African Journal of Applied Research
Vol. 8, No. 1 (2022), pp. 108-119
http://www.ajaronline.com
http://doi.org/10.26437/ajar.03.2022.8

FINANCIAL LITERACY, INVESTMENT AND SAVINGS DECISIONS AMONG GOVERNMENT INSTITUTIONS' WORKERS IN MWANZA, TANZANIA.

Mbwambo, H.[1], Magoma, A.[2], Gasper, L.[3], & Mwasha, N.[4]
[1,3&4]*College of Business Education, Mwanza-Tanzania*
[2]*Tanzania Institute of Accountancy, Mwanza-Tanzania*
[1]h.mbwambo@cbe.ac.tz
[2] anthonyrmagoma@gmail.com or anthony.magoma@tia.ac.tz
[3]l.gasper@cbe.ac.tz
[4] n.mwasha@cbe.ac.tz

ABSTRACT

Purpose: The study focused on examining how financial literacy influences the savings and investment decisions of government workers in Mwanza Tanzania.

Design/methodology/approach: A cross-sectional design approach was adopted and specifically a multistage sampling technique was fully applied to select 271 government workers from different government institutions in Mwanza-Tanzania. Primary data was collected through the use of questionnaires and analysis of the sourced data was done through a logistic regression model which was binary in nature since this study had two dependent variables namely savings and investment.

Findings: Findings of this study reveals that both financial attitude and financial knowledge were significant at a 5% level and had an impact on making sound investment and savings decisions among government workers.

Research limitation/Implications: The study used only a selected sample of government employees in Mwanza. Further studies should focus on including other non-governmental employees and the scope should be broadened to have more robust results.

Practical implications: From the study findings it is clear that most financially literate government workers stand a better chance of making prudent decisions when it comes to savings and investments which ultimately makes them better off in their financial and economic well being.

Social Implications: Financial intermediaries and policymakers should devise a platform suited enough to equip government workers with the knowledge to make prudent savings and investment decisions.

Originality / Value: The study revealed that attitude and knowledge are the determinants of savings and investment decisions of government employees.

Keywords*: Financial awareness; financial literacy; investment behaviour; saving behaviour*

ISSN: 2408-7920

1.0 INTRODUCTION

1.1 Background information

Financial literacy entails one's ability to use the acquired knowledge and skills over the years to make sound financial decisions in managing financial resources and its applicability in financial related matters (Karakara, Sebu, & Dasmani, 2021; Lusardi, & Mitchell, 2014). Financial literacy increases one's understanding when it comes to financial matters and in turn, makes the one concerned to have better decisions when it comes to personal finances. Recent technological advancements witnessed in the financial markets across the globe make it necessary for individuals to be financially literate so that they can have an upper hand when it comes to making proper savings, borrowings and investments decisions (Walakumbura, 2021). It is important to note that the less financially literate individuals are the more likely they will end up making poor, uninformed, unaware decisions that will ultimately affect their financial status (Bongini, Iannello, Rinaldi, Zenga & Antonietti, 2014).

It is also good to note that the capability to make prudent financial decisions is highly impaired by one's level of financial literacy thus an improved financial decision depends on an individual level of financial literacy gathered through the years (Lusardi, 2012). The dynamism brought about by financial products makes it paramount for the continuation of the update of financial knowledge and skills to match the ever-changing world (Dewi, Febrian, Effendi & Anwarm, 2020; Garg & Singh, 2018). On top of that financial literacy plays a vital role in tackling day to day financial tasks of households which ultimately help them solve their financial needs and snatch them out of poverty (Md, 2015).

Ummuhan & Ozer (2021) contended that studies on financial behaviour are important to researchers, financial institutions and policymakers as financial literacy is an added ingredient in influencing the saving pattern at micro and macro level in a country. At the micro-level financial literacy inspires individuals to be wise in using their money efficiently and in that regard they stand a better chance of cultivating sound savings decisions whereas at the macro-level financial literacy expediates the growth of the economy in a country through a well established financial sector and hence contributing to the national savings this will, in turn, leads to decrease in unemployment and improvement in living standard individuals concerned (Bayar, Funda & Öztürk, 2017). One cannot mention financial literacy without financial inclusion as the two are integral ingredients towards attacking poverty as financial inclusion provides access whereas financial literacy provides awareness needed to make prudent financial decisions in the market an individual finds himself in (Subbarao, 2013; Lusardi & Mitchell, 2014).

