

**IMPACT OF FINANCIAL LITERACY ON INVESTMENT DECISIONS:
EVIDENCE FROM INDIVIDUAL INVESTORS IN JAFFNA DISTRICT****Balagobei, S and Prashanthan, V***University of Jaffna, Sri Lanka***Abstract**

Financially literate individual investors can make smart investment decisions over complex financial scenarios to boost their financial wealth. The aim of the study is to investigate the influence of financial literacy on investment decisions of individual investors in Jaffna district. Further this study explores the impact of financial knowledge, financial behavior and financial attitude on investment decisions of individual investors. Two hundred individual investors in Jaffna district were selected as sample by using random sampling technique and primary data was collected through a structured questionnaire. Financial literacy consists of three dimensions namely financial knowledge, financial behaviour and financial attitude whereas investment decisions are measured by accounting information, self/firm-image coincidence, advocate recommendations and personal financial needs. Data was analyzed using the techniques of correlation, regression, t-test and ANOVA. The results reveal that financial literacy significantly positively impacts on investment decisions of individual investors in Jaffna district. The findings recommend the necessity for effective financial literacy programs focusing especially on enhancing financial knowledge, behaviors and attitude to facilitate informed investment decisions of individual investors.

Keywords: Financial literacy, financial knowledge, financial behavior, financial attitude, investment decisions.

1.Introduction

In today's dynamic universal society financial literacy is a substantial need for each individual who is implanted in increasingly complex financial scenarios. A financially literate individual possesses the competence to develop a road map to understand and identify how money works, how to manage income and expenses, how and where to invest, how to handle financial risks effectively and most importantly to avoid financial distress. Financial literacy is a combination of financial knowledge, financial behavior and financial attitude (Vitt, 2004; Atkinson & Messy, 2012; OCED, 2013). It is the capacity for effective wealth management and informed financial decision-making (Schagen & Lines, 1996). Financial literacy is becoming an essential

commodity for mankind and a basic raw material which is indispensable for development and even for mere survival (UNESCO, 1997). Gouws and Shuttleworth (2009) reveal that financial literacy is the basic skill needed for making accurate and informed investment decisions at an individual and organizational level.

Investment decisions today have become as a dynamic field. The process of investment decision making is very critical and depends upon various factors which may vary from individual to individual, for example, the type of investment they want to invest, when and where investor wants to invest whether in banks, property, share market, mutual funds, etc. and how much they ready to spend on

investment opportunities. When the investment decisions are made by investors and investment managers a corporation is involved, as to how, when, where, and how much capital will be spent on investment opportunities (Bhalla, 1982). Therefore successful investment decisions highly rely on an individual's level of financial literacy.

Investors are the major part in the whole economy to provide better financial support for the concentration and also they play a vital role in shaping up the economy. Sri Lanka is varying in many ways from other countries having its own determinants. It is important to explore the variables that help Sri Lankan investors in the decision making process. Even though Sri Lanka is also one of the emerging economies in the world, it has been experiencing a lower economic progress over the years. Lack of the financial literacy is one of the main causes for the investment scandals and bankruptcy of finance companies (Heenkenda, 2014), cost of public finance mismanagement, government's some erroneous economic decisions and policies, operations of some dishonest individuals and organizations outside the regulatory setup (CFA Society Sri Lanka, 2019). Hence the financial literacy should be improved so that the economy flourishes. Klapper, Lusardi and Panos (2012) suggest that the improved financial literacy will lead to a more prudent borrower behavior that could reduce financial fragility. Individual investors should be given proper financial education so they may not suffer financial shocks and start adopting changes. Financial literacy empowers and educates individual investors about the availability and suitability of the financial

products in the market to make informed decisions.

Financial literacy provides better expertise to analyze and perform financial activities for example; investment opportunities, investment decisions and saving (Siegenthaler, Anderson, Lyter, Kent, & Ward, 2000; Lusardi, 2012). Having an understanding and knowledge of financial products, key financial concepts and money matters not only reflect sound financial decision making capacity but also gives the confidence and ability to make right decision at right time (Van Rooij, Lusardi, & Alessie, 2011; Becchetti, Caiazza, & Coviello, 2013).

Now a day's financial market has become more complex. Financial literacy is critical in evaluating and uncovering alternative investment opportunities. Deficiency of Financial literacy is a significant factor which caused individuals to stay away from saving and investment. Individual investors have to possess an acceptable level of financial literacy when making informed investment decisions, in portfolio diversification and exploring alternative opportunities. Risk and Return relationship is one of the fundamentals of finance. In order to understand risk and return associated with financial products and services, financial knowledge is needed. Diversification of investment is essential when choosing the optimal portfolio of investment. Many imprudent decisions of investment can be avoided or minimized if the investors are aware of these basic financial concepts. People could maximize the return by investing in assorted financial products of credible and reputed financial institutions. For example government

issued debt instruments carry almost no risk and are easily accessible through many commercial banks but unfortunately most of the general public is unaware of these alternatives. Poor financial literacy has negative consequences for investors in that bad investment decisions adversely affect individual investors' long term financial well-being. People only focus on their short term financial health and do not understand the long term consequences of their decisions (CFA Society Sri Lanka, 2019).

