Structural guideline interfacing financial literacy and savings behaviour of South African households: A study of Tshwane and Mahikeng municipality employees

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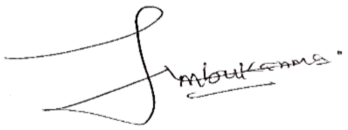
DECLARATION

I, Ifeanyi Mbukanma, declare that the thesis entitled **“Structural guideline interfacing financial literacy and savings behaviour of South African households: A study of Tshwane and Mahikeng municipality employees”**, hereby submitted for the degree of Doctor of Philosophy in Business Management at the North-West University, South Africa, has not previously been submitted by me for a degree at this or any other university. I further declare that this is my work in design and execution and that all materials contained herein, have been duly acknowledged.



IFEANYI MBUKANMA

DEDICATION

I dedicate this thesis to God Almighty, “For the LORD giveth wisdom: out of his mouth cometh knowledge and understanding” (Proverbs 2:6), my parents, Mr and Mrs Frank Omeakaokwulu Mbukanma JP and my late sister, Mrs Chinedu Stella Emuomagho, for sacrificing all to see me succeed in life. I also dedicate this study to all members of the Frank Omeakaokwulu Mbukanma JP family, for their prayers and support.

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ABSTRACT

The emergence of a credit economy in South Africa, gave birth to an environment where most households spend a great percentage of their earnings and even beyond, on immediate satisfactory goods and services. The literature reveals that most South Africans have several bank accounts, credit cards and debit cards, among others, thus making it difficult for them to understand their financial situation most of the time. As such, debts are incurred over a continuous period of time, giving room for little or no savings. As a result, a personal approach to cash management and the level of financial literacy among South Africans becomes a concern among academic scholars. Although, in theory, financial literacy was found as a core determinant of household savings behaviour, it is evident that though South Africans are familiar with financial knowledge and its terms compared to their peers in emerging economies, they have not inculcated this knowledge into making the right financial decisions with regard to savings and wealth creation. Consequently, the rate of personal savings in South Africa has been on a continuous decline, thus affecting the growth of the economy.

As such, this study sought to ascertain financial literacy variables that have statistical significant impact on household savings behaviour. Thus, to achieve this objective, financial literacy micro-variables were used to obtain quantitative data from two municipalities (City of Tshwane and Mahikeng) in South Africa. The variables tested in this study were grouped into independent (financial literacy variables) and dependent variables (variables that measure household savings behaviour). These variables were statistically tested and analysed to ascertain the statistical significant impact of financial literacy on household savings behaviour. Correlation statistical analysis was performed to ascertain the relationship between dependent and independent variables as well as aiding pre-selection of variables for the Structural Equation Model. In addition, factor analysis was performed to identify micro-variables that have a statistical significant impact on household savings behaviour as well as a confirmatory factor analysis through structural equation modelling.

The results revealed that most of the financial literacy micro-variables extracted from financial control, financial planning and financial knowledge as well as understanding, have positive statistical relationships with variables that measure household savings behaviour. Although it was also ascertained that the more South African households are knowledgeable and make use of financial and credit products, the lesser they are likely to save. Hence, the researcher succeeded in obtaining empirical results that statistically support the logic that financial literacy is a core determinant of household savings behaviour. As such, it is recommended that stakeholders in charge of financial literacy and savings campaigns in South Africa should employ the contribution of this study, which identifies savings literacy as the way forward to improve household savings behaviour.

Keywords: Financial literacy, household savings behaviour, savings literacy, rate of household savings, economic growth

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LIST OF ABBREVIATIONS AND ACRONYMS

APEC	- Asian Pacific Economic Co-operation
ASEAN	- Association of South East Asian Nations
BRICS	- Brazil, Russia, India, China and South Africa
CED	- Consumer Education Department
CFA	- Confirmatory Factor Analysis
EU	- European Union
FSB	- Financial Service Board
GDP	- Gross Domestic Product
HSRC	- Human Science Research Council
INFE	- International Network on Financial Education
JSE	- Johannesburg Stock Exchange
NCFEC	- National Consumer Financial Education Committee
NSFE	- National Strategy for Financial Education
NYIB	- National Youth Involvement Board
OECD	- Organisation for Economic Co-operation and Development
PIH	- Permanent Income Hypothesis
SABRIC	- South African Bank Risk Information Centre
SADC	- Southern African Development Community
SAIA	- South African Insurance Association
SASI	- South African Savings Institute
SEM	- Structural Equation Model

CHAPTER ONE

INTRODUCTION TO THE STUDY

Households are continually confronted with financial challenges and circumstances, for which they require financial knowledge to make proper decisions in such situations. Unfortunately, the existence of man is inevitably linked to money management, which has caused so much uncertainty and stress for households that lack the right financial knowledge to manage such situations. Thus, this section of the study provides the background to the study, the rationale for the study, problem statement, objectives of the study, the research questions, and the significance of the study.

1.1 INTRODUCTION

The recent competition and sophisticated market situation caused by the global economic reform has raised serious concerns among different stakeholders and academia around the world on how consumers ought to be acquainted with new developments and save in order to salvage their future financial well-being (Refera *et al*., 2016; Lusardi & Mitchell, 2014). Accordingly, there are evidences of a fast growing trend among most developing countries, known as emerging markets; these are countries that their social and business activities complements the process of their rapid growth and industrialisation. Countries such as, Brazil, Russia, India, China and South Africa are considered to be among the top ten countries in this category. The advent of this rapid evolution in emerging markets brought into existence some sophisticated economic system, such as credit economy (the economic system that allows individuals to increase consumption on credit basis), which has informed a consumption driving economy in South Africa (SASI, 2015, 2010; Prinsloo, 2000). As such, even with the existence of all these economic and market developments, households are left to make individual choices regarding their financial well-being.

Accordingly, it is important to ascertain how equipped South Africans are with regard to financial knowledge, to make informed financial decisions by controlling immediate consumption and save for the future. Indeed, it is noteworthy that individual financial choices regarding savings today, determine their future financial well-being and, their contribution to save at present, ultimately reflects on the growth side of the nation’s Gross Domestic Product (GDP). However, gap exist in previous studies on how to link these facts together, reconcile existing contradictions and provide a communicating bridge between financial literacy and household savings behaviour among South Africans. Thus, the purpose of this study was to identify and show the positive association between financial literacy and household savings behaviour that can assist in integrating and reconciling the most uncertainties surrounding the continuous decrease in the rate of savings by households in South Africa.

1.2 RATIONALE FOR THE STUDY

Being ‘broke’ by most working class South Africans days after pay day has become a subject that needs critical investigation to ascertain its actual causes. Indeed, previous studies have identified a continuous decline in the rate of savings among South African households, thus giving room for future imbalances in individual financial wellbeing (Cole *et al*., 2017; Precious & Asrat 2014; Mahlo, 2011). Furthermore, South Africa’s economy has been classified by most researchers as a consumption economy, where most households spend a great percentage of their earnings on immediate consumption goods, thereby creating an imbalance on their future financial wellbeing (Allais, 2017; Cole *et al*., 2017; Singh, 2015; Precious & Asrat, 2014).

The adoption of a credit economy in South Africa (which gives individuals access to spend beyond their credit status on goods and services) has also contributed greatly to the current situation in the country, where individuals save less and live more on debt (Singh, 2015; Fatoki, 2014). Thus, the need for this study in order to identify and show the positive correlation between financial literacy variables and household savings behaviour of South Africans. This will go a long way in clearing the cloud surrounding the low rate of savings and identify what could be done (knowledge) to boost the savings behaviour of South African households as indicated by previous scholars. In essence, financial literacy has been ascertained to have a positive correlation with household savings behaviour, as it boosts the rate of individual savings, thus contributing greatly to economic growth (Lusardi & Mitchell, 2014; Beckmann, 2013).

1.3 BACKGROUND TO THE STUDY

There are several variations across individuals in terms of what determines their rate of savings, with regard to those with relatively lifetime incomes. Researchers have found that these variations cannot easily be illustrated by chance of events or by asset allocation choices (Bernheim *et al*., 2000; Venti & Wise, 2000). Although the knowledge to save is believed to be a much more important determinant of these variations in the rate of individual savings (Ge *et al*., 2018; Cronqvist & Siegel, 2015; Lusardi & Mitchell, 2014), there is a fundamental question as what area of financial knowledge is needed by individuals to strengthen their saving habit.

However, there are other determinants of individual savings behaviour such as income, demographic variables and government policies, among others (Precious & Asrat, 2014; Mongale *et al*., 2013; Mahlo, 2011), but this study focuses on identifying financial literacy variables and to ascertain their level of association with personal savings behaviour, which on the other hand, informs an individual's rate of savings. It is obvious that for an individual to save, he or she must have been equipped by different variables that inform savings. As such, financial literacy has been identified as a core determinant of household savings behaviour among other factors (Petrie *et al*., 2018; Lusardi *et al*., 2017; Refera *et al*., 2016; Klapper *et.al.,* 2015; Lusardi & Mitchell, 2014; Roberts *et al.,* 2014; Jonubi & Abad, 2013; Struwig & Plaatjes, 2013; Atkinson & Messy, 2012, Van Rooij *et al.,* 2012). In view of this, it is noteworthy to indicate that for stakeholders to attend to the issue of low savings in South Africa, a research has to be done to align financial literacy variables with household savings behaviour in order to complement other determinants of rate of savings rate and to boost household savings in South Africa. Thus, Refera *et al*. (2016) identify the potentials of financial literacy as follows:

> "Not just convenience, but an essential survival tool because of the fact that lack of financial knowledge leads to poor financial choice and decisions, which could result in undesired financial and economic consequences to individual, financial system and entire economy".

Due to recent developments in the global economy, most South Africans are caught up in the web of spending their income on consumption rather than savings (Refera *et al*., 2016; Mongale *et al*., 2013; Darley, 2011). This is contrary to the aged established conventional microeconomic approach to saving and consumption decisions as propounded by Friedman (1957); and Modigliani and Brumberg (1954), which established that any level-headed individual will devour not as much as his pay in the midst of high earnings and spare to help utilisation when salary falls. This will, thus, make the individual to depend less on others or government at the age of retirement.

Thus, the concept of financial literacy education enhances household financial characteristics (awareness, knowledge, skills, attitudes and behaviour) required to make informed financial choices to accomplish future personal financial goals (Petrie *et al*., 2018; Lusardi *et al*., 2017; Atkinson & Messy, 2012). Indeed, absence of the right financial knowledge among individuals often leads them into spending their income on less priority items that will not necessarily benefit their families (Lusardi & Mitchell, 2014), making their living expenses to exceed their income, thus leading to more debts for the household (Refera *et al.,* 2016; Symanowitz, 2006). Such atmosphere of debt does not give room for savings but rather results in future financial imbalance for the household.

In essence, members of households owe themselves the responsibility to have a sound financial security plan against their retirement age. However, the extent to which they are prepared to make an informed savings decision and plan for retirement, strongly depends on their level of financial literacy (Boisclair *et al*., 2017; Clark *et al*., 2017; Lusardi, 2008). Thus, there are increased necessities of financial knowledge for individuals to make use of different facilities such as Automated Teller Machines (ATMs) for payments, manage risks, credits, loans, savings and investments for old age (Refera *et al*., 2016; Lusardi & Mitchell, 2014; Demirguc-Kunt & Klapper, 2013). Currently, financial literacy has raised increased concerns at the national level to increase awareness to equipped consumers with the right knowledge to suit the complexity of recently emerging markets (Petrie *et al*., 2018; Clark *et al*., 2017; Struwig & Plaatjes, 2013). Klapper *et.al.* (2015) and Jonubi and Abad (2013) emphasise the need for governments to promote financial literacy education among households by implementing various campaign programmes of financial education, as this will further enhance individual awareness to save. A global financial literacy rating shows that South Africa scored 42% on par with a number of developed countries, higher than many contemporary developing nations (Klapper *et.al*, 2015). A representation of financial literacy level among major emerging economies is shown in Table 1.1.

Table 1.1: Financial literacy level of major emerging economies

Major emerging economies	**Level of financial literacy in %**

Brazil	35
China	28
India	24
Russian Republic	38
South Africa	42

Source: Adapted from Klapper *et al.* (2015)

Table 1.1 shows results of the survey on financial literacy among the major emerging markets. Adults in South Africa, who participated in the survey, showed a mastery of financial literacy compared to other countries. However, this fact is not reflected in the savings culture of South African households as supported by previous literature; that personal level of financial literacy determines their savings behaviour (Boisclair *et al*., 2017; Clark *et al*., 2017; Lusardi & Mitchell 2014). Thus, it is evident that there is still a gap in the relationship between financial literacy and savings behaviour of South African households, going by the fair grasp of financial literacy among households in South Africa and their continuous low rate of savings.

However, Klapper *et al.,* (2015); Mandell and Klein (2009) and Lusardi (2008a) posit that individuals who acquire the individual money related administration course (financial management) in secondary school will, in general, spare a higher extent of their earnings than those who did not. Thus, an increase in household savings, which is informed by proper financial management, has been ascertained as a great contributor to economic growth and development (Amusa & Busani, 2013). Although, for some years now, the savings rate of South African households has faced a continuous decline (SASI, 2015; Mahlo, 2011), making the South African government and non-governmental organisations to continually embark on campaigns on the obligation for all South Africans to save (Fatoki, 2014a; Cronjé & Roux, 2010), a decrease in the rate of savings implies an increasing dependency on foreign capital inflows (Jagadeesh, 2015; Najarzadeh *et al*., 2014; Aron & Meullbauer, 2000). However, compared to most BRICS peer countries in the world, South Africa ranks very low in the rate of gross savings (WorldBank, 2017). A simple illustration of the savings rate of South Africa, compared to some selected countries in the world, is represented in the Table 1.2 below.

Table 1.2: Gross savings of some selected BRICS peer countries to South Africa (% of Gross Domestic Product)

Countries/dates	1998	2000	2002	2004	2006	2008	2010	2012	2014	2016
Australia	**22**	**21**	**22**	**22**	**22**	**22**	**23**	**25**	**24**	**22**
Botswana	**42**	**39**	**34**	**34**	**44**	**35**	**35**	**34**	**48**	**44**
Brazil	**12**	**13**	**15**	**18**	**17**	**17**	**19**	**17**	**16**	**14**
China	**40**	**36**	**40**	**46**	**50**	**52**	**51**	**50**	**49**	**46**
India	**23**	**25**	**26**	**33**	**35**	**34**	**34**	**32**	**31**	**31**
Russian	**17**	**36**	**29**	**31**	**31**	**32**	**27**	**28**	**23**	**26**
South Africa	**16**	**16**	**17**	**16**	**16**	**17**	**18**	**15**	**15**	**17**

Source: Adapted from WorldBank (2017)

Table 1.2 above, gives evidence on the growth rate of South Africa's gross savings compared to some countries in the world, indicating a crawling pace in the savings culture of South Africans. Practically, previous studies have found that the higher the savings rate of households, the higher economic development and growth (Jagadeesh, 2015; Najarzadeh *et al*., 2014; Odhiambo, 2009); this implies that countries with higher savings rates tend to have higher growth rates as well (Ali *et al*., 2017; Sherraden, 2017; Prinsloo, 2000), thus, justifying the need for this study which revealed that South Africans do not have a good savings culture despite their good mastery of financial literacy whereas, financial literacy has been identified as a core determinant of personal savings behaviour.

However, looking at the financial literacy and economic growth of 50 richest and 50 poorest countries in the world, proxied by gross domestic product (GDP) per capital, financial literacy tends to be higher in countries with a high GDP rate (Klapper *et al.,* 2015). It is evident that there is a positive correlation between financial literacy, increase savings rate and economic growth, as such, otherwise, lack of financial literacy results in low savings behaviour (Petrie *et al*., 2018; Lusardi *et al*., 2017; Refera *et al*., 2016; Jappelli & Padula, 2013; Lusardi, 2008), and, in return, causes a decreasing level of national economic growth (Jagadeesh, 2015; Najarzadeh *et al*., 2014; Bonham & Wiemer, 2012). Thus, there is a major challenge in the South African situation, where the ratio of domestic savings has been on a continuous decline for some years now, causing a corresponding decrease in GDP in the same period. A great demonstration of the relationship between GDP growth and the savings ratio of South African households is represented in Figure 1.1 below.

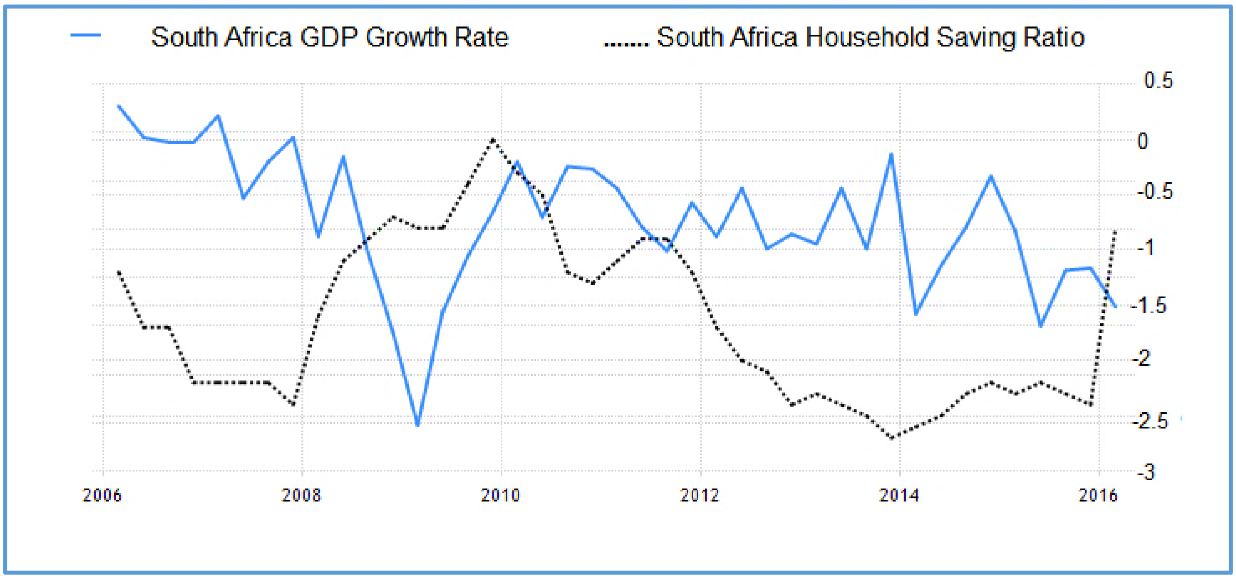


Figure 1.1: GDP growth rate and savings ratio of households in South Africa
Source: Adapted from WorldBank (2017)

Figure 1.1 shows the relationship between South Africa's GDP growth rate and the savings ratio of households between 2006 and2016. The trend shows that both savings ratio and GDP have been in the negative territory for a continuous period, thus generating a great negative implication on national economic growth and development. Growth in individual investment, which is a result from savings in every country, reflects an increase in the country's GDP, thus, savings by households drive growth in investment in the long run (Amusa, 2014; Sithebe, 2014).

However, Jagadeesh (2015); Najarzadeh *et al*. (2014) and Prinsloo (2000) emphasise on how to achieve an improved adequate rate of economic growth and development, and maintain the aggregate rate of savings will have to improve up to 20 percent and above of GDP to support a sustained growth rate in real incomes of more than 3 percent per year. It is the belief of the South African Savings Institute (SASI) that if individuals invest savings productively, it could go a long way in improving job creation and that the future prosperity of South Africa depends on individual contributions towards investment. Each manufacturing plant, shopping centre or basic venture, requires speculation cash-flow to change over from a thought into the real world. The more South Africans save, the more prominent the pool of venture capital they will make. The greater speculation capital accessible, the more potential there is for the economy to grow by creating employment opportunities (SASI, 2015). Thus, it is evident that the network between knowledge of finance and personal savings behaviour does not only benefit individual savers but also favours the economic growth of a nation.

1.4 PROBLEM STATEMENT

Several studies such as Petrie *et al*. (2018); Lusardi *et al*. (2017); Refera *et al*. (2016); Klapper *et.al.* (2015); Lusardi and Mitchell (2014); Jonubi and Abad (2013); Struwig and Plaatjes (2013); Atkinson and Messy (2012); Van Rooij *et al.* (2012) and Lusardi (2008a) have identified financial literacy as a crucial factor that enhances individual savings behaviour. Although most of these studies focus more on the importance of financial literacy to individual savings behaviour, with less consideration on identifying and aligning the financial literacy variables that actually enhance personal savings behaviour in South Africa, it has been ascertained that the statistical significant relationship between financial literacy variables and household savings behaviour has not been identified. Thus, the problem in this study aggregates to lack of alignment between financial literacy variables and monetary savings behaviour of households.

1.5 OBJECTIVES OF THE STUDY

The primary objective of this study was to identify financial literacy variables that has statistical significant impact on savings behaviour of South African households. Relevant variables were used in this study to construct a practical savings literacy guideline that could have a significant impact on the savings behaviour of households in South Africa.

Thus, the secondary objectives of the study were to:

a. Identify the financial literacy variables under the financial literacy domain that have a statistical significant impact on household savings behaviour;

b. Ascertain the level of financial literacy among South African households, using the four financial literacy core domains (financial control, financial planning, financial product choice and financial knowledge and understanding); and
c. Establish a statistical significant relationship between financial literacy and the savings behaviour of households.

1.6 RESEARCH QUESTIONS

The primary research question was: What are the financial literacy variables that have a statistical significant impact on the savings behaviour of households in South Africa? The subsidiary research questions were as follows:

a. What are the financial literacy variables that have a statistical significant impact on the savings behaviour of households in South Africa? The aim of this question was to identify the micro-economic variables of financial literacy that have a statistical significant impact on the savings behaviour of households in South Africa.
b. What is the level of financial literacy among households in South Africa? This question sought to obtain the level of financial literacy among households in South Africa, with regard to the four core financial literacy domains (financial control, financial planning, financial product choice and financial knowledge and understanding).
c. Is there any statistical significant relationship between financial literacy variables and the savings behaviour of households in South Africa.? This question sought to establish the statistical significant relationship between financial literacy variables and the savings behaviour of households in South Africa.

1.7 SIGNIFICANCE OF THE STUDY

It is essential to upgrade the level of financial literacy among individuals to boost their plans towards future financial well-being (Lusardi *et al.,* 2017; Hung *et al*., 2009). Accordingly, financial literacy improves one’s attitude towards saving, budgeting and planning for the future (Petrie *et al*., 2018; Lusardi *et al*., 2017; Refera *et al*., 2016; Perry & Morris, 2005). As such, the significance and benefits of this study include, inter alia, the following:

a. The study will provide the appropriate knowledge-variables for the campaign on financial literacy and savings literacy programmes in South Africa;
b. The study will enhance personal attitude towards cultivating a savings and investment culture;
c. It will enhance the confidence of South Africans in planning effectively for future financial needs;
d. It will improve the level of knowledge on financial concepts and products among South Africans;
e. The study will enhance a positive attitude towards managing household finances; and
f. This study will enhance understanding of financial practices relating to household cash management.

This study will add to previous academic studies in order to improve understanding of the role of financial literacy in boosting the savings behaviour of households.

1.8 RESEARCH METHODOLOGY

Research methods are strategies, techniques and processes used in research. In a nutshell, a quantitative method was adopted in the study, as it enhances better analysis and understanding of numeric data. A post-positivism philosophical and deductive approach which mostly informs a quantitative research underpins the study. Accordingly, a survey method was carried out in the study through self-administered questionnaire. Thus, a descriptive and inferential analytical method was used to analyse the quantitative data collected from two municipalities in South Africa (City of Tshwane and Mahikeng).

1.9 STRUCTURE OF THE STUDY

Chapter One: Introduction to the study – This chapter focuses on the introduction to the study, rationale for the study, background to the study, problem statement as well as the objective of the study. The research questions and significance of the study are also discussed in this chapter as well as a brief discussion of research methodology.

Chapter Two: Literature review – This chapter focuses on the literature review. It provided a detailed evaluation on the global review of financial literacy and national strategies for financial literacy education. The Chapter also provides a detailed conceptual analysis of financial education in South Africa. In addition, the need for financial literacy intervention and contributions to households are reviewed as well as an analysis of personal savings behaviour, benefits of personal savings to both the savers and national economic growth. Furthermore, a theoretical approach to the savings behaviour of households is provided as the theories provide a conceptual direction on the behavioural approach to personal savings.

Chapter Three: Conceptualising financial literacy – This Chapter provides the literature review on the conceptual analysis of financial literacy variables as a core element to improving the savings behaviour of households. A detailed definition of financial literacy and its dimensional concepts are provided as well as the economic importance of financial literacy to household savings. Thus, a conceptual framework of financial literacy variables towards enhanced household savings behaviour is provided as well as the analysis of financial literacy variables that enhance household savings behaviour. In addition, the financial literacy output and the analysis of the variables of savings knowledge are evaluated as they form part of the financial literacy conceptual framework.

Chapter Four: Research methodology – This Chapter focuses on the methods and procedures used to actualise the objectives of this study. Thus, these methods include but not limited to the research philosophy, research approach, research design, population of the study, sampling method, model for measurement of variables, data collection techniques, aligning the research questions with the objectives of the study, data management, validity of results and method of data analysis.

Chapter Five: Data analysis and presentation of results – The Chapter focuses on the analysis of the quantitative data and presentation of results. The Chapter also provides the descriptive and inferential data analysis, followed by a detailed interpretation and presentation of results. Thus, the contribution of the study is informed by the results of the study.

Chapter Six: Conclusion and recommendation – This Chapter provides a summary of the entire study as well as recommendation and suggestions for future research.

1.10 SUMMARY OF CHAPTER

Financial knowledge informs wealth creation, enhances the knowledge for households to save and also assists households in managing the financial uncertainty that confronts them. This Chapter has succeeded in providing the introduction to the study, as it borders on the necessity to improve the savings behaviour of households with regard to financial literacy. In essence, the level of financial literacy among South Africans was compared with other BRICS nations, thereby identifying the lack of alignment between financial literacy variables and savings behaviour of South Africans, as such, revealing the effect of low savings rate of South African households with regard to GDP. Thus, the background to the study, rationale for the study, the problem statement, objectives of the study, research questions, significance of the study as well as a brief discussion of research methodology were provided. The next chapter provides a review of previous literature on financial literacy and the savings behaviour of households.

CHAPTER TWO

LITERATURE REVIEW

The relevance of financial literacy in the lives of individuals has attracted several stakeholders from different parts of the world in the quest to provide the required financial knowledge for households to manage their financial wellbeing. Thus, this part of the study provides a review of literature on global initiatives and programmes on financial literacy as well savings awareness programmes in South Africa. As such, the gap in the literature was identified for proper inclusion of financial literacy variables not yet incorporated into savings awareness programmes in South Africa. Thus, the theoretical approach to household savings behaviour, benefits of savings to both the saver and the national economy was provided as well as financial literacy intervention and contributions to salvage the low rate of savings among households in South Africa.

2.1 INTRODUCTION

In the wake of the Global Financial Crisis of 2007-2008, the discussion on vulnerable and less informed investors gained more momentum, as they were probably more exposed to the crisis (Guiso & Viviano, 2014). Ironically, the genesis of the financial crisis, which started in developed countries around the world, is traced back to housing price bubbles that were fed by providing consumers with great access to credit, to lure consumers to make unwise investments (Adair & Adaskou, 2017; Xu *et al*., 2017). More prominent financial knowledge, together with culture to apply the exercise of financial knowledge, diminishes the probability that households, at any wage level, will fall prey to deceitful deal operators and buy items or administrations that are not to their greatest advantage (Fernandes *et al.*, 2014). Thus, the focus of this Chapter is to evaluate previous programmes on financial literacy and savings campaigns, in order to ascertain the gap in knowledge that has developed into a problem over time and to fine-tune the research path that would enable the researcher to tackle the problem statement identified in this study. The concept map of the chapter provides an indication of the focus of the Chapter (see Figure 2.1).

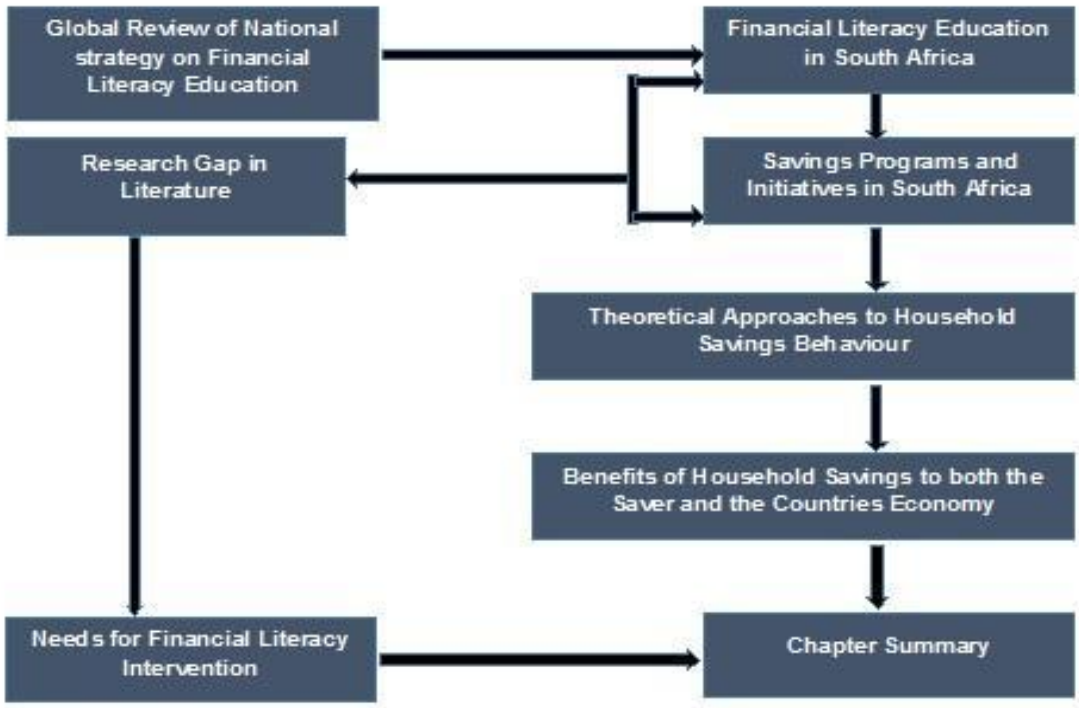


Figure 2.1: Concept Map

Figure 2.1 shows the concept map of the Chapter. Novak and Cañas (2008) state that a concept map provides a relationship among constructs using graphic designs. Brinkmann (2003) considers a map as "knowledge map" that uses structures to illustrate how concepts and ideas are interlinked together within a topic. However, in this study, the concept map is a subset of the literature review. As such, the Chapters provides a review of financial literacy to enhance understanding of efforts made by different stakeholders over the years in order to provide a clear direction and focus for the study. According to Creswell (2014), literature review provides the picture of a study that informs the scope to a relevant area of inquiry. In essence, the literature search provided a global understanding and contributions of different scholars and researchers on issues around financial literacy and its economic impact on household savings behaviour, which according to Rocher and Stierle (2015), informs the rate of household savings. While it is important to evaluate the level of financial literacy among households, there are challenges with regard to investigating how individuals see financial terms and settle on the right choices about their family financial wellbeing (Kuchler, 2015; Lusardi & Mitchell, 2011). Stakeholders in different nations have accepted financial literacy as a necessary leverage to the expanding unpredictability of purchasers' financial choices over the past decades (Boisclair *et al.,* 2017; Fernandes *et al.*, 2014; Lusardi & Mitchell, 2014). Accordingly, financially literate consumers have been identified to more likely save a greater percentage of their income, compare financial items and services, and talk about cash matters unhesitatingly with their families (Kalmi & Ruuskanen, 2018; Boisclair *et al.,* 2017; Lusardi & Mitchell, 2014; Miller *et al*., 2009).

Researchers have observed that a great backdrop on investment is inevitable for most investors that are not enlightened with the management of financial information in such complex market situations (Sivaramakrishnan *et al.,* 2017; Almenberg & Dreber, 2015; Mahdzan & Tabiani, 2013; Abreu & Mendes, 2010). The present situation in world markets has, likewise, featured vulnerabilities made by financial advancements and the expanding troubles of money-related markets. Financial products such as loans, have become too complex for consumers to easily understand. No adequate disclosures are made to clarify the risks. Derivative financial products and services have increased their complexities and marketing institutions were also unaware of the amount of risks involved (Miller *et al*., 2009). However, on the global scale, great positive correlations exist between financial literate households and their savings and investment behaviour, thus resulting in economic growth (Lusardi & Mitchell, 2014). Although households appear to lack financial literacy globally, such situation has attracted considerable attention of stakeholders with regard to the repercussions that financial illiteracy may cause on individuals' ability to make informed financial decisions (Guiso & Viviano, 2014).

Indeed, it is one of the setbacks of financial illiteracy and the recognition that lesser attention has been paid to improve these literacy levels, it would be wrong for researchers within this scope of study to ignore this problem (Louw *et al.*, 2013). Consequently, the question regarding the level to which South Africans make decisions regarding their financial wellbeing and their savings behaviour arises. Despite the initial rating of the level of financial literacy, where South Africa scored higher than most other developing nations, it is still necessary for further studies to be conducted to strengthen the linkage between financial literacy and the savings behaviour of South African households.

2.2 GLOBAL REVIEW OF THE NATIONAL STRATEGY ON FINANCIAL LITERACY EDUCATION

Different scholars around the world have made a remarkable effort with regard to the historical development of financial education on global growth and financial literacy. Decades before now, different academic works acknowledged the impact of financial literacy on individuals and collectively contributed to knowledge building across all regions with regard to promoting a better understanding of money and managing financial challenges (Wallace, 2018; Forté *et al*., 2014). As such, recognition of the need for financial literacy was spotted in a letter from John Adams to Thomas Jefferson, dated 23 August 1787. This effort was an attempt to resolve the confusions and distresses in America, which resulted from out and out obliviousness of the idea of coin, credit and flow. In 1914, the Smith-Lever Act authorised the Cooperative Extension Service in the United States to provide learning encounters that would create aptitudes, including monetary abilities required at home by individuals to oversee cash and different accounts.

In 1950, many countries around the world identified the challenges of financial management, earnings and expenditures, security and retirement, lodging, planning and saving (Karadag, 2015). This, therefore, informed a joint research study in the field of personal economics, thereby, creating more awareness in the field of financial education (Cichowicz & Nowak, 2017; Dickson, 2017). Thereafter, in 1970, within the credit union, volunteers perceived the need to render financial training to young people, as credit associations framed the National Youth Involvement Board (NYIB) to focus on youth money-related education. Furthermore, in the mid-1990s, financial literacy emerged as a key priority for many countries around the world. According to Klapper *et al*. (2015) and FCAC (2015), more policy makers began to recognise the broader economic implications of the low level of their citizens' financial knowledge and economic decision-making, and how it could lead to significant global repercussions. In the quest to addressing these issues, the Organisation for Economic Co-operation and Development (OECD) launched its financial educational project in 2002, which developed analytical policies and proposals on ideas and better practices for financial instructions and mindfulness, with more accentuation on particular areas, for example, credit, protection and private annuities (Lewis & Messy, 2012).

However, OECD started an international project, which linked different countries in 2003, after recognising the importance of financial education and its effect on individuals. The project was launched on money-related training under the Committee on Financial Markets and the Insurance and Private Pensions Committee with the goal of giving approaches to enhance monetary instruction and education gauges through the advancement of normal budgetary proficiency standards. Accordingly, in 2005, OECD produced the main significant investigation of financial education at a worldwide level. In addition, OECD introduced the International Gateway for Financial Education in 2008, which plans to fill in as a focal framework for financial education programmes, data and research around the world (Roberts *et al*., 2014). Subsequently, the International Network on Financial Education (INFE) was established, a committee aimed at exchanging ideas and information on financial education crosswise over OECD and non-OECD countries. The INFE currently has over 240 institutions from 107 member countries (Lewis & Messy, 2012). In essence, with support from the combined effort of Russian and World Bank OECD programme, referred to as "Trust Fund for Financial Literacy and Education", the $15 million Russia Financial Literacy programme has successfully carried out the following world development programmes:

a. Detailed evaluation of effective financial literacy educational activities and policies worldwide, with great participation of OECD/INFE member countries worldwide;

b. Comparative analysis of policies and reports. Research emphases were made on great practices and itemised contextual analyses on financial literacy crosswise over OECD/INFE part nations around the world; and

c. Practical tools, standard and principles to facilitate and improve strategic financial efforts were also developed.

On the African continent, financial education has picked up with the help of numerous gatherings, including major monetary affiliations, government offices and network premium associations (Klapper *et al.,* 2015; Fatoki, 2014b). Their interest is informed by the growing recognition of the value of financial knowledge and experience (Mitchell & Lusardi, 2011; Huston, 2010; Jappelli, 2010). Not only does financial illiteracy affect people's everyday cash administration, it also impacts their capacity to put something aside for long haul objectives and to wind up monetarily autonomous at retirement (Roberts *et al.,* 2014). However, African countries have been underrepresented in most of the global research on financial literacy, which has an effect on financial literacy initiatives in sub-Saharan African countries (Holzmann, 2010).