Problem Statement

Researchers, government agencies and other organizations in many countries have instigated several attempts and campaigns to enhance financial literacy (Lusardi & Mitchell, 2014; Sarnovics *et al.,* 2016). An improvement of the latter triggers an increase in savings and ultimately investments (Stolper & Walter, 2017). Financially literate individuals stand a better chance of saving and investing prudently than their counterparts as evidenced in prior studies (Bhushan, 2014; Gathergood, 2012; Hidajat, 2015).

In Tanzania, the implication of savings and investment decisions due to financial literacy is a topic that is not fully discussed. A study was conducted on how financial literacy impacts budget decisions (Norman, 2010). Other studies revealed that the main determinants of savings in Tanzania were age and education (Mori, 2019). Another study established the relationship that exists between delinquency and defaults of credit in cooperative societies (Mori, Nyantori, & Olom, 2016). While some studies revealed the main determinants of savings are disposable income, economic growth, population growth and life expectancy (Epaphra, 2014; Tesha, 2013). Despite the wealth of research around the determinants of savings and investment in Tanzania, the association between financial literacy, savings and investments decisions is an area that is not fully discussed thus this study focuses on establishing this relationship.

THEORETICAL LITERATURE REVIEW

Saving and consumption based on Life cycle theory

Earlier studies on consumer behaviour revealed that individuals are thought to be rational in their expenditures and it is assumed that individuals will consume less at present and save more to meet their future demands when their income falls so as smoothen their marginal utility over time (Friedman, 1957; Modigliani, & Brumberg, 1954). The more financially literate they become the better are the chances that their savings will increase and their welfare will be enhanced (Lusardi & Mitchell, 2014).

The Theoretical Foundation of Prospect Theory

For investors to stand a chance of making rational investment decisions they ought to have complete information on the opportunities available when it comes to investment and due to their differences, their judgement on where and when to invest depends on the subjective value and subjective probability. Thus, financially literate and exposed investors stand a better chance of arriving at prudent investment decisions as compared to those who are less financially literate (Woolridge, & Snow, 1990; Wan, 2018)

Empirical Literature review

Different means are thus used to acquire financial literacy, prior research indicates that respondents can acquire financial literacy through advice on financial matters from their friends and the financial course they enrolled and the workers' financial education is mostly fetched through workshops, group seminars, financial counselling and the internet (Ergün, 2018). In the context of this study financial literacy entails the sum of financial attitude and financial knowledge.

Financial attitude entails one’s ability to choose an investment, preference of some alternatives over others and financial knowledge entails the ability to deal with numbers, knowledge of interest and compound effects, knowledge of inflation and risk diversification and knowledge of borrowing as well as savings (OECD, 2013).

Awareness of Financial products and financial literacy

The importance of financial literacy in spreading awareness of various financial products cannot be denied. These products are bonds, treasury bills, mutual funds and just to name a few. The role played by financial literacy in spreading financial products awareness to university students on insurance products disclosed that there was a difference between students who pursued financial related courses compared to students who majored in non-financial courses (Dalkilic & Kirkbesoglu, 2015). Doorley & Nolan (2019), argued that financial literacy had a positive impact on aspects of retirement plans, long term financial plans, purchasing private pension insurance and just to name a few.