Dearth of financial literacy may lead the investors to misinterpret data for example, in the share market investors may get influenced by other factors when making the selling/buying decision of shares. Investing in the wrong asset or place could lead to lose good opportunity and lead to a shortfall in liquidity as well. Particularly lower financial literacy significantly leads to self-exclusion and financial exclusion but higher financial literacy helps individuals become self-sufficient to achieve financial stability.

Sri Lanka is generally considered as a country that possesses an Excellency in education system and higher literacy rate when compared to most of other developing countries. As per the report of the Central Bank of Sri Lanka (2018), the adult literacy rate is at 92%, making Sri Lanka the most literate country in South Asia. Contrastingly, Standard & Poor's 2014 global financial literacy survey of more than 150,000 adults in over 140 countries reported that Sri Lanka has the highest financial literacy rate compared to its South Asian countries which is only 35%. This largest gap indicates that there is more scope to promote financial literacy among Sri Lankans.

Deficiency of financial literacy could lead to poor financial decision making (Lusardi, 2012; Cheah, Phau & Liang, 2014), poor financial practice behavior (Robb & Woodyard, 2011), less net wealth accumulation (Jappelli & Padula, 2011; Mitchell, & Lusardi, 2011; Gustman, Steinmeier & Tabatabai, 2012; Almenberg & Dreber, 2012; van Rooij, Lusardi & Alessie, 2012; Lusardi, 2012), inability to make informed financial decisions (Chen & Volpe, 1998), worse saving behaviour (Lusardi, 2003; Butt et al., 2017), lack of portfolio diversification (Banks & Oldfield, 2007), inadequate stock participation (Van Rooij et al., 2011; Abdeldayem, 2016), being unable to make personal contributions (Van Rooij et al., 2007) and worst retirement planning and unpreparedness for post-retirement times (Lusardi, 2009 and Lusardi & Mitchell, 2007, 2011 & 2015).

The previous findings suggest that the influence of financial literacy on investment decisions cannot be neglected. Therefore this study fills the research problem by answering the research question of "how far does the financial literacy impact on investment decisions of individual investors in Jaffna district?" The objective is to investigate the impact of financial literacy on the investment decisions of individual investors in Jaffna district, Sri Lanka. Moreover, this study mainly focuses on three dimensions of financial literacy namely financial knowledge, behavior and attitude (OECD, 2011) and to what extent they impact on investment decisions. Investment decisions are found to be measured by accounting information, self/firm image, advocate recommendation, and personal financial needs. In addition to that, it also covers

various demographic factors that influence financial literacy.

2.Literature Review and Hypothesis

Development

Behavioral finance gives a clear understanding of how different investors realize and respond to market information and how investor psychology impacts on portfolio structure and investment outcomes. Sewell (2010) defines behavioural finance as the study of the effect of psychology on the behavior of finance practitioners and the subsequent influence on the market. Understanding behavioral finance will help to identify the decision making biases and information processing errors that affect financial decision making. The investor needs to choose the best alternative from the available investment options considering the risk and return features. The level of financial literacy may be varied with demographic characteristics of investors such as investor's gender, age, education, experience and income. Previous studies found that, investors with higher income had more knowledge in investment than those with lower income, and investors with college or higher degree performed better than those with low education (Chen & Volpe, 2002; OECD, 2005; Lusardi & Mitchell, 2007 & 2011 and Adam, Boadu & Frimpong, 2018).

Previous literature investigations demonstrate that the impact of financial literacy variables positively associated with individual investor's investment decisions (Mahfund, 2012; Tabiani & Mahdzan, 2012; Musundi, 2014; Jariwala, 2015; Aren & Zengin, 2016; Fachrudin & Fachrudin, 2016; Putri & Henny, 2017; Hamza & Arif, 2019). By contrast, some studies conclude that financial literacy has a negative impact on investment decisions (Al-Tamimi &

Kalli, 2009; Mian, 2014) and a few debated that financial literacy is not correlated with investment decisions (Atakora, 2013). Based on the above past investigations, the following hypothesis is formulated.

H₁: Financial literacy significantly impacts the investment decisions of individual investors.

Financial Knowledge

Financial knowledge is the ability to deal with, apply and solve numerical concepts in financial issues. Financial knowledge is defined as understanding key financial terms and concepts needed to function daily (Bowen, 2002). Key areas that an individual needs financial knowledge of inflation, simple and compound interest, diversification in the portfolio, risk and return and how various computations are carried out (Atkinson & Messy, 2012). Lusardi and Mitchell (2013) view financial knowledge as a type of investment in human capital. Kefala (2010) observes that the financial knowledge is strongly correlated with self-beneficial financial behavior. It also has a positive relationship with financial planning of retired income behavior and bigger approaches to high levels of planning (Lusardi & Mitchell, 2007). Therefore the hypothesis is as follows,

H₂: Financial knowledge significantly impacts the investment decisions of individual investors.