2.2.1 GLOBAL INITIATIVE OF FINANCIAL LITERACY EDUCATION

Having reviewed the global development on financial literacy education, this section of the study focuses on the global structures of financial literacy educational programmes and initiatives. Indeed, the challenges of financial literacy programmes that have cropped up over the past decade, have been the inability to draw upon solid empirical evidence indicating best practices for financial education (Van Campenhout, 2015; Drexler *et al*., 2014; Lusardi & Mitchell, 2014). Many programmes are narrow dimensional, failing to align with special objectives and lack an overall campaign strategy. Although several countries have invested so much in promoting the campaign with regard to financial knowledge to their citizens, there is still great work to do as financial obligations and challenges to individuals increases on a daily basis (Turner *et al*., 2016; Lusardi & Mitchell, 2014). Indeed, there is also a need to improve understanding of information on financial products such as bank accounts, credit products, savings products to combat the increasing sophistication of the financial landscape and financial services for a rising middle class in fast developing economies (Mitchell & Lusardi, 2015; Smyczek & Matysiewicz, 2015). The OECD and Russia's G20 Presidency issued a report in 2013 on propelling national methodologies for financial training, itemising progress by the administrations of the world's real economies in actualising national systems for enhancing household financial literacy. Indeed, the input of different organisations and academicians around the world on improving the magnitude of financial literacy shows its importance to daily financial management as indicated below.

> “Most financial literacy surveys conducted worldwide, including in G20 countries, show that a majority of the population do not have sufficient knowledge to understand even basic financial products and the risks associated with the products. A majority of individuals do not plan for the future and fail to make effective decisions to manage their finances. As the global crisis has shown, this can have a negative impact on financial and economic stability as

well as on people's or household prosperity, particularly among low-wage groups”.

In view of the decreasing level of financial literacy among the population around the globe, the National Strategy for Financial Education (NSFE) was established by policymakers on a global level to intervene in the financial literacy needs of populations (Klapper *et al.,* 2015). This intervention policy was introduced in early 2000 within advanced nations, such as the Netherlands, New Zealand, Japan, Singapore, the United Kingdom and the United States and lasted beyond the financial emergency era (OECD/INFE, 2009). Furthermore, the identification of the importance of a structured national strategy by OECD and INFE led to the foundation of a specialist ordered gatherings in 2010 to screen their status, review accessible experience, recognise great practices and reach strategy inferences (Fernandes *et al*., 2014). As such, the surveys conducted by OECD/INFE have recorded a progressive development 26 nations, having planned or executed a technique in 2011 (Grifoni & Messy, 2012). Thus, 45 countries were positively affected by this programme in 2013, and the coverage is developing fast as illustrated in Figure 2.2.

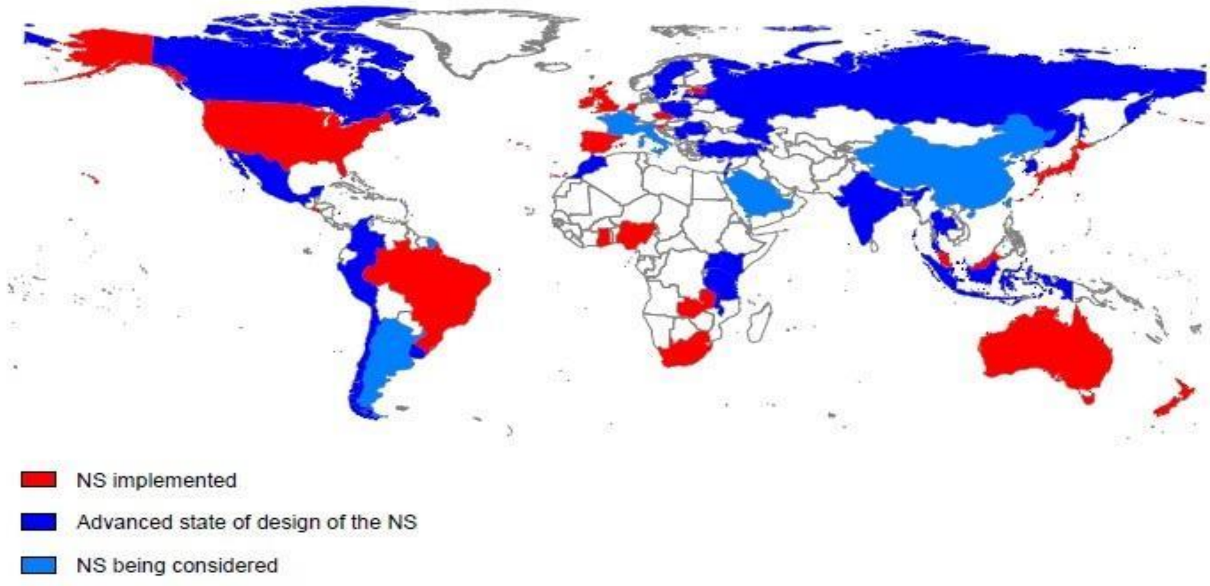


Figure 2.2: Landscape of National Strategy (*Adopted from* ANSFE*, 2013*)

Nevertheless, the continuous challenges in financial and economic situations attracted the attention of stakeholders in charge of financial literacy, and to the expanding significance of the worldwide approach with regard to exchange and a holistic academic impact. As such, several factors, such as the attention of the G20, and other regional organisations, including the Asia Pacific Economic Co-activity (APEC), the Association of South East Asian Nations (ASEAN), the Association of Latin American and Caribbean Central Banks (CEMLA), the Southern African Development Community (SADC) and the European Union (EU), shed further light on the importance of this strategy for financial literacy and individual financial well-being (Klapper *et al.,* 2015).

However, the dedicated work of OECD has added to the advancement of national strategies around the world. Practically, the reason for adopting this educational strategy emanates from the emphasis from OECD/Russian G20 (2013), which shows that policies such as credit, debt, pensions and savings issues that were posing challenges to individuals were identified and addressed (Roberts *et al*., 2014). This, typically, provided proof arising from national financial literacy practices and intermittent households, following financial literacy overviews, which furnished an evaluation of troubling figures, for example, disturbing family investment funds/utilisation rates in Brazil and reserve funds/obligation proportions in Canada or unnecessary credit presentation in South Africa and Spain. Furthermore, organised arrangements constituted a configuration to impact positive changes in the financial sector or of people in general welfare framework, as is regularly the situation with annuities and retirement benefits in countries such as the Netherlands (Fernandes *et al*., 2014; Lusardi & Mitchell, 2014).

The programme provides complementary policies on financial arrangements that emphasise exclusively on the supply side (expanded accessibility of passageways and scope of items) but cannot ensure viable utilisation of financial services and, all things considered, can upset the effect of financial inclusion strategies. Governments that put financial inclusion consideration among the best approach needs, have frequently supplemented supply side arrangements with interest side strategies, incorporating financial literacy measures in India, Indonesia and Mexico.

2.2.2 GLOBAL FINANCIAL LITERACY CO-ORDINATING STAKEHOLDERS

The mapping exercise done at the preparatory stage of the national strategy helped to identify relevant stakeholders in different countries used to supervise the programme. More importantly, consultations with stakeholders were undertaken to unite them around the world on the common objective that will gauge their views on drafting strategic documentations and programmes to be implemented in the structure of the strategy (OECD, 2015; OECD/INFE, 2015**)**. Hence, Table 2.1 shows the status of implementation of the National Strategy on G20 members and invited nations.

Table 2.1: National structural strategies among G20 members and invited nations

Country	National strategy	Assessment	Mapping
Argentina	Being considered	Opinion surveys conducted by the National Securities Commission	NA
Australia	Yes, being revised (2011, 2013	National survey on financial literacy (ANZ Surveys, 2003, 2005, 2008, 2011); PISA Fin Lit, 2012, PISA Fin Lit 2015	Financial Literacy Stock Take Survey in the context of the national strategy revision
Brazil	Yes, implemented (2010)	National survey on financial literacy (2008); PISA Fin Lit, 2015	Call for initiatives on the national strategy public website. Review of work done by public authorities.
Canada	Advanced design	National survey on financial literacy (2009); PISA Fin Lit, 2015 (some Provinces)	FCAC external stakeholders Advisory committee; national conferences; organisation of the financial literacy month
China	Being considered	Financial consumer surveys, analysis of consumer complaints; PISA Fin Lit, 2012 (Shanghai)	Review of initiatives undertaken by public financial authorities
France	Being considered	Financial consumer surveys (2012); PISA Fin Lit, 2012	NA
India	Advanced design	Planned (OECD/INFE survey)	During the design of the national strategy roadmap
Indonesia	Advanced design	National survey on financial literacy (2006, 2012, OECD/INFE)	Survey conducted by Bank Indonesia in 2012 that covers for evaluation of target group and improvement of financial education programme

Italy	Being considered	Survey on household income and wealth (biannual) and consumer surveys; PISA Fin Lit, 2012, PISA Fin Lit 2015	NA
Japan	Yes, being revised (2005, 2007, 2013)	National survey on financial literacy (2012, OECD/INFE survey – knowledge questions)	Conducted by the Central Council for Financial Services Information
Korea	Advanced design	Financial Literacy Survey targeting householders (2011, based on OECD/INFE guidance); National survey on financial literacy (2012, OECD/INFE survey); other surveys targeting students and adults	Survey conducted by the Financial Services Commission and research paper assigned to independent research institute (Korea Development Institute) in 2011; National survey and research paper conducted by Bank of Korea in 2012; Other surveys conducted by Financial Supervisory Service
Mexico	Advanced design	National survey on financial literacy (2012, World Bank + OECD/INFE knowledge questions)	Mapping conducted by an independent organisation; conducted by a dedicated working group of the Financial Education Committee
The Netherlands	Yes, being revised	National surveys on financial literacy (2007, 2008, and planned OECD/INFE survey); PISA Fin Lit, 2015	Conducted by specialised research firms in legal/regulation, consumer affairs, and school education
Russia	Advanced design	National surveys on financial literacy (2012-3, WB + OECD/INFE Survey); Consumer Finance Survey (2013) PISA Fin Lit 2012, PISA Fin Lit 2015.	NA
Singapore	Yes, being revised (2003)	National survey on financial literacy (2005)	NA

Spain	Yes, implemented (2008, 2013)	Survey on household's finance (2002, 2005, 2008, 2011); PISA Fin Lit, 2012, PISA Fin Lit 2015	Research conducted by national strategy authorities
South Africa	Yes, being revised (2001, 2013)	National survey on financial literacy (2011, OECD/INFE survey)	National Consumer Financial Education Committee already in place within the Treasury
Turkey	Advanced design	National survey on financial literacy (2012, WB survey; 2013, OECD/INFE survey)	Identification of stakeholders by the Committee drafting the national strategy
United Kingdom	Yes, being revised (2003/06, 2013)	National survey on financial literacy (2010, OECD/INFE survey, 2013); PISA Fin Lit, 2015 (England)	Call for evidence on MAS website
United States	Yes, being revised (2006, 2011, 2013)	Surveys conducted by not-profit organisations nationwide and on students (FINRA, 2009, 2012); PISA Fin Lit, 2012, PISA Fin Lit, 2015	"Calls to Action" for the Financial Literacy Commission's members, consumers, industry, non-profit and other stakeholders

Source: Adapted from OECD/INFE (2015)

According to Table 2.1, 13 G20 member countries and other states that performed official mapping exercises with regard to financial literacy education were identified. Some of the delayed cases were due to a few longstanding engagement of authorities responsible for the national strategy in financial education (OECD, 2015; OECD/INFE, 2015). Development of an important knowledge base also counts alongside the establishment of a joint committee that oversees the continual engagement with policy makers in Canada and South Africa. In Brazil, the mapping can either be led through demand for data on websites or completed by an independent organisation (*e.g.* in Mexico and South Korea). Hence, according to Fernandes *et al*. (2014); and Roberts *et al*. (2014), in order to reduce the hash consequences of financial illiteracy, it is in the plan of OECD and INFE to continue the campaign and implementation of different financial literacy education initiatives across the globe.

2.3 FINANCIAL LITERACY IN SOUTH AFRICA

Having explored the literature on financial literacy programmes and initiatives in the world, this section focuses on financial literacy with regard to programmes, trainings and initiatives on financial literacy education in South Africa. As such, the discussion below gives direction with regard to educational and training programmes on financial literacy in South Africa, and the extent of national efforts on improving the level of financial knowledge among South Africans. This section also provides insights on efforts made by various stakeholders and their scope towards financial literacy and initiatives at national and organisational levels. Although the evolution towards addressing the issue of financial literacy in South Africa began in 1990, following the enactment of the Financial Service Board (FSB) Act (Makina, 2017; Cohen & Nelson, 2011; Iheduru, 2004), in 2000, the Act was amended and mandates the Financial Service Board to conduct research in order to advance financial literacy programmes for households. Since then, FSB has organised different programmes on financial education dedicated to assisting South Africans on how to manage their personal and family financial matters effectively (Roberts *et al*., 2014).

Different organisations such as OECD, in alliance with FSB, Banking Association of South Africa, non-profit organisations, old mutual, the housing sector and private companies, have also contributed greatly to different awareness programmes on financial literacy in South Africa (Alsemgeest, 2015; Fatoki & Oni, 2014). Reforms such as the Green Paper on Skills Development and the White Paper on Education, 1997, also brought a great change on how education and trainings should be approached in South Africa (Van Nieuwenhuyzen, 2009). However, the result from the first financial literacy survey in South Africa (Baseline Survey) revealed that South Africans, with a low living standard, have significantly lower financial literacy levels compared to those with medium living standard. According to Roberts *et al*. (2012), it was also identified that as schooling increases among individuals, financial literacy levels become more significant. In other words, wealthy and educated South Africans are inclined to score a better mark in financial literacy than those who are poorer and less educated.

In essence, financial literacy has become a fast growing field in South Africa (Alsemgeest, 2015), and the initiative and campaign has been advanced by major financial institutions and educational programmes of schools. Despite these efforts, Fatoki and Oni, (2014) and Roberts *et al*. (2012) reported that the country scored poorly in international surveys on financial literacy and economic terms. Perhaps, households are experiencing increased financial distress, with the household debt-to-income increasing while household savings to income ratio is on a negative territory (Wentzel, 2016). However, more programmes on financial literacy are needed to strengthen household savings capability (Eniola & Entebang, 2016; Struwig, 2013). Chiroro (2010) posits that budgeting for voluntary savings is believed to cause a challenge to most South Africans. This is largely because a greater percentage of South Africans in the low wage and middle salary bunches have no plans to save. Although the relationship between financial literacy and economic behaviour does not mean causation, it is important to first ascertain a causal link. However, ascertaining an exogenous source of differences in financial literacy has been an uphill task (Klapper *et al*., 2012).

The effort by the Banking Association and other cooperate bodies such as the Johannesburg Stock Exchange (JSE), the South African Banking Risk Information Centre (SABRIC), the South African Savings Institute (SASI) and the South African Insurance Association (SAIA) is to improve financial literacy in order to enhance skills, knowledge attitudes and behaviours needed by South African households to make informed financial decisions. These interested organisations envision a future where every South African is informed with the right financial knowledge to help shape his or her future financial wellbeing and the state of economic growth in the country.

2.3.1 SCOPE OF THE NATIONAL STRATEGY ON FINANCIAL LITERACY IN SOUTH AFRICA

The essence of individual financial literacy in the South African context lies in the agitation to improve people’s financial knowledge and attitude (Eniola & Entebang, 2016; Fatoki & Oni, 2014). The present financial environment in South Africa, has great complexity and challenges as mentioned earlier, confronting households at the macro and micro scale levels (Littlewood & Holt, 2018). This implies that a campaign for financial understanding and awareness of financial concepts to South Africans is essential. However, the establishment of the National Strategy for Consumer Education (NSCE) in 2001, under the watch of FSB, was revised by the National Consumer Financial Education Committee (NCFEC), a committee made up of a greater range of stakeholders in South Africa. Accordingly, the decision to revise the

NSCE, is in accordance with South Africa's national approach on consumers' financial training and was formally propelled in the last quarter of 2013. However, before its launch, stakeholders of different financial institutions had already begun execution of related financial literacy programmes.

However, the necessity for consumer financial literacy in South Africa, was as a result of so many compelling issues, ranging from the inability of consumers to assess the appropriateness of financial items in connection with individual conditions, savage loaning, elevated amounts of purchaser obligation, low sparing rates, the multiplication of fraudulent business models and money related tricks, high item administration and punishment charges, absence of available and similar estimating data and constrained information of a plan of action components.

According to OECD/Russia G20 (2013), the objective to achieve the educational programme of the National Strategy in South Africa, was to adhere to the following policies: Firstly, that consumer financial literacy forms part of the showcase lead and buyer assurance strategy approach and regulation. The programme is structured to consider more extensive purchaser insurance and market lead administrative structure, controls financial information and advice; Secondly, the programme should provide a common focus and direction for a wide group of consumer education initiatives without any attempt of replacing existing consumer education interventions. According to Berg and Zia (2017) and Fatoki (2014), a methodology should be designed to help present assets by empowering their marriage with national arrangement and the system. This approach is fundamental for execution of the national methodology since it guarantees that the organising partners, stay in charge of the subsidising and administration of their individual financial literacy initiatives and activities (Alsemgeest, 2015; Roberts *et al*., 2012).

In the furtherance of improved consumer financial literacy in South Africa, the share of responsibilities should be among different stakeholders such as government, schools, monetary foundations, industry affiliations, bosses, exchange associations, network associations, and NGOs, which will be delegated with a powerful and legitimate role to play (Berg & Zia, 2017; Rensburg & Botha, 2014). A joint stakeholder committee with the alliance of a central planned body, to be specific, the national consumer council, is required to anchor the dynamic and practical involvement and contribution of all stakeholders. Thus, a risk-based national customer financial literacy is basic. Since the assets accessible for consumer financial literacy are limited, the national system should focus on high-need issues crosswise over two measurements target gatherings, for example, kids, the youth, retired people and monetary life measurements to be specific, budgetary control, monetary arranging, item decision and money-related information (Roberts *et al*., 2012). Hence, the objectives of the National Strategy programme on financial literacy and campaign in South Africa are to:

a. Provide a framework that will enhance joint commitment of financial sector policymakers in consumer financial literacy education;
b. Provide a methodology and data for measuring consumer financial education programmes and their stipulated goals and achievements;
c. Monitor the conducts and operations of financial institutions through their lay down rules and use of recourse facilities; and
d. Improve consumers' knowledge of financial management and decisions on product choices as well as to know where to look for information, objective advices or access to recourse facilities.

Considering the growing complexity of financial products in the present economy, FSB has jointly worked with various stakeholders, both private and open associations for over 10 years to provide financial literacy projects to South African customers. These partners are members of the NCFEC, assembled by the National Treasury to plan financial training activities, mutually sett the national approach and suggest national techniques. Stakeholders that are involved in this collaborated committees are presented in Table 2.2.

Table 2.2: Stakeholders involved in financial literacy in South Africa

	Industry bodies and associations	Regulators	Government Departments	Consumer and labour representatives	Offices of Ombudsmen
a	South African Insurance Association	National Credit Regulator	Trade and Industry	South African National Consumer Union	Credit Ombudsman
b	Association for Savings and Investments, South Africa	South African Reserve Bank	National Treasury	National Consumer Forum	Ombudsman for long-term insurance

c	Banking Association of South Africa	Financial Services Board	Basic Education	Congress of South African Trade Unions and affiliates such as the finance sector union, SASBO	Ombudsman for short-term insurance
d	Institute for Retirement Funds	National Consumer Commission	Higher Education and Training	Federation of Unions of South Africa	Ombudsman for banking services
e	JSE Limited		Provincial Consumer Affairs Offices Forum		
f	Financial Planning Institute				
g	Financial Intermediaries Association				
h	Principal Officers Association				
i	Financial Sector Charter Council				

Source: Adapted from ANSFE (2013)

Perhaps, the Consumer Education Department (CED) of FSB, coordinates the consultation of different stakeholders with regard to the participation of the financial education strategy with the collaboration of the National Treasury, South Africa. According to Roberts *et al*. (2012), three working committees have been set up to figure out a national methodology, establish a financial prosperity centre and set up a phase to concentrate database of all financial-related training activities of households implemented or being executed by policymakers. Thus, the need for more efforts towards improving the lay down strategies of NCFEC in order to stabilise the growth of financial literacy output.

2.3.2 GOVERNANCE MECHANISM

With regard to the furtherance of national strategies on financial education in South Africa, governance mechanism, as stated by Guochao and Xinqian (2017) and Hadi (2016), was the way forward towards enhancing the coordination of household financial proficiency, which happens through NCFEC and its collaborated distinctive stakeholders, involving an expansive blend of skilful hands drawn from labour unions, grassroots associations, institutions that deal with finances, and other private and public organisations. The National Treasury, led the body amid the initial two years of its foundation. Thus, the governance and performance monitoring mechanisms and feedback are shown in Figure 2.3.

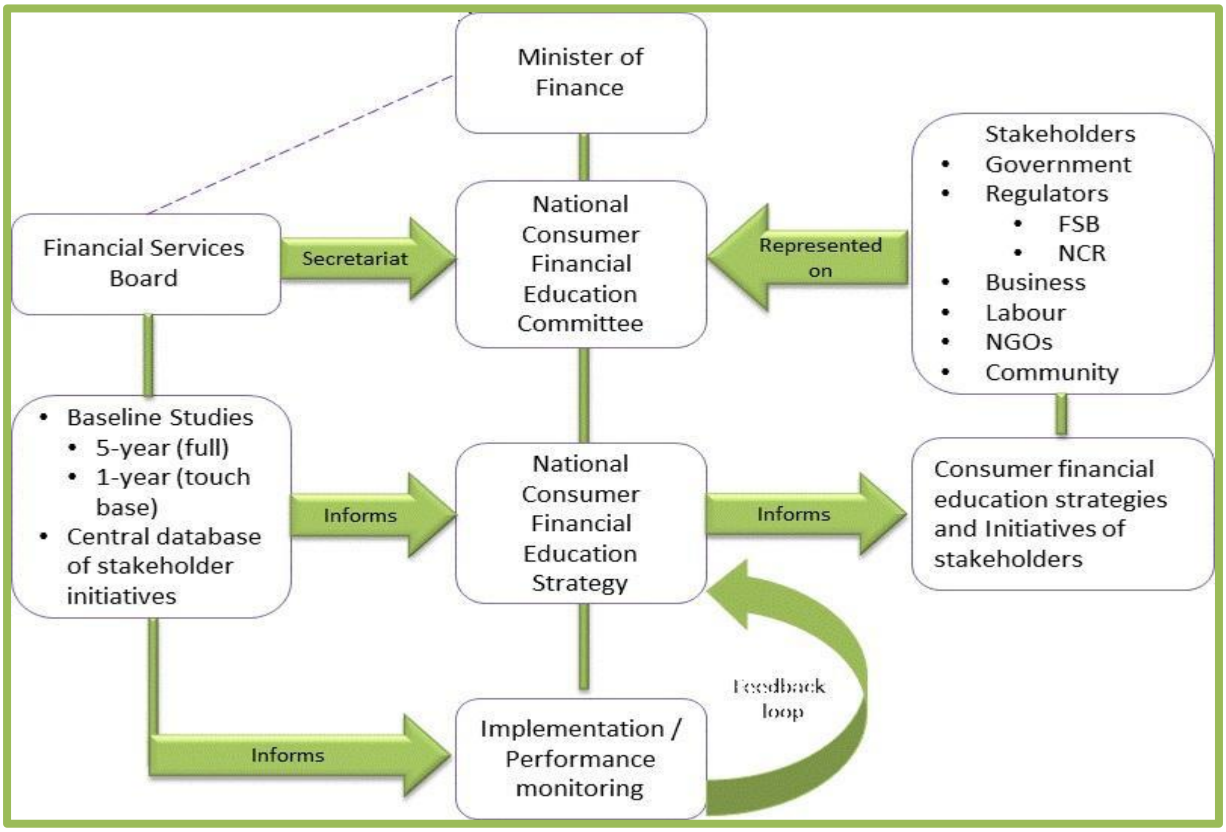


Figure 2.3: Governance and performance monitoring mechanism of consumer financial literacy education in South Africa (*adapted from ANSFE, 2013*)

According to Figure 2.3 above, the roles and responsibilities of NCFE are as follows: finalising the policy of NCFE, developing the national consumer financial education strategy by characterising target groups; utilising a risk-based constructed way to deal with choices in light of which target group to focus on; assigned with the obligation of setting up fitting activity designs and key execution markers showing correlations with universal norms to quantify accomplishments; managing the implementation of approaches through proper monitoring, providing leadership, financing, advising, ensuring work in progress report and recommending areas to undertake research; and reviewing the NCFE strategy on an annual basis to ensure its relevance was also added to their roles as recommended by OECD (2015) and OECD/INFE (2015**)**.

The key roles and responsibilities of individual stakeholders are as follows:

- Create and actualise consumer financial literacy instruction systems that are in accordance with national approach objectives and the national procedure; and
- Attend to consumer financial literacy programmes and activities embraced to actualise their techniques onto the focal information to empower the execution checking of national procedure.

In a nutshell, NCFEC gives lucidity on the course and focal point of stakeholders towards the effective implementation of the national strategy on financial literacy education. Thus, strategies, methods, data and metrics are put in place to evaluate the effectiveness of its programmes in order to achieve the stipulated objectives and targets.

2.4 SAVINGS PROGRAMME AND INITIATIVES IN SOUTH AFRICA

Personal savings serve as a mechanism for resource mobilisation in a country. It is argued that countries with high levels of savings enjoy a greater degree of self-financial independence, increased GDP and balanced financial well-being for citizens (Lochner *et al.,* 2018; Aaberge *et al*., 2017; Hernando, 2016). Indeed, this was the motivation behind the establishment of SASI in 2001. The establishment of SASI envisaged balancing the linkage between strong savings culture of South Africans, high savings rate and economic growth. Thus, SASI was meant to achieve this purpose through research and advocacy, round table debate fora on key savings issues, instruction and data arrangement and mindfulness creation through campaigns (Hamann *et al*., 2017). Such campaigns include the July National Savings Awareness Campaign, Teach Children to Save (TCTS), Varsity Financial Literacy and Festive Season Savings Campaign.

However, after seventeen years of establishment of SASI and continuous advocacy on promoting a savings culture, it is still obvious that South African households still battle with managing their finances and making provision for savings (Dickason & Ferreira, 2018; Rensburg & Botha, 2014). As such, it has been argued that most individuals and households lack some element of pragmatism towards savings. Thus, most South African households are exposed to economic shocks, hence, their financial well-being has been compromised (Alsemgeest, 2015; Fatoki & Oni, 2014). This has been a concern for SASI over the years, thus the campaign for South Africans to save in order to cushion their future financial well-being. Basically, over the years, SASI has used campaigns as a mechanism to carry out its programmes, thus, this mechanism gave birth to the yearly national savings month. The month of July (every year) is the savings month for the national savings awareness campaign of SASI. As such, the establishment of a yearly savings month, complements the objectives of SASI, which is based on the need to promote a strong savings culture that informs a strong savings rate among individuals in South Africa (Precious & Asrat, 2014; Cronjé & Roux, 2010). The savings month provides an opportunity and avenue where other responsibilities of SASI are carried out. Hence, the objectives of the yearly savings month are summarised as follows:

a. Promote debates around key issues on saving;
b. Increase familiarity with the advantages of short, medium and long-term financial plans;
c. Build up associations with key accomplices to use future opportunities;
d. Foster a culture of savings within local and worldwide setting; and
e. Complement the activities on government managed savings and retirement change process, to make it significant and applicable to the youth as well.

Indeed, a broad concept on how to encourage household savings in South Africa has been deliberated by SASI over the years and also the need for every household to save. However, going by the knowledge creation process as provided by Gouws (2001), a savings campaign and initiatives are not enough to produce an improved savings behavioural output, which is required to balance future financial well-being of individuals as well as the economy (Guerrieri & Lorenzoni, 2017). Thus, the need for a knowledge creation process based on savings educational variables, is inevitable. In essence, the benefit of household savings in an economy cannot be questioned, going from increment venture openings, decrease in outer reliance and enhanced monetary strength of citizens in a long-run (Dholakia *et al*., 2016; Khan & Sarker, 2016). On the contrary, low household savings rate causes negative spill-over effects, leading to a low state of service delivery and infrastructural development. Thus, the present economic situation in South Africa, with increased inflation and a continuous decrease in economic growth, has exposed the country to income vulnerability, expenditure and debt servicing. Hence, this researcher supports the argument that savings education is the way forward to improving household savings behaviour. However, this study is the first of its kind to empirically examine the concept of savings literacy within the context of South Africa as an educational programme that does not only equip households with the knowledge to save but also assist them in making informed financial decisions.

2.5 THEORETICAL APPROACH TO HOUSEHOLD SAVINGS BEHAVIOUR

Understanding of individual savings behaviour promotes an attitude towards savings and investment (Lusardi & Mitchell, 2014). As much as this study supports the arguments for the positive relationship between financial literacy and household savings behaviour, it also acknowledges theoretical approaches to household savings behaviour, although the approaches are more in support of individual behavioural attributes to their ability to manage personal finances (Precious & Asrat, 2014). In this section of the study, the core theoretical groundings behind household savings behaviour are discussed.

Considering the recent economic environment in South Africa, there are variations in household behaviour towards savings and financial decisions. As such, most of the literature in this area of study, that analysed the determinant of personal savings, concentrated on aggregate savings due to lack of consistent information on household savings behaviour (Mallick & Debasish, 2017; Ting & Kollamparambil, 2015; Muradoglu & Taskin, 1996). Although one cannot properly analyse personal savings behaviour without considering the level of personal consumption plans (Cronqvist & Siegel, 2015), other studies have revealed that savings behaviour has a significant gender gap (Boudet *et al*., 2016; Zwane *et al*., 2016; Embrey & Fox, 1997; Yuh & Hanna, 1997). Women were observed to be more averse to have a characterised retirement sparing arrangement compared to men (Sunden & Surrette, 1998), although recent studies have shown contradictory results (Boisclair *et al*., 2017; Agnew, 2006).

In the area of risk aversion, Shapiro *et al*. (2015), Booth *et al*. (2014), and Croson and Gneezy (2004) demonstrate that there is a critical distinction in risk-taking among people; it is distinguished that women are more unwilling to take risks compared to men. It has been emphasised that, in general, males takes more risk when they want to attract their future partner, while females are more risk averse in their child-bearing periods (Pogrebna *et al*., 2018). In any case, while the literature on psychology shows a critical distinction in risk resistance between various sexual orientations, studies on banks and financial matters revealed no sex contrast in the venture conduct (Zhong & Xiao, 1995), hence disagreeing with the findings of significant variations in risk-taking attitudes between sexes. On the contrary, Bannier and Neubert (2016), Agnew and Harrison (2015), and Lusardi and Mitchell (2007) posit that women are usually less financially informed than men, as financial literacy was found to influence their level of savings.

Thus, scholars in economics have developed some major theories of personal savings behaviour and consumption as follows: the life-cycle hypothesis (Ando & Modigliani, 1963; Modigliani & Ando, 1957; Modigliani & Brumberg, 1954); the permanent income hypothesis (Friedman, 1957); and the relative income hypothesis (Dusenberry, 1949), among others. All these theories have their calculated roots in the microeconomic hypothesis of funds and customer decision. Notwithstanding, the most comparative are the life-cycle and perpetual wage speculations. The two hypotheses expect that people endeavour to augment their utility or individual prosperity by adjusting a lifetime stream of profit with a lifetime example of utilisation. Hence, this part of the study provides an evaluation of these theories and differences in attitude towards saving behaviours across households, for a better understanding of individual principles towards what actually motivates them to save.

2.5.1 LIFE-CYCLE HYPOTHESIS

The life-cycle hypothesis (LCH) was originally designed by Modigliani and Brumberg, (1954), based on the idea that individuals make critical choices about how much they want to spend at each stage of their lives (Statman, 2017; Mahlo, 2011). According to Nduku and Simo-Kengne (2017), and Deaton (2005), the theory revealed that the motive of putting money aside was for the need to provide for retirement. As such, the life-cycle hypothesis approach to savings and consumption decisions states that an individual should spend less of his income in times of high earnings, then save to cushion consumption in times of low earnings such as during retirement. Modigliani and Brumberg (1954) posit that consumers should organise their ideal savings in a pattern to cover negligible utility up their lifetime. Distinctive researchers have indicated how such an actual existence cycle streamlining procedure can be organised by consumers' inclinations (e.g., risk avoidance and markdown rates), the financial condition (e.g., risky profits for speculations and liquidity requirements), and social wellbeing net advantages (e.g., accessibility and liberality of welfare plans and Social Security benefits), among different highlights (Lusardi & Mitchell, 2014).

The life-cycle hypothesis has been utilised extensively to ascertain personal savings behaviour at retirement (Stiglitz, 2015). Thus, the hypothesis started with the observation that consumption needs and income are often unequal at various points in an individual's life. At a younger age, people are identified to have consumption needs such as housing and education, among others, causing their expenditures to exceed their income and, therefore, have little or nothing to save. For middle age people, priority is on profit and large assets, empowering obligations aggregated prior in life to be satisfied and investment funds to be gathered. During retirement, wages decrease and people expend out of their previously accumulated investment funds to cover their expenses.

In essence, empirical studies on the life-cycle hypothesis have generated a great deal of literature. Most studies that focused on the savings behaviour of older people have been uncertain with respect to the correspondence between observed savings behaviour and the pattern of savings and dissaving anticipated by the life-cycle hypothesis. Hence, according to Van Ooijen *et al*. (2015), most of the studies seem to be in conflict with the life-cycle hypothesis, as their findings reveal that older persons continue to save even at retirement period.

As such, this study is in agreement with the life-cycle hypothesis with regard to the fact that a well-informed individual can formulate and execute savings and spend-down plans, which require them to have the capacity to take advantage of complex economic situations and to have ideas in dealing with financial markets. In other words, financial literacy plays a role as it enhances the positive decision of individual towards managing their finances (Boisclair *et al*., 2017; Agnew & Harrison, 2015). On the contrary, few people seem to have much financial knowledge to deal with the present economic situation (Lusardi & Mitchell, 2014). Hence, acquiring such knowledge by consumers has been the recent campaign of different states and organisations across the globe, since the necessity to save, invest and augment for retirement are becoming part of individual life (Chuang, 2014).

2.5.2 PERMANENT INCOME HYPOTHESIS

The permanent income hypothesis theory, as propounded by Friedman (1957), states that consumers save and consume their money at a level consistent with their expected future average income. The level of expected long-term income then becomes thought of as the level of "permanent" income that can be safely spent. Accordingly, the permanent income hypothesis theory assumes that for any individual, consumption, decision should be arranged in a way that maximise their utility (Koehler *et al*., 2015; McNeill & Moore, 2015; Obwona & Ddumba-Ssentamu, 1998). As such, consumers prefer to smoothen consumption and set it equal to the annuity value of total assets and the current value of expected disposal income (Mahlo, 2011). Basically, it means that any change in income, present or future, consumption will be distributed overtime by change in savings. In essence, Friedman (1957) emphasised that the motive why people save is because they expect a decline in future income, as such, households are expected to save against future decline in income.

2.5.3 RELATIVE INCOME HYPOTHESIS

James Duesenberry, in his fundamental work entitled “Income, Savings and the Theory of Consumer Behaviour” (1949), presents the relative pay speculation in in an attempt to legitimise the entrenched divergences of cross-sectional and time-arrangement properties of utilisation information. On the one hand, an abundance of concentrates dependent on 1935-36 and 1941-42 cross-sectional spending plan overviews, present a sparing proportion that expanded with salary. On the other hand, the information on total funds and wage from 1869 to 1929 gathered by Kuznets (1942), presents a pattern less sparing proportion. Duesenberry (1949) proposes an individual utilisation work that relies on the present pay of other individuals. Subsequently, for some random relative pay dissemination, the level of salary spared by a family will, in general, be one of a kind, invariant and expanding capacity of its percentile position in the pay appropriation (Petrarca & Ricciuti, 2015). Duesenberry (1949) maintains the rate spared will be autonomous, without a doubt, to the level of wage. Furthermore, the total sparing proportion will be autonomous indisputably, to the level of pay.

2.5.4 NEO-KEYNESIAN APPROACH

The theory assumes that household savers are divided into two groups as follows: wage earners, who often consume all their earnings; and entrepreneurs, who earn profit as part of their income which they save and re-invest. Profit from the entrepreneur's savings is always higher than the wage earner's savings. Entrepreneurs receive capital appreciation on their past productive investment; thereafter, save from the income to satisfy future investment needs of the firm (Mahlo, 2011). In essence, a well-informed wage earner, or entrepreneur on financial knowledge, will understand that savings is an investment and that it does not only cushion future expenses but also accumulates an additional value to the initial amount saved (Khan, 2017; Wise, 2013). Hence, income earners need to have the right financial knowledge for them to take advantage of savings and investment products.