A study conducted in the United States of America and Japan disclosed that the financially literate respondents were able to invest in stocks, securities and other financial products. This implies that financially literate individuals are more conscious of various financial products available in the financial markets than their counterparts (Shimizutani & Yamada, 2019).
From the literature discussed above this study is guided by the following hypothesis

H1- Financial literacy has a significant relationship to awareness of financial products

Financial literacy and investment decisions

Investment in financial products is better done when the prospective investors grasp an understanding of the level of risks attached to complex financial products. Both fundamental and complex skills in financial literacy are paramount in predicting the level of risk attached to investment and complex products (Rodrigues, Oliveira, Rodrigues & Costa, 2019). The study conducted in Chinese households revealed that those consumers who are financially literate tend to hold riskier financial products than their counterparts as they are well informed about the complexity that exists in the financial markets thus they have what it takes to mitigate the risks attached to various investment products (Liao, Xiao, Zhang & Zhou, 2017). Additionally, an individual’s experience backed up with a higher degree of financial literacy serves as a pillar to enable them to willingly study various financial reporting information of companies and through this, they are more likely to make prudent investment decisions (Bellofatto, D’Hondt, & De Winne, 2018; Krische, 2019). Rai (2017), contended that financial attitude is a prerequisite ingredient towards investment this implies that not only financial knowledge but financial attitude is a determinant of one’s investment behaviour.
The study is guided by the following hypothesis
H2- “Financial attitude has a significant relationship with investment behaviour”
H3- “Financial knowledge has a significant relationship with investment behaviour”

Financial literacy and saving decisions

A study that was conducted in South Africa revealed that the black's level of financial literacy was lower compared to their coloured counterparts such as the Indians and whites. This trend has affected their level of savings and over-indebtedness as compared to their counterparts (Matemane, 2018). It is also good to note saving is an important financial instrument that is highly needed if one needs to be financially successful and financial literacy acts as a catalyst that stirs up one's ability to save for the present and future consumption. In Zimbabwe, a study was conducted and disclosed that the level of financial literacy in women is lower in comparison to men and rural dwellers had a lower financial literacy level as compared to urban dwellers the study concluded that financial literacy positively influences saving behaviour (Murendo & Mutsonziwa, 2017). Propensity to save and financial literacy is highly correlated as financially literate individuals are more likely to save and vice versa is also true (Xue, Gepp, O'Neill, Stern, & Vanstone, 2019). An interesting outcome was also revealed in another study that involved training programs and SMS reminders on saving to trainees. Those who received SMS reminders periodically about savings increased their savings to sales as compared to others who never received the SMS. Thus, those who received SMS reminders saved more of their income, invested a greater chunk of their business returns (Abebe, Tekle & Mano, 2018). Last but not least a study conducted in Indonesia revealed that financial literacy was insignificant to influence attitudes towards savings and saving intention (Widyastuti, Suhud, & Sumiati, 2016).

H4- Financial attitude has a significant relationship with saving behaviour

H5- Financial knowledge has a significant relationship with saving behaviour

2.0 RESEARCH METHODOLOGY

Mwanza region was purposively selected due to its important economic features and it is a business hub in the lake zone region in Tanzania. Not only that, but Mwanza is also one of the fastest-growing cities in the country where key business activities such as mining, farming, fishing and many others are conducted. These activities in their generality require business people to be financially literate if the success of their businesses is important to them. This particular study applied a cross-sectional design approach to address the study objectives

The sampling method used to collect data in this study was multistage sampling. The first stage is three districts namely Sengerema. Ilemela and Kwimba were randomly selected out of seven districts found in Mwanza region. In the second stage, two wards from each district selected in (first stage) were randomly selected. The final stage entails the selection of government workers purposively from the wards pointed out where self-administered questionnaires were distributed to Sengerema (150 questionnaires), Ilemela (200 questionnaires) and Kwimba (100 sets of the questionnaire). Out of 450 distributed questionnaires only 301 of them were received from the respondents. After a thorough analysis of the received sets of the questionnaire, only 271 were found to be fit for this study. Hence our sample size was 271 respondents.

The sets of the questionnaire were employed to collect primary from government workers. Questionnaires were preferred since they can be administered to a large number of respondents without the need for the researcher to be physically present. The questionnaires adopted a 5-point likert scale.

