NEU 4	0.896				
	NEU 5	0.701				
	NEU 6	0.787				

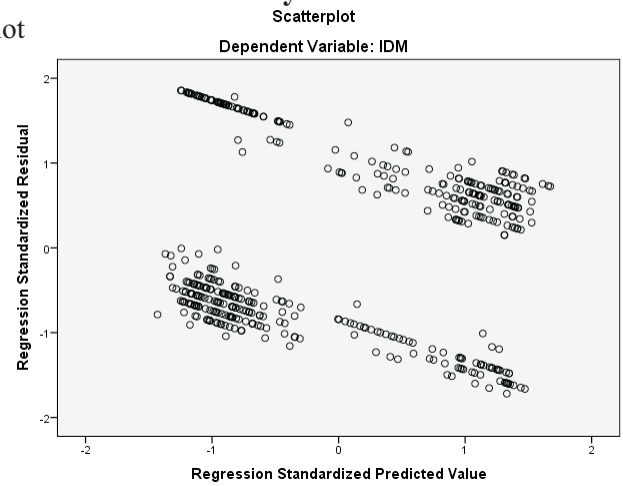
	NEU 7	0.832				
	NEU 8	0.885				
Openness to Experience	OPEN 1	0.867				
(OPEN)	OPEN 2	0.717				
	OPEN 3	0.784				
	OPEN 4	0.779				
	OPEN 5	0.923	0.928	80.834	0.000	0.903
	OPEN 6	0.856				
	OPEN 7	0.878				
	OPEN 8	0.851				
	OPEN 9	0.901				
Financial Self Efficacy	FSE 1	0.869				
(FSE)	FSE 2	0.915				
	FSE 3	0.898				
	FSE 4	0.895				
	FSE 5	0.869	0.923	88.916	0.000	0.969

Appendix 2: Reliability

Variable	No. of Items	Cronbach's Alpha
Investment Decision Making (IDM)	6	0.974
Agreeableness (AGR)	8	0.985
Extraversion (EXT)	8	0.982
Consciousness (CON)	9	0.938
Neuroticism (NEU)	8	0.900
Openness to Experience (OPEN)	9	0.903
Financial Self Efficacy (FSE)	5	0.969

Appendix 3: Test of Heteroscedasticity

Figure 1: Scatter Plot



Appendix 4: Test of Autocorrelation

Model	Durbin-watson
1	2.342

Appendix 5: Test of Muliticolliniarity

Model	Tolerance	Tolerance
Extraversion (EXT)	0.360	0.360
Agreeableness (AGR)	0.371	0.371
Consciousness (CON)	0.956	0.956
Neuroticism (NEU)	0.692	0.692
Openness to Experience (OPEN)	0.845	0.845

Appendix 6: Test of normality