Financial behavior

Financial behavior is the ability and knowledge of borrowing, saving and preparing budget (OECD, 2013). Financial actions and behaviors of individuals may reflect their characteristics, systematically influence individual investment decisions and ultimately shape their financial situations and well-being in both the short and longer-term (Mandell & Klein, 2009). Financial situation and well-being of investors are

affected by some type of financial behaviour such as selecting the financial products without researching the market, not planning for the future expenditures or delaying bill payments. According to Joo and Grable (2004), financial behaviors were found to have more significant and direct effects on financial satisfaction than level of household income or other demographic factors. These past findings enable to formulate the below hypothesis.

H₃: Financial behavior significantly impacts the investment decisions of individual investors.

Financial attitude

Financial attitude is a key factor in the investment decision making process which consists of individual opinions, beliefs and perceptions in planning and propensity towards their saving, investment and expenditure. Financial attitudes are a combination of concepts, information and emotions about learning, which results in a readiness to react favorably (Shockey, 2002). Financial attitudes relating to longer-term financial planning consists of various aspects such as individuals' preferences in time, investment opportunity and willingness for planned savings are likely to promote behaviors that could lead to reduced financial resilience and well-being (Atkinson & Messy, 2012). Based on the above previous studies the following research hypothesis is formulated:

H₄: Financial attitude significantly impacts the investment decision of individual investors.

In general, investment decisions are depends on many factors such as, demographic factors like age, sex, income and education (Lewellen, Lease & Schlarbaum, 1977), individual and environmental factors (Sivaramakrishnan, Srivastava, & Rastogi, 2017), investment experience (Christanti & Mahastanti, 2011),

accounting and general information related to firm's reputation, firm's status in industry, firm's financial stability, price movements, dividends, expected earnings and past performance of the firm (Potter, 1971; Baker & Haslem, 1973, 1974; Kothari, 2001; Gentry & Fernandez, 2008 and Chong & Lal, 2011), self-reported risk tolerance (Samuelson, 1969 and Langer, 1975), recommendations of brokers, family members and co-workers go largely unheeded (Nagy & Obenberger, 1994), get rich quickly, stock marketability, government holdings and religious reasons (Hussein, 2007). So, major factors which determine the investment decisions of individual investors are accounting information, self-image/firm image, advocate recommendations and personal financial needs. Relative importance of these determinants will vary from investor to investor.

3.Data and Methodology

Quantitative research design is employed in this study and a deductive approach has been followed to test developed hypotheses based on existing theories and concepts. Population of the study is the individual investors in Jaffna district. Primary data was collected from CSE investors, businessmen, salaried individuals and self-occupied professionals in Jaffna district using a structured questionnaire. The paradigm for constructing financial literacy and investment decisions questionnaire referred from the concept and measurement adopted by Al-Tamimi and Bin Kalli (2009); Jariwala (2015), Janor et al. (2016) and Hamza & Arif (2019).

The questionnaire consists of two sections with fifty one questions in total. Section A consists

of nine items covering socio-demographic information about the investors. Section B includes forty two items in total, among those 23 items measure the financial literacy of respondents. Remaining 19 items examine the factors influencing investment decisions such as accounting information, self/firm image, advocate recommendations and personal financial needs. The sampling technique is probability sampling with random approach to make the selection effective. A total of 220 questionnaires were issued to the participants using random sampling. After excluding 20 incomplete questionnaires remaining 200 questionnaires were used for the data analysis.

4.Data Analysis and Findings

Initially, all data was checked by employing reliability test. Thereafter descriptive statistics of individual investor's demographic characteristics are illustrated and discussed on data analysis and findings. The association between financial literacy and investment decisions has been examined using correlation, multiple regressions with the aid of SPSS (version 20.0).

4.1 The profile of the study's respondents

The process of presenting data is necessary to understand the pattern of statistics. It is a visual way of illustrating the data and making the interpretations.

Table 1 presents that the majority 118 (59%) of respondents were males whereas 41 per cent were found to be female. 35.5% of the respondents fall in the age group of 26-35 years, 21.5% in the age group of 36-45 years, 15% in the age group of 46-55 and only 2.5% of the

respondents were over 65 years which indirectly says that young people are more active in investment activities. In terms of respondents' marital status, 60% were married, 38.5% were unmarried and 1.5% were found to be divorced. Majority of the respondents (33%) have completed G.C.E (A/L) and 27% are graduates followed by 10.5% having post graduate degree. It can be reported from the table that an overwhelming majority of the respondents were literates. Most of the respondents (44%) were working over 10 years and 32.5% were working below 5 years. Majority (34%) of the respondents have an average monthly income between Rs.30 000 - Rs.50 000 while 26% of the respondents have between Rs.50 000 – Rs.100 000 and 10.5% contribution from the above Rs.150 000 average income group respondents.