Specification of the Model used
Upon successful data collection of the questionnaire, a binary logistic regression model was chosen since the dependent variables, investment decisions and saving decisions were dichotomous in nature where the respondent was either influenced positively or negatively. The study analysed the data through a binary logistic model. The model used is stated as under;

Logit p =In (p/1-p) =β0 + β1X1 + β2X2 + μ

P= Probability of the effect of financial literacy on investment decision
Odds=p/1-p= probability of the effect of financial literacy on Investment/saving decision/probability of no effect of financial literacy on Investment/saving decision.
Where;
Logit p= Saving decision/Investment decision
X1 = Financial Knowledge
X2 = Financial attitude
μ= Error term
B1, β2 are coefficients
β0 = the constant term

3.0 RESULTS AND DISCUSSION
3.1 Empirical results
3.1.1 Awareness of financial products and financial literacy
Table 1 below shows the level of awareness of financial products to the financial literacy of government workers. All aforementioned products were statistically significant at a 5% level.

Table 1: Chi-square Results of awareness of financial products

Financial products	Chi-square	Df	P-value
Pension fund	5.752	1	0.016
Mutual funds	27.993	1	0.000
Mortgage	12.736	1	0.000
Bank loan	23.298	1	0.000
Shares and Stock	38.379	1	0.000
Treasury bills	35.099	1	0.000
Bonds	25.756	1	0.000
Insurance	38.927	1	0.000
Real estate	5.788	1	0.016
Mobile phone payment account	5.600	1	0.018

Source: Estimation using SPSS

ISSN: 2408-7920

3.1.2 Financial literacy and investment decisions

Financial literacy (financial knowledge and attitude) had a positive and significant relationship with investment decisions. The study also employed -2log Likelihood (- 2LL) as a measure of the goodness of the logistic models with both Nagelkerke R square and Cox & Snell R square to show the explanatory power of the model. To check whether the logistic estimates were significant from zero, the study used Wald statistics. Nagelkerke R squared of 0.808 indicated that the model provided a strong fit on overall prediction.

Table 2: Financial literacy and investment decisions

Variables in the equation						
Variable	B	S.E.	Wald	Df	Sig	Exp(B)
Knowledge	.992	.231	18.431	1	0.000	2.697
Attitude	.470	.206	5.227	1	.022	1.600
Constant	-15.571	3.852	16.339	1	.000	.000
Nagelkerke R Square	.808					
Chi square	93.523					
Cox & Snell R Square	.604					
-2 Log likelihood	45.292					

Source: Estimation using SPSS

3.1.3 Financial literacy and saving decisions

Financial literacy (financial knowledge and attitude) had a positive and significant relationship with saving decisions. The study also employed -2log Likelihood (- 2LL) as a measure of the goodness of the logistic models with both Nagelkerke R-square and Cox & Snell R-square to show the explanatory power of the model. To check whether the logistic estimates were significant from zero, the study used Wald statistics. Nagelkerke R squared of .627 indicated that the model provided a strong fit on overall prediction.

Table 3: Financial literacy and saving decisions

Variables in the equation						
Variable	B	S.E.	Wald	Df	Sig	Exp(B)
Knowledge	.270	.088	9.429	1	.002	1.310
Attitude	.855	.209	16.816	1	.000	2.352
Constant	-13.925	3.213	18.787	1	.000	.000
Nagelkerke R Square	.627					
Cox & Snell R Square	.47					
-2 Log-likelihood	75					
Chi square	64.175					

Source: Estimation using SPSS

3.2 Discussion

3.2.1 Awareness of financial products

The results depicted in Table 1 above revealed that financial literacy knowledge contributes to financial product recognition. Individuals' financial literacy level entails their ability not only to recognize different financial products but they stand a better chance of investing in different stocks and securities that are traded in the financial market. (Shimizutani & Yamada, 2019). Likewise, financial literacy plays a vital role in developing awareness of insurance products as evidenced in a study conducted by (Dalkilic & Kirkbesoglu, 2015). Financial literacy also contributes to the awareness of the pension funds scheme and the results were statistically significant as depicted in a study conducted by (Doorley & Nolan, 2019).

3.2.2 Financial literacy and investment decisions

In Table 2 above the findings shows that there is a statistically significant positive relationship between financial knowledge and investment decision (β = 0.992, Wald = 18.431 and p-value = 0.000).