2.5.5 THE CLASSICAL APPROACH

This theory postulates that savings is a positive function of interest rate (Froyen, 1983). An increase on real interest rate attracts favourable terms on the amount to save. The assumption is that a financial literate household would take advantage of the favourable return on savings as a trade-off between present and future consumption (Bhutta & Keys, 2016). Thus, in the case of financial distress, households will have to adjust their wealth into more liquid assets (Mahlo, 2011). In essence, a model developed by Harrod (1939) and Domar (1946), referred to as the Harrod-Domar growth model, indicates that the growth rate of an economy is a function of savings ratio to output and capital output ratio to the economy.

Hence, it is evident that several variations exist in personal savings behaviour with regard to gender differences, risk-taking, personal level of income and ability to take advantage of market situations such as the level of a favourable interest rate (Challe & Ragot, 2016; Bhabha *et al*., 2015). Therefore, the behavioural approach of households towards taking financial decisions should be aligned with financial knowledge to balance up between these variations. Otherwise, if a household is not aware of the broad potential of savings, there would be no reason to save. Accordingly, a number of countries have now carried out financial literacy surveys of their adult populations that give insights into knowledge, attitudes and behaviour related to savings. Hence, Lewis and Messy (2012) found that people who were unfit for complex financial decisions, did not sufficiently plan ahead, and had a poor understanding of investment concepts such as risk and diversification.

2.6 BENEFITS OF HOUSEHOLD SAVINGS TO BOTH THE SAVER AND NATIONAL ECONOMIC GROWTH

The economic theory propounded by Keynes (1936), postulates that saving households is the difference between income and consumption of households. Household income is the total income earned in a given period by an individual from all sources. Consumption, however, is the total quantity of goods and services consumed by an individual during a certain period (Krueger & Albrecht, 2016; Rutherford, 1999). Sandri, 2014; Gale *et al*., (2012); Prinsloo (2000) and Solow (1956) suggest that savings influence economic growth, and higher savings lead to accumulation of capital and, therefore, to economic growth.

At the individual level, savings are important ways to improve well-being, protect against shock times and provide a buffer to help people cope in times of crises (Lusardi & Mitchell, 2014; Lusardi, 2008; Zeller & Sharma, 2000; Rutherford, 1999). Thus, the benefits of savings to the saver includes but not limited to hedging against unforeseen circumstances, accumulation of assets, availability of funds for household investment and provision for retirement. Indeed, savings can help the saver to purchase homes and housing, improve debt settlement and acquire social services (Dedry *et al*., 2017; Kasongo & Ocran, 2017). Sustaining household savings increases the possibility of future micro and macro investments in the economy. However, mobilisation of savings is critical for individual and social welfare. It helps households to safely consume and finance productive human and business capital investments. Savings rates at the macroeconomic level, strongly predict future national economic growth (Kumar, 2016; Karlan *et al.,* 2014). As such, different studies have identified investment as an antidote needed to fuel economic growth; thus, household savings are traditionally an important source of domestic investment (Duncan, 2012).

The importance of savings in the development of a nation is well known, as it is the main determinant of investment, and is widely acknowledged as the primary engine of economic growth (Stiglitz, 2016; Sibil & Joy, 2014). Thus, the economic growth of a country is basically on the capacity to increase the productivity of goods and services in comparison with other countries of the world. All other things being equal, the savings rate is important as increased level of household savings generates cash to fund infrastructure, business expansion and other investments, reduces reliance on foreign investment, thus promoting longer-term sustainable growth (Jagadeesh, 2015; Lewis & Messy, 2012). The manner which households save, ranges from holding surplus revenues in cash, through simple informal saving mechanisms such as savings and loan clubs, to complex investments or non-financial savings such as property or livestock (Baker, 2018; Andersen *et al*., 2015). Some of these approaches are more suitable for short-term savings and income reduction, while others offer long-term savings in the future. Following the financial crisis of 2007-08, credit has become more expensive and harder to obtain, which may have an impact on the use of credit to smooth income (Gaur & Kaushal, 2018; Coeurdacier *et al.,* 2015; Hoynes *et al*., 2015). In many economies, people are reluctant to save, even when they are aware of the benefits of doing so. It is for this reason that policy makers are looking to a range of tools to encourage savings and enable households to provide themselves with a financial cushion.

2.6.1 RELATIONSHIP BETWEEN DOMESTIC SAVINGS AND ECONOMIC GROWTH: A CASE OF DEVELOPING AND EMERGING COUNTRIES

Savings of households play an important role in the economic development of both developed and developing countries because of their impact on the circular income flow in the economy (Stiglitz, 2016; Jagadeesh, 2015; Iyoha *et al*., 2003). To analyse the relationship between domestic savings and economic growth, the Keynes model (1936) and the Solow hypothesis (1956) were considered. According to the Keynes model, savings (S) can be presented as a function of economic growth (Y), which can be presented as:

$$S = \alpha_o + \alpha_1 Y + U_1$$

Where,

S = savings, Y = economic growth, α_o = free term in the equation, α_1 = savings to economic growth sensitivity coefficient and U_1 = random component.

According to the Solow hypothesis, domestic savings, however, are a determinant of economic growth. Economic growth is, thus, the function of savings, which can be presented as:

$$Y = \beta_o + \beta_1 S + U_2$$

Where,

S = savings, Y = economic growth, β_o = free term in the equation, β_1 = economic growth to savings sensitivity coefficient and U_2 = random component.

Furthermore, the Keynes model and the Solow hypothesis present a positive relationship between domestic savings and economic growth, although several hypotheses explain this positive relationship as well. It is argued by some scholars that increased savings stimulates economic growth through increased investment (Lardy, 2016; Bebczuk, 2000). This approach is supported by Harrod (1939), Domar (1946) and Solow (1956) growth models. Alguacil *et al*., (2004) and Singh (2009) share the same view and maintain increased household savings is a vital factor towards economic growth. However, economic growth theories stipulate that the economic growth dynamics of country will increase if investment in human or material capital or in scientific research and development (R&D) increases. However, if a country has access to international financial markets, it may not necessarily develop faster if domestic savings are low because foreign savings can finance investment (Guterries & Solimano, 2007).

Jorgenson and Vu (2016) and Jagadeesh (2015) moot that savings creates capital formation, which leads to technical innovation and progress that enhances the economy of large-scale production, increases specialisation, which helps to accelerate the productivity of labour and further result in an increase in GDP. Hence, the continuous low level of economic growth in developing countries can also be subdued through sufficient savings, which is the main key to economic development as well.

2.6.2 CONTRIBUTION OF INDIVIDUAL SAVINGS IN A CLOSE AND OPEN ECONOMY

Savings in a closed economy are the same as the total investment or capital formation. In an open economy, given the possibility of a current account balance of surplus or deficit, depending on the difference between exports and imports, the total investment in the domestic economy can either exceed or fall short of domestic savings (Kim & Nguyen, 2017; Muyambiri & Odhiambo, 2017; Prusty, 2011). Thus, it is notable that the slow rate of development in third world countries is usually attributed to low levels of household savings. As a result, constraints are bound towards capacity to invest in capital formation (Jagadeesh, 2015). This leads to lower levels of economic growth and development than other countries that contribute enough savings. So, saving is usually considered as the main source of economic growth.

According to the South African Business Integrator (2015), it is the plan of the National Development Plan of South Africa for the economy to increase by 5.4% or more and to create enough jobs to redress inequalities and resolve the country's high rate of unemployment. For South Africa to achieve this target, there is need to find investment that amounts to at least 25% of GDP. Investment is the best fuel for sustainable economic growth as supported by the growth models of Bebczuk (2000), Solow (1956), Domar (1946), and Harrod (1939), and the only source that results to investment funding is savings (Ansar *et al*., 2016; McCombie & Thirlwall, 2016). As such, stakeholders should be more concerned with factors that will boost the savings capability of individuals in order to attain sustainable economic growth.

Savings has a positive effect on both open and closed economic growth as a whole because funds that are institutionalised by individuals, as savings, are channelled through financial intermediaries to fund investments by firms. In return, investments by firms will positively benefit the nation through higher productivity and economic growth (Đurić *et al*., 2018). Indeed, increase in savings can also hedge countries against economic backdrop and financial crisis. Thus, in order to increase the level of national savings, individuals need to take advantage of personal savings products. This can only be accomplished by encouraging financial literacy educational, programmes to increase individuals' financial literacy so as to make proper decisions to save and to invest on such products (Lusardi & Mitchell, 2014; Mahdzan & Tabiani, 2013). This will go a long way in increasing understanding by individuals of their own financial situations, thus enabling them to make financial decisions for the future, and choose the most appropriate financial instrument that will assist them to achieve their financial goals as well as contribute to national economic growth.

2.7 RESEARCH GAP IN THE LITERATURE

A research gap is defined as that area of research where insufficient information limits the ability to reach a conclusive informed decision (Robinson *et al*., 2011). While different methods exist in doing research, there has always been a vacuum in the literature, which has always prompted continuous studies in the field of research. Thus, as the world of research grows, key emerging issues attract the attention of researchers to provide sufficient and supporting information for decision-making (Visvanathan, *et al*., 2017; Rowbotham *et al*., 2016; Robinson *et al*., 2013). As such, this section of the study focuses on the gap in the literature that has raised concerns for empirical studies to be conducted. The purpose of this study is to provide information to close the gap that has limited decision-making within the ambit of financial literacy and household savings behaviour.

Although the financial environment places a premium upon literacy and knowledge as a source of advantage in making an informed decision regarding household financial management and savings for future financial well-being, it is evident from previous studies on financial literacy that a positive relationship with household savings behaviour enhances the ability of individuals in planning and controlling their finances (Yap *et al*., 2017; Mitchell & Lusardi, 2015; Lusardi & Mitchell, 2014). In essence, most scholars maintain most households with great plans for future financial well-being and retirement, are among those with better mastery of financial literacy (Boisclair *et al*., 2017; Isomidinova & Singh, 2017; Deuflhard *et al*., 2014). Other scholar have established that proper debt management and ability to save and taking up investment opportunities are also informed by individual levels of financial literacy (Petrie *et al*, 2018; Anderson *et al.,* 2017).

However, the positive impact of financial literacy on household savings behaviour was only established empirically. In other words, the process and procedure of this impact and the concept to improve household savings behaviour, using financial literacy, is yet to be revealed in the literature. Indeed, the fact still remains that there is a positive correlation between financial literacy and household savings behaviour, but previous studies have failed to exploit this aspect of integration that produces an improved household savings behaviour. Hence, the gap in the literature that with regard to financial literature and household savings behaviour (see Figure 2.3).

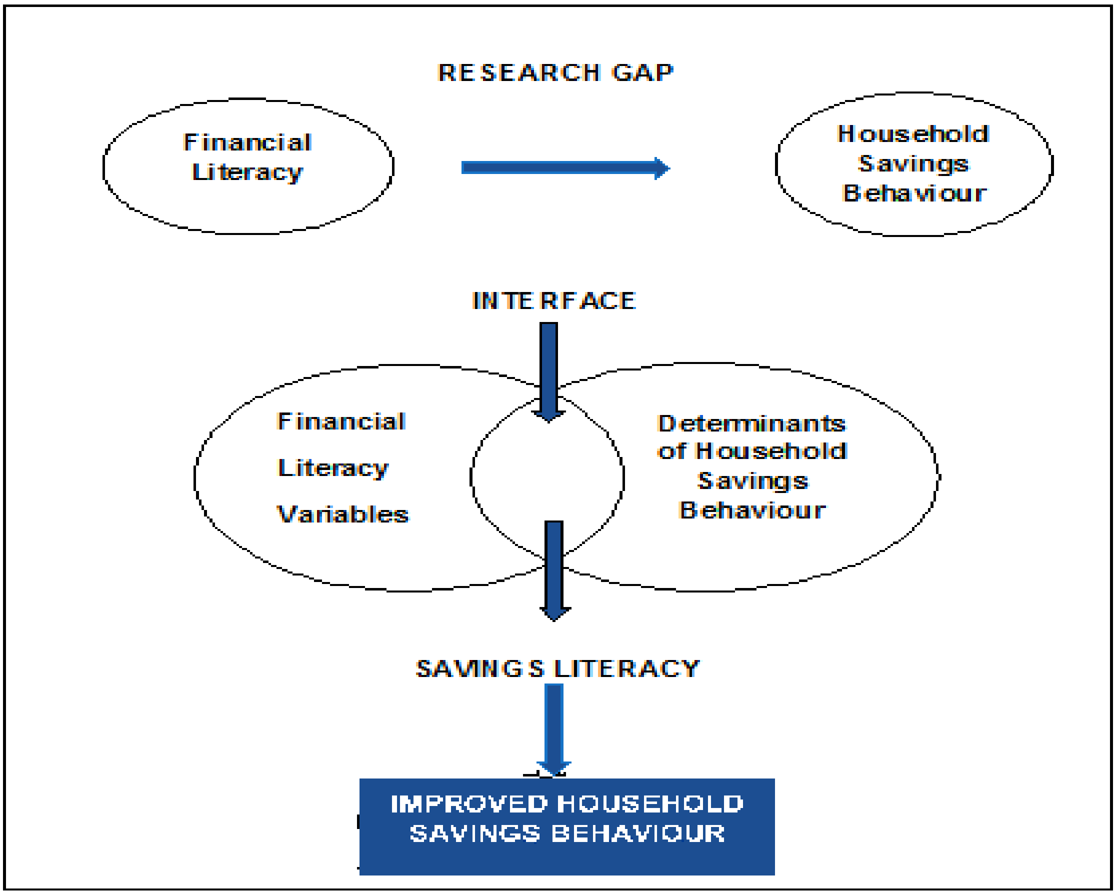


Figure 2.4: Gap in the literature with regard to financial literacy and household savings behaviour

Figure 2.4 shows a positive impact of financial literacy on household savings behaviour and, as such, the interface which integrates financial literacy variables and determinants of household savings behaviour through the process of savings literacy, produces an improved household savings behaviour. In essence, savings literacy has been identified in this study as the gap in the literature that previous studies have failed to exploit in the relationship between financial literacy and household savings behaviour.

Different scholars have argued on the different ways to measure the level of financial literacy among individuals, but this is not enough for policy makers with regard to the process of improving the ability of households to save. Thus, as much as financial literacy impacts positively on household savings behaviour, it has also been ascertained that there is a positive relationship between financial literacy and the determinants of household savings behaviour (Magendans *et al*., 2017; Cooper & Zhu, 2016). Such savings determinants involve the ability to properly manage disposable income, taking advantage of real interest rate on savings, investment and other economic policies that can enhance the future financial well-being of households.

Thus, the synergy between both financial literacy variables (knowledge of financial control, planning, understanding and product choice) and the determinants of household savings by savings literacy was identified as the interface, which the literature should pay attention to, in order to enhance the ability of households to save and make proper financial planning for the future (Clark *et al.,* 2018). As such, savings literacy is a product of financial literacy, which forms the life line, process and procedure that will positively influence household savings behaviour by incorporating the education of financial literacy and determinants of household savings variables to households (Anderson *et al*., 2017; Kalwij *et al*., 2017). Thus, the purpose of this study is to empirically identify variables of financial literacy that influence household savings behaviour as well as building it into a savings literacy curriculum for future campaign programmes in order to have a society with an improved household savings behaviour.

2.8 FINANCIAL LITERACY INTERVENTION AND CONTRIBUTION

The need for financial literacy education can never be under estimated, as it equips households with the right knowledge to make informed financial decisions. However, the previous section of this study focused on identifying the gap in the literature, which falls within the construct of financial literacy education (savings literacy). This section of the study adds to the literature with regard to the need for financial literacy intervention and its contribution to enhancing household savings behaviour. According to Peter (2015), definitions of financial literacy have been universally too limited. The authors argue that the responsibility for financial probity rests on the individual, and that the role played by banks and governments is usually ignored. Nonetheless, lack of financial literacy has been seen to be a popular phenomenon at a global stage and is also clearly evident in developed economies (Boisclair *et al*., 2017; Isomidinova & Singh, 2017; Lusardi & Mitchell, 2005). Hence, Jappelli and Padula (2013) argue that financial illiteracy is associated with low savings and wealth accumulation. Thus, Individuals, who are thinking about improving and moving towards financial freedom, must increase their financial literacy in multiple areas of personal financial planning that match the financial knowledge they need. To this end, the level of financial education achieved by individuals, provides a strong foundation for such development (Enwereji *et al.,* 2017; Jappelli & Padula, 2013).

Thus, promoting financial literacy is an intervention and obvious response to the increased complexity in economic decision-making. There are many challenges in economic environment, where there is obvious need to readdress this problem for national economic growth. Financial experts constantly report that people are not saving enough for retirement, and everyone knows that too many consumers mismanage their budgets, invest unwisely and spend too lavishly. Olivia S Mitchell states as follows:

> "When we first started this line of research back in 2004, we thought this was so simple, everyone would know [these things], But that is not the case".

According to Lusardi and Mitchell (2014), a number of empirical findings support the debate that financial literacy plays a role in the demand for and effective use of financial products and services and other informed financial decisions such as savings. Low levels of financial literacy are prevalent among adults and young growing youth around the world, they are especially associated with disadvantaged groups and poor financial choices that can lead to economic insecurity (Hütten *et al*., 2018; Idris *et al.;* 2017; Lusardi & Mitchell, 2014; Abreu & Mendes, 2010). As such, improved financial literacy can help people better understand, save more, achieve greater economic status and greater economic security (Carvalho *et al*., 2016). For all these reasons, the effect of financial education on household savings is a major issue (lusardi & Mitchell, 2014).

Ironically, the way financial services providers present their products and services can also act as a barrier to savings for financially illiterate individuals. Indeed, financial providers make extensive use of jargons, and may require a legalistic way of interpretation, causing more complexity in information to consumers (Gathergood & Weber, 2017; Gerrans & Hershey, 2017). In consequence, products may look more complicated than they actually are to financial illiterate individuals, making them not to understand important product features, such as charges and risks (Lewis & Messy, 2012). Thus, such individuals are faced with information they do not understand, causing them to deter from buying products, which could be useful to them. On the contrary, when people are financially literate, they are more likely to explore the products and services offered by financial institutions for their own benefits (Lusardi *et al*., 2017).

There are a number of negative effects of financial illiteracy that can be listed at the global, national, and organisational levels, and most of these challenges are faced by individuals and are not restricted to any level (Muralidhar, 2017; Van Nieuwenhuyzen, 2009). Thus, the consequence of not having the necessary skills to make sound financial decisions becomes severe, especially during the time of economic instability, where resources can be more limited and negative financial events are more frequent, such as job losses and sharp revenue declines (Klapper & Singer, 2018). While managing daily, financial transactions become more difficult, as there are also greater risks in getting it wrong (Roberts *et al*., 2012). However, lack of financial literacy at the global level was revealed by the global financial crisis of 2007/2008, thus highlighting lack of financial preparedness and skills of most households at a global level as such. Such situation raises the interest of government and non-governmental organisations with regard to the costs of financial illiteracy as well as its consequential impacts (Lusardi & Mitchell, 2014).

Finally, it is evident that financial literacy is important in explaining various economic and financial behaviours such as retirement planning and retirement savings, having more savings, investing in stocks and participating in financial markets, financial management skills and having rainy day funds (Bianchi, 2018; Tharayil, 2015). As such, lack of financial literacy has been associated with costly borrowing and credit card misuse behaviours and having higher mortgages (Gathergood & Weber, 2017; Snyman, 2014). Thus, there is need for all stakeholders to promote education and research on financial literacy, as it has been empirically and theoretically proved to be an essential skill to plan for household financial wellbeing.

2.9 SUMMARY OF CHAPTER

This chapter has provided a detailed and in-depth review of global efforts on the campaign towards financial literacy. An evaluation of existing programmes and initiatives as well as the historical development on financial literacy around the world and in South Africa was provided. It was revealed that widespread financial literacy could provide broad social and economic gains as vulnerable individuals can make better financial decisions and, possibly, increase capital stock as saving rates increase. Thus, this chapter has cleared the uncertainty caused by the knowledge gap by providing a detailed analysis of the chain of relationship between the global interest in financial literacy and developmental programmes in the South African context. The effort by SASI to promote savings culture among South Africans using savings campaign was reviewed as well as theoretical approaches that inform household savings behaviour.

Thus, the gap in the literature was identified as well as a suggestion on the way forward provided in order to improve savings behaviour among South African households. The benefits of household savings to both the saver and the economy was also reviewed. Thus, the final focus of the Chapter was on the need for financial literacy intervention and contributions since it has been identified that financial literate individuals are believed to make ends meet, keep track of expenses, plan ahead, and make the choice of appropriate financial products and stay informed on economic changes. The next chapter focuses on the conceptual framework of financial literacy, its definitions and dimensions as well as its economic importance to households.

CHAPTER THREE

CONCEPTUALISING FINANCIAL LITERACY TOWARDS IMPROVED HOSEHOLD SAVINGS BEHAVIOUR

According to Kocaaga *et al*. (2018), Shah (2017) and Lusardi and Mitchell (2014), financial literacy serves as a mechanism to enhance the ability of households to better allocate financial resources with regard to savings and wealth creation over their lifetimes in a world of uncertainty and imperfect insurance. Thus, the major focus of this part of the study was to conceptualise financial literacy micro-variables towards improving household savings behaviour. The economic importance of financial literacy to households, conceptual definitions and dimensions of financial literacy were analysed as well as a detailed evaluation of financial literacy micro-variables and variables of savings knowledge provided.

3.1 INTRODUCTION

As a result of the constant challenges confronting households on financial wellbeing, households are continually caught up in the web of uncertainty with regard to the appropriate measures to manage financial matters for future financial wellbeing. Thus, financial literacy was found to have a significant impact on the financial planning and control of households, which directly influences household savings behaviour (Petrie *et al*., 2018; Lusardi *et al*., 2017; Refera *et al*., 2016; Klapper *et al.,* 2015). Although different studies support the evidence that a large percentage of the adult population knows little about financial terms as well as basic financial concepts, such as risk diversification, inflation and interest compounding, however, financial literacy is a concept that needs to be implemented by way of education. Indeed, this study is in support of the argument that financial literacy variables that enhance individual savings behaviour is a model of an endogenous choice of variables akin to the accumulation of human wealth and support to economic growth.

This section provides a conceptualised framework that suggests the way forward to improve the required financial and savings knowledge by households to have a sound financial wellbeing. Hence, the major focus of this Chapter includes the following:

a. A review of the conceptual definition of financial literacy;
b. Identification of conceptual dimension of financial literacy;

c. A review of the economic importance of financial literacy to household savings behaviour;
d. A conceptualisation of financial literacy variables towards improving household savings behaviour; and
e. An analysis of financial literacy variables, financial literacy output and variables on savings knowledge.

Identification and analysis of the association between financial literacy variables and personal savings behaviour would assist in achieving the objectives of this study. Indeed, analysing these variables would also assist in evaluating the contributions of financial literacy on personal savings behaviour, which informed the methodology used to resolve the problem statement raised in this study. This study is an addition to the growing body of literature that highlights how several financial literacy knowledge building and behaviour relate to factors that enhance household savings and making financial decisions.

3.2 DEFINING FINANCIAL LITERACY

In the previous section, focus was on the review of the national strategy on financial literacy. The statutory body, educational programmes and initiatives were reviewed around and in South Africa. Thus, this section focuses on identifying the proper meaning of financial literacy and its concepts. Identifying the appropriate definition of financial literacy will assist in the process of conceptualising the core concepts of what constitutes financial literacy (Van Nieuwenhuyzen, 2009), although some challenges have been faced with regard to providing a suitable definition of financial literacy (Fernandes *et al.,* 2014; Remund, 2010). Table 3.1 presents a summary of various definitions of financial literacy as proposed by different scholars.

Table 3.1: Sources and conceptual definitions of financial literacy

Authors	Conceptual definition
Hilgert *et al*. (2003)	Financial knowledge
FINRA (2003)	"The understanding ordinary investors have of market principles, instruments, organisations and regulations."

Moore (2003)	"Individuals are considered financially literate if they are competent and can demonstrate they have used knowledge they have learned. Financial literacy cannot be measured directly so proxies must be used. Literacy is obtained through practical experience and active integration of knowledge. As people become more literate, they become increasingly more financially sophisticated and it is conjectured that this may also mean that an individual may be more competent."
National Council on Economic Education (NCEE) (2005)	"Familiarity with basic economic principles, knowledge about the U.S. economy, and understanding of some key economic terms."
Mandell (2007)	"The ability to evaluate the new and complex financial instruments and make informed judgments in both choice of instruments and extent of use that would be in their own best long-run interests."
Lusardi and Mitchell (2007)	Familiarity with "the most basic economic concepts needed to make sensible saving and investment decisions."
Lusardi and Tufano (2008)	Focus on debt literacy, a component of financial literacy, defining it as "the ability to make simple decisions regarding debt contracts, in particular, how one applies basic knowledge about interest compounding, measured in the context of everyday financial choices."
ANZ Bank (2008), drawn from Schagen (2007)	"The ability to make informed judgements and to take effective decisions regarding the use and management of money."
Lusardi (2008a & 2008b)	"Knowledge of basic financial concepts, such as the working of interest compounding, the difference between nominal and real values, and the basics of risk diversification."
Huston (2010)	"Measuring how well an individual can understand and use personal finance-related information."
Buckland (2010)	"...having the appropriate knowledge, skills and attitude about daily and longer-term finances to maintain or promote one's financial wellbeing."

Remund (2010)	"...conceptual definitions of financial literacy fall into five categories; (a) knowledge of financial concepts; (b) ability to communicate about financial concepts; (c) aptitude in managing personal finances; (d) skill in making appropriate financial decisions and (e) confidence in planning effectively for future financial needs."
Fornero and Monticone (2011)	"...the level of their financial knowledge, their ability to deal with financial decisions..."
Atkinson and Messy (2011 & 2012)	"Financial literacy is a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing."
Fernandes *et al*. (2014)	"...the knowledge of basic concepts of personal finance with respect to borrowing/debt and saving/investments that leads to better lifetime financial decision-making".

Source: Adapted from Wingfield (2016) and Hung *et al*. (2009)

Table 2.3 shows that the definitions of financial literacy do not exclude anyone with respect to the value of knowledge. Nonetheless, there is still a debate on a suitable definition of financial literacy (Wingfield, 2016; Van Nieuwenhuyzen, 2009). The second important issue to note with regard to the definitions of financial literacy is that it implies a continuous knowledge process, which means that financial literacy is not a final state of affairs (Van Nieuwenhuyzen, 2009). Perhaps, having understood the meaning of financial literacy, the effort of OECD's initiatives on providing financial education is to improve individual financial literacy, which ultimately, enhances the capability of household savings among other financial decisions (Lusardi and Mitchell, 2014).

3.3 CONCEPTUAL DIMENSION OF FINANCIAL LITERACY

The summary, as presented in Table 2.3, shows the contributions of different scholars in defining financial literacy. As provided for in the definition of financial literacy, the concept includes knowledge, understanding, skills and competence, and the ability to discern financial choices and future planning responsibilities. As such, OECD (2013) provided a definition that properly covers this idea, where financial literacy is regarded as a synergy of awareness, knowledge, skill, attitude, and behaviour needed to make informed financial decisions and the ability to achieve the financial well-being of households.

Financial knowledge, as mostly used in place of financial literacy, is the ability of consumers to understand financial products and concepts, thereby giving them the confidence to identify financial risks and opportunities, to make sound financial choices, to know where to go for assistance on financial matters, and to take other effective actions to improve their financial well-being (Roberts *et al*., 2012; Xu & Zia, 2012; OECD, 2005). It is an antecedent to various healthy financial behaviours; perhaps, one of the most robust findings in the literature is the cognitive factor in financial literacy in the sense that it plays a key role in financial preparedness for savings against retirement (Fernandes *et al*., 2014). Thus, Table 3.2 provides a synthesis of the core concepts and dimensions of financial literacy.

Table 3.2: Concepts and dimensions of financial literacy

Authors	Dimensions	Financial literacy concepts
Criddle (2006)	Effective choice	The choice of numerous alternatives for establishing financial goals.
Hung, Parker and Yoong (2009)	Financial knowledge and skills	The ability to use knowledge and skills acquired to better management.
Robb and Sharpe (2009)	Financial knowledge	The most specific human capital, measured by financial literacy issues.
Huston (2010)	Financial knowledge and application of knowledge	Financial knowledge and the application of that knowledge, with self-confidence in making financial decisions.
Norvilitis and MacLean (2010)	Knowledge, behaviour and attitude	It goes beyond the primary idea of financial education, where the influence of financial knowledge on behaviour is mediated by financial attitudes.
Remund (2010)	Financial decisions	Making informed financial decisions.

Atkinson and Messy (2012); OECD (2013)	Financial knowledge, financial behaviour, and financial attitude	Encompasses financial literacy in three dimensions: financial knowledge; financial behaviour; and financial attitude.
Robb, Babiarz and Woodyard (2012)	Understanding and decision-making	The ability to understand financial information and make effective decisions, by using this information.
Lusardi and Mitchell (2014)	Financial knowledge	Measured through a set of questions that measure primary financial concepts, such as capitalisation of interest, inflation and risk diversification.

Source: Adapted from Potrich *et al.* (2015)

The reason for conceptualising financial literacy, as a synonym for financial knowledge or financial education by several authors, emanates from their construct of measurement (Potrich *et al.,* 2015). Thus, most definitions are driven by the concepts of financial knowledge, financial attitude and financial behaviour (Atkinson & Messy, 2012). However, some authors conceptualise it broadly, measuring it through other aspects, such as financial behaviour, financial attitude, and financial experiences, among others. As such, lack of a standardised set of consistent financial literacy definitions and measures did not prevent the emergence of a significant number of studies (Potrich *et al.,* 2015).

However, the concept of financial education was addressed by OECD (2005) and Lusardi and Mitchell (2007), as the procedure by which consumers and investors enhance their comprehension and familiarity of financial products/concepts and, through data, guidance, as well as target counsel, build up the abilities and certainty to end up more mindful of financial dangers and chances to settle on sound choices, to know where to go for help, and to take other compelling activities to enhance their financial prosperity.

3.4 ECONOMIC IMPORTANCE OF FINANCIAL LITERACY TO HOUSEHOLDS

As much as every individual needs to be financially literate, bread-winners of each family need it more as they face an even more complex financial world and suffer from lack of time to fix financial misappropriation as some of them are overloaded with different family responsibilities. Lyons and Neelakantan (2008) emphasise that there is a gap between the theory behind how individuals should behave and how they actually behave financially. As such, the goal of financial education is to improve financial literacy among individuals.

In general, economic developments and financial products and services in South Africa such as rate of inflation, volatile interest rate, loans, credit facilities, savings and pension plan, among others, have awoken the relevance of financial literacy among individuals (Wingfield, 2016). Thus, the degree of low savings rate in South Africa is termed as bad news leading to a bad situation for a country that needs to revive its economic growth. The challenge that emanates from these developments is that such products that aim to support and aid individuals in their financial well-being, have proved so complex for financial illiterate individuals to make advantageous use of them (Engelbrecht, 2014; Lusardi & Mitchell, 2014).

On the other hand, poverty reduction focuses on meeting basic household needs such as food and health care, sustained long-term economic progress and making wise financial decisions depends on the knowledge and access to financial products and services (Nanziri, 2016). As such, financial literacy has been recognised as a key skill for individuals involved in an increasingly complex financial environment (Potrich *et al.,* 2015). Despite its significance, many studies around the world indicate that much of the world's population still suffers from financial illiteracy and suggest an urgent remedy to the problem is needed (WorldBank, 2014; Brown & Graf, 2013; Thaler, 2013; Atkinson & Messy, 2012; Lusardi & Mitchell, 2011).

Consumers who fail to understand the concept of financial literacy, will always have bigger debts, spend more on consumption and incur higher interest rates on loans (Lusardi & Tufano 2015; Lusardi & De BassaScheresberg, 2013). Most individuals also end up saving less money because of their high rate of borrowing (Stango & Zinman, 2009). Indeed, people with strong financial knowledge, do a better financial planning and saving for retirement (Lusardi & Mitchell, 2014; Behrman *et al*., 2012). In response to this deficiency of financial literacy and the overwhelming evidence of the positive impact to the society, financial education programmes have grown in number and importance (Tharayil, 2015). Thus, the economic importance of financial literacy is contextualised as follows:

3.4.1 FINANCIAL KNOWLEDGE

Knowledge is the most common, and perhaps, the most recognisable concept of the numerous definitions of financial literacy (Roberts *et al*., 2016). Thus, financial knowledge is what individuals understand as an expertise, experience and capability of individuals, integrated with processes and corporate memory (Abell & Oxbrow, 2001:73). Therefore, financial literacy provides individuals with the knowledge to understand financial information, concepts and the ability to use this knowledge for sound financial decision-making (Lusardi & Mitchell, 2014; Shuttleworth, 2011).

On the other hand, the pace of the recent financial inclusion in society, where everyone can access the basic banking product and services electronically rather than relying on the orthodox systems of money market, has increased awareness of individuals to acquire the necessary financial knowledge to accommodate such challenges (Lusardi & Mitchell, 2014).

3.4.2 MONEY MANAGEMENT

Financial literacy enhances the day-to-day money management of an individual. According to Roberts *et al*. (2016), a financial literate household will always create budget to monitor their monetary operations based on a specific period. In other words, the presence of a budget indicates a positive awareness relating to financial management (Mitchell & Lusardi, 2011; Arrowsmith & Pignal, 2010).

Indeed, households that fail to manage their income well, will end up not having enough left to save after day-to-day expenses or may accumulate debt they cannot repay. Lack of financial skills also means people do not plan ahead or understand how financial planning can help meet their goals (Lewis & Messy, 2012).

3.4.3 FINANCIAL INTELLIGENCE

The intelligence construct refers to the ability of individuals to apply their mind, to think and to be sensible to financial concepts and activities. Financial literacy, therefore, boosts the capability of intellectual comprehension. As such, it aids the ability of an individual to use numbers and financial mechanisms to analyse financial information and use such information to take their decisions to the changing business environment Thus, financially intelligent individuals will always know when to question the financial information or advice they receive and when to accept it at face value (Shuttleworth, 2011).

3.4.4 FINANCIAL CONSCIOUSNESS

Financial literacy aids individuals' consciousness towards financial awareness, which enables them to consider the financial implications of their decisions. Dantzig (2005, 1) explains, however, that a number sense should not be confused with counting but should rather be an enabling mental process. Hence, financial consciousness means that individuals have the mental ability to comprehend numbers and view them in context to infer meaningful relations from them (Shuttleworth, 2011). Gerardi *et al*. (2013) emphasise that numerical ability contributed substantially to the massive defaults on subprime mortgages in the recent financial crisis. Thus, those in the highest numerical ability grouping, had about a 20-percentage point lower probability of defaulting on their subprime mortgages than those in the lowest financial numeracy group (Lusardi & Mitchell, 2014).

3.4.5 FINANCIAL PRODUCT CHOICE

Individual ability to choose the right financial products is an important aspect of financial decision that is informed by financial literacy. Modern financial product markets are highly complex, and as such, Van Rooij *et al.* (2012) estimate that an increase in financial literacy will, otherwise, increase stock market participation and retirement planning, respectively. In the United States of America, evidence from a life-cycle model that incorporates financial literacy shows that financial literacy alone can explain more than half the observed wealth inequality (Lusardi, *et al*., 2013). Thus, results obtained by comparing wealth to income ratios across education groups with and without financial literacy, allows individuals to earn higher returns on their savings. For this reason, if the effects of financial literacy on financial behaviour can be taken as causal, the costs of financial ignorance are substantial. Costs of financial ignorance arise not only in the saving and investment arena, but also influence how consumers manage their liabilities (Fernandes *et al.*, 2014).

3.4.6 FINANCIAL ATTITUDE TOWARDS SAVINGS AND INVESTMENTS

Differences in behavioural biases and external influences can affect both the decision to save and how to save. However, due to financial illiteracy, some individuals prefer immediate gratification (i.e. instant consumption) rather than keeping their resources for gain, leading to low savings (Lewis & Messy, 2012). Conversely, if financial knowledge does not improve, households remain confronted by a situation of low savings, high debt, and little provision for retirement and ultimately, high financial stress levels (Lusardi & Mitchell, 2014). Before 1994, most South Africans were denied access to investment. Thereafter, more South Africans have had the opportunity to save and invest their money. Despite this freedom, majority of them are still unable to save and invest (Roberts *et al*., 2016).

Given the corresponding increase in the volume of research on financial literacy and financial education, of course, there is no better time to take stock of its relevant evidences if not, now (Xu & Zia, 2013). The relationship between earning from savings, investment and financial literacy has received very little attention because of the low level of information on financial knowledge within the population (Van Rooij, 2012).

Indeed, it has been revealed that individuals with high levels of financial literacy, tend to save and accumulate wealth, plan for retirement, exhibit more risk diversification, show sophisticated investment behaviour, manage debt better and make better mortgage-related decisions (Van Rooij, *et al*., 2012; Behrman, *et al*., 2012; Jappelli & Padula, 2011; Christelis, *et al*., 2010; McArdle, *et al*., 2009; Ameriks, *et al*., 2003). Few studies have acknowledged the fact that developing and making saving decisions is a very difficult task. Individuals may have to spend a reasonable time and effort in acquiring information required to make saving decisions (Lusardi, 2008). As such, a significant gap, which is needed to synergise, exists between having the right financial knowledge and developing a savings habit.