Concerning the number of years involved in investment activities, 19% of the respondents having an experience over 10 years where 57.5% and 23.5% of the respondents have below 5 years and between 5-10 years respectively. Finally the awareness towards the financial products by the respondents was illustrated. All of the respondents (100%) were aware of the bank deposits and 93% of respondents were familiar with insurance. 153 and 125 respondents were aware of shares and bonds respectively. Further 62.5% of respondents exhibited their awareness on a property mortgage. Results reports that the investors are less familiar with Mutual funds and Unit trusts hold only 26.5% and 37.5% respectively.

Table 1. Demographic Characteristics of Investors

Demographic Characteristics		Frequency	Percentage
Gender	Male	118	59.0%
	Female	82	41.0%
Age	18-25	34	17.0%
	26-35	71	35.5%
	36-45	43	21.5%
	46-55	30	15.0%
	56-65	17	8.5%
	>65	5	2.5%
	Marital Status	Single	77
Married		120	60.0%
Divorced		3	1.5%
Educational Qualification	G.C.E(O/L)	20	10.0%
	G.C.E(A/L)	66	33.0%
	Diploma	38	19.0%
	Bachelor's Degree	54	27.0%
	Masters	21	10.5%
	Others	1	0.5%
Working experience	Below 5 years	65	32.5%
	Between 5-10 years	47	23.5%
	Over 10 years	88	44.0%
Average Monthly Income	Below Rs.30 000	31	15.5%
	Rs.30 000 - Rs.50 000	68	34.0%
	Rs.50 000 - Rs.100 000	52	26.0%
	Rs.100 000 - Rs.150 000	28	14.0%
	Above Rs.150 000	21	10.5%
Experience in investment activities	Below 1 Year	40	20.0%
	1 - 3 Years	39	19.5%
	3 - 5 Years	36	18.0%
	5 - 10 Years	47	23.5%
	Above 10 Years	38	19.0%
Financial Products	Bank Deposit	200	100%
	Shares	153	76.5%
	Bonds	125	62.5%
	Insurance	186	93%
	Mutual Funds	53	26.5%
	Unit Trust	75	37.5%
	Property Mortgage	125	62.5%

Source: Survey data (2020)

4.2 Reliability

Cronbach's alpha coefficient method is employed to test the reliability of the variables. It measures the inter-item reliability of a scale generated from several items.

Table 2 presents that the Cronbach's alpha of overall financial literacy and investment decisions are 0.899 and 0.836 respectively which displays satisfactory internal

consistency. Since the reliability of all variables under study satisfied the general rule a coefficient greater than or equal to 0.7 is considered acceptable and a good indication of construct reliability (Nunnally, 1978), each variable's values is above 0.7 which indicates the results of reliability analysis confirmed that consistency is at an acceptable level for each variable.

Table 2. Reliability - Cronbach's Alpha (N=200)

	Variables	No of items	Cronbach's alpha
Financial literacy	Financial Knowledge	5	0.703
	Financial Behaviour	10	0.872
	Financial Attitude	8	0.705
	Financial literacy	23	0.899
	Accounting Information	4	0.819
Investment decision	Self-image/firm image	7	0.701
	Advocate Recommendation	5	0.701
	Personal Financial Needs	3	0.707
	Investment decision	19	0.836

Source: Survey data (2020)

4.3 Descriptive Analysis

Table 3. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Financial Knowledge	200	1.40	5.00	3.9320	.62877	.395
Financial Behavior	200	1.30	5.00	3.8130	.64724	.419
Financial Attitude	200	1.13	4.88	3.7744	.53530	.287
Accounting Information	200	1.00	5.00	3.8513	.75025	.563
Self/Firm-image Coincidence	200	1.57	5.00	3.6393	.62359	.389
Advocate Recommendation	200	1.00	5.00	3.6730	.67435	.455
Personal Financial Needs	200	1.33	5.00	3.7800	.62288	.388
Financial Literacy	200	1.38	4.73	3.8398	.51595	.266
Investment Decision	200	1.95	4.86	3.7359	.47930	.230
Valid N (list-wise)	200					

Source: Survey data (2020)

As seen in table 3 the number of respondents under the study (*N*) is 200. The mean value of overall financial literacy and investment decisions are 3.8398 and 3.7359 which illustrates respondents' answers mostly falls between neutral and agree. Further the minimum and maximum scores of overall financial literacy and investment decisions are 1.38 – 4.73 and 1.95 – 4.86 respectively, which indicates overall financial literacy has a high standard deviation of 0.5160. Individual investors have the lowest mean value (3.6393) in self/firm-image coincidence and highest mean value (3.9320) in financial knowledge. However the most variation among the sub domains (0.75025) in standard deviation is observed in accounting information and the

least variation (0.5353) is observed in financial attitude.