The results imply that one's acquisition of financial knowledge increases their influence on investment decisions by 0.992 units. Moreover, one unit increase in financial knowledge leads to an odds ratio of 2.697 times as large. Thus, government workers who are acquiring financial knowledge training have 1.697 times of making positive investment decisions in their lives which is comparable. Likewise, the Nagelkerke R squared of 0.808 indicated that the model provided a good fit between financial literacy and investment decisions on overall prediction. When the full model was tested the constant proved significant indicating financial literacy reliability differentiated between those with positive and negative investment decisions (Chi square=93.523, p-value=0.000). the findings of this particular are in alignment with the previous study (Rodrigues, Oliveira, Rodrigues, & Costa, 2019).

The findings revealed financial attitude had a positive and significant relationship with investment decisions (β= 0.470, Wald = 5.227 and p-value=0.022). This implies that financial attitude increases the impact of investment decisions by 0.47 units. one unit increase in financial attitude leads to the odds ratio of 1.600 times as large. Thus, government workers who are acquiring finance attitude literacy programs have 0.600 times of making a positive investment decision. The findings were from a previous study conducted (Rai, 2017)

3.2.3 Financial literacy and savings decisions

In Table 3 above the findings shows that there is a significant positive relationship between financial knowledge and saving decision (β = 0.27, Wald = 9.429 and p-value = 0.002). This implies that one's acquisition of financial knowledge increases the influence of saving decisions by 0.27 units. Moreover, one unit increase in financial knowledge leads to the odds ratio of 1.310

ISSN: 2408-7920

African Journal of Applied Research
Vol. 8, No. 1 (2022), pp. 108-119
http://www.ajaronline.com
http://doi.org/10.26437/ajar.03.2022.8

times as large and thus government workers who are acquiring financial knowledge training have 0.310 times of fostering positive saving decisions.

Likewise, the Nagelkerke R squared of 0.625 indicated that the model provided a good fit between financial literacy and saving decisions on overall prediction. When the full model was tested the constant proved significant indicating that financial literacy reliably differentiated between those with positive and negative investment decisions (Chi square=64.15, p-value=0.000 with d.f= 4). The findings of this particular study are in alignment with previous studies such as (Matemane, 2018; Xue et al., 2019). The findings revealed that financial attitude had a positive and significant relationship with saving decisions (β= 0.855, Wald = 16.816 and p-value=0.000). This implies that financial attitude increases the impact of saving decisions by 0.855 units. One unit increase in financial attitude leads to the odds ratio of 2.352 times as large. Thus government workers carrying out financial literacy programs have 1.352 times more chances of fostering prudent and positive saving decisions than their counterparts. The findings were contrary to a previous study conducted in Indonesia (Widyastuti, Suhud, & Sumiati, 2016).

4.0 CONCLUSION AND RECOMMENDATION

Conclusion

The study concludes that government workers' financial attitude and their level of financial knowledge had a positive and significant impact on making prudent saving and investment decisions.

Both life cycle saving theory and Prospect investment theory were tested and proved to be significant From the study findings, it is clear that most financially literate government workers stand a better chance of making prudent decisions when it comes to savings and investments which ultimately makes them better off in their financial and economic well being. Thus, it is good to note that financial literacy in this case is considered a predecessor and a significant predictor of the saving and investment decisions

Recommendations

Financial intermediaries and policymakers

The study reveals that the increase in the level of financial literacy of government workers has a significant effect on their investments and savings decisions. It has been noted that government workers are prepared to make new investments for better financial returns once they are financially literate enough. Their level of financial literacy will push them to take more financial risks as they will be equipped enough to mitigate the said risks and earn better financial returns. Thus, financial intermediaries and policymakers should devise a platform suited enough to equip government workers with the knowledge to make prudent savings and investment decisions.

ISSN: 2408-7920

Government institutions in Tanzania
This study recommends that the government institutions in Tanzania should periodically offer courses on investment, savings and financial markets trends to its workers to increase their awareness and their attitudes towards saving and investment.