Lusardi (2008) argues that the main reason why individuals lack planning for pensions and get involved in poor terms of their financial contracts is that they lack financial knowledge. Indeed, the relationship between financial literacy and household financial management is important, as individuals are left with the responsibility for their financial wellbeing and their retirement preparation (Van Rooij, 2012). Thus, Rootman and Antoni (2015) emphasise that the poor savings culture of South Africans that has led many individuals living in debt was a result of lack of financial knowledge among the population. The authors maintain individuals with low financial literacy levels might not, for example, budget, save, nor be able to borrow and repay loans, and therefore, their financial inclusion levels are low.

3.4.7 ENHANCED PERSONAL ECONOMIC DECISION-MAKING

Financial literacy comes with a holistic knowledge that enhances positive economic decision-making (Lusardi & Mitchell, 2014). As such, previous studies have revealed a positive correlation between financial literacy and informed economic decisions by households (Hastings *et al*., 2013). The government urgency over the level of financial literacy among its citizens, is a reaction to a changing economic climate in which individuals now shoulder greater personal financial responsibility about making informed financial decisions (Hastings *et al*. 2013). It is the responsibility of consumers to make extraordinarily complex financial decisions on a day-to-day basis, yet, there is growing evidence that households are poorly informed when they make many consequential economic choices. It was also gathered that people who report a higher level of knowledge of economics, tend to score relatively high on the concept of financial literacy (Lusardi & Mitchell, 2009).

Early economic literature in this area began with the emphasis on the relationship between financial literacy and several economic behaviours (Lusardi & Mitchell, 2014). As such, Bernheim (1995, 1998) found that most U.S. households lacked the necessary financial knowledge and that they also used now outdated crude rules of thumb when engaging financial transactions such as savings. Calvet *et al*. (2009 & 2007) evaluated the actions of Swedish investors and found that poorer, less educated, and immigrant households (attributes associated with low financial literacy, as noted earlier) were more likely to make economic decision errors. Accordingly, financial ‘errors’, identified as the most occurring among the young and the old age bracket, normally displayed the lowest financial knowledge (Agarwal *et al*., 2009). Financial knowledge impacts key outcomes on economic decisions such as borrowing, saving, and investing decisions not only during the work life, but also during retirement age as well (Lusardi & Mitchell, 2014).

Lusardi and Mitchell (2014) and Xu and Zia (2012) provide a summary of the findings on the economic importance of financial literacy, where differences in results depend mostly on the measure of financial literacy used. A clear evidence was revealed in surveys conducted in developed nations, where households with low levels of financial literacy tended to make sub-optimal financial decisions, leading to great financial misconduct, thus such households do not plan to save for retirement (Lusardi & Mitchell, 2007), take loan facilities at high interest rates, invest in little or no assets (Lusardi & Tufano, 2009; Lusardi & Mitchell, 2007), and take less advantage of the potentials in the formal financial sector (Alessie *et al.,* 2011).

While market developments have brought a great improvement to the system, they also impose, on households, a much greater financial management responsibility to borrow, save, invest, and to access credit and debt facilities (Lusardi & Mitchell, 2011). In other words, as the level of financial literacy increases, individuals, on their own, can carry out financial responsibilities such as earn, manage, save and invest money and apply their knowledge to make the best use of financial products.

Gustman *et al.* (2010) argue that if higher cognitive ability leads to a greater appreciation of the needs for savings, or to more effective investment, one might also expect higher cognitive ability to be accompanied by greater knowledge of the instruments used in saving. As such, the variables under savings capability boost individual savings decision by increasing their ability to make, manage and invest funds, thereby increasing their savings rate. The former Chief Executive Officer of the South African Savings Institute, MrGerald Mwandiambira, declared that many South Africans lack the necessary savings capability and that basic money management skills are often not taught appropriately and hence, many South Africans struggle with personal finances, regardless of their earnings or level of tertiary education.

Beinhocker (2005: 317) states that knowledge deals with information that is useful and fit to manage a situation. Creation of knowledge, therefore, depends on the interaction between individuals and management of useful information (Shuttleworth, 2011). Thus, an increase in personal savings rate emanates from proper knowledge to management of individual income.

3.5 CONCEPTUALISING FINANCIAL LITERACY VARIABLES TO IMPROVE HOUSEHOLD SAVINGS BEHAVIOUR

It is important to note that the relationship between financial literacy and household savings behaviour is more of a behavioural concept; since it has to do with individual ability, and attitude to be familiar with financial and economic concepts and to properly handle financial situations for a better financial wellbeing. Thus, the aim of strategic financial education is to improve individual financial literacy levels and, ultimately, critical financial decisions of individuals towards savings, investment and risk diversification (Potrich *et al*., 2016; Klapper *et al.,* 2015; Roberts *et al.,* 2014). However, when considering the strategic plan to improve household savings behaviour, it is important to also understand that improving the level of financial literacy will be a great deal to influence behavioural changes (Dhashni & Abel, 2016). A conceptual framework was used in this study to synergise the relationship between financial literacy and household savings behaviour.

A conceptual framework, as outlined by Ravitch and Riggan (2012), is an analytical tool with different variations and contexts, used to make conceptual distinctions and organise ideas. Strong conceptual frameworks capture real ideas and it is done in a way that is easy to remember and apply. In other words, a conceptual framework represents the researcher's synthesis of literature on how to explain a phenomenon. It maps out the actions required during the study, given his previous knowledge of other researchers' point of view and his observations about research. Thus, it shows the understanding of how variables in this study connect with each other.

According to Beckman and Cook (2007), and McGaghie *et al*. (2001), a conceptual framework prepares the stage for the researcher to present its research questions that drive the investigation being reported, based on the problem statement. In addition, a conceptual framework provides a representation of an abstract idea (Eldridge *et al*., 2016; Jessen *et al.*, 2014). As such, while the theoretical framework informs the theoretical background which a study is built on, a conceptual framework is viewed as the operationalisation of the theory which gives direction to the study (Hatcher *et al*., 2018; Chinn & Kramer, 1999). Hence, the problem statement of this study presents the context for which the conceptual framework is built upon. The objectives of formulating a conceptual framework are to organise, explain, predict, and understand phenomena and, also to challenge existing knowledge within the ambit of critical existing assumptions (Ravitch & Riggan, 2012).

As such, there are various financial literacy variables that enhance household savings behaviour, which are important when considering the strategies and when designing programmes to support household savings behaviour. Thus, in the quest to attain the objective of this study, which is based on ascertaining the association between financial literacy variables and savings behaviour among South African households, the focus of the researcher in this section is to develop a framework that produces the synergy (savings literacy) between financial literacy variables and variables that measure household savings behaviour. This framework will serve as a knowledge-based framework towards understanding the mechanism through which the knowledge of finance can produce sound savings decisions using savings literacy. Since there is limited literature in this area of study, and in accordance with providing a guideline for any initiative that aims at promoting household savings behaviour, Figure 3.1 provides the conceptual framework on how knowledge of financial literacy enhances household savings behaviour through financial and savings literacy.

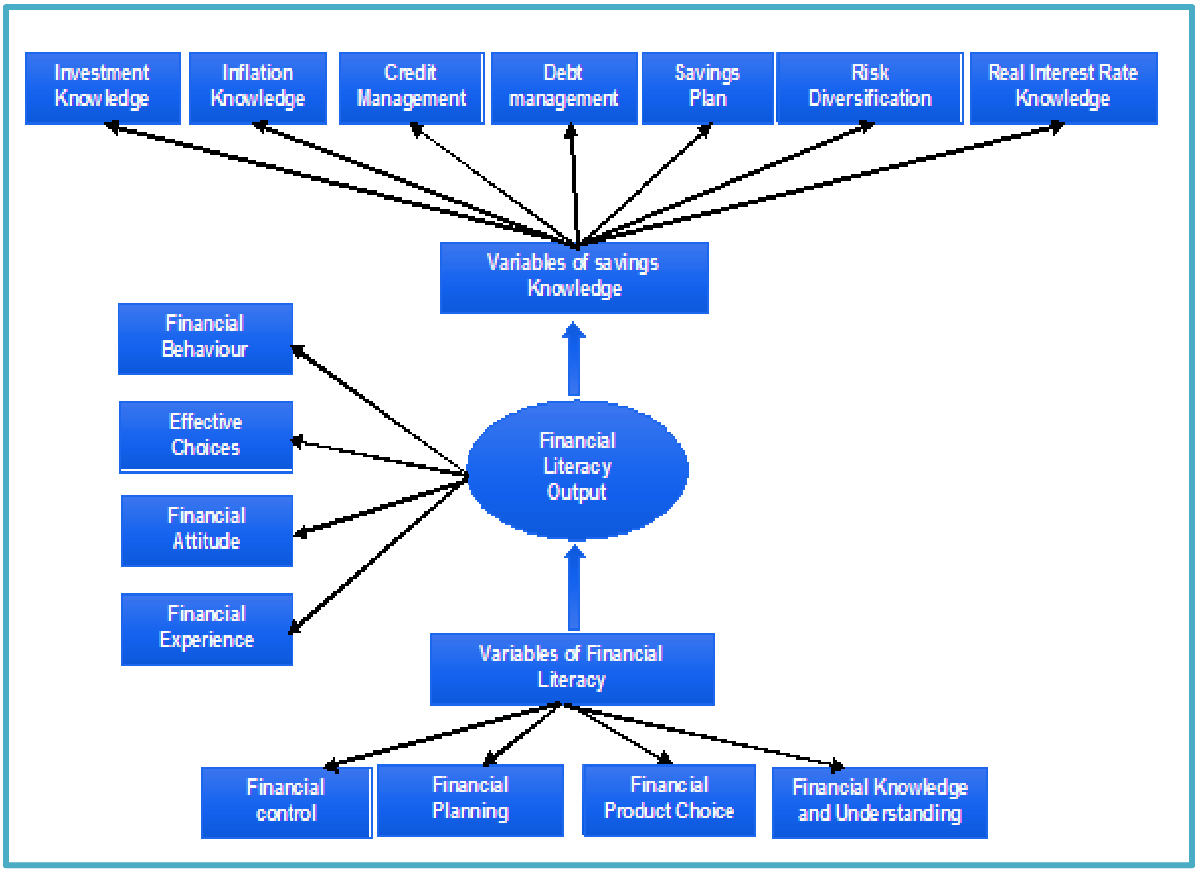


Figure 3.1: Conceptual framework of financial literacy variables towards improving household savings behaviour

The framework above provides a comprehensive core financial literacy variable that impacts on individual savings decisions as revealed from previous literature (Refera *et al*., 2016; Klapper *et.al.,* 2015; Lusardi & Mitchell, 2014; Roberts *et al.,* 2014;

Roberts *et al*., 2012). Thus, since this study is problem-based and will provide practical solutions to actual education related problems, the aim of the framework is to contribute to the body of knowledge in the field of financial education and personal financial management. In addition, the concept of financial literacy is broadly rated and should be contextualised before it can be measured (Van Nieuwenhuyzen, 2009). Although there has been a substantial theoretical and empirical body of work on the economics of education, very little attention has been devoted to the question of how financial literacy can be used in improving household savings behaviour. As such, the conceptual framework of financial and savings literacy provides a knowledge-based relationship between financial literacy and savings literacy variables. Understanding the nature of household savings in formulating policies to promote savings and investment has been a critical engagement to policy makers. Given the differences in economic advancement in a country-such as South Africa, households need proper financial knowledge to make informed savings decisions (Lusardi & Mitchell, 2014).

However, the concept of financial and savings literacy provides the synergy that results from the variables under the two constructs (financial and savings literacy). Indeed, the empirical evidence of the impact of financial literacy on individual savings behaviour is mixed (Lusardi & Mitchell, 2014). Thus, the four-core domains of financial literacy produce a financial literacy output as follows: financial behaviour; financial choice; financial attitude; and financial experience that have been empirically ascertained to have a positive impact on household savings behaviour (Potrich *et al*., 2016; OECD, 2013; Atkinson & Messy, 2012; Norvilitis & MacLean, 2010; Criddle, 2006). Accordingly, the alignment between the variables of financial literacy and financial literacy output enhances the knowledge and understanding of the variables of savings knowledge. In other words, to stimulate the linkage between financial literacy and savings behaviour of households in South Africa, this conceptual framework is suggested for usage in order to build a financial literacy education module, which could be utilised to communicate financial knowledge to the people of South Africa to encourage savings. However, a detailed explanation of financial literacy variables as well as the variables that measure household savings behaviour is provided in detail in the subsequent section of this Chapter.

3.6 ANALYSIS OF FINANCIAL AND SAVINGS LITERACY VARIABLES

Going by the definition of financial literacy, which deals with the ability to read, analyse, manage and communicate about personal financial terms and concepts that affect material well-being, the OECD made a consideration of mindfulness, information, aptitudes, state of mind and practices necessary to settle on sound money-related choices and eventually accomplish individual financial prosperity (Massey *et al*., 2016; Atkinson & Messy, 2012). However, this study has incorporated these financial literacy variables into a conceptualised form that could be used to improve household savings behaviour through the platform of financial and savings literacy. Hence, the conceptual framework in Figure 3.1 is divided into three major sections: financial literacy variables; financial literacy output; and variables of savings literacy.

3.6.1 FINANCIAL LITERACY VARIABLES

Financial literacy variables, as revealed in the literature, comprises financial control, financial planning, financial product choice and financial knowledge and understanding. Thus, these set of variables form the bases of financial and savings literacy concept that reveals the basic financial knowledge needed by households to make informed financial decisions with regard to savings and investment. A detailed evaluation of these variables is provided below.

3.6.1.1 FINANCIAL CONTROL

Previous literature revealed challenges faced by individuals due to by their financial situations, causing them to choke in the state of financial anxiety. Others feel that they are in such deep financial trouble that there is no real help available. Some may fear that they will reach out for help to the wrong person or organisation, thus ending up worse off than when they began. Unfortunately, failure to resolve this financial challenge will only make matters worse, as the problem is not going to cure itself (Barnes, 2017, Nigam & Boughanmi, 2017). Likewise, delaying action will only make the situation more difficult to resolve. Every individual owes it to themselves and their family to adopt a structure that will help maximise household financial satisfaction as well as providing for future financial balance for their families.

As such, the ability of an individual to apply discipline and prudence in situations and decisions connected with money is regarded as personal financial control. It deals with relative conservative attitude towards money management as well as a detailed financial planning and budgeting, attentive monitoring of one's personal income and expenditures records (Gaciorowska, 2014). An individual with good financial control, is regarded as a person who makes informed financial decisions, exhibits a careful approach to personal finances, prefers saving over spending and lives in a household that works within their financial budget to make ends meet (Roberts *et al*., 2014; Klapper *et al.,* 2015; Lusardi, 2008).

Financial control involves the behavioural capability of an individual to manage and track household expenses. It includes but not limited to household financial budgeting, self-discipline and control towards monitoring and managing household expenses. However, it is important for every household to have basic money management skills to live within a budget and handle credit and debt issues appropriately (Lusardi & Mitchell, 2014). Hence, having little or no knowledge with regard to financial control, can affect individuals negatively in different aspects of their lives. Thus, this section of the study provides an evaluation of variables of financial control, which every individual is required to obtain as a knowledge to have proper management of their finances for a better future financial balance. Hence, the variables of household financial control were also obtained from previous literature as micro-economics variables that fall within the construct household financial control, that aids management and control of household income. These variables are discussed below.

a. Personal money management ability

Personal money management ability and behaviour have been a common cause for concern among financial experts, psychologists, academicians, strategy makers, sociologists and anthropologists for more than three decades (Qamar, *et al*., 2016; Babiarz & Robb, 2014). A study by Roberts *et al.,* (2016) on South Africa, emphasised that the pattern of personal decision-making towards proper money management is based on their level of financial literacy. Accordingly, financial literacy forms the basis of understanding the usage of money in daily life, which includes the way income and expenditure are managed and the ability to use the common methods of exchanging and managing money (Sarnovics *et al*., 2016). Since spending money is a natural human phenomenon, money management, therefore, has to do with the level of financial control and discipline of every person (Akinyede *et al*., 2017). As such, discipline is a behavioural approach that shows the willingness to obey rules and orders (Merriam-Webster). Financial discipline entails how well an individual can conform with their spending and saving to the budget that they have set to achieve their financial goals (Lusardi & Mitchel, 2014).

In other words, the relevance of money management skills to individual savings behaviour, is to first, identify the necessities of the household, arrange them on a scale of preference and ensure that savings provision is made to smoothen future expenses. To this end, Sonnenberg (2017) posits that the way household income is allocated and managed, can have a significant result for the well-being of individual family members. The different procedures that should be considered by an individual to optimise money management abilities are discussed below.

To understand one's income, it is necessary to consider evaluating income when planning. As such, one needs to look not only at the annual salary, but the net, or take-home pay, which will determine what one has available to put towards a budget and cover expenses. Determination of net pay gives an exact gross income minus taxes and other automatic deductions from one's earnings (Hill *et al*., 2016). Thus, this will enhance the allocation of financial resources available for different household necessities. Most people know their full monthly earnings but have little knowledge of their full monthly expenses (Dolečková, 2016).
Nonetheless, the point is to determine your total expenses and subtract that from the net income for the month in question. Hence, if a negative figure arises from the calculation, it means the household spends more than they earn. It is, therefore, advisable to reduce spending. If a positive figure is calculated, it means the household spends less than they earn, and it is, therefore, advised to increase household savings and avoid additional debts.

b. Identification and organisation of household necessities

Usually, household necessity has been studied as an economic phenomenon alongside with other activities of the family. It is a duty of every individual to identify and organise the necessities of the household to maximise allocation of household financial recourses (Kan *et al.,* 2017). As such, it is the sole objective of every individual who wants to have a future financial balance to learn how to manage his or her finances better by taking expenses and every penny into account. Thus, a proper organisation of household necessities will enhance allocation of financial resources to those expenses that positively affect the wellbeing of every individual (Hassan *et al.,* 2015).

c. Allocation of financial resources according to scale of preference

To be in control of financial expenditures, one must organise his or her needs according to level of importance. Household financial allocation, according to scale of preference, does not only prevent expenses on irrelevant items, it also allows one to make sure that there is financial provision for the necessity of the household (Jappelli & Padula, 2013). In the long run, allocation of financial resources, according to scale of preference, provides self-discipline towards household financial management and benefits households to live within their means.

d. Monitoring spending against possible deviation

An important aspect of money management, that can never be overlooked, is to keep track of personal expenses paid by cash as well as credit cards. The idea is to have all expenses of both variable and fixed items, accounted for to get a total amount (Olafsson & Pagel, 2016). This will not only allow one to see the whole picture and know how to manage expenses going forward, but also guide towards working with one's scale of preference (Fredericks *et al*., 2017), thus providing a guideline to compare one's historical financial performance over time.

e. Ability to create an emergency fund

Unexpected events and uncertainty occur in individual's financial life and it is good to prepare for it. In addition to the available cash for everyday transactions, it is important for individuals to save a portion of their income in case of emergencies (Gjertson, 2016). Unforeseen events such as illness, loss of a job, or any other unfortunate event can severely strain a family's budget, and without some liquid assets, the family could be forced to sell other assets, such as a house or automobile, to meet daily living expenses. Emergency funds form an important part of a healthy personal finance plan. In most cases, one should not touch or take money out of the fund, rather, it is being left to generate interest.

3.6.1.1.1 OBJECTIVES OF HOUSEHOLD FINANCIAL CONTROL

Household financial control consists of plans that considered in household income and expenditure (budget). Creating this plan allows an individual to know, in advance, the amount of money he or she will earn and to guide the allocation of funds to spending, saving and paying debts (Struwig *et al*., 2012). The findings from the study done by Roberts *et al.* (2013) revealed that only 28 percent of South Africans stay with their budget, 28 percent usually stay within their budget, while 31 percent sometimes maintain their budget, 6 percent never have a budget and 1 percent does not know. However, personal financial control is an individual initiative of preparing for household future financial wellbeing in a manner that benefits them economically (Altfest, 2004). Thus, it involves an expression of control measures of actual and expected income and expenditure for a period of time.

Accordingly, Roberts *et al*. (2016 & 2013), Nanziri (2016) and Lusardi and Mitchell (2014) identify financial control as a core variable of financial literacy, which involves setting financial goals and working hard to meet them by deciding to have emergency funds in place (through a formal savings product or by informal means). Indeed, household budget allows an individual to create a plan for income towards expenses and savings. Sticking to a budget plan will help an individual to stay out of debt and make proper provision for savings (Albayrak & Masterson, 2017; Bir, 2016). Consequently, household financial control helps in checkmating estimation of revenue and expenses over a future period of time. In other words, it helps to monitor the amount of money assigned for every project and the summary of intended expenditures and the ways on how to meet the proposal (Yeoman, 2013).

The research conducted on South African Social Attitudes Survey (2015) provided the track record of the presence of budget in South African households since 2010. The results revealed that majority of households in South Africa had a budget in 2015, although with a considerable minority not having such a budget. In 2010, 51% of South Africa’s population was revealed to have a household budget; this share remained relatively unchanged in subsequent years. In 2015, approximately 59% of the adult population reported the presence of a budget in their households. A significant share 34% of adult population in South Africa lived without a budget in 2015, thus revealing a poor household capability and approach towards managing their finance. Hence, the objectives of household financial control variables are to:

a. Control resources

Financial control enables households to establish the cost constraint for a project, programme or bills, for example, jobs are an income source, while bills and rent payments are expenses. It helps to identify the reason why those projects are one's priorities, how one is strategising to achieve them and how fast one needs to see results (Gonzalez & Gonzalez, 2016). Although short-term goals should not be extended beyond a year for possible achievement, long-term goals may take years to achieve. A typical example would be saving for retirement or a child's education (Lusardi & Mitchell, 2014).

b. Communicate plans to various household responsibility

Financial control provides a snapshot of household income and expenditure (budget). Thus, having a budget in hand, will enhance an informed communication between revenues and expenditures.

c. Motivate households to save

Sticking to a stipulated household financial estimate enables an individual to create a positive balance of funds between income and expenditure which gives the household control over its finances and allows such household to save more money for short and long-term goals (Lusardi *et al*., 2017; Nanziri, 2016). Accordingly, it is important to cultivate the habit to stick to a financial plan to attain individual financial goals (Drever *et al*., 2015). Thus, in striving to meet a financial goal, it is necessary to make a list of the entire financial project one wishes to accomplish over the short and long terms (Loke *et al.,* 2015).

d. Evaluate the financial performance of the household

Financial control enables households to ascertain the level of financial management capability by periodically comparing the actual and expected income and expenditure. Tracking and sticking to a spending plan is also important for an individual to attain financial goals. Although households sometimes spend outside their spending plans, such expenses can be difficult to track because of the variable nature (Gasiorowska, 2014, Klawitter *et al.,* 2013). Indeed, it is necessary to look at one's spending every month and compare it to the personal budget worksheet to identify the flow of cash. If one finds that one is often going over-budget in some areas out of necessity, one should consider cutting elsewhere to keep things under control.

e. Keep accountability

Financial accountability starts with financial honesty. A personal financial plan (budget) enables absolute accountability of the usage of funds. In creating a budget, it helps to ascertain the actual proportion of income to different responsibilities to avoid over-estimation (Bir, 2016; Nanziri, 2016). As such, it is necessary to ascertain one's net income, which the household budget is based on. It is also important to identify the nature of the household expenditure; this could come in the form of fixed or variable expenses. Expenditures such as mortgage are regarded as fixed because their repayment stays the same each month. Other expenditures such as bills, maintenance, entertainment, groceries and rents, which are flexible in nature, are regarded as variable expenses. Thus, on the expenditure side of the budget, it is necessary to divide the expenses into these two categories for proper accountability. Perfect control of personal income enhances financial well-being and peace of mind. According to Klawitter *et al.* (2013), using a realistic financial plan to forecast personal spending for the year could assist with long-term financial goals. An individual can then make realistic assumptions about one's annual income and expense then plan for long-term financial life achievements such as starting one's own business, buying an investment or recreation property or retiring (Qamar *et al*., 2016).

3.6.1.2 FINANCIAL PLANNING

Household financial planning is a critical component for financial success, as such, it involves the process of planning on the financial well-being of a household (Anderson *et al*., 2017; Roberts *et al*., 2016). Good financial planning involves setting up financial goals and working hard to achieve them, having the right knowledge of the need to provide for the future, preferring saving over spending, making provision for savings and emergency funds in place (Refera *et al.,* 2016; Yeoman, 2013; Symanowitz, 2006). However, this study highlights some vital elements of financial planning as it borders around providing households with better future financial well-being. Thus, the variable of household financial planning comprises of micro-economics variables that help households to evaluate current income and future financial state by using current household financial elements to predict future income, values of assets and withdrawer plans. Thus, these variables are discussed below.

a. Personal credit management

Personal credit management deals with the strategic method employed by an individual to control the usage of credit facilities. Credit facility is a general term, and covers a range of different loan and credit types. According to Chukwuere *et al.* (2017), and Wellalage *et al.* (2016), different types of credit facilities exist in South Africa such as mortgage loan, car loan, home equity loan and secured credit card; each comes with its own set of rules and characteristics. Judicious use of credit facilities is a major tool to help achieve financial and lifestyle goals.

To achieve success and advancement in financial wellbeing, consumers must create, establish, maintain credit worthiness and discipline in their borrowing terms and responsibly repay their debt as at when due (Aron & Muellbauer, 2013; James, 2014). Indeed, financial knowledge equips individuals with the right information needed to attain any condition and terms of credit. Although households need liquidity most of the time to honour their financial obligations and undertake valuable projects when they arise, proper usage of credit facility entails the ability of an individual to have effective management of the financial advances that he or she uses to smoothing the day-to-day financial responsibilities (Bridges & Disney, 2004). Considering the economic system in South Africa, where credit system is the order of the day, it is important for every South African household to have the right character to manage the advances as they come.

South Africa has experienced credit market liberalisation, which has increased credit advances on households engaging in smoothing consumption (Aron & Muellbauer, 2013). Indeed, there are consequences in the case of default, where the individual involved is subject to the legalities attached to the credit agreement. Hence, financial literacy equips individuals to critically consider the terms of credit facilities and the details of the repayment before taking the credit advance.

b. Personal debt management

For any country such as South Africa that practises a credit economy, personal debt is inevitable. Debt, according to Investopedia, is the amount of money borrowed by one party from another. The arrangement between both parties gives the borrowing party permission to borrow money under the condition to pay back later, usually with interest. Thus, financial knowledge provides individuals with the ability for debt control, since budgeting allows one to create a spending plan within one's income, it then ensures that one will always spend money for the things one needs and the things that are important to one (Hilgert *et al*., 2003; Gale *et al*., 2012; James, 2014). As such, financial planning keeps an individual out of debt or helps one work the way out of debt if one is currently in debt (Mitchell & Lusardi, 2011).

It is the responsibility of the individual to have a structured plan to manage the debts as they arise. Therefore, debt management is an individual quality that helps one to stick to the conditions and terms of credit in order to avoid the consequences of defaulting (Han, 2015). Lorgat (2003) believes that household debt emanates from financial illiteracy on the part of consumers who spend almost all their income leaving little, if not, nothing for their savings and investments. South African households have recorded a high level of debt to income ratio in recent time, this has caused the economy to be more vulnerable to various external shocks (Meniago *et al*., 2013; Moroke *et al*., 2014).

According to the Gauteng City-Region Observatory Quality of Life Survey Report, 2015, South Africans are becoming more heavily indebted, with interest rate hikes and the weak economy crippling households across the country. It was highlighted from the Survey that Gauteng, being the most populous and wealthiest province in South Africa, holds the title of having the most indebted citizens, especially those in the middle and lower income groups. Hence, knowing the negative impact of the high level of debts among households, is a great concern for stakeholders in South Africa to keep the level of household debt at a balanced level (Meniago *et al*., 2013).

c. Savings knowledge

Savings knowledge is the economic awareness of an individual to reserve a portion of his or her disposable income as savings, other than spending it on immediate consumption. Accordingly, a portion of disposable income not spent on consumption of goods, but invested directly on capital equipment or purchase of securities, is regarded as savings. According to Lusardi and Mitchell (2014), savings knowledge is economically essential for individuals to identify the necessity of saving a proportion of their income. The elements of savings knowledge involve the philosophical ideas of savings that is necessary to equip every individual on savings capability.

There are differences in behavioural guiding principles (philosophy) of savings across individuals in terms of wealth accumulation at retirement age and those with relatively similar lifetime incomes (Lusardi *et al*., 2017). Accordingly, this behavioural phenomenon raises a fundamental question as follows: what makes an individual a “spender” while the other individual with very similar income and other socioeconomic characteristics save a larger portion of his or her earnings (Cronqvist & Siegel, 2013).

The English Oxford Living Dictionary defines savings philosophy as an individual behavioural guiding principle towards savings attitude. Since the philosophy about savings deals with individual attitude in different ways, it is important to properly examine the motive behind this attitude that varies from one individual to another. On economic terms, differences in savings behaviour across individuals are in relationship with differences in preferences (Cronqvist & Siegel, 2013). Examining the impact of saving motives on saving decisions has created difficult challenges to applied researchers in recent years (Mastrogiacomo & Alessie, 2012). Hence, the elements of savings knowledge are discussed below.

- ✓ **Household savings philosophy**

For a proper understanding of household savings philosophy, individual attitudes and behavioural approaches towards savings need to be reviewed. To examine the savings behaviour of households, therefore, it is important to take into consideration, attributes of each savings goal and factors affecting human needs on the likelihood of saving (Alkhiary, 2015; Lee & Hanna, 2015). Savings goals are those variables or purposes that lead households to save and can be attained by ascertaining the most important reason to save (DeVaney *et al*., 2007). Thus, household goals such as basic needs, emergency/safety, retirement/security, love/family, esteem/luxuries and self-actualisation are attributes that inform household savings behaviour (Cho, 2009, Lee & Hanna, 2015). I It has been revealed that most South Africans do not use formal savings mechanisms, instead, they save money informally, such as saving money at home, in a wallet, in a stokvel or giving money to a family member to save (Roberts *et al*., 2012). Hence, setting a savings goal contributes as the basis of household savings behaviour.

- ✓ **Savings motives**

Saving is important today, and improves both the life of an individual saver and for the country for sustainable economic growth and development (Fredrik, 2013). What motivates a household to spend less of their immediate income and save for the future must deal with philosophy and principles of life. Thus, one should not consider savings motive in place of determinants of savings, the review of savings literature, established that there is a positive relationship between saving motives and actual savings behaviour (Fredrik, 2013). Kasilingam and Jayabal (2011) argue that the saving rate of a household is affected by both its ability to save and the willingness to save. The ability to save is determined by the income and expenditures, while the willingness to save is the saving motives of the individual. The authors posit the level of motives influences the size of saving. Thus, the clarification of the savings motive of an individual will enhance the understanding of how an individual is saving and for what purpose (Fredrik, 2013).

Researchers have grouped savings motives into different names and categories. But for the purpose of this study, Mahlo (2011) provides a comprehensive summary on the motives of household saving. Firstly, the Permanent Income Hypothesis (PIH) has been identified as a motive where individuals save to build up reserves against uncertainties such a decline in future income. Secondly, the life-cycle motive where individuals save to balance future income and expenditures. Thirdly, inter-temporal substitute has been identified as a savings motive that informs enjoyment of wealth appreciation and interest rate.

Furthermore, more saving motives have been identified such as improvement motives, where individuals save to enjoy a gradual increase in future needs. Accordingly, individuals also save to enjoy doing their own things independently. Enterprise motive is another savings motive where individuals save to carry out transactions, speculative or business projects. Finally, individuals save to create future fortune (bequeath motive) for generations to come. This is in desire to add to the estate of their beloved.

- ✓ **Environmental inter-play on household savings decision**

Choices of savings decisions, are sometimes, affected by environmental characters that surround one’s domain. Issues such war, economic shutdown, political issues and environmental disasters greatly contribute to individual attitudes and motives towards savings.

The reality of getting old is inevitable and planning for retirement is crucial if an individual want to enjoy the later years, without continuing to work. So, it is necessary for one to make saving a priority by adding an amount from each pay into the private savings account plus the amount employers contractually transfer into the employee retirement account. The ability to save is not totally based on the size of an individual's income. There are so many well-paid individuals who spend their entire income as quickly as they earn it. Financial security is not a function of what one makes or earns, but from how much money one saves (Wahlen, 2012). Accordingly, cultivating a savings habit does more than to provide for a rainy-day fund. It offers a comfortable life style, self-confidence and financial freedom. An individual with a good savings plan can project for a long-term career goal rather than focusing on a job to pay for immediate needs. With savings, an individual can extend generosity with his or her resources to benefit family members, neighbours and the community.

3.6.1.3 FINANCIAL PRODUCT CHOICE

Product choice, involves the ability of an individual to make a critical selection of financial products in favour of his or her future financial well-being (Kirui *et al*., 2014; Roberts *et al*., 2014). However, the knowledge to choose financial products by households is based on their awareness and familiarity of different kinds of financial products, ranging from savings products, credit, loans, banking, investments and insurance products (Bianchi, 2018; Lusardi *et al*., 2017). Thus, knowledge to choose financial products also enhances understanding and usage of these products to the best of its productivity. Household decision on any financial product plays a greater role on the ability to create wealth for future household financial well-being (Chu *et al*., 2017; Gathergood & Weber, 2017). The variables of financial product choice, which comprises variables that fall within financial products, are discussed below. Knowledge of these variables, enhances the ability of households to choose and manage financial products to optimise wealth creation.

a. Savings products

In this study, an individual savings plans refers to a situation whereby, an individual puts aside funds to meet a certain household liability at a given date in the future. Guiso and Viviano (2014) emphasise the problem of clarity with empirical relationships between individual financial knowledge and their productive outcomes on finances. For

instance, an individual who saves a great percentage for retirement, is not making a better decision than one who makes fewer savings; it depends on the ability to identify the best savings plan by the consumer, which is clearly unobserved. According to Owadally *et al*. (2013), savings plans are grouped into different categories, as such, individuals may contribute to a medium-term investment and savings vehicle like a normal savings account, to meet daily household needs and school or college fees for his or her children in 5 years' time. A longer-term example is where individuals choose a fixed-term deposit savings, where they save out of labour income to provide a lump sum to purchase property. Most often, two related decisions are made with respect to the responsibilities of the household such as: how much the monthly contribution will be; and where the savings will be invested. Different savings plans and packages are discussed below.

- ***Savings account***

A savings account is a simple type of bank account that allows one to store money securely and earn interest on its balance. Although the interest rate offered by savings account is low, however, it keeps the money save and gives one quick access to it in case of emergency. Thus, according to Rhine *et al.* (2016), a savings account can be conventional where the individual arranges to be remitting a sum of money into the account to meet future household liabilities.

- ***Fixed deposit account***

A fixed deposit account is a savings plan in which money is deposited for a stated period and a fixed interest rate is paid at the end of that period. It is a savings plan that provides individuals a secured way of storing money with a high interest rate (Owadally *et al*., 2013). It is important that the individual understands the terms of the tenure right while investing in a fixed deposit because making a premature withdrawal of the money will lead to being penalised. Hence, benefits of a fixed deposit account include the following:

- ✓ It encourages a savings habit as the money one deposits needs to be in the account for a period without one making any withdrawal;
- ✓ Investing in a fixed deposit account earns one a higher interest rate than depositing the money in other account packages;
- ✓ One is assured of returns for the cash deposit;
- ✓ The account helps to act as a fall back for one's business in the event of a cash flow squeeze or can be used to meet future cash requirements;

- ✓ Interest is payable at maturity, annually or monthly depending on the term one chooses, or one could use the money to buy assets if one wants;
- ✓ One gets to choose how long one wants to invest the money in a fixed deposit account ranging from 30 days to ten years; and
- ✓ One can choose to have more than one fixed deposit account if one wants to save for different goals.

- ***Educational savings account***

Educational savings account is a savings plan that allows individuals to save money to cover future educational fees for an eligible beneficiary (child). In some countries such as the USA, an educational savings account is tax-free on the interest earned from the account if the child uses the funds before the age of 30 years. The tax-free policy on the interest is implemented to encourage savings against future educational fees. As such, the knowledge to store money in an educational savings account not only helps the family to smoothen future educational fees of children, but also stabilises the family for future responsibilities.

- ***Stokvel***

A stokvel is an informal group savings scheme in which members voluntarily agree to contribute a fixed amount to a common pool on a weekly, fortnightly or monthly basis (Lukhele, 1990). The name “stokvel” originated from the term “stock fairs”, as the rotating cattle auctions of English settlers in the Eastern Cape during the early 19th century. Stokvels, as pointed out by Matuku and Kaseke (2014), forms part of the key poverty alleviation strategies, which have been practised for many years by majority of black South Africans. Stokvels are recognised at the global level as "rotating savings and credit associations" (ROSCAs). The term stokvel is unique to the South African context (Mashigo & Schoeman, 2010).