4.4 Correlation Analysis

Correlation analysis is an inferential statistical analysis which represents the direction and strength of the relationship between the variables.

The results of the correlation matrix as depicted from table 4 shows that the correlation coefficient between financial literacy and investment decisions is 0.741, ($P < 0.01$) which represents a significant relationship at 0.01 levels. Therefore, financial literacy is strongly positively correlated with investment decisions.

Table 4. Correlation matrix for financial literacy and investment decisions

		Financial Literacy	Investment Decisions
Financial Literacy	Pearson Correlation	1	
	Sig. (2-tailed)		
Investment Decisions	Pearson Correlation	.741**	1
	Sig. (2-tailed)	.000	

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

Table 5. Correlation matrix for dimensions of financial literacy with investment decisions

	FK	FB	FA	ID
Financial Knowledge (FK)	1			
Financial Behavior (FB)	.575** .000	1		
Financial Attitude (FA)	.527** .000	.682** .000	1	
Investment Decisions (ID)	.619** .000	.619** .000	.666** .000	1

** . Correlation is significant at the 0.01 level (2-tailed).
Source: Survey data (2020)

As table 5 represents the correlation matrix, the financial knowledge ($r = 0.619^{**}$, $P < 0.01$), financial behavior ($r = 0.619^{**}$, $P < 0.01$) and financial attitude ($r = 0.666^{**}$, $P < 0.01$) have a significant relationship with investment decisions at 99% confidence level. Hence financial knowledge, financial behavior and financial attitude are positively correlated with investment decisions of investors.

4.5 Multiple Regression Analysis

Table 6 shows that regression coefficient (β) between financial literacy and investment decisions is 0.688 ($P < 0.05$) which indicates financial literacy has a significant impact on investment decisions at 95% confidence level. Since the adjusted R^2 value for financial literacy and investment decisions is 0.547 which represents 54.7% of total variance in investment decisions is described by financial literacy and the remaining 45.3% of variability is explained by other factors rather than financial literacy. Here, F value is 240.997 ($P = 0.000$) which reveals that this regression model is more applicable for the study. Therefore the hypothesis (H_1) is supported with the findings

as financial literacy has a positive statistically significant impact on investment decisions.

The table 7 depicts that financial knowledge ($\beta=0.242$, $P<0.05$), financial behavior ($\beta=0.134$, $P<0.05$) and financial attitude ($\beta=0.336$, $P<0.05$) have a significant positive impact on investment decisions at 0.05 levels respectively. The value of adjusted R^2 is 0.552 which implies 55.2% of the total variance in investment decisions is explained by variation in the three dimensions of financial literacy such as financial knowledge, financial behavior and financial attitude and the remaining 44.8% of the variance is not depicted in this model. As F value is 82.731($P<0.05$) in this analysis the regression model is significant. The result concludes that financial literacy dimensions have a positive significant impact on investment decisions. Therefore the hypotheses (H_2 , H_3 and H_4) are supported with the findings as financial knowledge, financial behavior and financial attitude have a positive significant impact on investment decisions.

Table 6. Regression Coefficients for financial literacy and investment decisions

Model	Beta	Std. Error	T	Sig.
Constant	1.093	.172	6.363	.000
Financial Literacy	.688	.044	15.524	.000
$R^2 = 0.549$		Adj. $R^2 = 0.547$		F=240.997
				P=0.000

Table 7. Regression Coefficients for dimensions of financial literacy and investment decisions

Model	B	Std. Error	T	Sig.
(Constant)	1.005	.176	5.709	.000
1 Financial Knowledge	.242	.045	5.342	.000
Financial Behavior	.134	.051	2.613	.010
Financial Attitude	.336	.060	5.637	.000
$R^2 = 0.559$		Adj. $R^2 = 0.552$		F = 82.731
				P = 0.00

Source: Survey data (2020)

4.6 Demographic factors and Level of Financial Literacy

Independent samples t-test and One-way ANOVA have been adopted to examine whether individual investors from different sub-categories of demographic characteristics have different levels of financial literacy.

Gender and Financial Literacy

Independent samples t-test is used to determine whether there is a statistically significant difference between the means in two unrelated groups.

H_0 - There is no significant difference in the level of financial literacy between gender groups of individual investors.

H_1 - There is a significant difference in the level of financial literacy between gender groups of individual investors.

According to the table 8 male individual investors (118) have an average financial literacy of 3.8341 (76.68%) whereas the female (82) scores 3.8480 (76.96%). Since the probability ($p = 0.846$) for the F value is greater than 0.05. Thus, the variances of the two groups are equal, and therefore the output in the Equal variances assumed should be used. Further independent samples t-test shows that t statistics of -0.186 with 198 degrees of freedom ($p=0.852$). So there are no significant differences in the level of financial literacy between female and male.