Government employees
The study recommends that government employees should be active enough in updating themselves on relevant information that pertains to investment and savings decisions this will in turn increase their economic well being.

5.0 REFERENCES
Abebe, G., Tekle, B., & Mano, Y. (2018). Changing saving and investment behaviour: The impact of financial literacy training and reminders on micro-businesses. *Journal of African Economies*, *27*(5), 587-611.
Baidoo, S. T., Boateng, E., & Amponsah, M. (2018). Understanding the determinants of saving in Ghana: Does financial literacy matter?. *Journal of International Development, 30*(5), 886-903.
Bayar, M. Y., Funda, S. H., & Öztürk, Ö. F. (2017). Impact of Financial Literacy on Personal Saving : A Research on Usak University Staff Impact of Financial Literacy on Personal Savings : A Research on Usak. *Journal of Knowledge Management, Economics and Information Technology*, *8*(6), 1–19.
Bellofatto, A., D'Hondt, C., & De Winne, R. (2018). Subjective financial literacy and retail investors' behaviour. *Journal of Banking & Finance, 92*, 168–181.
Bhushan, P. (2014). Relationship between financial literacy and investment behaviour of salaried individuals. *Journal of Business Management and Social Sciences Research*, *3*(5), 82-87.
Bongini, P., Iannello, P., Rinaldi, E.E., Zenga, M. & Antonietti, A. (2018). "The challenge of assessing financial literacy: alternative data analysis methods within the Italian context", *Empirical Research in Vocational Education and Training, 10*(12), 1–22.
Chijwani, M. M. (2014). "A study of financial literacy among working women in Puni." *International Journal of Scientific and Development, 1*(11), 2456–2458.
Dalkilic, N., &Kirkbesoglu, E. (2015). The role of financial literacy on the development of insurance awareness. ,. *International Journal of Economics and Finance*, *7*(8), 272-280.
Dewi, V.I., Febrian, E., Effendi, N. & Anwarm, M. (2020). "Does financial perception mediating the financial literacy on financial behaviour? A study of the academic community in central Java Island, Indonesia. *Montenegrin Journal of Economics*, *6*(2), 33-48.
Doorley, K., & Nolan, A. (2019). *The Determinants of Retirement Planning within Couples in Ireland.* (ESRI Discussion Paper Series IZA DP No. 12188).
Epaphra, M. (2014). Empirical investigation of the determinants of Tanzania's national savings. *Journal of Economics and Development Studies*, *2*(4), 223-241.
Ergün, K. (2018). Financial literacy among university students: A study in eight European countries. *International Journal of Consumer Studies*, *42*(1), 2-15.

Friedman, M. (1957). *A Theory of the Consumption Function*. Princeton University Press.

Garg, N., & Singh, S. (2018). *Financial literacy among youth*. *45*(1), 173–186. https://doi.org/10.1108/IJSE-11-2016-0303

Gathergood, J. (2012). Self-control, financial literacy and consumer over-indebtedness. *Journal of Economic Psychology*, *33*(3), 590–602.

Hidajat, T. (2015). An analysis of financial literacy and household saving among fishermen in Indonesia. *Mediterranean Journal of Social Sciences*, *6*(5), 216.

Karakara, A. A. W., Sebu, J., & Dasmani, I. (2021). Financial literacy, financial distress and socioeconomic characteristics of individuals in Ghana. *African Journal of Economic and Management Studies*. https://doi.org/10.1108/AJEMS-03-2021-0101

Krische, S. D. (2019). Investment experience, financial literacy, and investment-related judgments. *Contemporary Accounting Research, 36*(3), 1634-1668.

Liao, L., Xiao, J. J., Zhang, W., & Zhou, C. (2017). Financial literacy and risky asset holdings: evidence from China. *Accounting & Finance, 57*(5), 1383-1415.

Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. ,. *Journal of Economic Literature*, *52*(1), 5–44.

Lusardi, A. (2012). Financial literacy and financial-decision making in older adults. *Generations*, *36*(2), 25-32.

Matemane, M. R. (2018). Saving for tomorrow: does the level of financial literacy in the South African working class matter?. *Southern African Business Review, 22*(1), 1–21.