Stokvels have a constitution, which dictates the size of the contributions, when the accumulated money is to be paid out, as well as the roles and responsibilities of members. There are different types of stokvels in South Africa as pointed out by Verhoef (2001), such as savings, burial, investment and high budget stokvels. Hence, they have both economic and social functions; the economic function relates to the use of stokvels to promote income security while the social function speaks to social capital, which manifests itself through friendships and social networks (Matuku & Kaseke, 2014). The economic benefits of stokvel include the followings:

- ✓ Peer pressure forces one to save;
- ✓ Pooled money can earn better returns, at a lower cost compared to banks real interest rates;
- ✓ Some of the added benefits are a sense of community and socialising. Members of stokvels traditionally meet regularly and make an occasion of the meetings;
- ✓ Members acquire economic knowledge as they operate like investment clubs and invest in the stock exchange or companies. Members do their homework, deliberate about which shares or companies to invest in and make investment decisions;
- ✓ Knowing when one will receive a windfall amount makes it easier to plan finances; and
- ✓ It reduces chances of savings being stolen if the money is moving rather than saving the money at home.

- ***Retirement savings plan***

Households choice on a retirement plan is informed by the by their level of financial literacy (Lusardi & Mitchell, 2014). Most retirement plans are financial products, which come as a contractual responsibility bidding on both the saver and the financial institution. The idea behind taking up a savings retirement plan is to minimise present expenditures and then smoothing expenses that come after retirement. As individuals accumulate growth in their net worth and establish a standard of living, risk of loss of income and assets should be provided for at all time to mitigate against potential loss of income and personal net worth and safeguard personal identity. Risk management products and strategies (insurance) provide income and asset leverage over one's life span. As such, factors to consider before selecting a retirement plan include the following:

i. Real rate of return

In economic terms, real interest rate is the rate of interest on every amount of money an individual save over a period of time. The rate differs from one means of plan to another. It is also monitored by the financial authority of any country.

ii. Cost and risk involvement

Each of the savings plan is associated with a kind of cost used to service the plan and that will determine the rate of returns on the savings. It is necessary that individuals be aware of the impediments of such costs associated with savings and their benefits.

iii. Monitoring requirement

The necessity to consider the variation and flexibility of a retirement plan and its return is highly required since economic activities are affected by different variables in between times.

b. Investment products

Investment plans deal with the economic strategy of an individual to acquire an asset with the hope that it will generate income or will appreciate in future. In finance, investment involves purchasing a monetary asset with the idea that the asset will provide income in future or will be sold at a higher price for a profit (Igbinosa, 2012: 1). The invested monetary asset involves bonds, stocks mutual fund and real estate properties.

Increase in the rate of individual savings of some countries such as China, have attracted attention in relation to global rating, as one may ask the variables behind the high rate of savings. As such, a study conducted by Bonham and Wiemer (2012) revealed that the increase in the rate of household savings in China is a result of domestic investment knowledge by individuals to yield a ballooning trade surplus and a massive accumulation of foreign reserves. D’alpaos and Canesi (2014) conclude that risk and uncertainty are bound to some real estate investors due to lack of knowledge and poor or imperfect information about the terms associated with investment. However, it is worthy to note that financial literacy provides individuals with the right knowledge needed to make decisions on real estate investment.

Investment does not only help individuals to smoothen future expenses but also contributes to the economic growth of a country (You & Solomon, 2015). Previous literature has revealed that most financial literate individuals understand the potentials of spreading their investment funds across several ventures compared to illiterate ones (Abreu & Mendes, 2010). The goal of financial management is to increase one’s net worth. Thus, investment results from saving and saving is equal to investment (Malho, 2011). There are different types of investment plans designed to build individual wealth, capital appreciation and increase financial security as discussed below.

- Real estate investment

Real estate investment involves the acquisition of property, which consists of land and building on it, along with its natural resources. Although real estate markets are characterised as illiquid markets, several academics argue that such markets are efficient, and it is assumed that participants act in accordance with the right financial knowledge (Salzman & Zwinkels, 2017). Investment in real estate comes in three categories based on its uses as illustrated in the table below.

Table 3.3: Categories of real estate investment

	Residential	Commercial	Industrial
1	Undeveloped lands	Office building	Factories
2	Houses	Warehouses	Mines
3	Condominium/town houses	Retail store building	Farms

Investing in real estate means to own, lease or rent land and/or property. Thus, investing in residential properties involves a reasonable sum of money but lesser compared to investment in commercial and industrial real estate, which requires greater investment sums tied up in a relatively less liquid secondary market (Limaye, 2016).

- Bonds

A bond is a debt investment in which an investor loans money to an entity (typically corporate or government) which borrows the funds for a defined period at a variable or fixed interest rate (Bhuyan *et al*., 2014). In South Africa, government entities issue bonds and list them on the JSE Debt Board to raise funds for large capital projects such as roads, power stations and hospitals. They have done so since the inception of the Debt Board in 1994. It was referred to as the Bond Exchange of South Africa at the time. Fanta and Makina (2017) state that financial development has a great impact on economic growth in South Africa through the bond markets contrary to previous findings which revealed it is to be driven by economic growth rather than causing it. Thus, bonds are associated with some common characteristics as follows:

i. Face value is the money amount the bond will be worth at its maturity and is also the reference amount the bond issuer uses when calculating interest payments;

ii. Coupon rate is the rate of interest the bond issuer will pay on the face value of the bond, expressed as a percentage;

iii. Coupon dates are the dates on which the bond issuer will make interest payments. Typical intervals are annual or semi-annual coupon payments;

iv. Maturity date is the date on which the bond will mature, and the bond issuer will pay the bond holder the face value of the bond; and

v. Issue price is the price at which the bond issuer originally sells the bonds.

- Stocks

A stock is an investment in security that signifies ownership in an organisation and represents a claim on part of the organisational assets and earnings (Kirui *et al.,* 2014). There are two main types of stock, namely; common and preferred. Common stock usually entitles the owner to vote at shareholders' meetings and to receive dividends. Preferred stock generally does not have voting right but has a higher claim on assets and earnings than the common shares (Investopedia). For example, owners of preferred stock receive dividends before common shareholders and have priority if a company goes bankrupt and is liquidated (Nyasha & Odhiambo, 2015).

- Mutual funds

A mutual fund is an investment vehicle made up of a pool of funds collected from many investors for investing in securities such as stocks, bonds, money market instruments and similar assets (Igbinosa, 2012). Mutual funds are operated by money managers, who invest the fund's capital and attempt to produce capital gains and income for the fund's investors (Wright, 2015). A mutual fund's portfolio is structured and maintained to match the investment objectives of investors. The advantages of investing in a mutual fund are as follows:

i. Increased diversification of funds to reduce risk;

ii. Provide liquidity as open-end funds allow investors to redeem their investment at the close of every trading day;

iii. Mutual funds are managed by professional investors;

iv. Ability to participate in investments that may be available only to larger investors. For example, individual investors often find it difficult to invest directly in foreign markets;

v. Service and convenience. Funds often provide services such as check writing;

vi. Mutual funds are regulated by a governmental body; and

vii. Transparency and ease of comparison. All mutual funds are required to report the same information to investors, which makes them easier to compare.

However, in view of different investment plans available for individuals, there are processes involved in investment, which every investor needs to consider. Firstly investment policy, which deals with the formulation of the investment policy for the systematic functioning of investment. Such policy should cover areas such as: source of investment funds, which could be through savings or borrowing; objectives of investment framed in terms of required rate of return; the need for regularity of income; risk perception; and the need for liquidity. Secondly, careful and systematic analysis of the financial assets which the investor is interested in (security analysis). It usually involves analysis of the market environment, a selected industry and the entire economy. Following the security analysis, and the choice of a specific industry an investor is interested in, the next step in the investment process is to carry out detailed scrutiny of the asset to determine the intrinsic value of the security (security evaluation).

Portfolio construction comes next after security analysis as it involves collection of investment assets or securities established to meet the goals and objectives of an investor. To best achieve this, the investor diversifies his portfolio to include various asset types and allocates funds appropriately among them. Thus, portfolio construction involves making two main decisions as follows: firstly, asset allocation decision, which involves choosing from among the broad asset classes (stocks, bonds, real estate and commodities); and secondly, security selection decision, which entails making a choice of specific securities within each asset class. Finally, for efficient management of portfolio, it has to be regularly evaluated, revised and updated (portfolio evaluation). Such appraisal should involve a consideration of developments in the economy, industry and relevant companies and should be able to send signals of possible losses and suggest steps to be taken to avoid such losses.

c. Insurance products

Insurance involves the process of protecting against financial loss. It is a way of managing risks and is primarily used to hedge against unforeseen risks. Thus, an insurance process involves a financial arrangement in which an insurance provider states its guarantee responsibility to pay on covered claims and the buyer, in return, agrees to pay a monthly premium cost. Indeed, insurance products include but not limited to life insurance, vehicle, property, medical aid scheme, loans and hospital plan insurance. Although the actual insurance contract takes the form of a policy binder, which states all the terms and conditions as well as the overview of what events would lead to a claim pay-out, however, some common characteristics exist regarding risks which can be insured or lay claims on, such as the conditions and the size of the loss. Accordingly, several legal principles are also binding on the procedures and the contract, which includes and not limited to the following:

i. Indemnity;
ii. Insurable interest;
iii. Utmost good faith;
iv. Proximate cause; and
v. Mitigation.

Thus, the costs that come with the purchase of an insurance product are called premiums or insurance rates, which are determined on the bases of the risk factor that comes with the subject that is insured. Indeed, households should be aware of the financial protection provided by insurance as it provides a claim in case of the occurrence of any risk (Driver *et al*., 2018; Gustavsson, 2014). As such, the ability of households to choose the right insurance product does not only provide hedge against financial risk on the existing investment but also provides a pay-back return over the contract period even in the absence of any financial risk (Yao, 2018; Busque *et al*., 2017).

d. Credit and loan products

Credit and loan products are financial products that allow the credit provider (creditor) to give out advances in the form of money or resources to another party (debtor) without immediate repayment by the debtor (thereby, generating debt) but agrees to pay back at a later date (Li *et al*., 2018). Thus, this set of products includes but not limited to mortgage, auto, business home equity, personal and agriculture. Although the debtor pays an interest on the advance, which is basically on the agreement between the two parties, however, the ability of individuals to identify and properly manage credit and loan products, enhances their capability to make provision for their future financial wellbeing (Melzer, 2017).

3.6.1.4 FINANCIAL KNOWLEDGE AND UNDERSTANDING

Financial knowledge is defined as the level of individual understanding of basic numeracy and financial concepts, namely; impact of inflation on wealth creation and on the cost of living, interest on loans, real interest rate, compound interest, return investments risk and risk diversification (Alessie *et al*., 2011; Atkinson & Messy, 2012; Robert *et al.*, 2016; Akinyede *et al*., 2017). As such, to ascertain the level of financial literacy among South African households, it is important to first identify the extent of financial knowledge and understanding that an individual possesses. Knowledge is the core concept and, perhaps, the most recognisable element of the different definitions of financial literacy (Robert *et al.*, 2016). The concepts of financial knowledge are covered by most studies on financial literacy with the incorporation of numerical skills as it is considered important in building financial skills (Marson *et al*., 2016; Mason & Wilson 2000). Sound familiarity of financial concepts helps the individual level of financial knowledge and understanding of basic mathematical division, interest on loans and deposits, compound interest, effects of inflation and risk diversification (Klapper *et al*., 2015).

Moreover, the debate on savings behaviour has given rise to new empirical studies that seek to understand the relationship between cognitive and non-cognitive skills, on the one hand, and savings patterns, on the other (Cobb-Clark *et al*., 2013). Accordingly, individuals who are familiar with numeric in finance, are found to earn more on real interest than less numerate individuals, who appear to have lower wealth creation levels and are more likely to make financial mistakes (Agarwal & Mazumder, 2013; Banks & Oldfield, 2007; Zagorsky, 2007). Interestingly, individuals with cognitive abilities are also associated with having more patience and a greater willingness to take risks (Dohmen *et al*., 2010). As such, the ability to hold risky assets increases with familiarity with financial numeracy, verbal fluency, memory and intelligent quotient (Christelis *et al*., 2010; Smith *et al*., 2010; Grinblatt *et al*., 2011). Indeed, it has been revealed that financial literate investors, hold more stock, anticipate earnings and portfolio volatility and could choose between high and lesser risk portfolios (Clark *et al.,* 2015).

Financially knowledgeable households invest wisely and can expect higher returns on their savings and investment (Lee & Hanna, 2015; Lusardi & Mitchell, 2014). Indeed, poor financial education leads people to make bad financial decisions and to become burdened by debt. Thus, financial knowledge and understanding is the ability to make informed financial decisions and manipulate money in its different forms, uses, and functions, including the ability to deal with everyday financial matters and make the right choices for one's own needs (Lusardi *et al*., 2017; Lusardi & Mitchell, 2005). Thus, below are some of the variables of financial knowledge and understanding, which comprise variables that enhance the skills of households to make and manage financial decisions and choices to optimise wealth creation.

a. Risk diversification

In finance, risk diversification involves the allocation of capital in a way that reduces exposure of any asset to volatility. In other words, diversification is an act of risk reduction or volatility by investing in a variety of assets (García-Kuhnert *et al*., 2015; Bach *et al.,* 2016). Households exhibit a taste for diversity across several settings. The value of diversity can arise because preferences are convex across products or because of risk aversion. Households routinely diversify financial asset holdings due to risk aversion, although evidence suggests that consumers may undervalue diversification with respect to international asset holdings, leading to what is referred to as the diversification puzzle. Thus, according to Lusardi and Mitchell (2014), the economic importance of financial literacy to individuals involves equipping them with the knowledge to allocate their capital in more than one potential investment.

b. Knowledge of inflation

Economists understand inflation as a situation where there is so much money in circulation, thereby creating an environment where so much money chases few goods.

As such, this automatically increases the prices of goods and services in such environment (Robarts *et al.,* 2016). Thus, a study conducted by the Human Sciences Research Council (HSRC) requested respondents to showcase their grasp with regard to their understanding of inflation. This study is in line with previous studies which revealed that with the help of financial literacy, individuals can, on their own, take decisions that will enhance their future financial well-being (Lusardi & Mitchell, 2014; Wise, 2013; Mitchell & Lusardi, 2011). Thus, this study adds to the body of knowledge by ascertaining the effects of inflation knowledge to individual savings behaviour.

c. Knowledge of real interest rate

Financial ignorance carries significant costs. Consumers who fail to understand the concept of interest rate calculation, spend more on transaction fees, run up bigger debts and incur higher interest rates on loans (Lusardi *et al*., 2017; Lusardi & Tufano, 2015; Klapper *et al.*, 2013). In other words, individual numeric knowledge will spend less on transaction fees and take advantage of market situations by working out the best interest rate for any financial product. On the other hand, a central role is played by interest rate volatility in expectations regarding debt and credit management. Although few studies have endeavoured to explore the empirical regularities associated with changes in interest rate volatility (Curran & Velic, 2017), familiarity with financial concepts is especially important in times where increasingly complex financial products are easily available to a wide range of the population.

3.6.2 FINANCIAL LITERACY OUTPUT

The definition of financial literacy, as provided for by previous scholars, is driven by the concepts of financial knowledge, financial attitude and financial behaviour (Atkinson & Messy, 2012). However, some authors measure it through other aspects, such as financial behaviour, financial attitude, and financial experiences, among others. As such, the output of financial literacy has been identified as a great antecedent towards personal savings knowledge (Potrich *et al.,* 2015). Indeed, the concept of financial literacy output was addressed by OECD (2005) and Lusardi and Mitchell (2007) as the procedure used by individuals to enhance their understanding of financial products and concepts, through information, instruction, skills development and confidence to become more aware of financial risks and opportunities to make sound financial and savings decisions. Furthermore, it will make them to know where to go for help, and to take other effective actions to improve their financial well-being. Thus, financial literacy outputs, which mediate between financial literacy and savings knowledge, are evaluated below.

a. Financial behaviour

Financial behaviour is basically the manner in which people react to financial transactions. It is the actual expression of one's financial knowledge towards making informed decision on financial transactions (Jorgensen *et al.,* 2017; Norvilitis & MacLean, 2010). Accordingly, the level of one's pro-activeness towards wealth creation is based on his or her behavioural approach of having a future financial wellbeing (Xiao & Porto, 2017; Haliassos *et al*., 2016). However, financial literacy enriches household financial behaviour as their decisions on wealth creation and savings is based on their level of financial knowledge (Jorgensen *et al.,* 2017; Seuntjens *et al*., 2016).

b. Effective choices

The impact created by financial literacy in the life of a household, goes beyond enhancing household ability to make informed financial decisions, thus exposing them to a variety of savings and investment options (Chu *et al*., 2017; Gathergood & Weber, 2017). As a result, households will be able to identify and make proper decisions with regard to savings and investment options (Gathergood & Weber, 2017). Although households are known to have different tastes with regard to financial products, their level of financial literacy serves as a hedge towards making effective savings and investment choices to optimise wealth creation (Bianchi, 2018; Potrich *et al.,* 2015)

c. Financial attitude

Financial attitude involves personal predispositions to financial decisions and choices. Indeed, household attitude towards financial transactions is a predictor of financial decision-making and reflects in their monetary status and habits (Yap *et al*., 2018; Yong *et al*., 2018). Thus, household financial attitude influences their financial stability and goal-setting, which informs their financial management practices such as savings, spending, loan delinquency and credit card debt (Yap *et al*., 2018; Chien & Devaney, 2001; Parotta & Johnson, 1998). However, a positive financial attitude towards financial management, as informed by financial literacy, has a positive effect on household's intentions to utilise several types of savings/investment vehicles, limit credit card use, and manage their finances in more beneficial ways (Faique *et al*., 2017 Borden *et al*., 2008).

d. Financial experience

Financial literacy informs financial experience, thus, when a person has a good grasp of financial terms and concepts, his or her financial decisions towards savings and investment become enriched (Bačová *et al*., 2017; Lusardi & Tufano, 2015). However, households with financial experience have been identified as those that take advantage of financial markets for productive returns (Bianchi, 2018; Lusardi & Mitchell, 2014; Christelis *et al*., 2010). Thus, financial experience mediates between financial literacy and household savings knowledge and provides the basic knowledge for every household to make informed financial decisions with regard to savings and investment (Bačová *et al*., 2017; Boatman & Evans, 2017).

3.6.3 VARIABLES OF SAVINGS KNOWLEDGE

The primary objective of this study was to ascertain the influence of financial literacy on household savings behaviour. According to Cavanaugh (2018) and Nguyen *et al*. (2017), knowledge on savings enhances personal savings behaviour as financial literacy enhances personal savings knowledge. Thus, the variables of personal savings knowledge are those micro-economics components that are used in creating wealth, which includes but not limited to the following: investment knowledge; inflation knowledge; credit and debt knowledge; savings plans; risk diversification; and real interest rate knowledge. However, previous studies (Refera *et al*., 2016; Klapper *et.al.,* 2015; Lusardi & Mitchell, 2014; Roberts *et al.,* 2014; Roberts *et al*., 2012) identified financial literacy as a medium to improve household savings knowledge, thus, the concept in Figure 3.1 provides a comprehensive mechanism, which should be used as a medium to improve household savings behaviour.

3.7 SUMMARY OF CHAPTER

This chapter provided a review of the literature on financial literacy. A comparison of the different definitions discussed in this Chapter revealed that financial literacy is a never-ending process of being able to read, analyse, manage and write about the personal financial conditions that affect an individual's wellbeing. In simple terms, it includes the ability to discern financial choices, discuss money and financial issues without discomfort, plan, and respond competently to life events that affect every day financial decisions, including events in the general economy. Accordingly, the core concepts and its dimension of financial literacy were discussed and evaluated as they provide the knowledge direction on financial literacy.

Furthermore, the economic importance of financial literacy to households was reviewed since financial literacy has been identified as a skill that provides households with the right financial knowledge to assist them make informed financial decisions with regard to savings and investment. In addition, this Chapter succeeded in providing a conceptual framework of financial literacy variables towards improving household savings behaviour. In essence, the conceptual framework provides a mechanism on how financial literacy should be used to improve knowledge on household savings. Thus, the variables of financial literacy and its output were analysed as they are micro-economics elements that enrich knowledge on household savings. The next chapter focuses on the research methodology used in conducting the empirical part of this study.

CHAPTER FOUR

RESEARCH METHODOLOGY

According to Saunders *et al*. (2003), research methodology is the theoretical and philosophical assumption upon which research is undertaken. It involves the selection of approaches by the researcher to carry out a research project; the approach determines the tools that will be used in the research (Leedy & Ormrod, 2010). The tools include the mechanisms the researcher uses in collecting, manipulating and interpreting data. Thus, this chapter focuses on the research design and methodology used in conducting this study. This chapter also provides the proposed model for measuring variables, method of data analysis and alignment of the objectives of the study and the research questions.

4.1 INTRODUCTION

A quantitative research approach in empirical research involves collecting, analysing and interpreting data in other to draw inferences on the targeted population. Thus, this goal in research is achieved by employing a prescribed method that incorporates different research approaches. Creswell (2014) posits that research methodology is guided by a research philosophy, which enhances a deeper understanding of the study. There are different methods which researchers use in carrying out research, namely; quantitative, qualitative and mixed methods. The choice of any of these research approaches is based on the link between the objectives of the study, the problem under investigation, the researcher's knowledge of the research area, the variables concerned and the purpose of the study. All these impact on the type of research method chosen (Bless & Smith, 2000). For the purpose of this study, a quantitative approach to inquiry was adopted, as assisted the researcher to reveal the effects of financial literacy variables on household savings behaviour. In essence, research methodology can simply be described as a diligent and scientific process of enquiry or investigation into a subject or problem in order to come up with the latest discovery so as to identify and resolve societal problems (Ott & Longnecker, 2017; Saunders *et al*., 2003) (see Figure 4.1).

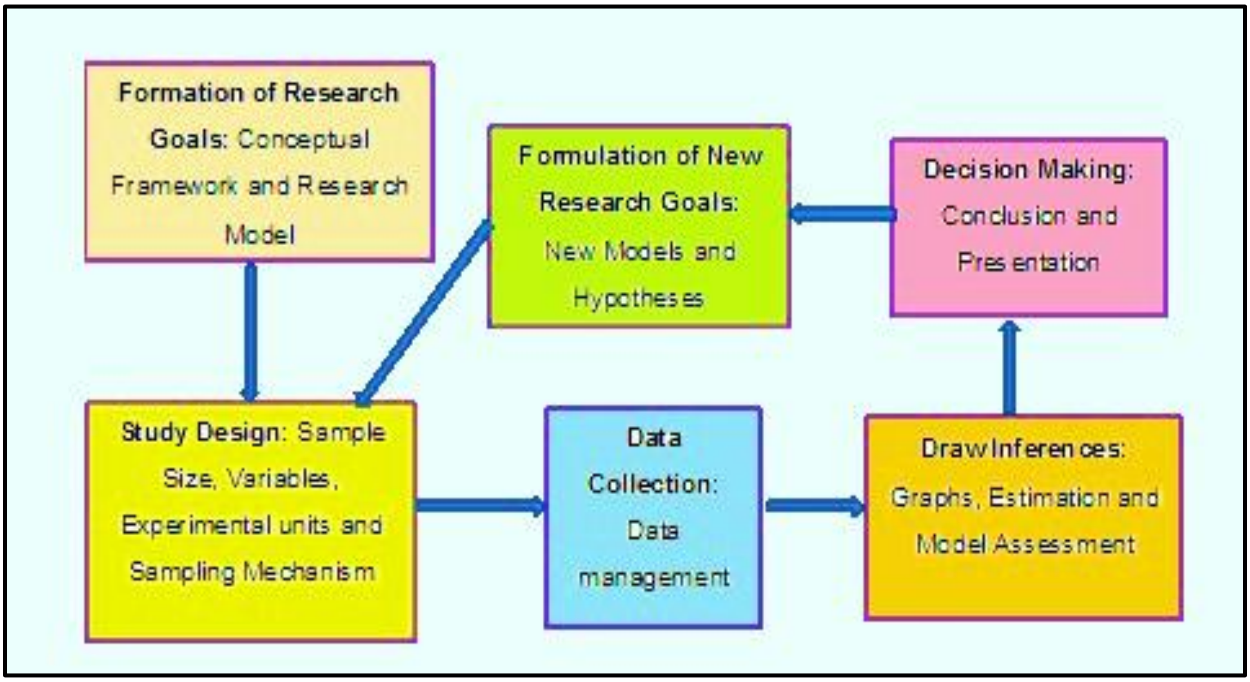


Figure 4.1: Scientific method schematic (*adapted from Ott & Longnecker, 2017*)

Figure 4.1 shows the process of scientific research methodology in a study. In essence, as research aims to address societal problems, it is important to develop a plan for data collection, summarise the data, analyse, interpret and communicate solutions to the intended audience. Thus, in different areas of study, a research method is used to discover new groundings and findings so that an informed decision can be deduced (Bell & Bryman, 2007).

Thus, quantitative data was obtained from employees of Tshwane and Mahikeng municipalities, South Africa. Nonetheless, the outcome is based on empirical theory-building of a conceptual framework of (savings concern) financial literacy variables towards enhanced savings behaviour of South Africans. It is, therefore, based on this background that the current study was conducted with the hope of adding to the body of knowledge in the field of research. This chapter consists of the following important sections: the concept map of the chapter; the research philosophy (worldview); research approach; research design; study population; sampling method; model for measurement; data collection techniques; data management; reliability of results; and method of data analysis.

4.2 CONCEPT MAP OF CHAPTER

A map is a representation of relationships using a graphic diagram (Cañas & Novak, 2008). The graphic representation puts together two or more constructs with the intention to link the constructs together. Brinkmann (2003) considers a map, as a "knowledge map" that uses structures to illustrate how concepts and ideas are interlinked in the study. As such, the researcher used the map as a building block for structural representation of concepts within this Chapter. Thus, the map was used in this study as a guiding principle for the entire Chapter (see Figure 4.1).

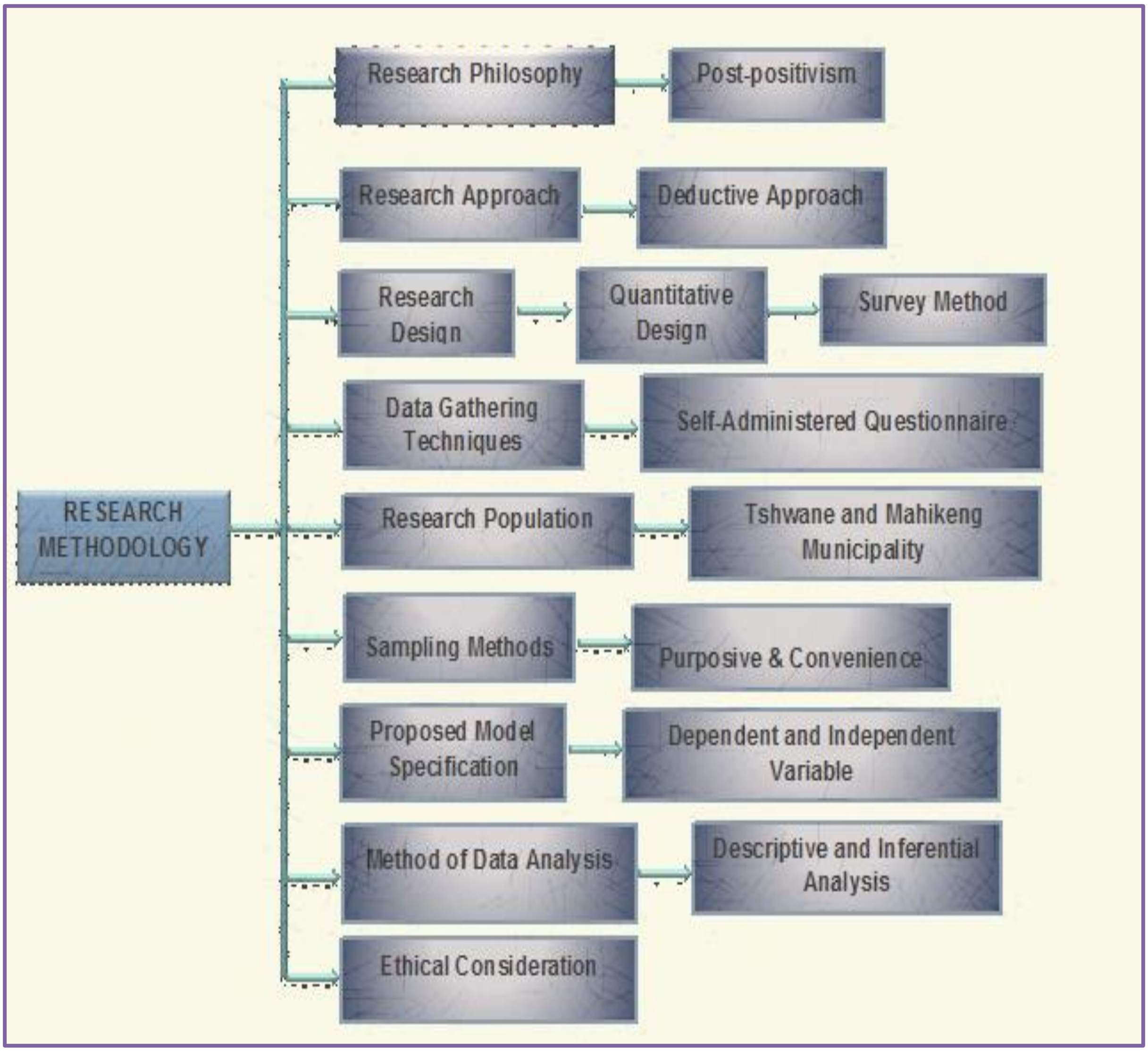


Figure 4.2: CONCEPT MAP: Research methodology

The purpose of the map above, is to provide a better understanding and present the c different concepts discussed in the Chapter (Cañas & Novak, 2008). Thus, a concept map was used in this study as a structured graphic director that links one area of knowledge to another comprehensively.

4.3 RESEARCH PHILOSOPHY

Every research is based on some underlying philosophical assumptions about what constitutes 'valid' research and which research method is appropriate for the contribution of knowledge in a given area of study (Saunders *et al*., 2009). In order to carry out an investigation and evaluate any research, it is, therefore important to identify the proper philosophical assumption that befits one's study. A research philosophy, therefore, provides the structural background of any research assignment (Creswell, 2014). Figure 4.2 shows the interconnection between philosophical assumptions, research design, research approach and research method employed in this study.

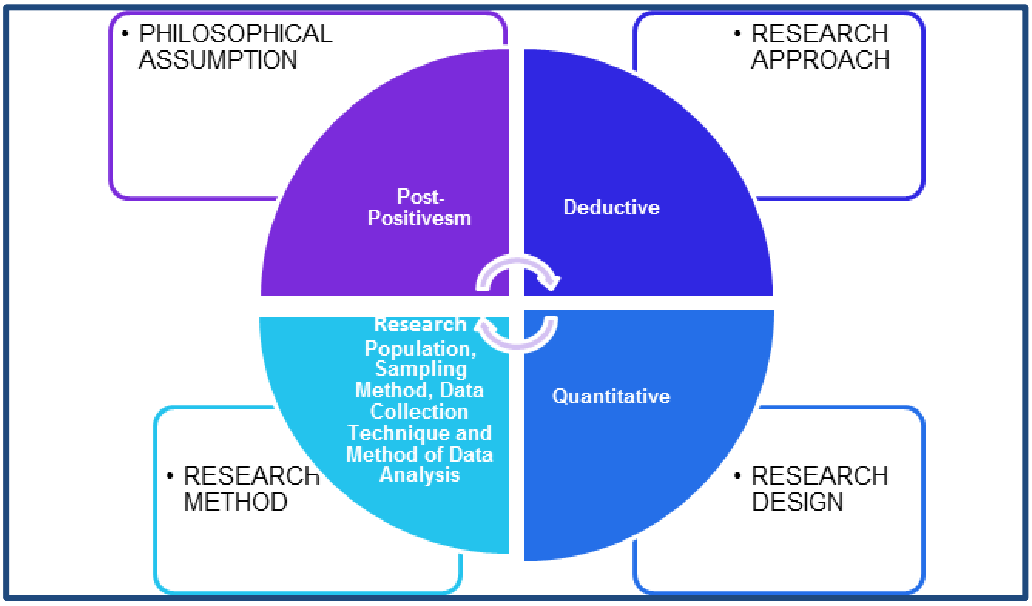


Figure 4.3: Research framework (*adapted from Creswell, 2014: 35*)

Figure 4.2 shows the relationship between different sections of the research methodology. Although philosophical assumption remains largely hidden in research (Slife & Williams, 1995), it still impacts on the structural practice of research and needs to be acknowledged. As such, a research philosophy explains why a researcher chooses qualitative, quantitative or mixed methods research designs and approaches for their research (Creswell, 2014). Bryman (2015) posits that research philosophy is a belief about the way and nature in which data about a phenomenon is gathered, investigated and analysed. In addition, research philosophy provides a basis for inter and trans-disciplinary design of research sustainability (Becker, 2012). Thus, research philosophy is associated with different categories of assumptions about the nature and the source of knowledge (Knobe & Nichols, 2013).

Every study is based on some kind of assumptions about the world and the ways of understanding the world. Creswell (2013) maintains the philosophical assumption of a study is a worldview of orientations and nature of research process that the researcher understudies. Creswell (2014) further points out that the four most widely discussed research philosophies in recent literature are post-positivism, constructivism, transformative and pragmatism. Thus, a post-positivism philosophy was adopted in this study. This philosophical approach contributed in enhancing understanding of the logic and nature inherent in this study as well as how it fits the methodology used in the study.

4.3.1 POST-POSITIVISM PHILOSOPHY

Post-positivism is an amendment to positivism, which recognises the critiques against logical positivism. Post-positivism is not a rejection of the scientific method but a reformation of positivism to meet these critiques. Post-positivism philosophy holds the assumption that causes (probably) determine effects or outcomes. As such, the research problems understudied by post-positivists as in the current study, reflect the need to identify and assess the causes that influence outcomes (Creswell, 2014).

Although post-positivists accept that theories, background, knowledge and values of the researcher can influence what is observed, positivism philosophy maintain post-positivists pursue objectivity by recognising the possible effects of biases (Luft & Shields, 2014; Robson, 1993). As such, four key elements are associated with post-positivism philosophy as follows:

a. Determination;
b. Reductionism;
c. Empirical observation and measurement; and
d. Theory verification.

Furthermore, post-positivist assumptions have represented the traditional form of research, and this assumption underpins quantitative research more than any other form of research approach (Creswell, 2014; Phillips & Burbules, 2000). The aim of this study was to identify and test financial literacy variables that enhance individual savings behaviour. After identifying the concept in this study, post-positivism philosophy was considered to harness the idea of the researcher towards reducing the objectives of the study into a small, discrete set to experiment, such as the variables that comprise the research questions. Hence, the post-positivism approach to this study assisted in developing knowledge based on a careful observation and measurement of the objective reality that exists in the world (Tekin & Kotaman, 2013). According to Creswell (2014), developing numeric measures of observations and studying the perceptions of individuals become paramount in a research.

Phillips and Burbules (2000) outline the key assumptions of post-positivism as follows:

a. Being objective is a basic part of able request; scientists must inspect techniques and ends for predisposition. For instance, standard of legitimacy and unwavering quality are imperative in quantitative research;
b. The procedure of research is to make claims and, afterward, refining or surrendering some of them for different cases, all the more unequivocally justified. Most quantitative research, for instance, begin with the trial of a hypothesis;
c. Data, proof and balanced contemplations shape information. By and large, the scientist gathers data on instruments dependent on measures finished by the members or by perceptions recorded by the specialist;
d. It is the possibility of each analyst to create applicable, genuine proclamations that can serve to clarify the circumstance of concern or that can depict the causal connections of intrigue. In quantitative examinations, scientists advance the relationship among factors and represent this as far as inquiries or theories; and
e. Knowledge is approximated (hostile to basic). In research, outright truth can never be found. In this way, proof built up in research is constantly flawed and frail. It is thus, that scholars express that they do not demonstrate a theory; rather, they show an inability to dismiss the speculation.

4.4 RESEARCH APPROACH

A research approach involves the strategic guide and procedures used in research, which begins from the philosophical assumption to detailed methods of data collection, analysis and interpretation (Creswell, 2014; Lincoln *et al*., 2011). A research approach is the "science of methods" that brings together the research procedures that are associated with a particular philosophical assumption (Mavetera, 2011). This approach informs the research design and methods of data gathering, data analysis and the justification of the whole process. A research approach can be seen as a standard guideline for research practice (Joshua, 2016). Thus, a research approach can be classified into deductive and inductive. In essence, to answer the research questions raised in this study and to achieve the objectives of the research, a deductive research approach was adopted.