Table 8. Independent Samples t-test between Gender and Financial Literacy

		Gender	N	Mean	Std. Deviation	Std. Error Mean
Financial Literacy	Male		118	3.8341	.49963	.04599
	Female		82	3.8480	.54158	.05981

		Levene's Test for Equality of Variances			t-test for Equality of Means			
		F	Sig.	T	df	Sig.	Mean Difference	Std. Error Difference
Financial Literacy	Equal variances assumed	.038	.846	-.186	198	.852	-.01386	.07436
	Equal variances not assumed			-.184	165	.854	-.01386	.07545

Source: Survey data (2020)

Other Demographic factors and Financial Literacy

One-way ANOVA is conducted to determine whether there is a significant difference in financial literacy level among different groups of respondents according to demographic factors such as age, marital status, educational qualification, working experience, average monthly income and number of years of involvement in investment activities.

H₀: There is no significant difference in the level of financial literacy among different groups of respondents according to demographic factors.

H₁: There is a significant difference in the level of financial literacy among different groups of respondents according to demographic factors.

As seen in table 9 there is a statistically significant difference in the level of financial literacy among different age groups (ANOVA, $F=5,194 = 5.196, p=0.000$). Contrastingly there is no statistically significant difference in the level of financial literacy among different groups of investors according to marital status and educational qualifications as the significant values are greater than 0.05. There is a statistically significant difference in the level of financial literacy among different groups of investors based on working experience, average monthly income groups and the number of years involvement in investment activities as determined by one-way ANOVA ($F (2,197) =4.369, p = .014$), ANOVA ($F (4,195) =3.621, p = 0.007$) and ANOVA ($F (4,195) =4.958, p = .001$) respectively.

Table 9. One-Way ANOVA Test – Demographic factors and Financial Literacy

Financial Literacy		Sum of Squares	Df	Mean Square	F	Sig.
Age	Between Groups	6.256	5	1.251	5.196	.000
	Within Groups	46.718	194	.241		
	Total	52.974	199			
Marital Status	Between Groups	.458	2	.229	.858	.425
	Within Groups	52.516	197	.267		
	Total	52.974	199			
Educational Qualification	Between Groups	1.741	5	.348	1.318	.258
	Within Groups	51.233	194	.264		
	Total	52.974	199			
Working experience	Between Groups	2.250	2	1.125	4.369	.014
	Within Groups	50.724	197	.257		
	Total	52.974	199			
Average monthly income	Between Groups	3.663	4	.916	3.621	.007
	Within Groups	49.311	195	.253		
	Total	52.974	199			
No of years involvement in investment activities	Between Groups	4.890	4	1.223	4.958	.001
	Within Groups	48.084	195	.247		
	Total	52.974	199			

5. Conclusion and Recommendation

The ultimate objective is to investigate the impact of financial literacy on the investment decisions of individual investors in Jaffna district. The analysis reveals that financial literacy and its dimensions namely financial knowledge, financial behavior and financial attitude have a strong positive significant impact on investment decisions of individual investors in Jaffna district. The results highly collaborate with the previous findings of Moore, (2003); Mahfund, (2012); Tabiani and Mahdzan, (2012); Aren and Aydemir, (2014); Jariwala, (2015); Fachrudin and Fachrudin, 2016; Putri and Henny, 2017 and Hamza and Arif, 2019. The study results also support empirical findings of financial literacy provide better expertise in performing investment decisions (Lusardi and Mitchell, 2011; Becchetti, Caiazza, & Coviello, 2013; Van Rooij, Lusardi, & Alessie, 2011).

Further the study reveals that age, average monthly income, working experience and number of years involvement in the investment activities have statistically significant differences with the level of financial literacy. These findings support the empirical evidence of Chen and Volpe (2002); OECD (2005); Lusardi and Mitchell (2011); Al-Tamimi and Kalli (2009). Furthermore the study indicates that no statistically significant difference in the level of financial literacy as well between various groups of gender, marital status and educational qualifications of the individual investors. Besides, the study demonstrates that individual investors are very much familiar with bank deposits and insurance rather than stocks and bonds. There is a lack of awareness about the mutual funds and unit trusts among the

investors under the study depicts that there is more scope for the improvement and awareness of financial products.

Financial literacy is the pivotal skill in complex financial scenarios for rational financial decision making, overall financial welfare and sailing through worst financial times. This is because financially literate investors are more likely to understand and make choices and decisions which would lead them to avoid some egregious mistakes, limit their losses and to make optimal financial decisions, thus maximizing their financial well-being. Therefore investors try to develop their knowledge and behavior to increase their operational and future decision on investment to achieve the higher return. The government, policymakers and financial institutions should develop financial education programs in a lucid manner (e.g. seminars and workshops) to enhance financial knowledge of investors and encourage investing their money efficiently and effectively, which will increase the demand of complex financial products. Financial institutions should enhance their promotional strategies; a range of financial products available on the market, making investment decisions has become increasingly complex for individual investors. Hence the awareness about financial products is essential to make an effective investment decision. Investors should diversify their investment in different financial institutions by developing an effective portfolio of investment to minimize risk and maximize their return on investment.