Md, A. M. H. A. P. (2015). A comparison of financial literacy between welfare recipients and non-welfare recipients in Brunei. *International Journal of Social Economics*.

Modigliani, F., & Brumberg, R. (1954). *"Utility Analysis and the consumption function: an interpretation of cross-section data", in Kurihara, K.K. (Ed.), Post Keynesian Economics, Rutgers University Press, New Brunswick,* 388-436.

Mori, N. (2019). Determinants of individual savings in Tanzania. *Behavioural Finance*, *11*(3), 352–370.

Mori, N. (2016). Effects of clients' literacy on default and delinquency of savings and credit co-operative societies in Tanzania.

Murendo, C., &Mutsonziwa, K. (2017). Financial literacy and savings decisions by adult financial consumers in Zimbabwe. *International Journal of Consumer Studies*, *41*(1), 95-103.

Mutlu, Ü., & Özer, G. (2021). The moderator effect of financial literacy on the relationship between locus of control and financial behaviour. *Kybernetes*.

Norman, A. (2010). Importance of financial education in making informed decisions on spending. *Journal of Economics and International Finance*, *2*(10), 199-207.

OECD. (2013). *"Financial literacy framework", in OECD (Ed.), PISA 2012 Assessment and Analytical Framework: Mathematics, Reading, Science, Problem Solving and Financial Literacy, OECD Publishing, Paris,*. 139–166.

Rai, K. (2017). Association of Financial Attitude, Financial Behaviour and Financial Knowledge Towards Financial Literacy : A Structural Equation Modeling Approach. *FIIB Business*

ISSN: 2408-7920

Review, *8*(1), 51–60. https://doi.org/10.1177/2319714519826651

Rodrigues, L. F., Oliveira, A., Rodrigues, H., & Costa, C. J. (2019). Assessing consumer literacy on financial complex products. *Journal of Behavioral and Experimental Finance, 22*, 93–104.

Sarnovics, A., Mavlutova, I., Peiseniece, L., & Berzina, S. (n.d.). Financial literacy enhancement is a task of financial education for the Latvian population. Business challenges in the changing economic landscape-. *Springer.*, *2*, 365–389.

Shimizutani, S, & Yamada, H. (2019). Financial literacy of middle-aged and older Individuals: Comparison of Japan and the United States. *The Journal of the Economics of Ageing*. https://doi.org/DOI: 10.1016/j.jeoa.2019.100214

Stolper, O.A., & Walter, A. (2017). Financial literacy, financial advice, and financial behaviour. *Journal of Business Economics*, *87*, 581–643. https://doi.org/https://doi.org/10.1007/s11573-017-0853-9

Subbarao, D. (2013). ,. www.rbi.org.in/Home/Speeches www.rbi.org.in; https://rbidocs.rbi.org.in/rdocs/Speeches/PDFs/03IWS04032013F.pdf

Tesha, D. M. (2013). *Determinants of private saving in Tanzania.*

Walakumbura, S. H. M. L. (2021). The Effect of Financial Literacy on Personal Investment Decisions amongst Medical Practitioners in Sri Lanka. *European Journal of Business and Management Research*, *6*(4), 123–126. https://doi.org/10.24018/ejbmr.2021.6.4.952

Wan, W. (2018). *Prospect theory and investment decision behaviour : A review. 2018 International Conference on Education Technology and Social Sciences*. *Etsocs*, 114–118.

Widyastuti, U., Suhud, U., & Sumiati, A. (2016). The impact of financial literacy on student teachers' saving intention and saving behaviour. *Mediterranean Journal of Social Sciences*, *7*(6), 41.

Woolridge, J. R., & Snow, C. C. (1990). Stock market reaction to strategic investment decisions. *Strategic Management Journal*, *11*(5), 353-363.

Xue, R., Gepp, A., O'Neill, T. J., Stern, S., & Vanstone, B. J. (2019). Financial literacy amongst elderly Australians. *Accounting & Finance, 59*, 887-918.

ISSN: 2408-7920

Arca Academic Publisher
GBPA GPA449-122017