4.4.1 DEDUCTIVE APPROACH

Deductive research is more of a scientific research; it involves the development of a theory or framework that is subjected to a rigorous test (Saunders *et al.,* 2009). As such, it is the most used research approach in the natural sciences, where laws present the basis of explanation, allow the anticipation of phenomena and predict their outcome, thereby permitting them to be controlled (Collis & Hussey, 2003). Robson (2002) outlines the five steps through which deductive approach to research will progress as follows:

a. Deducing a research question or hypothesis to ascertain a testable proposition about the relationship between two or more variables from a theory;
b. Indicating an operational medium on how the concepts or variables are to be measured;
c. Testing this operational hypothesis with a concise research design or strategy;
d. Examining the specific result of the inquiry through either confirming the theory or indicating the need for its modification; and
e. Modifying the theory in the light of the findings if necessary.

Thus, the deductive approach possesses several unique characteristics that differentiate it from the inductive approach as explained in Table 4.1.

Table 4.1: Major differences between deductive and inductive approaches to research (*adapted from Saunders et al., 2009)*

Deductive approach	Inductive approach

1	The need to explain causal relationships between variables	Gaining an understanding of the meanings humans attach to events
2	The operationalisation of concepts to ensure clarity of definition	A close understanding of the research context
3	The collection of quantitative data	The collection of qualitative data
4	A highly structured approach	A more flexible structure to permit changes of research emphasis as the research progresses
5	Researcher independence of what is being researched	A realisation that the researcher is part of the research process
6	The necessity to select samples of sufficient size in order to generalise conclusions	Less concerned with the need to generalise
7	Scientific principles	
8	The application of controls to ensure validity of data	
9	Moving from theory to data	

Table 4.1 shows the unique features of a deductive approach to research. Hence, in line with Creswell (2014), Saunders *et al.* (2009), and Robson (2002), this study was based on a post-positivism philosophical assumption. Using a deductive approach enabled the researcher to test the effect of (savings concerns) financial literacy variables on personal savings behaviour by specifying a model, thereby collecting data to support or refute the model if necessary.

4.5 RESEARCH DESIGN

A research design outlines the master plan of action to follow in order to realise the objectives of the study. Creswell (2014) argues that a research design is a choice of investigation within qualitative, quantitative, and mixed methods design that provide a specific direction for procedures in a research. Designing a research, guides the researcher to plan and implement the study in a way that will help to obtain intended results, thus enhancing the chances of obtaining an outcome that could be associated with the real situation (Burns & Grove, 2001). In this study, the research design informed the research approach. Others have referred to it as strategies of inquiry (Denzin & Lincoln, 2011). Kothari (1985) posits that a research design is the structural plan of how research is conducted, the aim is to gather meaningful information to answer identified research questions and achieve the objectives of the study. Thus, a quantitative research design was adopted in this study as discussed below.

4.5.1 QUANTITATIVE DESIGN

According to Flick (2015), a quantitative design works with numbers and emphasises more on measurements as in natural science and relates to research aims and objectives. Leedy & Ormrod (2010) posit that a quantitative design involves measurement of variables by the use of commonly accepted philosophy and design that makes use of experiments, tests, questionnaires and rating scales to derive a solution to a societal problem. In addition, Creswell (2014) posits that a quantitative design is a procedure for testing objective theory through examining the relationship between variables. As a result, variables can be measured typically on instruments, so that numbered data can be analysed using statistical procedures. As such, those who engage in this kind of research, have assumptions about testing theories deductively, building in protections against bias, controlling for alternative explanations, and being able to generalise and replicate their findings.

Thus, a quantitative design assists in providing results that can be summarised statistically and indicates the extensiveness of characters and beliefs held by different people (Hughes, 2012). Although there are other types of research designs, such as qualitative and mixed method design, each of these designs has unique characteristic that differentiate them. Each of them represents different end on a continuum (Newman & Benz, 1998). The mixed method resides in the middle of this continuum because it incorporates elements of both qualitative and quantitative design (Creswell, 2014).

However, for the purpose of this study, the choice for a quantitative research design against other designs was based on its concept, methods and procedures for obtaining and analysing the required data as supported by Zindiye (2008). In essence, the concept of a quantitative design rests on a set of accepted numeric analysis standards for the validity and reliability of the design, such as the number of respondents required to establish a statistically significant result in a study (Goddard & Melville, 2004).

Furthermore, the intent of using a quantitative design in this study was to identify, test, and validate relationships quantitatively and to develop generalisations that contribute to the existing body of knowledge employed in testing the relationship between financial literacy and household savings behaviour among South Africans. In addition, the researcher's choice of a quantitative design was based on the anticipation to test theories deductively, build in protections against bias, controlling for alternative explanations, and being able to generalise and replicate findings. Thus, the researcher supports the school of thought which suggests that in order to pursue the principle of scientific rigour, quantitative design, which is based on post-positivism assumption, dictates that the researcher should be independent of what is being observed.

Hughes (2012) outlines the key characteristics of a quantitative design as follows:

a. Control is the most important element of a quantitative design as it enables the researcher to identify the causes of his or her observations, and then experiments are conducted in an attempt to answer certain research questions. As such, control is necessary in order to provide less ambiguous answers to such questions;
b. Statistical techniques allow for sophisticated analyses;
c. Operational definition in a quantitative design enables terms to be defined by the steps or operations used to measure them. Such procedure is necessary to eliminate any confusion in meaning and communication;
d. Quantitative data obtained in an experiment and the outcomes are reliable in such a way that the same results are found if the study is repeated;
e. Precision through quantitative and reliable measurement; and
f. Ability to produce causality statements, using controlled experiments.

4.5.2 SURVEY METHOD

According to Creswell (2014), a researcher does not only choose a qualitative, quantitative, or mixed methods in a study; it is required of the researcher to also decide on a method of inquiry within these three designs. As such, this section of the study outlines the method of inquiry adopted in this study in other to provide specific direction for procedures with regard to data collection. However, there are different methods of inquiry namely; experimental, quasi-experimental, phenomenology, discourse analysis, grounded theory, survey, action research, ethnography, case studies, narrative research, constructive research, convergent, explanatory sequential and exploratory sequential, among others (Creswell, 2014; Creswell, 2009; Otero & Harlow, 2009; Oates, 2008). For the purpose of this study, a survey method was adopted in order to structure systematic ways through which all respondents could be identified for relevant data. There are different stages involved in a survey method as illustrated in Figure 4.3.

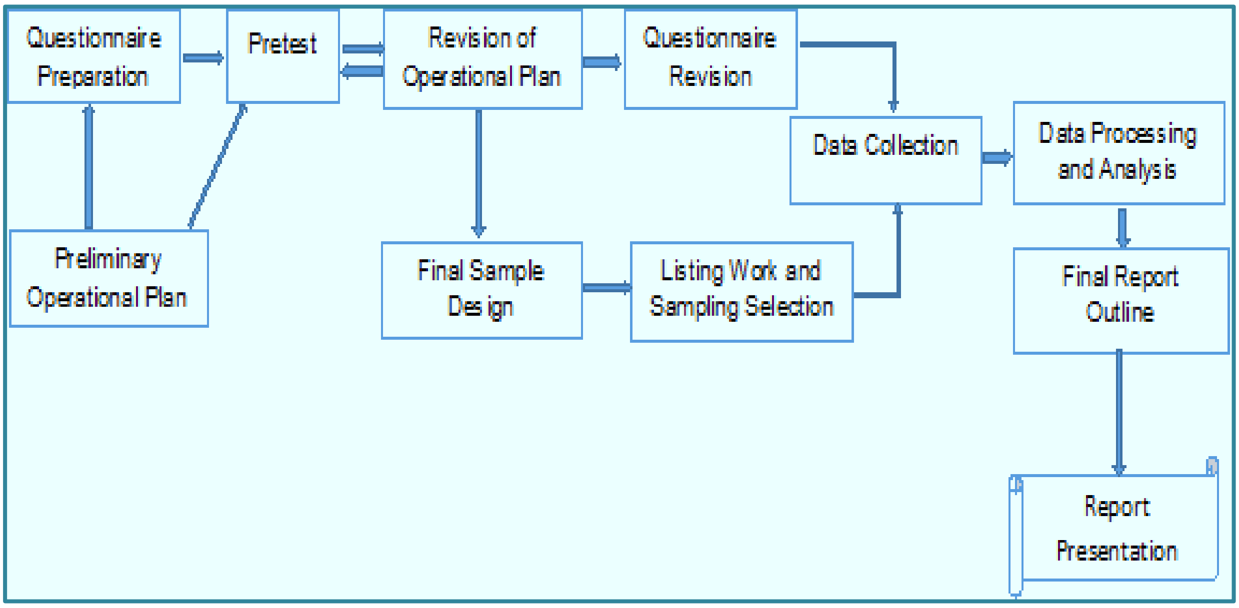


Figure 4.4: Stages of a survey (*adapted from Ott & Longnecker, 2017*)

The stages involved in a survey research, as illustrated in Figure 4.3, provide a comprehensive summary of the different levels of assignment from the beginning of the survey to the final presentation of the report. However, Saunders *et al.* (2009) posit that a survey method is usually associated with the deductive approach. It is the most common method used in business and management research and, is most frequently used to answer who, what, where, how much and how many questions. Creswell (2014) considers a survey as a method that provides a quantitative or numeric description of trends, attitudes, perceptions, or opinions of a population by studying a sample of that population. As such, the sample results from a survey method are used to generalise or draw inferences to the entire population.

In essence, a survey method is also described as a quasi-experimental form of research in which the researcher uses correlational statistics to describe and measure the degree or association (or relationship) between two or more variables or sets of scores (Sauders *et al.*, 2009). Indeed, a survey method reflects a post-positivism philosophical stance, which is the sole assumption of this study. Thus, it is suggested that examining the relationships between and among variables is central to answering research questions through surveys and testing of theories (Creswell, 2014). However, a survey method has both strengths and weaknesses. The most popular strength of using a survey method is that it gives the researcher more control over the research process and when sampling is used, it is possible to generate results that are representative of the whole population at a minimal cost than collecting data for the whole population. Moreover, a survey method enhances the possibility of collecting sufficient relevant data, which can then be measured and statistically analysed (Hopkins & Mitchell, 1974). Although data collected using a survey design is unlikely to be as wide-ranging as those collected by other research methods, one cannot prove that the responses of participants are honest (Fink *et al*., 2003; Sauders *et al.*, 2009).

Huston (2010) posits that 70 percent of studies on financial literacy measure over the past 10 years, made use of a survey method. Thus, a survey method is widely used and has proved to be reliable through a variety of tests and a comprise stability in measuring financial literacy across items and variables (Mckenzie, 2010; Hung *et al*., 2009; Avard *et al*., 2005; Volpe *et al*., 1996). For the purpose of this study, a survey method was considered in order to obtain relevant data to test the effect of financial literacy variables on household savings behaviour among South Africans.

4.6 DATA GATHERING TECHNIQUES

There are different techniques used to collect data as follows: a questionnaire, interviews, document analysis and observations (Oates, 2008). Primary data was obtained empirically, and used to test the relationship among variables. In line with Creswell (2014), Zohrabi (2013), Angell and Townsend (2011), a survey method was adopted in this study and a questionnaire used to collect data. The questionnaire consisted mostly of standardised closed-ended questions. The questions were kept short and simple in order not consume the precious time of respondents and, at the same time, provide solutions towards achieving the objectives of the study. The questionnaires include variables such as:

a. Personal characteristics, which requested respondents to provide their demographic profiles on indicators such as age, gender, education, income level, ethnic group and geographical settlement; and

b. A 4-point Likert–type scale ranging from 1 (completely agree) to 4 (completely disagree) designed and used to obtain the opinions of respondents.

The empirical nature of this study required that the method be used in collecting data for the study and in obtaining relevant information from respondents to achieve the objectives of the study.

4.6.1 SELF-ADMINISTERED QUESTIONNAIRE

A self-administered structured questionnaire involves obtaining data from one or more groups of people on their attitudes, opinions and experiences through the use of questions and tabulating their answers (Leedy & Ormrod, 2010). Oates (2008) posits that a questionnaire is a method used to collect quantifiable data. It involves the process of prewritten order of questions with the intention that respondents will provide information on the subject under study (Chukwuere, 2013; Degu & Yigzaw, 2006; Kothari, 1985). However, the use of a questionnaire allows each respondent to respond to the same set of questions, as such, providing an efficient way of collecting responses from a large sample prior to analysis of the quantitative (Sauders *et al.*, 2009).

There are different types of questionnaires as follows: open; closed-ended; and a combination of both (Kothari, 1985; David & Sutton, 2004). For the purpose of this study, a closed-ended questionnaire was used to collect data; the questions were arranged in the form of multiple choice and respondents were allowed to select their responses from the options provided, in order to get quantifiable data to support the literature review in this study. The design of a questionnaire informs the rate of responses as well as the validity of the data obtained (Sauders *et al.*, 2009). Thus, for a positive effect to be attained in this study, the researcher considered the following:

- Careful design of individual questions;
- Clear and pleasing layout of the questionnaire;
- Lucid explanation of the purpose of the questionnaire;
- Pilot testing; and

- Carefully planned and executed administration.

Considering the importance of appearance and layout of the questionnaire to respondents, the questionnaire was designed in a simple manner in order to allow respondents to answer without bias. In addition, special attention was also given to the layout of the questionnaire to ensure that it addressed the objectives of the study and ascertained the opinions and perceptions of respondents. Thus, the questionnaire was divided into six section as adapted from previous financial literacy literature as provided below.

Section A: Demographic details: This section of the questionnaire consisted of questions on demographic characteristics of respondents. It requested information on the age, sex, level of education, monthly income, municipality of employment and amount of monthly savings.

Section B: This section consisted of questions on household knowledge with regard to financial control. This section of the questionnaire sought to obtain information from respondents on their ability and knowledge towards financial control. The items in this section included but not limited to ascertaining the individual involvement on family money management, adherence to household budget, allocation of household financial resources and the ability to monitor household spending to avoid possible deviations.

Section C: This section focused on household knowledge with regard to financial planning. The questions solicited information from respondents with regard to their ability to plan for their future financial wellbeing. Thus, the questions in this section focused on the ability of households to make financial provisions for the future, save for the long-term, cutting down on household consumptions as well as the ability to control the usage of credit facilities.

Section D: This section focused on financial product choice. The questions solicited information from respondents in order to ascertain household level of knowledge and ability to make choices with regard to financial products. Thus, the questions in this section includes but not limited to ascertaining familiarity and ability of households to make use of financial products ranging from savings products, investment, banking, credit, loan and insurance.

Section E: This section focused on financial knowledge and understanding. The items focused household knowledge and understanding of financial concepts. In essence, the questions focused on numeric financial knowledge, effects of inflation on savings and investment, knowledge of real interest rate, investment diversification and understanding of procedures for the payment of instalments.

Section F: This section focused on the determinants of household savings behaviour. This items focused on variables that determine household savings behaviour as identified from previous literature. Although the variables under this section formed the dependent variable in the study, variables such as the impact of increase in household disposable income, increase in real interest rate, favourable tax rate on savings and investment as well as level of consumption by households constituted the of focus of this section.

4.6.2 ALIGNING THE OBJECTIVES OF THE STUDY WITH THE RESEARCH QUESTIONS

Table 4.2 presents the three main objectives of this study, informed by the research questions. Each of the objectives is linked to a specific question, specifying clearly how the objectives were addressed. Each of the research questions was formulated to achieve each research objective listed in this study.

Table 4.2: Research objectives aligned with the research questions

	Research objectives	**Research questions**	**Instrument used**
1	To identify the financial literacy variables under the financial literacy domain that have a statistical significant impact on household savings behaviour.	What are the variables of financial literacy that have a statistical significant impact on South African household savings behaviour? The aim of this question was to identify variables of financial literacy that have a statistical significant impact on the savings behaviour of households in South Africa.	Questionnaire

2	To ascertain the level of financial literacy among South African households, using the four financial literacy core domains (financial control, financial planning, financial product choice and financial knowledge and understanding).	What is the level of financial literacy among South African households? This question sought to obtain the level of financial literacy among South African households, with regard to four core financial literacy domains.	Questionnaire
3	To establish a statistical significant relationship between financial literacy and household savings behaviour.	Is there any statistical significant relationship between financial literacy variables and the savings behaviour of households in South Africa? This question sought to ascertain the statistical significant relationship between financial literacy variables and the savings behaviour of households in South Africa.	Questionnaire

4.7 PRE-TESTING OF QUESTIONNIARE

According to Roberts-Lombard (2002), pre-testing refers to a small sample of respondents testing a questionnaire similar to the ones targeted in the actual survey. This is done to identify and eliminate problems with the questionnaire. All sections of the questionnaire, including wording, sequence and layout, are, however, tested during pre- testing. This is done to assist the researcher to reduce misinterpretation of key terms, which could distort the entire meaning of the question (Saunders *et al.,* 2009). In addition, it enables the researcher to obtain some evaluation of the validity of the questions and the probable reliability of the data collected.

However, analysis using the pilot test, was done using employees from Mahikeng Municipality. This was done to ensure that the main survey during the data collection phase, enabled respondents to provide responses to investigative questions asked (Creswell, 2014; Saunders *et al.,* 2009). In essence, the reason for conducting a pilot study is to determine the time taken to complete the questionnaire by respondents. It is also to check if the variables should be addressed as a construct or as individual items to achieve the research objectives (construct validity and reliability). Thus, the pilot study assisted the researcher in identifying problem areas of the questionnaire that fell short of the standard, for it to be refined and be ready for the actual survey (Saunders *et al.,* 2009). As such, the errors noted in the questionnaire (during the pilot study), were refined to the best standard to achieve the objectives of the study.

4.8 ASSESSING VALIDITY

Validity is the extent to which a concept, conclusion or measurement is well founded and corresponds accurately to the real world. As such, the validity of any measurement tool is rated as the degree to which the tool measures what it claims to measure (Brians *et al*., 2016). In this study, the researcher anticipated an equivalence of accuracy in the validity of the study. As such, for the benefit of this study, focus was on the four aspects of validity as outlined by Saunders *et al.* (2009).

a. **Internal validity** of a questionnaire deals with the questionnaire's ability to measure what one plans to measure. The concern is that what is found in the questionnaire is actually the reality of what one measures.
b. **Content validity** deals with the extent to which the questions in the questionnaire, provide adequate coverage of the investigative questions. This was resolved through proper definition of the research in the literature review and using selected professional individuals to examine the essentiality of the measurement questions.
c. **Criterion-related validity** in relation to a questionnaire is the ability of the question to make accurate prediction about the expected outcome. The researcher ensured that the measuring tool for this study accurately predicted the effect of financial literacy variables on household savings behaviour.
d. **Construct validity** refers to the extent to which a questionnaire measures the attitudes and perceptions of constructs that it is intended to measure. Thus, the researcher ensured that the questionnaire was properly structured to provide responses that could be generalised to the targeted population.

4.9 TESTING FOR RELIABILITY

To be valid, a questionnaire must be reliable. Therefore, reliability deals with the robustness of the questionnaire, whether or not the answers to the questions are consistent at different times and under different conditions, such as with different samples or with different interviewees in the case of an interviewer- administered questionnaire (Saunders *et al.,* 2009). Mitchell (1996) outlines three main approaches to assessing reliability. Although the analysis for each of these approaches is undertaken after data collection, it is still important to consider them at the questionnaire design stage as discussed below.

a. **Test re-test** deals with obtaining reliability by correlating data collected with those from the same questionnaire collected under separate conditions as possible. The questionnaire, therefore, was administered twice to respondents. To avoid retesting, the researcher ensured that the questionnaire was properly structured to obtain responses in order to achieve the objectives of the study.

b. **Internal consistency** involves correlating responses obtained from each question in the questionnaire to other responses. It, therefore, measures the consistency of responses across questions or a sub-group of the questions from the questionnaire.
c. **Alternative form** offers some sense of the reliability within the questionnaire, through comparing responses to alternative forms of the same question or groups of questions.

Hence, to achieve reliability of results in this study, the researcher focused on proper management of sampling error, response error and non- response errors, since these are the main types of research errors that may affect reliability of research results.

4.9.1 SAMPLING ERROR

According to Babbie (2007:196), sampling error refers to the difference between the estimate from a sample survey and the true value resulting from testing the entire population under the same conditions. In this study, sample errors were minimised through the use of a recommended sample size. In light of this, a sample size calculator was used to determine the margin of error to be allowed in this study. A sample size of 379 employees in Tshwane and 248 employees in Mahikeng municipalities with a 95% confidence level and margin of error of 5% was chosen. Kumar (2005) argues that results based on larger samples are more certain than those based on smaller samples. Thus, the accuracy of results was achieved by a greater sample size than by smaller ones.

4.9.2 RESPONSE ERROR

Errors in response occurs when a researcher or respondent gives incorrect estimates. For example, when answering the question, the respondent may choose to provide incorrect information or the researcher may have mistakenly structured the questionnaire (Cooper & Schindler, 2003). To avoid response error, the researcher ensure that the questionnaire was carefully designed and pre-tested.

4.9.3 NON-RESPONSE ERROR

Non- response error is an error resulting from failure to contact all sample members or from failure of some sample members to answer all or a specific part of the questionnaire (Singh & Singh, 2017; Carkin & Tracy, 2015). A self-administered questionnaire was used to collect data in this study. As such, respondents were monitored to minimise non-response error.

4.10 RESEARCH POPULATION

Different scholars have variously defined the population of a study and their definitions point towards the same direction. Avwokeni (2006) considers the population of a study as the set of all participants that qualify for a study. While Akinade and Owolabi (2009) consider a population as the total set of observations from which a sample is drawn, Adeniyi *et al.* (2011) refers to it as the total number of habitations of people in a geographical settlement, for example, the population of a country. Popoola (2011) defines a population as the whole items or objects under the universe of study. It involves all the members of the target of the study as outlined by the aims and objectives of the study.

A research population has been classified into different types to include listed population, homogeneous population, heterogeneous population, unlisted population, group population, scattered population, clustered population, target population and accessible population (Akinade & Owolabi, 2009; Adedokun, 2003). However, in this study, a target population was used, which consists of all members of a group under the investigation to which the result of the investigation will be applied.

As such, target population can be described as the total group of individuals or objects in which an investigator is interested in generalising its conclusion. According to Groves *et al.* (2009), a target population is the set of elements in which the researcher wants to draw inferences by using sample statistics, stating that the sample is the subset from which measurement will be drawn. Furthermore, Saunders *et al.* (2003) considers a target population as the full set of cases, from which a sample is collected. As such, this study is in line with the definitions of the above scholars. Hence, the researcher conceptualised a population as the total body of items, objects or individuals that fall within the geographical location in which a researcher is interested to investigate for his or her study. Thus, Table 4.3 shows the breakdown of the target population considered in this study, comprising of employees of two municipalities from two provinces in South Africa.

Table 4.3: Number of employees from the city of Tshwane and Mahikeng Local Municipality, South Africa

Province	Municipality	Employees
Gauteng	City of Tshwane	29574
North west	Mahikeng	695

Source: https://municipalities.co.za, (2017)

4.10.1 JUSTIFICATION FOR THE RESEARCH POPULATION

This study focused on City of Tshwane and Mahikeng local municipality to achieve its objectives by considering the followings:

a. A fair participant representation of both urban and rural settlement;
b. A fair record of participants from all races and ethnic groups in South Africa;
c. Participants had to be individuals who earn a salary; and
d. To complete the study within the apportioned time with less cost effect.

4.10.2 CITY OF TSHWANE

City of Tshwane is part of the local government of Northern Gauteng Province, South Africa. It is situated in the city of Pretoria with neighbouring towns and villages that make-up the local government. The choice of Tshwane Metropolitan Municipality was informed by its geographical location, which gives a good representation of an urban settlement, as envisaged respondents were more exposed to the current reforms and policies of government.

Secondly, employees of Municipality had a fair representation of all races and ethnic groups in South Africa as recoded by the 2011 census of South Africa. Considering the ethnic composition of the Municipality, it was cost effective to get respondents of different ethnic groups gathered in one geographical location. Furthermore, Tshwane Metropolitan Municipality fell within the requirements of the targeted population for the completion of the study.

4.10.3 MAHIKENG LOCAL MUNICIPALITY

Mafikeng Local Municipality is situated within Ngaka Modiri Molema District Municipality, in the capital city of North West Province, South Africa. Objectively, the rationale for selecting Mahikeng Local Municipality was due to its rural geographical location. However, employees of Mahikeng Local Municipality also fell within the structural requirements of the study with regard to their status as salary earners and a representation of an ethnic group (Batswana) in South Africa.

4.11 SAMPLING METHODS

A sample is a selected fraction of a population, which comprises of elements that have common characteristics. It, therefore, deals with a portion of a population selected for a study and on whom information needed for the study is obtained (Creswell, 2014; Awoniyi, *et al.,* 2011; Akinade & Owolabi, 2009; Sauders *et al.*, 2009; Adedokun, 2003). Thus, the elements of the sample are studied for generalisations or inferences on the entire population. It is important to reemphasise here that generalisation of results based on the sample is the major purpose of sampling and also a major concern in any scientific investigation.

The procedure by which some elements of a given population are selected as representatives of the entire population is known as a sampling method (Cooper & Schindler, 2003; Welman & Kruger, 2001). After selecting a representative of the entire population (sampling), the researcher is able to draw sound conclusions about the entire population. The sampling methods used in this study are discussed below.

4.11.1 PURPOSIVE SAMPLING

Purposive sampling is a non-probability sampling method, where the researcher selects units from the entire population to be sampled based on their knowledge and professional judgment (Saunders *et al.,* 2009). It is a sampling procedure characterised by a deliberate effort to obtain representative samples from a study population (Welman & Kruger, 2001). The process involves nothing but purposely-selecting individuals from the population based on the authorities or the researcher's knowledge and judgment.

In other words, purposive sampling relies on the researcher's knowledge of the field and report with members of targeted networks (Barratt *et al*., 2015). As such, the employees of two municipalities (City of Tshwane and Mahikeng) from two different provinces in South Africa were selected through purposive sampling. The structure of this study required the researcher to obtain data from respondents who earn a salary and from rural and urban settlements, and who also have a level of academic knowledge to manage household income.

4.11.2 CONVENIENCE SAMPLING

Contrary to probability sampling where the selection of units is done randomly, convenience sampling involves sampling a situation where the units that are selected for inclusion in the sample, are the easiest to access (Creswell, 2014; Saunders *et al*., 2009). This sampling method was selected in order to obtain sound data to achieve the objectives of this study.

In line with Creswell (2014), respondents were chosen based on their convenience and availability. The researcher approached employees of the selected municipalities to take part in the study. Thus, the process involved accessing respondents until the required sample size of this study was attained (Saunders *et al.,* 2009). Although there are no best sampling methods, the best choice depends on the researcher's context and the nature of its aims and objectives (Palys, 2008).

4.12 DETERMINATION OF SAMPLING SIZE

Martins (1999) argues that the correct sample size in a study depends on the researchers' objectives and the nature of the population under investigation. Besides, Fowler (2009) suggests that the determination of a sample size has to marry with the analysis and plan of the study. Thus, the sample size of this study was drawn from employees of both Tshwane and Mafikeng municipalities, South Africa (consisting of 29,574 and 695 employees respectively as at 2016 South Africa Municipality Staff Record (municipalities.co.za, 2016). For the purpose of this study, the sample size determination formula by Krejcie and Morgan (1970) was adopted as follows:

$$Ss = \frac{x^2 * N * P * (1 - P)}{\left(d^2 * (N - 1)\right) + x^2 * P * (1 - P))} \qquad (1)$$

where,

Ss = sample size;
x^2 = value for confidence level (1.96 for 95%) = 3.841;
N = size of population;
P = proportion of the population = 0.5 (for maximisation);
d^2= Degree of accuracy (Margin of Error) = 5%;

Substituting for City of Tshwane:

$$Ss = \frac{3.841 * 29574 * 0.5 * (1 - 0.5)}{\left(0.0025 * (29574 - 1)\right) + 3,841 * 0.5 * (1 - 0.5))}$$

$$Ss = \frac{28398.4335}{74.89275} \qquad = 379$$

Using the equation above, the sample size for Tshwane Municipality was #379;

Substituting for Mahikeng Municipality:

$$Ss = \frac{3.841 * 695 * 0.5 * (1 - 0.5)}{\left(0.0025 * (695 - 1)\right) + 3,841 * 0.5 * (1 - 0.5))}$$

$$Ss = \frac{667.37375}{2.69525} \qquad = 248$$

Using equation 1 above, the sample size for Mahikeng Municipality was #248. Table 4.4 shows the breakdown of the study population and sample size from both municipalities.

Table 4.4: Study population and sample size

Municipality	Population	Sample size

City of Tshwane	29574	379
Mahikeng	695	248

Table 4.4 shows the targeted population and the sample size from each of the municipalities. Thus, the reason for having a separate sample size was to have a great percentage of respondents from both rural and urban settlements in South Africa.

4.12.1 JUSTIFICATION OF THE SAMPLING SIZE

As indicated above, a quantitative research design was used in this study. The purpose of using this approach was to obtain responses from both urban and rural settlements (Tshwane and Mahikeng respectively) to balance the effects of financial literacy on individual savings behaviour. The quantitative sampling approach was based on the status, experience and expertise of respondents as earlier indicated, especially with regard to their experiences as income earners, who also needed to save for their future financial well-being. Furthermore, the sample focused solely on employees' knowledge with regard to financial literacy and savings behaviour. The sampling also depended on respondents' interest, ideas and knowledge with regard to identifying and ascertaining financial literacy variables and their relationship with personal savings behaviour.

4.13 PROPOSED MODEL FOR MEASUREMENT OF VARIABLES

A concept that can be valued quantitatively is referred to as a variable (Shor, 2017; Terceño *et al*., 2017). As such, the main objective of this study was to identify financial literacy variables and to ascertain their statistical significant association with household savings behaviour. The measurements used in this study were adapted from established scales and from the works of scholars in the area of financial literacy and personal savings behaviour. Thus, variables considered in the study were obtained from the four financial literacy domains as indicated by Roberts *et al.* (2012). The dependent and independent variables are discussed below.

4.13.1 DEPENDENT VARIABLE: HOUSEHOLD SAVINGS BEHAVIOUR

The variables of the dependent variable consisted of the determinants of household savings behaviour and were measured to ascertain the possible association with the independent variable. Thus, respondents were asked questions with regard to their knowledge and perceptions on these variables in order to ascertain if they correlate with the independent variables.

4.13.2 INDEPENDENT VARIABLES: FINANCIAL LITERACY

The independent variables consisted of four core financial literacy domains as follows:

- ✓ Financial control

This includes the financial control which individuals exercise such as household budgeting, money management and how they keep records of their spending.

- ✓ Financial planning

Information required from respondents on the extent to which they plan for their future financial well-being such as personal debt management, personal credit management and savings knowledge. It included their financial provision for retirement and the financial provision they make for anticipated expenses.

- ✓ Financial product choice

The researcher used this variable to solicit responses from respondents with regard to their ability to choose appropriate financial products such as savings and investment products.

- ✓ Financial knowledge and understanding

This variable solicited information on the extent to which individuals keep up-to-date with financial matters, and their level of understanding with regard to key financial concepts such as risk diversification, inflation and interest rate.

Hence, the aim of this multi-dimensional approach was to shed light not only on individual knowledge and understanding of financial concepts and finances, but also to identify the level of effects of financial literacy on individual savings behaviour among South Africans.

4.13.3 MODEL SPECIFICATION

A proposed model was used in this study as a guide towards ascertaining the statistical relationship between variables (Ahmadi *et al*., 2018; Bedi *et al*., 2017). Thus, the proposed model, as specified in Figure 4.4 served as a guide towards ascertaining the statistical relationship between financial literacy and household savings behaviour.

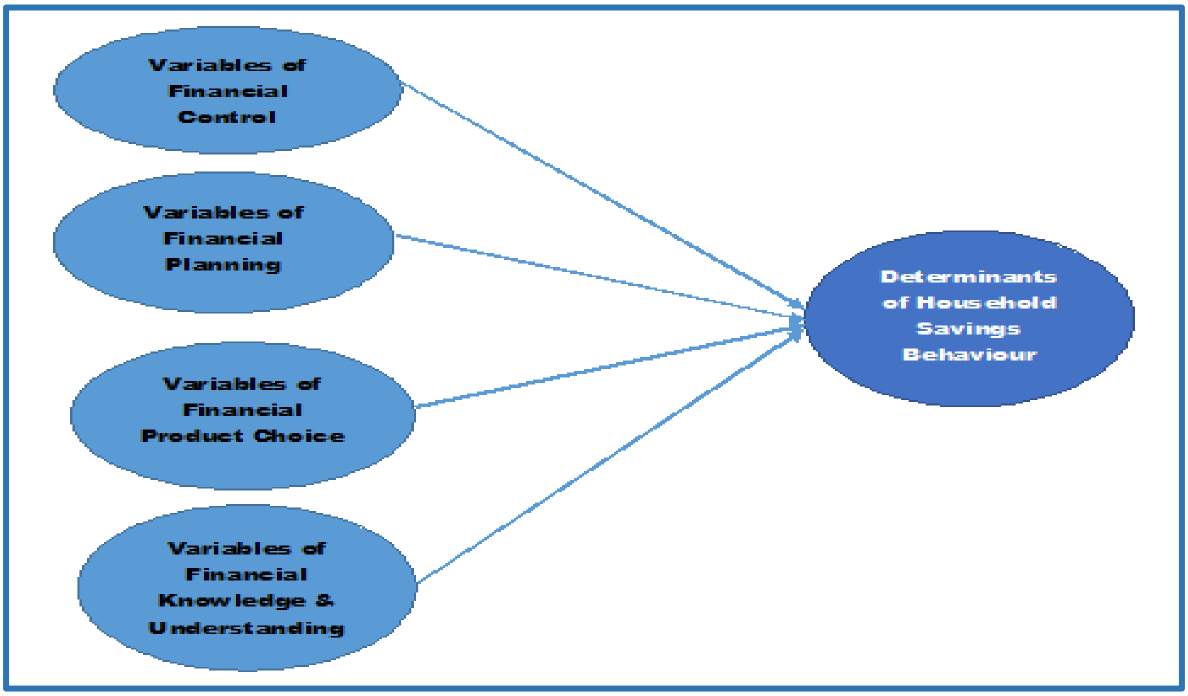


Figure 4.5: Proposed model on the relationship between financial literacy variables and variables on household savings behaviour

Figure 4.4 provides a comprehensive guide to measure the statistical relationship between variables in accordance with the four core domains of financial literacy (financial control, financial planning, financial product choice and financial knowledge and understanding), which formed the independent variables and variables that measure household savings behaviour (determinants of household savings behaviour), which also formed the dependent variable. Thus, in line with the deductive approach adopted in this study, it was expected that the model above would be used to ascertain the statistical impact of financial literacy variables on household savings behaviour as well as establishing the statistical significant relationship between these variables.

4.14 METHOD OF DATA ANALYSIS

According to Cooper and Schindler (2003), data analysis involves the reduction into a manageable size of the accumulated data, the development of summaries and the search for patterns using statistical techniques. It also improves the interpretation of research findings in light of the research issues and determines whether the results are consistent with the research goals (Johnston, 2017; Nicholas *et al*., 2017). In essence, raw data conveys very little meaning to most people, as such, Saunders *et* *al*. (2009) posit that data, therefore, need, to be analysed to make it useful, by turning it into information. Data analysis techniques such as graphs, charts and statistics allow the researcher to explore, present, describe and examine relationships and trends from the data obtained.

Cooper and Schindler (2003) posit that data analysis involves the reduction to a more meaningful and manageable size of accumulated data through the development of summaries and patterns using statistical techniques. Thus, data analysis includes the interpretation of research findings in light of the research questions, and determines if the results are consistent with the objectives of the study. Descriptive data analysis, presentation and inferential analysis techniques were used in this study. Descriptive statistics were being used to analyse responses obtained from respondents using tables, charts and percentages and general discussions to enhance understanding and meaning of the data analysed. Furthermore, inferential analysis focused on the correlation between independent and dependent variables. Thus, factor and confirmatory factor analysis were used to identify variables that fit in the structural equation model. This was used to infer and make judgements on the association between dependent and independent variables using data obtained from respondents. For the purpose of this study, and in an attempt to produce valid results, data management focused on data editing, coding and processing of data.

4.14.1 EDITING OF DATA

Editing involves a thorough and critical examination of the completed questionnaire, in terms of compliance with the criteria for collecting meaningful data, and in order to deal with questionnaires not duly completed (Cooper & Schindler, 2003). Editing helps to detect data errors, adhering to the minimum quality standard, ensuring that the data is as accurate as possible and that the research questions have been addressed within the objectives and aims of the study (Saunders *et al.,* 2009)

4.14.2 CODING OF DATA

According to Cooper and Schindler (2003) and Saunders *et al.* (2009), coding of data involves assigning numbers or other symbols to responses obtained from respondents. Responses can be grouped into a limited number of sections and categories for the purpose of analysis. The classification of data into limited categories is necessary for efficient analysis. Therefore, for the purpose of easy analysis, all the questions in the questionnaire were systematically coded and arranged.