Though the study findings have provided relevant and more insight understandings

related to financial literacy and investment decisions, it is important to focus on the limitations of the study. Firstly, the study used a small sample, which restricts the generalization of the findings to the whole population. Besides, the sample was obtained from individual investors in Jaffna district. Future research should pay more attention to increase the sample size and improve the representatives of the sample. Findings of the study demonstrate that 55.9% variance in the investment decision is explained by financial literacy ($R^2=0.559$), the remaining 44.1% of the variance in the investment decision is explained by other factors rather than financial literacy. Hence, the study recognizes that there are other areas which need to be explored regarding investment decisions of individual investors. Future research should consider conducting some other qualitative methods to collect the data for exploring the level of financial literacy of investors. Investors will better understand the question but they may provide the desired answer instead of actual intention. Therefore, it is suggested to conduct observational research which can give more insights to financial literacy and investment decisions.

References

Abdeldayem, M. M. (2016). Is there a relationship between financial literacy and Investment Decisions in the Kingdom of Bahrain? *Journal of management and accounting studies*, 4(2), 68-78.

Adam, A. M., Boadu, M. O., & Frimpong, S. (2018). Does gender disparity in financial literacy still persist after retirement? Evidence from Ghana, *International Journal of Social Economics*, 45(1), 18-28.

Almenberg, J., & Dreber, A. (2012). Gender, stock market participation and financial

literacy. *SSE/EFI Working Paper Series in Economics and Finance*.

Al-Tamimi, H. A. H. (2009). Financial literacy and investment decisions of UAE investors. *The Journal of Risk Finance*, 10(5), 500-516.

Anderson, C., Kent, J., Lyter, D. M., Siegenthaler, J. K., & Ward, J. (2000). Personal Finance and the Rush to Competence: Financial Literacy Education in the US. *Journal of Family and Consumer Sciences*, 107(2).

Aren, S., & Zengin, A. N. (2016). Influence of financial literacy and risk perception on choice of investment. *Procedia - Social and Behavioral Sciences*, 235, 656-663.

Atakora, A. (2013). Measuring the Effectiveness of Financial Literacy Programs in Ghana. *International Journal of Management and Business Research*, 3(2), 135-148

Atkinson, A., & Messy, F. A. (2012). Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study.

Baker, H. K., & Haslem, J. A. (1973). Information needs of individual investors. *The Journal of Accountancy*, 64-69.

Banks, J., & Oldfield, Z. (2007). Understanding pensions: Cognitive function, numerical ability and retirement saving. *Fiscal Studies*, 28(2), 143-170.

Becchetti, L., Caiazza, S., & Coviello, D. (2013). Financial education and investment attitudes in high schools: evidence from a randomized experiment. *Applied Financial Economics*, 23(10), 817-836.

Bhalla, V. K. (1982). Investment: Objectives and Risks. Investment Management: Security Analysis and Portfolio Management. *Chand & Company Pvt. Ltd.*

Bowen, C. F. (2002). Financial knowledge of teens and their parents. *Journal of Financial counseling and planning*, 13(2), 93-102.