4.14.3 PROCESSING OF DATA

The statistical Package for the Social Sciences (SPSS) version 25.0, spread-sheet (Microsoft Excel) was used to process the data collected. SPSS is an integrated set of modules used for manipulating, analysing and presenting data in the form of tables, pie charts and graphs to ultimately reveal the internal content of the data obtained. In essence, for validity and reliability purposes, the researcher ensured that the quantitative data obtained was managed for quality and consistency purposes. The process started with the pilot study; thereafter, the main survey was conducted, where quantitative data was assigned a particular number for tracking purposes against any possible data error.

Thus, in supporting the possibility of detecting and eliminating data error, double data entry technique was employed. Double data entry includes entering data separately on the spreadsheet (Microsoft Excel) while the Statistical Analysis System (SAS version 9.3) was used to verify the existence of any form of errors. Non-matching data was identified and corrections made immediately by verifying the data on the questionnaire with the assigned numbers

4.15 ETHICAL CONSIDERATIONS

No issues of ethical bias or violation were observed in this study. However, ethical clearance was requested and obtained from the Ethics Committee of the North-West University before issuing out the questionnaires for data collection. The researcher also sought and obtained the consent of respondents by briefing them about the objectives and benefits of the study. Respondents were assured of the degree of confidentiality of the information provided. Thus, all information was kept confidential and all secondary sources consulted acknowledged. The following principles and guidelines were adhered to in the study:

a. The research was very objective and completed with integrity;
b. High technical standards were maintained, especially regarding referencing and sources;
c. An epistemic approach to science was followed;
d. High levels of values, norms and standards were maintained;

e. The survey clearly explained the purpose and significance of the study and respondents gave consent before completing the questionnaire. All information obtained from respondents was not disclosed to the public and was used solely for the purpose of this study;
f. Research results to be disseminated in an open and transparent manner; and
g. The required consent forms were submitted before approaching respondents for responses.

4.16 SUMMARY OF CHAPTER

This chapter has provided a detailed outline of the research methodology used to conduct this study. A concept map of the chapter was provided to give direction on how the different stages of the research methods were employed in the study. The research philosophy, research approach and research design were explained discussed and an explanation given of how they fitted into the study. Furthermore, an evaluation was done with regard to the target population of the study (two municipalities in South Africa, City of Tshwane and Mahikeng). In addition, the sampling method as well as the method used to determine the sample size were also outlined. Thus, this chapter succeeded in presenting a proposed model on the relationship between financial literacy variables and variables of household savings behaviour. Data gathering techniques as well as method of data analysis were discussed and described. Thus, the purpose of this Chapter was to ensure that proper techniques were employed and used judiciously to achieve the objectives of the study as well as to provide solutions to the problem statement. The next chapter focuses on data analysis and presentation of results.

CHAPTER FIVE

DATA ANALYSIS AND PRESENTATION OF RESULTS

Data analysis is the process of bringing together and giving meaning to the mass of data collected. It involves an ambiguous, time-consuming, creative and fascinating process to give meaning to the data collected (De Vos *et al*., 2005). Thus, this chapter provides the analysis, interpretation, discussion and presentation of data obtained from the quantitative survey in a systematic manner, using descriptive data and inferential analysis in addressing the statistical relationship between financial literacy variables and household savings behaviour.

5.1 INTRODUCTION

Engaging on an empirical research as proposed by Nishina *et al*. (2018) embodies detailed descriptive and inferential analysis and interpretations of responses from participants. Thus, the purpose of data analysis is to understand the various constitutive elements of data through investigating the relationship between concepts and variables to ascertain if there are any patterns or trends among the variables that can be identified or isolated or to establish themes in the data (Nishina *et al*., 2018; Shields *et al*., 2018). Accordingly, when the results of the analysis are taken, inference and conclusions on the meaning and implications of the findings are made (Andereck, 2017; Cranmer *et al.,* 2017).

Data interpretation demands that the researcher must give meaning to data and establish the relationship between the findings and theory in a manner that supports or disputes the researcher's expectations. Indeed, this study made use of SPSS and Microsoft Excel application software to achieve effective analysis and presentations. Most importantly, correlation analysis was used to ascertain the relationship between variables related to the overall objectives of the study. However, from the quantitative sample size of 379 respondents from Tshwane Municipality, 252 questionnaires were duly completed and returned, while 176 were completed and returned by employees of Mahikeng Local Municipality from a sample of 248. Thus, a total of 428 duly collected questionnaires were returned from both municipalities. Thus, this chapter begins with a summary of the data using descriptive statistics, followed by the inferential statistical test used to address the results in the study. Thus, this Chapter provides information on the following:

- Descriptive statistics;
- Construct validity;
- Structural equation modelling;
- Correlation analysis;
- Path coefficients analysis;
- Validation and presentation of model fit indices;
- Presentation of results
- Contributions of the study; and
- Summary of chapter.

5.2 DESCRIPTIVE STATISTICS

Descriptive statistics involve the procedure of measuring, classifying, computing, describing, analysing and interpreting data obtained in a systematic manner (Jaggi, 2013). It also involves describing or summarising the set of data collected from respondents who constitute the interest of the researcher (Craige *et al*., 2017). Indeed, descriptive statistics give numerical and graphical definition to collated data in a clear and understandable manner. Thus, Section A presents responses obtained from respondents with regard to their demographic characteristics, Sections B to F focus on a detailed interpretation of responses obtained from respondents with regard to the four financial literacy constructs and the construct that measures savings behaviour. The questionnaire was divided into the following sections:

- Section A: Demographic characteristics of respondents;
- Section B: Personal knowledge of financial control;
- Section C: Personal knowledge of financial planning;
- Section D: Knowledge to choose financial products;
- Section E: Financial knowledge and understanding; and
- Section F: Determinants of household savings behaviour.

5.2.1 SECTION A: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Figures 5.1 to 5.6 show responses with regard to the demographic characteristics of respondents. The Figures show data from the standpoint of the respondents, followed by summaries of the data.

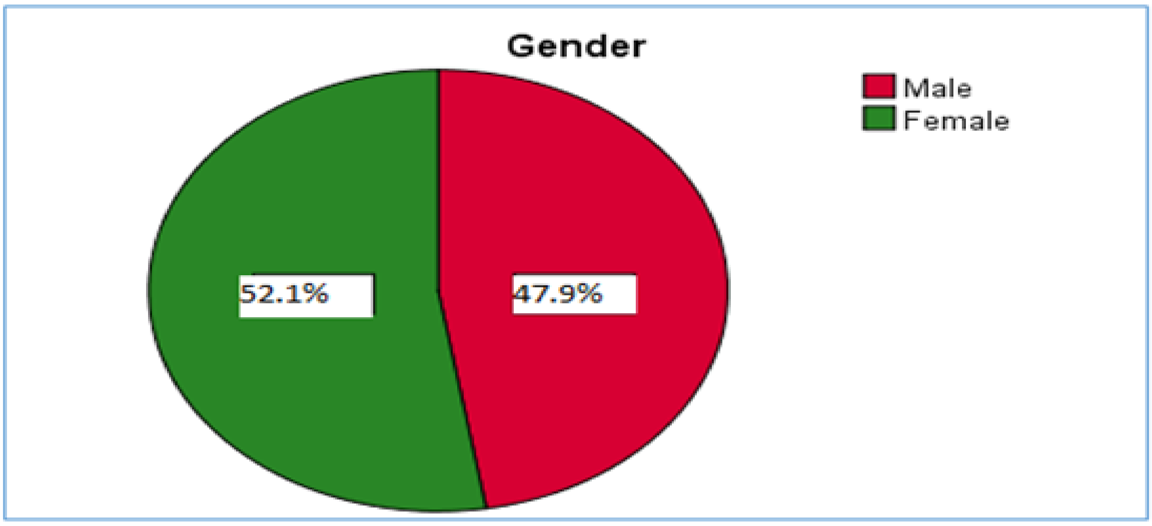


Figure 5.1: Gender of respondents

Figure 5.1 shows that 47.9% of respondents were male while 52.1% were female. This is an indication that more female employees participated in the study compared to males.

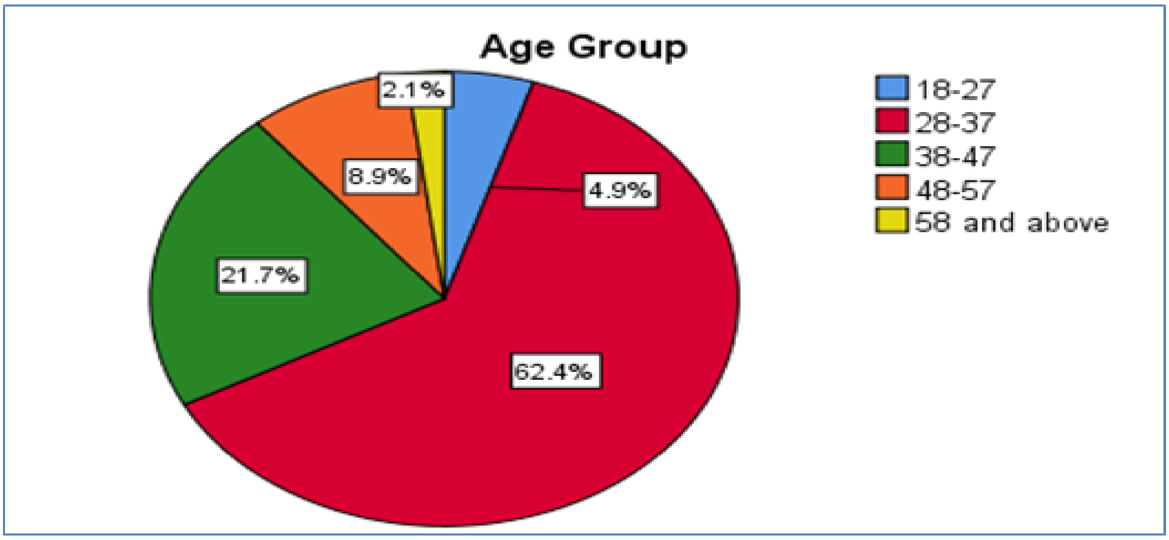


Figure 5.2: Age group of respondents

Figure 5.2 shows that 4.9% of respondents were aged between 18 and 27 years, 62.4% were between 28 and 37, 21.7% were aged between 38 and 37 , 8.9% of respondents were between 48 and 57, while 2.1% were aged 58 and above. The results show that majority of respondents fell within 28 – 37 aged group, thus representing the great number of respondents in the labour force who are also breadwinners of their individual households.

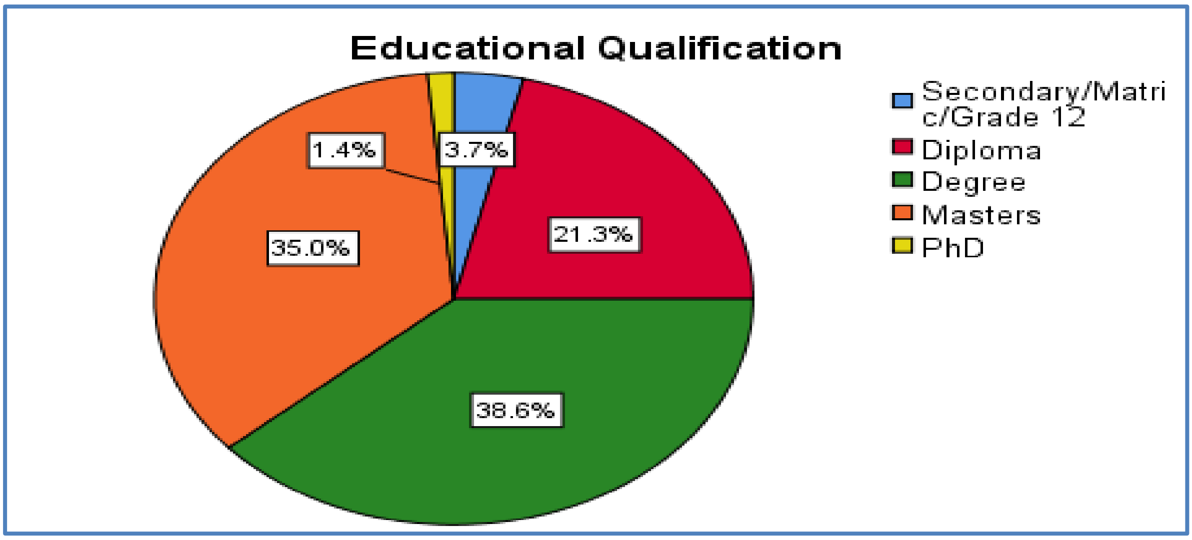


Figure 5.3: Level of educational of respondents

Figure 5.3 shows the highest level of education of respondents. The results revealed that 3.7% of respondents had secondary (National Senior Certificate), 21.3% had diploma, 38.6% had a degree, 35.0% had a Master's degree while 1.4% had doctorate degree. The level of education of respondents is an indication that majority of respondents had university degrees. This, in theory, informs the purposive sampling method adopted in the study, which focused more on respondents who had an idea on the subject under investigation.

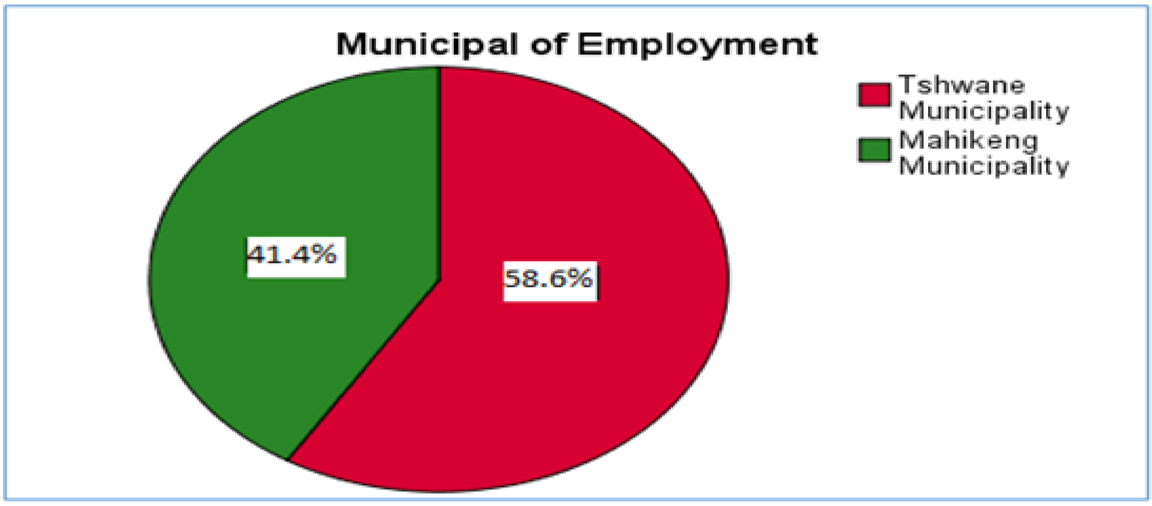


Figure 5.4: Municipality of employment

Figure 5.4 presents the number of respondents from each municipality. The Figure shows that 58.6% of respondents were employees of the City of Tshwane while 41.4%

were employees of Mahikeng Local Municipality. The Figure further indicates that majority respondents participated in Tshwane Municipality compared to Mahikeng.

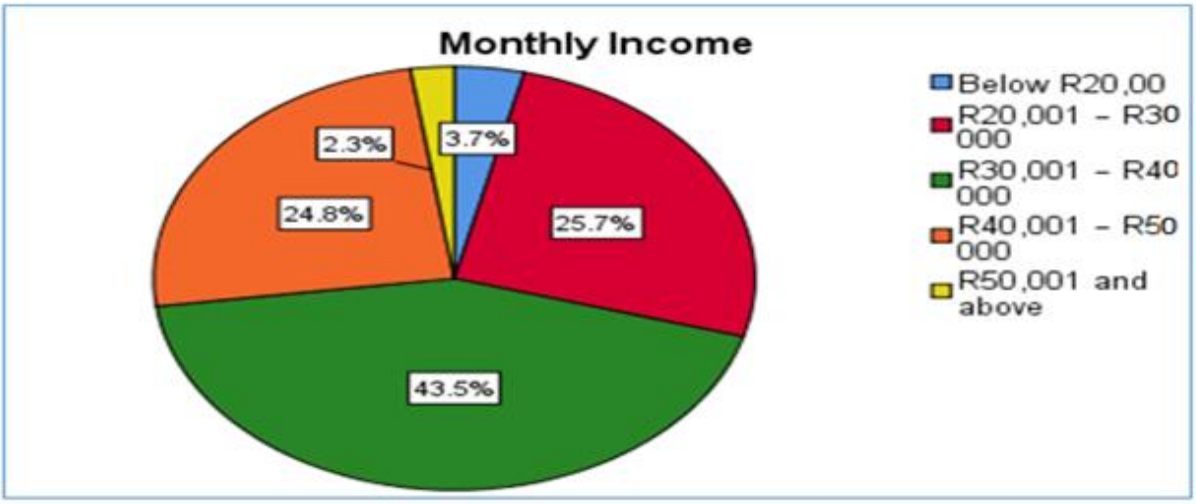


Figure 5.5: Monthly income

Figure 5.5 shows the monthly income or respondents. 3.7% of respondents earned below R20000, 25.7% earned between R20001 and R30000, 43.5% had an income of between R30001 and R40000, 24.8% of respondents earned between R40001 and R50000, while 2.3%% earned between R50001 and above. However, the Figure shows that a greater percentage of respondents earned between R30001 and R40000.

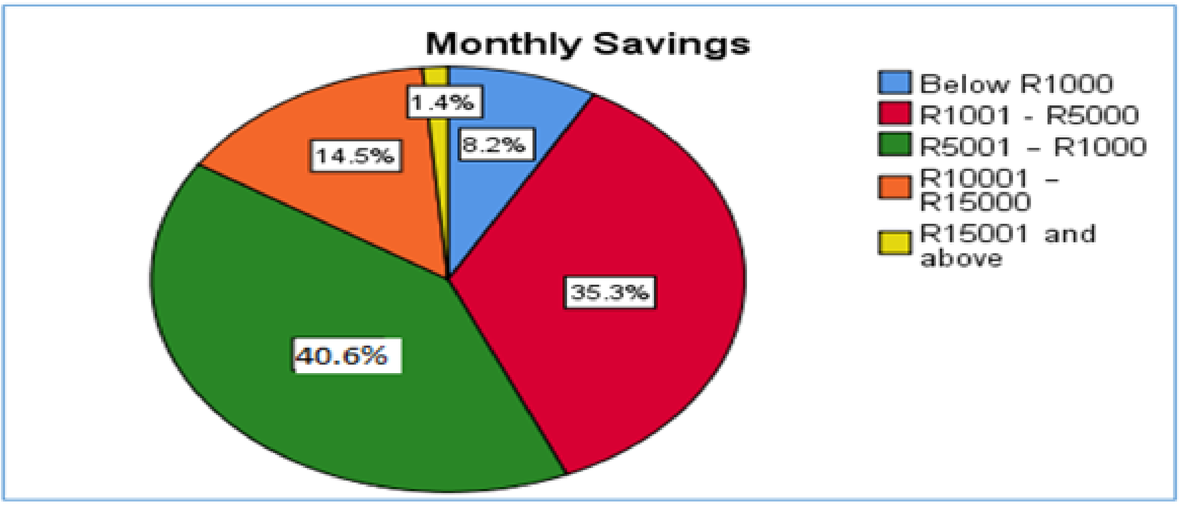


Figure 5.6: Monthly level of savings

One of the question items sought to understand the characteristics of respondents with regard to the rate of savings. Figure 5.6 shows the percentages of monthly savings of respondents. 8.2% of respondents indicated they save below R1000, while 35.3% save between R1001 and R5000. 40.6% of respondents indicated they save between R5001 and R10000, 14.5% save between R10001 and R15000, while 1.4% of respondents save R15001 and above. Most respondents saved between R5001 and R10000 and 1001 and 5000.

5.2.2 SECTION B: PERSONAL KNOWLEDGE ON FINANCIAL CONTROL

The items in this section sought to ascertain the ability of respondents with regard to personal financial control. The responses to the questions were arranged in a four linker-scale manner, ranging from completely agree to completely disagree. However, the objectives of the study underpin the rationale behind the manner in which the questions were arranged. The leading questions in this construct were mixed with other complementary questions to ascertain the ones that have direct impact on the dependent variable (Household savings behaviour). Thus, leading questions are sets of questions that directly suggest answers that inform the essence of the study (Babiak, 2014; Guadagno & Powell, 2014). The issue of whether respondents were involved in the day-to-day financial management of households was asked to know if respondents had ever come across challenges with regard to household financial control. 91.4% of respondents cumulatively agreed (completely agreed and agreed) that they part-take in the financial management their households, while 8.6% respondents cumulatively disagreed (disagreed and completely disagreed).

Furthermore, one of the questions sought to understand if respondents adhered to household financial budget. 71.3% of respondents cumulative agrees while 28.7% of respondents cumulatively disagreed that they did not adhere to household financial budget. Again, respondents were asked if before they buy something, they carefully considered if they could afford it. 67.3% of respondents cumulatively agreed while 32.7% cumulatively disagree. Respondents were also asked if keeping a close watch on their financial affairs enhanced their future financial well-being. 91.6% of respondents agreed to it while 8.4% cumulatively disagreed to the statement. Also, a follow-up question was asked whether refusing to withdraw money from their savings account to meet household needs could help settle future expenses. 85.5% of respondents cumulatively agreed while 14.5% cumulatively disagree with the statement. Respondents were further asked if the ability to set long-term financial goals and working hard to achieve them helped in meeting their future financial needs. 82.9% of respondents cumulatively agree while 17.1% cumulatively disagreed with the statement, an indication that respondent identified that long-term financial plans and working hard to achieve them would be a bonus for future financial well-being.

Furthermore, respondents were asked if they pay their bills on time to avoid extra charges. The results show that 78.0% of respondents cumulatively agreed and understood the implication of not paying bills as at when due and while 22.0% of respondents cumulatively disagreed to the statement. Respondents were also asked a question on accountability; if they balanced their financial budget periodically to check their expenses. 75.4% of respondents cumulatively agreed while 24.6% cumulatively disagreed. In addition, respondent was asked if they check their credit card invoices to avoid possible mistakes and debts. 81.3% of respondents cumulatively agreed while 18.7% cumulatively disagree to the statement. Respondents were also asked if they ensured proper allocation of household financial resources for future financial well-being. 88.3% of respondents cumulatively agreed while 11.7% of respondents cumulatively disagreed with the statement.

5.2.3 SECTION C: PERSONAL KNOWLEDGE OF FINANCIAL PLANNING

The purpose of this section of the questionnaire was to obtain respondents' ability and knowledge to plan for their financial well-being. Thus, responses in this section followed the same manner as in Section B. One of the questions sought to understand if providing for a rainy-day fund, can cover expenses in case of emergency. 86.2% of respondents cumulatively agreed while 13.8% cumulatively disagreed to the statement. Another item focused on whether saving money for the long-term could help cover for future household consumption. 87.8% of respondents cumulatively agreed that long term savings could be used to balance up future household consumption while 12.2% of respondents cumulatively disagreed. A follow-up question was asked to ascertain if respondents lived for today and also if they thought about the next day. 66.8% of respondents cumulatively agreed while 33.2% cumulatively disagreed and maintained they did not consider what would happen the next day.

Respondents were also asked if they believed that money was not just there to be spent on just anything. 82.2% of respondents cumulatively agreed to it while 17.8%

cumulatively disagreed. Respondents were further asked if spending less on immediate consumption could increase savings. 82.9% of respondents cumulatively agreed while 17.1% cumulatively disagreed that spending less on immediate consumption would not increase savings. Respondents were also asked if refusing to satisfy their household needs on debt could enhance their future financial well-being. 81.0% of respondents cumulatively agreed that when one avoids satisfying household needs on debts, it enhances future financial well-being. Thus, 19.0% of respondents cumulatively disagreed. Another item sough to understand whether savings and investments provide for future financial balance. 90.0% of respondents cumulatively agreed while 10.0% cumulatively disagreed.

Furthermore, respondents were asked whether cutting down on spending could help meet household financial needs. 85.7% of respondents cumulatively agreed while 14.3% of respondents cumulatively disagreed. Respondents were further asked if refusing not to sell their personal property could help them to cover for their future household needs. 72.2% of respondents cumulatively agreed while 27.8% of cumulatively disagreed to the statement. Respondents were also asked if working overtime for extra cash could help them meet their household needs. 93.5% of respondents cumulatively agreed while 6.5% cumulatively disagree to the statement.

5.2.4 SECTION D: PERSONAL ABILITY TO CHOOSE FINANCIAL PRODUCTS

This section of the questionnaire focused on ascertaining, from respondents, their ability to choose financial products. The responses are arranged based on the number of financial products, ranging from 5 above, 4 – 3, 2 – 1 and none. Several financial products were provided in the question and respondents were asked to indicate how many of them they had heard of and made use of. To begin with, a set of banking products was listed and respondents were asked to indicate how many they had heard of. The responses show that 98.4% of respondents had heard of 3 banking products and above while 1.6% had heard of 2 banking products and below. Furthermore, respondents were asked how many of the banking products they were making use of. 69.3% of respondents indicated they make use of 3 banking products and above while 30.7% indicated they make use of 2 banking products and below.

Furthermore, a list of credit and loan products was provided, and respondents were asked to indicate how many they had heard of, 97.9% of respondents indicated they had heard of 3 products and above while 2.1% indicated they had heard of 2 products and below. In addition, respondents were asked how many of the credit and loan products they were making use of. 70.0% of respondents indicated they make use of 3 products and above while 30.0% indicated they make use of 2 products and below. Furthermore, a list of investment and savings products was provided and respondent were asked to indicate how many they had heard of. 97.2% of respondents indicated they had heard of 3 products and above while 2.8% indicated they had heard of 2 products and below with regard to investment and savings products. Respondents were also requested to indicate how many investment and savings products they were making use of. 68.9% of respondents indicated they make use of 3 products and above while 31.1% indicated they make use of 2 products and below.

In addition, a list of insurance products was provided, and respondent were requested to indicate how many they had heard of. 98.8% of respondents indicated they had heard of 3 products and above while 1.2% had heard of 2 products and below with regard to insurance products. Respondents were further asked to indicate how many insurance products they were making use of. 63.9% of respondents indicated they make use of 3 products and above while 36.1% indicated they make use of 2 products and below.

5.2.5 SECTION E: HOUSEHOLD KNOWLEDGE AND UNDERSTANDING OF FINANCIAL CONCEPTS

The aim of this section of the questionnaire was to ascertain respondents' level of knowledge and understanding of financial concepts and their level of familiarity with numeric calculation in finance. Responses under this construct followed the same manner of arrangement as in Sections B and C. Respondents were asked if R10, 000 was given to five friends and they were asked to share the money equally, would each one of them get up to R2, 000? 86.7% of respondents cumulatively agreed while 13.3% cumulatively disagreed with the statement. Respondents were also asked to imagine that five friends shared R10, 000 equally and kept their share as deposit in the bank for one year and inflation decreased for that period, would they get up to R2, 000 and above each? The responses show that 88.3% of respondents cumulatively agreed to the statement, while 11.7% cumulatively disagreed that the friends will not get up to R2, 000 and above.

One of the items also sought to ascertain respondents' level of understanding of real interest rate. As such, respondents were asked to imagine they put R1, 000 into a savings account with a guaranteed interest rate of 20% per year, will they have up to R1, 200 at the end of the first year? The responses showed that 86.7% of respondents cumulatively agreed to the statement, while 13.3% cumulatively disagreed with the statement. Furthermore, respondents were asked to imagine if they invested R1, 000 into a mutual fund with a guaranteed interest rate of 10% per month, if they would have up to R1, 300 at the end of the first three months. The results revealed that 87.1% of respondents cumulatively agrees while 12.9% cumulatively disagreed. Similarly, respondents were asked whether comparing the available credit option when buying in instalments could enhance future household financial well-being. 81.1% of respondents cumulatively agreed to the statement while 18.9% cumulatively disagreed to the statement.

Furthermore, the item on investment diversification was raised to ascertain respondents' level of understanding with regard to investment and how it impacts on their savings behaviour. As such, respondents were asked whether diversifying their investments among different assets, decreases the risk of losing money. 84.3% of respondents cumulatively agreed with the statement while 15.7% cumulatively disagreed. Respondents were also asked if they had R100 in a savings account and the real interest rate was 10% a year, after 5 years will they have up to R150 in their savings account? 74.3% of respondents cumulatively agree that they will have up to R150 while 25.7% cumulatively disagreed. Also, respondents were asked whether investment on real estate could give a high rate of return on a long-time period. 84.5% of respondents cumulatively agreed while 15.5% cumulatively disagreed.

5.2.6 SECTION F: DETERMINANTS OF HOUSEHOLD SAVINGS BEHAVIOUR

This part of the questionnaire focused on obtaining the perception of respondents on the determinants of household savings behaviour. The responses were arranged in a four linker-scale manner ranging from completely agree to completely disagree. Respondents were asked if they will increase their monthly savings if their monthly income increased. 87.4% of respondents cumulatively agreed while 12.6% cumulatively disagree. With regard to the statement if the real interest rate on savings increases, I will like to save more to get more returns, 87.6% cumulatively agreed while 12.4% cumulatively disagreed.

Respondents were also asked to indicate their perception if they will like to save more when tax on savings is favourable. 78.7% of respondents cumulatively agreed to the statement while 21.3% cumulatively disagreed. Again, a statement was put to the respondents in order to ascertain how they react to savings and investment risks. 87.9% of respondents cumulatively agreed that they will save and invest more if there was less uncertainty on savings and investment while 12.1% of respondents cumulatively disagreed to the statement. Respondents also reacted to the statement concerning the importance of spending less on immediate consumption. 85.5% of respondents cumulatively agreed that if they spend less money on immediate consumption, it will help provide for savings against the future while 14.5% of respondents cumulatively disagreed to the statement. Finally, respondents were asked if they will spend less and save more if they had a smaller family size. 81.8% of respondents cumulatively agreed to the statement while 18.2% cumulatively disagreed with the statement.

5.3 CONSTRUCT VALIDITY

Construct validity was used to ascertain the consistency and regularity of the construct of the questionnaire used in the study. Cronbach's Alpha was used to test the reliability of the instrument used in the study, although the Cronbach's Alpha value was less than the recommended benchmark of 0.7 as recommended by (Whitehead *et al.,* 2012; Alawadhi & Morris, 2008; Marchewka *et al.*, 2007). Thus, some of the questions were phrased in a way to ascertain the level of financial literacy among respondents. As such, the variables were not used as a summary under independent construct but used as individual items in the Structural Equation Modelling in Figure 5.7. Indeed, this is in line with the primary objective of this study, which was to identify financial literacy predictors (independent variables) that influence household savings behaviour (dependent variable).

5.4 STRUCTURAL EQUATION MODELLING

Structural Equation Modelling (SEM) involves using models to describe the relationship between observed variables considered by the researcher to provide a quantitative test of a theoretical model (Ullman & Bentler, 2012; Crowley & Fan, 1997).

More importantly, various theoretical models can be tested using SEM, which has been hypothesised by the researcher on a set of a predictors under their constructs and how the constructs correlate within each other and the dependent variable (Henseler *et al*., 2015; Savalei & Bentler, 2006). Presently, SEM has been recognised as one of the techniques used by different researchers across disciplines (Howard *et al*., 2018; Hershberger, 2003). However, challenges exist on how to ascertain the best model fit with regard to how much the model represents the sample data used in the study (Howard *et al*., 2018; Henseler *et al*., 2015). The main aim of SEM analysis is to ascertain the extent to which the theoretical model is supported by the sample data (Asparouhov *et al.*, 2015; Crowley & Fan, 1997). Accordingly, if the theoretical model is supported by the sample data, then more theoretical models can be hypothesised. Otherwise, if the model is not supported by the sample data, the model will have to be modified and tested or a new model should be developed (Kenny *et al*., 2015; Perry *et al*., 2015).

Basically, SEM can be used to test different theoretical models such as regression, path and confirmatory factor models. However, for the purpose of this study, SEM was employed to help provide an understanding of the relationship among variables used in the study. In essence, the variables used in this study are classified into independent and dependent variables. The independent variables are those that measure financial literacy, they are not influenced by any other variables in the analysis, while the dependent variable is the variable that measures household savings behaviour and is influenced by the independent variables. Hence, this study adhered to the SEM statistical method that takes a confirmatory approach to analyse the structural model that best describes the equation of relationships within the variables in the study. Thus, correlation analysis was used as a defined yardstick in the study to measure the relationship among variables and is explained below.

5.5 CORRELATION ANALYSIS

The concept of correlation and regression analysis was proposed by Sir Francis Galton in 1888, where he used it as a procedure for examining covariance in two or more traits. This discovery emanated after the French Physicist, Auguste Bravais, developed a correlation coefficient in 1846. Accordingly, Karl Pearson (1896), propounded a statistical formula for correlation coefficient and regression approach.

Thereafter, Charles Spearman (1904) used the correlation procedure to formulate a factor analysis technique. In essence, the correlation, regression and factor analysis techniques have, for many years, been used as a yardstick for generating tests and defining constructs. Consequently, present academic scholars are expanding their knowledge of the roles that correlation, regression and factor analysis play in theory and construct definition to include latent variable, covariance structure and confirmatory factor measurement models (Punekar *et al*., 2016; Lavrova & Pechenkin, 2015). However, statistical analysis is classified into descriptive and inferential statistics. While descriptive statistics focus on describing data with summary charts and tables, inferential statistics attempt to draw conclusions about the population from which the sample was obtained (D'Souza *et al*., 2017; Anvari *et al*., 2015).

Although inferential statistics find it difficult to avoid errors, it helps researchers to make sound inference about the population in question (D'Souza *et al*., 2017). Indeed, inferential statistical tests include, among others, ANOVA, T-Test, Chi-Squared, regression, correlation analysis and hypothesis testing (Wang *et al*., 2017; Zhang *et al*., 2017). However, in this study, data that was collected from respondents and used to ascertain the relationship within the variables used in the study. Pearson correlation analysis was used in this study to obtain the coefficient range within the variables as well as cluster analysis to ascertain the range of responses with regard to their level of financial literacy. Thus, correlation is a statistical analysis used to show the relationship between two or more variables (Schnell, 2018; Zheng *et al.*, 2017; Higgins, 2005). Correlation was applied in this study to measure the coefficient and display the strength, weakness or linear relationship between variables. Accordingly, correlation coefficient is a statistical measure of the degree to which changes to the value of one variable predict change to the value of another (Zebende & Da Silva Filho, 2018; Şahin & Liu, 2017). In order word, it helps to measure the direction and strength of a linear relationship between variables.

Thus, Pearson correlation coefficient provides the yardstick for the test of significance, explanation and prediction of a dependent variable from an independent variable. The value of correlation coefficient, which is represented as "*r*", is defined as the covariance of the variable divided by the product of their standard deviations (Xu & Deng, 2018; Sudha *et al*., 2017). As such, when *r* is -1.0, it indicates a perfect negative correlation, while +1.0 indicates a perfect positive correlation and when the *r* is 0.0, it indicates zero or no correlation within the variables. Hence, this study adhered to the standard of Pearson's correlation coefficient range as shown in Table 5.1.

Table 5.1: Pearson's correlation coefficient range (*adapted from Higgins, 2005*)

+ r values	Positive	– r values	Negative
1.0	Perfect +	–1.0	Perfect –
.8 to .99	Very strong+	–.8 to –.99	Very strong–
.6 to .8	Strong +	–.6 to –.8	Strong –
.4 to .6	Moderate +	–.4 to –.6	Moderate –
.2 to .4	Weak +	–.2 to –.4	Weak –
0 to .2	Very weak +	0 to –.2	Very weak –

As indicated in Table 5.1 above, the value of correlation is such that $-1 \leq r \leq +1$. The positive and negative signs are used to show the direction of the linear relationship (Zebende & Da Silva Filho, 2018; Şahin & Liu, 2017). Although the range of values for the correlation coefficients is marked at 1.0 on an absolute value basis or between -1.0 to 1.0, if the *r* is above 1.0 or below -1.0, the correlation measurement is incorrect. However, the correlation between the independent variables and the dependent variable was performed, which informed the pre-selection of variables for the Structural Equation Model (SEM). In essence, SEM was used to perform confirmatory factor analysis (CFA). Indeed, CFA is used as the first step to access the proposed measurement model in a structural model (Mueser *et al*., 2017; Neumann *et al*., 2017). Thus, Table 5.2 illustrates the pre-selection of variables to fit in the SEM.