- Butt, A., Donald, M. S., Foster, F. D., Thorp, S., & Warren, G. J. (2017). Design of My Super default funds: influences and outcomes. *Accounting and Finance*, 57(1), 47-85.
- Cheah, I., Phau, I., & Liang, J. (2014). Factors influencing consumers' attitudes and purchase intentions of e-deals. *Marketing Intelligence & Planning*. 33 (5): pp. 763-783
- Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial services review*, 7(2), 107-128.
- Chen, H., & Volpe, R. P. (2002). Gender differences in personal financial literacy among college students. *Financial services review*, 11(3), 289-307.
- Christanti, N., & Mahastanti, L. A. (2011). Factors Considered by Investors in Investing. *Journal of Theory and Applied Management*, 4(3), 37-51.
- Fachrudin, K. R., & Fachrudin, K. A. (2016). The influence of education and experience toward investment decision with moderated by financial literacy. *Polish Journal of Management Studies*, 14.
- Gallery, N., Newton, C., & Palm, C. (2011). Framework for assessing financial literacy and superannuation investment choice decisions. *Australasian Accounting, Business and Finance Journal*, 5(2), 3-22.
- Gentry, B., & Fernandez, I. O. (2008). The effect of financial information on investment in shares. *International Journal of Business and Commerce*, 3(8), 32-46.
- Gouws, D. G., & Shuttleworth, C. C. (2009). Financial literacy: an interface between financial information and decision-makers in organizations. *Southern African Business Review*, 13(2).
- Gustman, A. L., Steinmeier, T. L., & Tabatabai, N. (2012). Financial knowledge and financial literacy at the household level. *American Economic Review*, 102(3), 309-13.
- Hamza, N., & Arif, I. (2019). Impact of Financial Literacy on Investment Decisions: The Mediating Effect of Big-Five Personality Traits Model. *Market Forces*, 14(1).
- Heenkenda, S. (2014). Inequalities in the financial inclusion in Sri Lanka: An assessment of the functional financial literacy. *Ilorin Journal of Economic Policy*, 1(1). 1-30.
- Janor, H., Yakob, R., Hashim, N. A., Zanariah, Z., & Wel, C. A. C. (2017). Financial literacy and investment decisions in Malaysia and United Kingdom: A comparative analysis. *Geografia-Malaysian Journal of Society and Space*, 12(2).
- Jappelli, T., & Padula, M. (2013). Investment in financial literacy and saving decisions. *Journal of Banking & Finance*, 37(8), 2779-2792.
- Jariwala, H. V. (2015). Analysis of financial literacy level of retail individual investors of Gujarat State and its effect on investment decision. *Journal of Business & Finance Librarianship*, 20(1-2), 133-158.
- Joo, S. H., & Grable, J. E. (2004). An exploratory framework of the determinants of financial satisfaction. *Journal of family and economic Issues*, 25(1), 25-50.
- Klapper, L. F., Lusardi, A., & Panos, G. A. (2012). Financial literacy and the financial crisis NBER working papers, National Bureau of Economic Research, Inc.
- Lewellen, W. G., Lease, R. C., & Schlarbaum, G. G. (1977). Patterns of investment strategy and behavior among individual investors. *The Journal of Business*, 50(3), 296-333.
- Lusardi, A. (2003). Saving and the effectiveness of financial education. 2004). *Pension Design and Structure: New Lessons from Behavioral Finance*. Oxford, UK: Oxford University Press.
- Lusardi, A. (2012). Numeracy, financial literacy, and financial decision-making (No. w17821). *National Bureau of Economic Research*.

- Lusardi, A. (2009). Overcoming the saving slump: How to increase the effectiveness of financial education and saving programs. University of Chicago Press.
- Lusardi, A., & Mitchell, O. S. (2011). Financial literacy around the world: an overview. *Journal of Pension Economics and Finance*, 10(04), 497–508.
- Lusardi, A., & Mitchell, O. S. (2007). Financial literacy and retirement planning: New evidence from the Rand American Life Panel. *Michigan Retirement Research Center Research Paper No. WP*, 157.
- Lusardi, A., & Mitchell, O. S. (2009). Financial literacy: Evidence and implications for financial education. *Trends and issues*, 1-10.
- Lusardi, A., & Mitchell, O. S. (2013). Older adult debt and financial frailty. In *Michigan Retirement Research Center Research Paper*, 213-291.
- Mandell, L., & Klein, L. S. (2009). The impact of financial literacy education on subsequent financial behavior. *Journal of Financial Counseling and Planning*, 20(1), 15–24.
- Mian, T. S. (2014). Examining the level of financial literacy among Saudi Investors and its impact on Financial Decisions. *International Journal of Accounting and Financial Reporting*, 4(2), 312.
- Musundi, K. M. (2014). The effects of financial literacy on personal investment decisions in real estate in Nairobi count. (Doctoral dissertation, University of Nairobi).
- Nagy, R. A., & Obenberger, R. W. (1994). Factors influencing individual investor behavior. *Financial Analysts Journal*, 50(4), 63-68.
- Robb, C. A., & Woodyard, A. (2011). Financial knowledge and best practice behavior. *Journal of Financial Counseling and Planning*, 22(1).
- Samuelson, P. A. (1969). Lifetime portfolio selection by dynamic stochastic programming. *The review of economics and statistics*, 239-246.
- Schagen, S. and Lines, A. (1996) Financial Literacy in Adult Life: A Report to the Natwest Group Charitable Trust. NFER, 36-45.
- Sewell, M. (2010). Behavioral finance. *University of Cambridge*, 13.
- Shockey, S. (2002). Low-wealth adults' financial literacy, money management behaviors, and associated factors, including critical thinking /. (Electronic Thesis or Dissertation). Retrieved from <https://etd.ohiolink.edu/>
- Sivaramakrishnan, S., Srivastava, M., & Rastogi, A. (2017). Attitudinal factors, financial literacy, and stock market participation. *International Journal of Bank Marketing*, 35 (5)
- Van Rooij, M. C., Kool, C. J., & Prast, H. M. (2007). Risk-return preferences in the pension domain: are people able to choose? *Journal of public economics*, 91(3-4), 701-722.
- Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics*, 101(2), 449-472.
- Vitt, L.A. (2004). Consumers financial decisions and the psychology of values. *Journal of Financial Service Professionals*, 58 (6), 68-78.