Table 5.2: Pre-selection of variables for the Structural Equation Model (SEM)

	F1	F2	F3	F4	F5	F6
B3			.179**			
B6	.136**					
B7		.147**				
B8			.108*			
C2		.123*		.163**		
C4		.107*	.139**		-.115*	

C5			.100*			
C8		.140**				
C9		.103*	.181**			
D1		-.100*				
D3	-.116*					
D5			-.129**	-.114*		
D7			-.134**			
E2		.114*	.122*		-.103*	
E3	.109*					
E4					.170**	
E5				.112*		-.099*
E6	.102*	.097*	.150**			
E7				.099*		
E8				.122*		

As indicated in Table 5.2, some of the items that measure the Personal knowledge of Financial Control (B3, B6, B7 and B8), Personal knowledge of financial planning (C2 , C4, C5, C8 and C9), Knowledge to Choose Financial Products (D1, D3, D5 and D7), Financial Knowledge and Understanding (E2, E3, E4, E5, E6, E7 and E8) have significant correlations with the items that measure Household Savings Behaviour (F1, F2, F3, F4, F5 and F6). As such, when correlation is positive, the value indicates a relationship between two variables such that as the value of one of the variables increases, the value of the other also increases. Thus, when correlation has a negative value, it indicates that when the value of one of the variables increases, the value of the other one decreases (Usuda *et al.,* 2018; Sudha *et al*., 2017). Thus, these independent variables were included in the initial model to determine the validity of their relationship with items measuring Household Savings Behaviour.

5.6 PATH COEFFICIENTS ANALYSIS

Path coefficients are used to examine the possible relationship between statistical variables in structural equation modelling approach. The term path coefficients originated from the work of Wright (1921), where a descriptive-based diagram approach was used to identify relationships between variables in a multivariate system. Indeed, path coefficients help to assess the relative impacts of variables within the fitted model (Rani *et al*., 2017; Saidaiah *et al*., 2008; Dodge, 2003). Thus, for the purpose of this study, path coefficients were used to describe the directed dependencies among the variables used in this study. Most importantly, in this study, the correlation focused more on the p-value, when p-value is ≤ (less than or equal) to 0.05, then the correlation is significant, and the reverse is insignificant. Table 5.3 shows the results of variables excluded from the final SEM, since their p-value was greater than 0.05.

Table 5.3: Standardised results for PATH list (P-Value >0.05)

Path			Parameter	Estimate	Standard Error	t Value	Pr > |t|
B8	===>	**F3**	**_Parm04**	0.07972	0.04667	1.7084	**0.0876**
C4	===>	**F2**	**_Parm07**	0.05471	0.04794	1.1413	**0.2537**
C4	===>	**F3**	**_Parm08**	0.07347	0.04716	1.5581	**0.1192**
C5	===>	**F3**	**_Parm10**	0.05829	0.04661	1.2505	**0.2111**
C9	===>	**F2**	**_Parm12**	0.05834	0.04789	1.2183	**0.2231**
D1	===>	**F2**	**_Parm14**	-0.06765	0.04797	-1.4103	**0.1584**
D7	===>	**F3**	**_Parm18**	-0.08264	0.04735	-1.7454	**0.0809**
E2	===>	**F4**	**_Parm21**	0.00273	0.04719	0.0579	**0.9538**
E2	===>	**F5**	**_Parm22**	-0.08884	0.04768	-1.8633	**0.0624**
E3	===>	**F1**	**_Parm23**	0.07685	0.04800	1.6011	**0.1094**
E6	===>	**F2**	**_Parm28**	0.08769	0.04690	1.8698	**0.0615**
E6	===>	**F1**	**_Parm17**	0.09171	0.04768	1.9233	**0.0500**

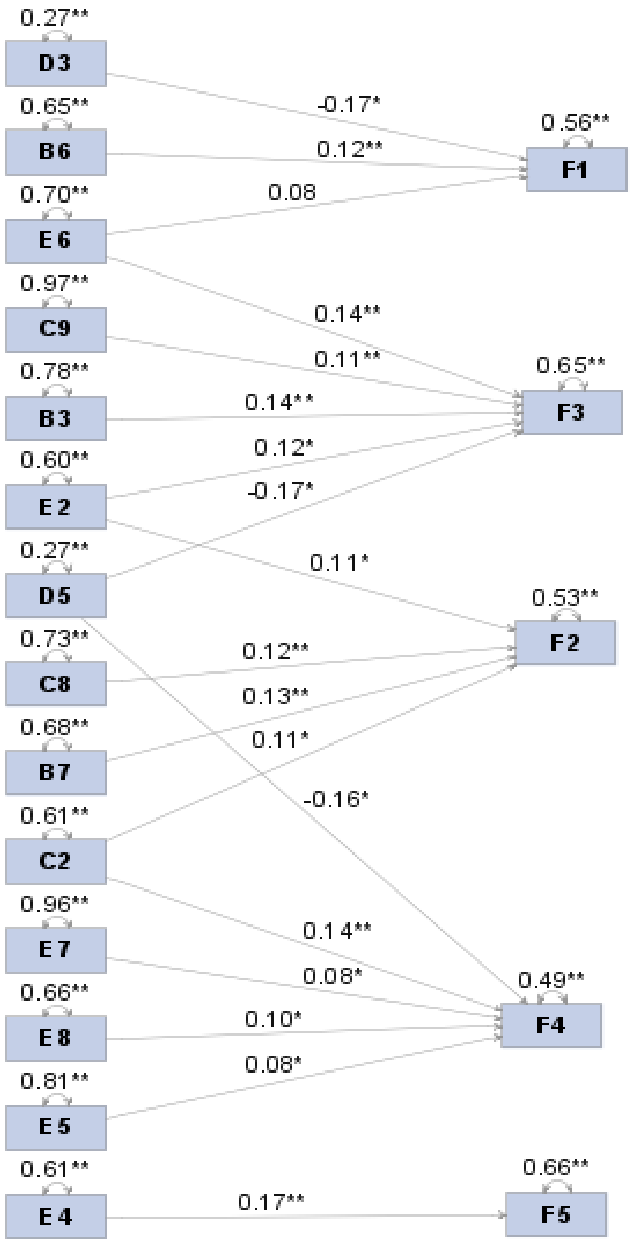
Thus, the aim of every variable selection in a path list is to remove insignificant covariates with no contribution and identify variables that provide enough information to achieve the objective of the model. Table 5.3 shows that the SEM path coefficients are all insignificant (p-values >0.05), as such, they were excluded from the SEM. Hence, the path coefficients for the modified model are presented in Table 5.4.

Table 5.4: Standardised results for PATH list (P-Value <0.05)

Path			Parameter	Estimate	Standard Error	t Value	Pr > |t|
B6	===>	**F1**	**_Parm01**	0.12774	0.04753	2.6877	0.0072

D3	===>	**F1**	**_Parm02**	-0.11408	0.04755	-2.3990	0.0164
E6	===>	**F1**	**_Parm03**	0.09171	0.04768	1.9233	0.0500
B7	===>	**F2**	**_Parm04**	0.14304	0.04675	3.0599	0.0022
C2	===>	**F2**	**_Parm05**	0.11497	0.04694	2.4491	0.0143
C8	===>	**F2**	**_Parm06**	0.13215	0.04683	2.8221	0.0048
E2	===>	**F2**	**_Parm07**	0.10886	0.04694	2.3188	0.0204
B3	===>	**F3**	**_Parm08**	0.14848	0.04680	3.1729	0.0015
C9	===>	**F3**	**_Parm09**	0.12949	0.04702	2.7537	0.0059
D5	===>	**F3**	**_Parm10**	-0.10607	0.04630	-2.2910	0.0220
E2	===>	**F3**	**_Parm11**	0.10723	0.04643	2.3093	0.0209
E6	===>	**F3**	**_Parm12**	0.14000	0.04603	3.0414	0.0024
C2	===>	**F4**	**_Parm13**	0.15540	0.04667	3.3298	0.0009
D5	===>	**F4**	**_Parm14**	-0.11578	0.04673	-2.4774	0.0132
E5	===>	**F4**	**_Parm15**	0.09691	0.04695	2.0643	0.0390
E7	===>	**F4**	**_Parm16**	0.10728	0.04681	2.2920	0.0219
E8	===>	**F4**	**_Parm17**	0.11579	0.04675	2.4769	0.0133
E4	===>	**F5**	**_Parm18**	0.16289	0.04750	3.4292	0.0006

All path coefficients in Table 5.4 are significant (p-values < 0.05), thus, they were included in the SEM. In essence, the standardised results for the Path list identifies those Path coefficients used to show the direct effects between the independent and the dependent variables. Thus, Table 5.4 provides the significant covariates that contributed and provided information to achieve the objective of the model. The model is subject to validation with standard fit indices such as Chi-square, Adjusted Goodness-of-Fit statistic (AGFI), Comparative Fit Index (CFI), Standardised Root Mean Square Residual (SRMR) and Root mean square Error of Approximation (RMSEA). Thus, the path diagram is presented in Figure 5.7.



Chi-sq	72.46
DF	62
Pr > Chi-sq	0.17
AGFI	0.95
CFI	0.94
SRMR	0.03
RMSEA	0.02
RMSEA LL	0.00
RMSEA UL	0.04
Pr Close Fit	1.00

Figure 5.7: Path diagram

The path diagram in Figure 5.7 presents the SEM, which typically conveys two important aspects of this study. Firstly, the use of series structure to present causal processes under investigation and, secondly, the presentation of the relationship in a structure which has provided a clearer conceptualisation of the solution to the problem under investigation. However, as earlier mentioned, two groups of variables (independent and dependent) were used in the modelling process. The independent variables were formed under financial literacy and further grouped into A, B, C and D construct variables, while the dependent variables were formed under determinants of household savings behaviour and grouped as F construct variable. Thus, the confirmatory factor analysis employed, helped in achieving the objectives of the study by ascertaining individual predictors that had a significant impact on the dependent variable (determinants of household savings behaviour). Thus, the correlation coefficients in Figure 5.7, which are discussed in section 5.7 of the study, were interpreted based on the guidelines described by Weinberg and Abramowitz (2016), which based its interpretation on when $0.0 \leq r < 0.3$ indicates a weak correlation, $0.3 \leq r < 0.5$ indicates a moderate correlation and $0.5 \leq r \leq 1$ indicates a strong correlation.

According to Weinberg and Abramowitz (2016), and taking into consideration the context of this study, a negative correlation implies that the more the responses tend to the agreement side (agree to completely agree) with the independent variable, the more they tend to the disagreement side (disagree or completely disagree) with the dependent variable. In essence, Figure 5.7 shows that the lesser the number of investment or savings products that one has heard of (D3), the more they are likely to increase their monthly savings if their monthly income is increased (F1). Thus, the lesser the number of insurance products that one makes use of (D5), the more one is likely to increase his or monthly savings if tax on savings is favourable (F3). Again, the lesser the number of insurance products that one makes use of (D5), the more one is likely to increase one's monthly savings if there are less uncertainties on savings and investment (F4).

On the contrary, according to Weinberg and Abramowitz (2016), and taking into consideration the context of this study, a positive correlation implies that the more the responses tend to the agreement side (agree to completely disagree) with the independent variable, the more they tend to the agreement side (agree or completely agree) with the dependent variable. Thus, Figure 5.7 shows that the more one believes that the ability to set long-term financial goals and working hard to achieve them helps one to meet future financial needs (B6), the more they are likely to increase their monthly savings if their monthly income is increased (F1). The more one believes that diversifying investments among different assets, decreases the risk of losing money (E6), the more they are likely to increase their monthly savings if their monthly income is increased (F1). Again, the more one believes that diversifying investments among different assets decreases the risk of losing money (E6), the more they are likely to increase their monthly savings if tax on savings is favourable (F3).

Figure 5.7 also shows that the more one believes that knowledge about refusing to sell personal property can help one to cover for future household needs (C9), the more they are likely to increase their monthly savings if tax on savings is favourable (F3). In the same vein, the more one accepts that careful consideration whether one can afford something or not before one buys (B3), the more they are likely to increase their monthly savings if tax on savings is favourable (F3). Again, the more knowledgeable people are on investment during inflation (E2), the more they are likely to increase their monthly savings if real interest rate on savings increases (F2) and also when tax on savings is favourable (F3). Thus, the more one believes that the knowledge of cutting down on spending can help meet future financial needs (C8), the more one is likely to increase one's monthly savings if real interest rate on savings increases (F2).

Furthermore, within the same context of positive correlation, the more one believes that the knowledge of paying bills on time could save one from extra cost (B7), the more one is likely to increase monthly savings if real interest rate on savings increases (F2). Accordingly, the more one accepts that the knowledge of saving money for long-term can help one cover for future household consumption (C2), the more one is likely to increase monthly savings if real interest rate on savings increases (F2). Also, the more one believes that knowledge of saving money for long-term can help one cover for future household consumption (C2), the more one is likely to increase monthly savings if there are less uncertainties on savings and investment (F4). Again, the more knowledge one has on computing interest rate on savings (E7), the more one is likely to increase monthly savings if there are less uncertainties on savings and investment (F4).

Accordingly, the more one believes that investing in real estate can give high rate of return on a long-run (E8), the more one is likely to increase monthly savings if there are less uncertainties on savings and investment (F4). Also, the more one believes that comparing the available credit option when buying in instalments, can enhance future household financial well-being (E5), the more one is likely to increase monthly savings if there are less uncertainties on savings and investment (F4). Finally, the more knowledge people have on investing in a mutual fund with a guaranteed interest rate per month (E4), the more they are likely to increase their monthly savings if they spend less money on immediate consumption to provide for savings against the future (F5). Thus, having explained the correlation between the independent and dependent variable in SEM, the model fit indices are evaluated in Section 5.6.1 in accordance with the standard threshold to ascertain the plausible postulation of the relationship among the variables used in the study.

5.6.1 VALIDATION AND PRESENTATION OF MODEL FIT INDICES

Absolute fit indices determine how well a model fits the sample data and reveals how the proposed model has the most superior fit (Garrido *et al*., 2016; McDonald & Ho, 2002). Accordingly, this measure provides the most conceptual indication of how well the proposed theory fits the data. With regard to which proper fit indices to report in a model, McDonald and Ho (2002) revealed that the most commonly reported fit indices are the CFI, GFI, NFI and the NNFI. On the other hand, Kline (2005) argues strongly about which fit indices to report and advocates the use of Chi-Square test, the RMSEA, the CFI and the SRMR. Indeed, over the years, more fit indices have been used to report SEM, as such, when deciding on the particular indice to report and on, the consideration on the most frequent used, it is important to select the indices that well reveal the concept of the model (Garrido *et al*., 2016; Hooper *et al*., 2008).

However, there are no golden rules for assessment of model fit, thus, reporting varieties of indices is healthier to enhance acceptability of the model (Henseler *et al*., 2015; Hooper *et al*., 2008). For the purpose of this study, Chi-square, Adjusted Goodness-of-Fit statistic (AGFI), Comparative Fit Index (CFI), Standardised Root Mean Square Residual (SRMR) and Root mean square Error of Approximation (RMSEA) were reported in this study as they are absolute fit indices that conveyed significant concept of the SEM in this study.

Chi-square

Chi-square is the traditional measure used to evaluate the overall model fit, it also helps in assessing the level of discrepancy between the fitted covariance matrix and the sample (Shi *et al*., 2018; Test, 2015; Hu & Bentler, 1999). Thus, a good model fit will provide an insignificant result of p-value > 0.05 (Rogers & Kifer, 2017; Hooper *et al*., 2008; Barrett, 2007). Going by the commonly used standard, a chi-square value that is insignificant (p-value > 0.05) was obtained in this study. However, there are several criticisms about chi-square fit statistics as to which value obtained from SEM should be used to reject or accept the model (McIntosh, 2006).

Adjusted Goodness-of-Fit statistic (AGFI)

AGFI is an adjustment to GFI based upon a degree of freedom that comes with more saturated model reducing fit (Tabachnick & Fidell, 2007). It is an alternative to chi-square test. It computes the share of variance that is accounted for by the estimated population covariance (Yuan *et al*., 2016; Tabachnick & Fidell, 2007). Although AGFI tends to increase in value with the size of the sample, the value ranges between 0 and 1. Thus, when AGFI is up to 0.90 but not above 1.0, it is accepted as a good fitted model (Hooper *et al*., 2008). Accordingly, the AGFI of this study obtained a value of 0.95, indicating a well fitted model.

Comparative Fit Index (CFI)

CFI was created from the work of Bentler (1990), a reviewed form of NFI that takes into account, the sample size used in the study (Tabachnick & Fidell, 2007; Byrne, 1998). The concept of CFI assumes that latent variables are uncorrelated and compares the sample covariance matrix with the null model (Mahler, 2016; Lai and Yoon, 2015). As such, the value of CFI ranges between 0.0 and 1.0, with value closer to 1.0 indicating a good fitted model (Lai & Yoon, 2015; Hooper *et al*., 2008). Thus, the model in this study obtained a CFI value of 0.94, which is in line with the standard good fit model.

Standardised Root Mean Square Residual (SRMR)

SRMR is the square root of the variance between the residual sample covariance matrix and the hypothesised covariance model (Kline, 2005). Thus, the standardised value ranges between 0.0 and 1.0, although the value of SRMR that falls within the threshold of 0.05 indicates a well fitted model (Diamantopoulos & Siguaw, 2000; Byrne, 1998). The model in this study revealed a SRMR value of 0.03, indicating an accepted model by SRMR standard.

Root mean square Error of Approximation (RMSEA)

RMSEA reveals how good the model, with unknown but optimally chosen parameter scale would fit the populations covariance matrix (Kaplan, 2000; Byrne, 1998). In most recent studies, RMSEA has been regarded as one of the most fundamental fit indices (Diamantopoulos & Siguaw, 2000). In essence, the value of RMSEA that falls between 0.08 and 0.10, provides a mediocre fit and below 0.08 shows a good fit (Steiger, 2007; MacCallum *et al*, 1996). Thus, a value of 0.02 of RMSEA was obtained in this study. Although the value of 0.02 falls below the upper bound of RMSEA, Hooper *et al*. (2008)

advocate that a model with lower limit of 0.0 and upper limit of less than 0.08 should be accepted as well-fitted.

5.7 PRESENTATION OF RESULTS

This section of the study presents the results from the data analysis and a discussion of the results. The discussion is based on the objectives of the study and how they contributed in proffering solutions to the problem statement as well as the research questions. Thus, to present the results of this study, the objectives and the research questions are hereby revisited.

The primary objective of this study was to identify financial literacy variables and ascertain their statistical significant impact on household savings behaviour among South Africans. The primary objective of the study was examined through the secondary objectives which were to:

a. Identify the financial literacy variables under the financial literacy domain that have a statistical significant impact on household savings behaviour;

b. Ascertain the level of financial literacy among South African households, using the four financial literacy core domains (financial control, financial planning, financial product choice and financial knowledge and understanding); and

c. Establish a statistical significant relationship between financial literacy and household savings behaviour of South Africans.

The primary research question sought to address the financial literacy variables that have as statistical significant impact on household savings behaviour of South African. The primary research question was addressed through the following secondary research questions as follows:

a. What are the variables of financial literacy that have a statistical significant impact on the savings behaviour of households in South Africa?

b. What is the level of financial literacy among households in South Africa? and

c. Is there any statistical significant relationship between financial literacy variables and savings behaviour of households in South Africa?

Recent studies (Petrie *et al*., 2018; Lusardi *et al*., 2017; Refera *et al*., 2016; Klapper *et al.,* 2015; Lusardi & Mitchell, 2014; Jonubi & Abad, 2013; Struwig & Plaatjes, 2013; Atkinson & Messy, 2012; Roberts *et al.,* 2014; Roberts *et al*., 2012; Van Rooij *et al.,* 2012; Lusardi, 2008) have ascertained that financial literacy is a core determinant of household savings behaviour. Also, Refera *et al*. (2016); Klapper *et.al.* (2015); Lusardi and Mitchell (2014); Roberts *et al.* (2014) and Roberts *et al*. (2012) emphasize on the four core domains used in measuring the level of financial literacy among individuals. Thus, micro-variables were extracted in this study under these four core domains to test their statistical relationships with the savings behaviour of households in South Africa.

However, the set of variables used in this study was grouped into dependent and independent variables. As such, it is important to revisit the proposed model of this study, which would act as a guide towards productive interpretation of the results of the study. In essence, a proposed model (tentative) provides a logical structure that used in revealing the concept and planning of the study. For the purpose of this study, the model, as illustrated in Figure 5.8, presents the set of variables and their logical quantitative relationship between the dependent and independent variables.

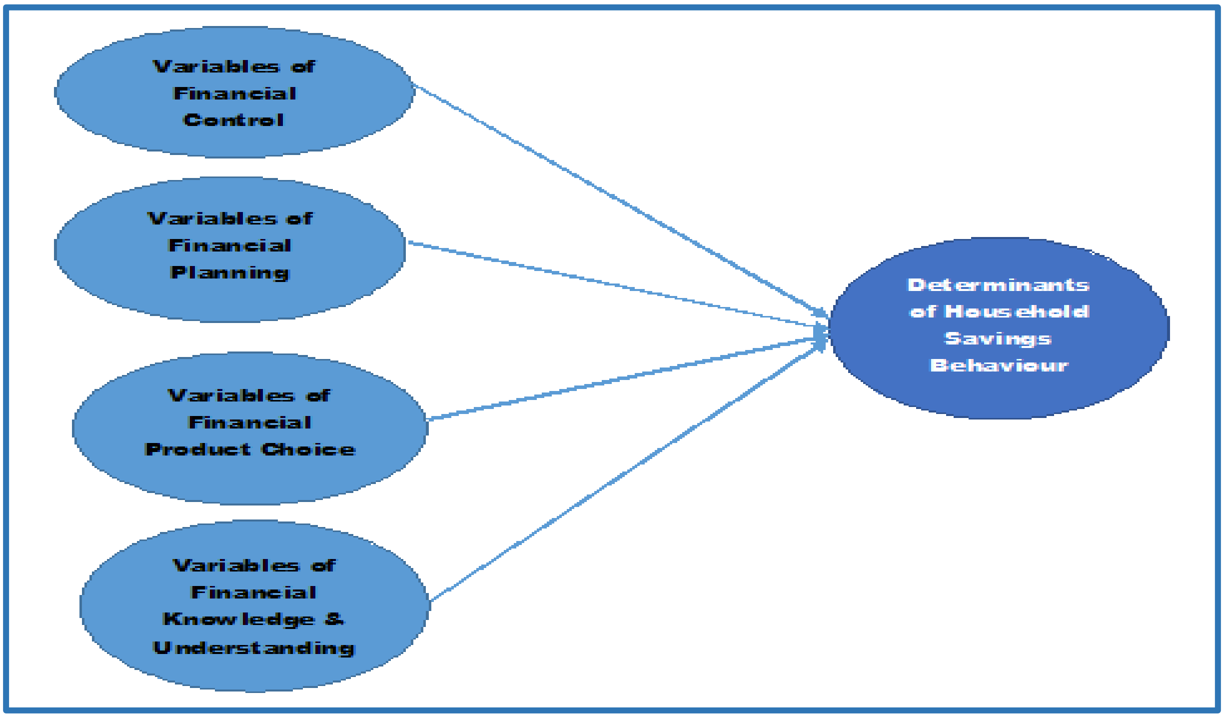


Figure 5.8: Proposed model of relationship between financial literacy variables and variables of household savings behaviour

The model in Figure 5.8 reveals the logical direction and relationship between financial literacy variables and those of household savings behaviour. Accordingly, the proposed model represents the idea of the researcher, used as a mechanism to present the logical concept of the study. Although the structural equation model in Figure 5.7 was used to ascertain the statistical relationships between these variables, the results are presented based on the findings from the SEM.

5.7.1 RESEARCH OBJECTIVE ONE

The first research objective sought to identify the financial literacy variables under the financial literacy domain that have a statistical significant impact on household savings behaviour among South Africans. Financial literacy variables were thus considered under four constructs as informed by previous literature, thus, the results of this study are discussed independently from these constructs.

5.7.1.1 PERSONAL KNOWLEDGE OF FINANCIAL CONTROL

According to Petrie *et al*. (2018), Lusardi and Mitchell (2014), Roberts *et al.* (2014) and Roberts *et al*. (2012), financial control includes individual responsibilities with regard to their day-to-day money management, as whether they have a financial budget, stick to the budget, make provision for savings from their income and how they monitor their spending to avoid spending above their budget. In addition, financial control involves how individuals make ends meet and their attitudes towards managing available money with them. Thus, microeconomics variables were formed under this financial literacy construct to statistically test how they influence household savings behaviour. Accordingly, these variables were extracted to design a questionnaire to ascertain the statistical relationship with savings behaviour of South African households.

Consequently, responses were captured as detailed in Section 5.2.2 of this study and, thereafter, were treated as independent variables in the SEM. Indeed, the proposed model in section 4.13 of this study was revisited to test how these variables impact on savings behaviour of households in South Africa. However, a pre-selection of variables that have a statistical significant relationship with the dependent variable was performed as well as a confirmatory factor analysis to verify the factor structure of the observed variables. Consequently, the standardised result from the path list revealed variables under financial control construct that have a statistical significant relationship (p-value < 0.05) with the dependent variable.

Accordingly, the SEM shows that financial control variables such as the knowledge of one accepting that careful consideration whether they can afford something or not before they buy (B3), has a positive statistical significant relationship with their savings behaviour, as they are likely to increase their monthly savings if tax on savings is favourable (F3). Also, the variable that deals with the ability to set long-term financial goals and working hard to achieve them (B6), had a positive statistical significant relationship with their savings behaviour as they are likely to increase their monthly savings if monthly disposable income increases (F1). Accordingly, the variable that deals with the knowledge to pay bills on time to avoid extra charges (B7), also had a positive statistical significant relationship with their savings behaviour as they are likely to increase their monthly savings if real interest rate on savings increases (F2). Hence, it was empirically ascertained that variables under the construct of financial control, thus, have a positive statistical significant relationship with household savings behaviour as identified by previous studies. In essence, it means that the more knowledgeable people are in personal financial control, the more they are likely to save.

5.7.1.2 PERSONAL KNOWLEDGE OF FINANCIAL PLANNING

According to Kocaaga *et al.* (2018), Anderson *et al*. (2017), Shah (2017), Lusardi and Mitchell (2014), Roberts *et al.* (2014) and Roberts *et al*. (2012), knowledge of personal financial planning is a personal financial responsibility that involves ascertaining one's financial situation, structuring financial goals, ascertaining the alternative course of action, evaluating the alternatives, implementing financial plans and, subsequently, revisiting the ongoing implemented plans by monitoring. Thus, in the quest of identifying financial literacy variables that impact on household savings behaviour and how much statistical significant they have with household savings behaviour, microeconomics variables under financial planning construct were extracted to design a questionnaire to ascertain this relationship with savings behaviour of South African households.

In essence, responses were obtained from the questionnaires as presented in Section 5.2.3 of this study and, thereafter, were treated as independent variables in the SEM.

Thereafter, the proposed model in this study was tested to ascertain how these variables impact on the savings behaviour of households in South Africa. Accordingly, a pre-selection of the variables that had a statistical significant relationship with the dependent variable (household savings behaviour) was performed as well as a confirmatory factor analysis to verify the factor structure of the observed variables. Consequently, the path list identified variables under personal knowledge of financial planning construct that had statistical significant relationship (p-value < 0.05) with the dependent variable.

Accordingly, the SEM shows that financial planning variables that deal with the knowledge to save money for long-term and how it can help them cover for future household consumption (C2), has a positive statistical significant relationship with savings behaviour, as they are likely to increase their monthly savings if real interest rate on savings increases (F2). Also, the same variable that deals with the knowledge to save money for long-term and how it can help them cover for future household consumption (C2), has a positive statistical significant relationship with savings behaviour, as they are likely to increase monthly savings if there are less uncertainties on savings and investment (F4). Thus, the variable that deals with the knowledge of cutting down on spending can help meet future financial needs (C8), also have a positive statistical significant relationship with savings behaviour as they are likely to increase monthly savings if real interest rate on savings increases (F2).

Furthermore, the SEM also revealed that the variable that deals with one’s knowledge about refusing to sell personal property can help one to cover for future household needs (C9) also have a positive statistical significant relationship with savings behaviour as they are likely to increase monthly savings if tax on savings is favourable (F3). Thus, with the above findings, it is ascertained that variables under the construct of personal knowledge of financial planning, have a positive statistical significant relationship with household savings behaviour as revealed by previous studies. Indeed, it means that the more knowledgeable people plan for their financial well-being, the more they are likely to save.

5.7.1.3 PERSONAL KNOWLEDGE TO CHOOSE FINANCIAL PRODUCTS

According to Chu *et al*. (2017), Lusardi *et al*. (2017), Kirui *et al*. (2014), Lusardi and Mitchell (2014), Roberts *et al.* (2014) and Roberts *et al*. (2012), personal knowledge to choose financial products involves the ability of an individual to make a critical selection and investment in financial products that is in favour of their future financial well-being. Thus, microeconomics variables were formed under this financial literacy construct to statistically test how they influence household savings behaviour. These variables were extracted to design the questionnaire to ascertain the statistical relationship with savings behaviour of South African households.

Consequently, responses were captured as outlined in Section 5.2.4 of this study and, thereafter, were treated as independent variables in the SEM. Indeed, the proposed model in Section 4.13 of this study was tested to ascertain how these variables impact on the savings behaviour of households in South Africa. However, a pre-selection of the variables that had a statistical significant relationship with the dependent variable was performed as well as a confirmatory factor analysis to verify the factor structure of the observed variables. Thus, the standardised result from the path list provides variables under personal knowledge to choose financial products construct that have a statistical significant relationship (p-value < 0.05) with the dependent variable.

The SEM shows that personal knowledge to choose financial products variables such as the lesser number of investment or savings products that one has heard of (D3), has a negative statistical significant relationship with savings behaviour, as they are likely to increase their monthly savings if their monthly income is increased (F1). Also, the variable that deals with the lesser number of insurance products that one makes use of (D5), had a negative statistical significant relationship with savings behaviour, as they are likely to increase their monthly savings if tax on savings was favourable (F3). Thus, the variable that deals with the lesser number of insurance products that one makes use of (D5), also had a negative statistical significant relationship with savings behaviour, as they are likely to increase monthly savings if there are less uncertainties on savings and investment (F4). Hence, it was empirically ascertained that variables under the construct of personal knowledge to choose financial product, thus, have a more negative statistical significant relationship with household savings behaviour. In essence, it means that the more people know more and make use of financial products, the less they are likely to save.

5.7.1.4 HOUSEHOLD FINANCIAL KNOWLEDGE AND UNDERSTANDING

According to Kocaaga *et al.* (2018), Petrie *et al*. (2018), Chu *et al*. (2017), Lusardi *et al*. (2017), Kirui *et al*. (2014), Lusardi and Mitchell (2014), Roberts *et al.* (2014) and Roberts *et al*. (2012), financial knowledge and understanding involves an individual level of familiarities with basic numeracy and financial concepts as follows: effects of inflation; interest paid on loans; interest on deposits; compound interest; risk of high return investments; effects of inflation on the cost of living; and risk diversification. Thus, microeconomics variables were formed under this financial literacy construct to statistically test how they influence household savings behaviour. Accordingly, these variables were extracted to design a questionnaire to ascertain the statistical relationship with savings behaviour of South African households.

Accordingly, responses were captured as outlined in Section 5.2.5 of this study and, thereafter, were treated as independent variables in the SEM. Indeed, the proposed model in Section 4.13 of this study was revisited to test how these variables impact on the savings behaviour of households in South Africa. However, a pre-selection of variables that have a statistical significant relationship with the dependent variable was performed as well as a confirmatory factor analysis to verify the factor structure of the observed variables. Consequently, the standardised result from the path list revealed variables under household knowledge and understanding of financial concept construct that had a statistical significant relationship (p-value < 0.05) with the dependent variable.

Thus, the SEM revealed that household knowledge and understanding of financial concepts variables such as knowledge of one accepting that diversifying investments among different assets, decreases the risk of losing money (E6) has a positive statistical significant relationship with savings behaviour, as they are likely to increase their monthly savings if their monthly income increases (F1) and if tax on savings is favourable (F3). Also, the variable that deals with one's knowledge to or not to invest during inflationary period (E2), has a positive statistical significant relationship with savings behaviour as they are likely to increase their monthly savings if tax on savings is favourable (F3) and if real interest rate on savings increases (F2). Accordingly, the variable that deals with knowledge to calculate real interest rate (E7), also had a positive statistical significant relationship with savings behaviour as they are likely to increase monthly savings if there are less uncertainties on savings and investment (F4).

Variables that deal with the knowledge of identifying the potentials in investing in real estate (E8), had a positive statistical significant relationship with savings behaviour as they are likely to increase monthly savings if there are less uncertainties on savings and investment (F4). Again, the variable on the knowledge to compare available credit options when buying on instalments (E5), had a positive statistical significant relationship with savings behaviour as they are likely to increase monthly savings if there are less uncertainties on savings and investment (F4). Finally, the variable on the knowledge on investing in a mutual fund with a guaranteed interest rate (E4), thus had a positive statistical significant relationship with savings behaviour as they are likely to increase monthly savings if they spend less money on immediate consumption (F5). Thus, with the above results, it is ascertained that variables under the construct of personal knowledge and understanding thus, had a positive statistical significant relationship with household savings behaviour as revealed by previous studies. Indeed, it is an indication that the more knowledgeable households are about financial concepts, the more they are likely to save.

5.7.2 RESEARCH OBJECTIVE TWO

The second research objective of this study sought to ascertain the level of financial literacy among South African households, using the four financial literacy core domains (financial control, financial planning, financial product choice and financial knowledge and understanding). Thus, micro-economic variables were formed under these four constructs in a structure that "agree and completely agree" options in the questionnaire represented the positive responses that indicated a fair level of financial literacy knowledge as supported by previous studies.

Thus, the results of this study are discussed with the use of cluster analysis, which were used to identify the group cluster of respondents. Indeed, cluster analysis is a multivariate process of analysis that aims at classifying a sample of subjects (or items) on the basis of a set of measured variables into a number of different segments such that similar subjects are placed in the same segment (Ahlqvist *et al.,* 2018). Thus, Figure 5.8 presents the cluster analysis.

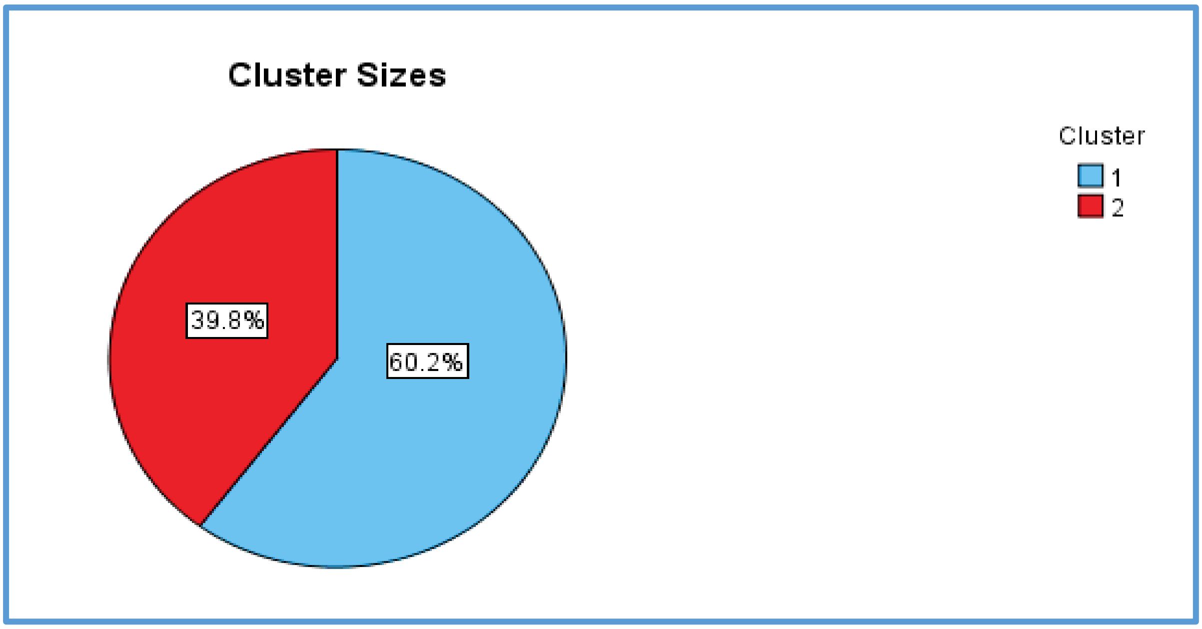


Figure 5.9: Cluster analysis of responses

Figure 5.8 shows that the two-stage cluster analysis derived two clusters with majority of respondents belonging to cluster 1 (60.2%), while only 39.8% belonged to cluster 2. Accordingly, the statistical segmentation that was grouped into cluster 1 comprised respondents with "Agree" responses to the items, while cluster 2 comprised respondents with "Completely Agree" responses with the items in the chart. In essence, these items were used in measuring the level of personal knowledge of financial control, personal knowledge of financial planning, knowledge to choose financial products, and personal knowledge and understanding of financial concepts.

Consequently, both clusters depict the agreement (agree to completely agree) and not disagreement (disagree to completely disagree) and this is because a negligibly small percentage of respondents were in disagreement (disagree to completely disagree) with these items. Furthermore, Figure 5.9 shows the relationship between demographic variables of respondents and items measuring their personal knowledge of financial control, personal knowledge of financial planning, knowledge to choose financial products, and personal knowledge and understanding of financial concepts.

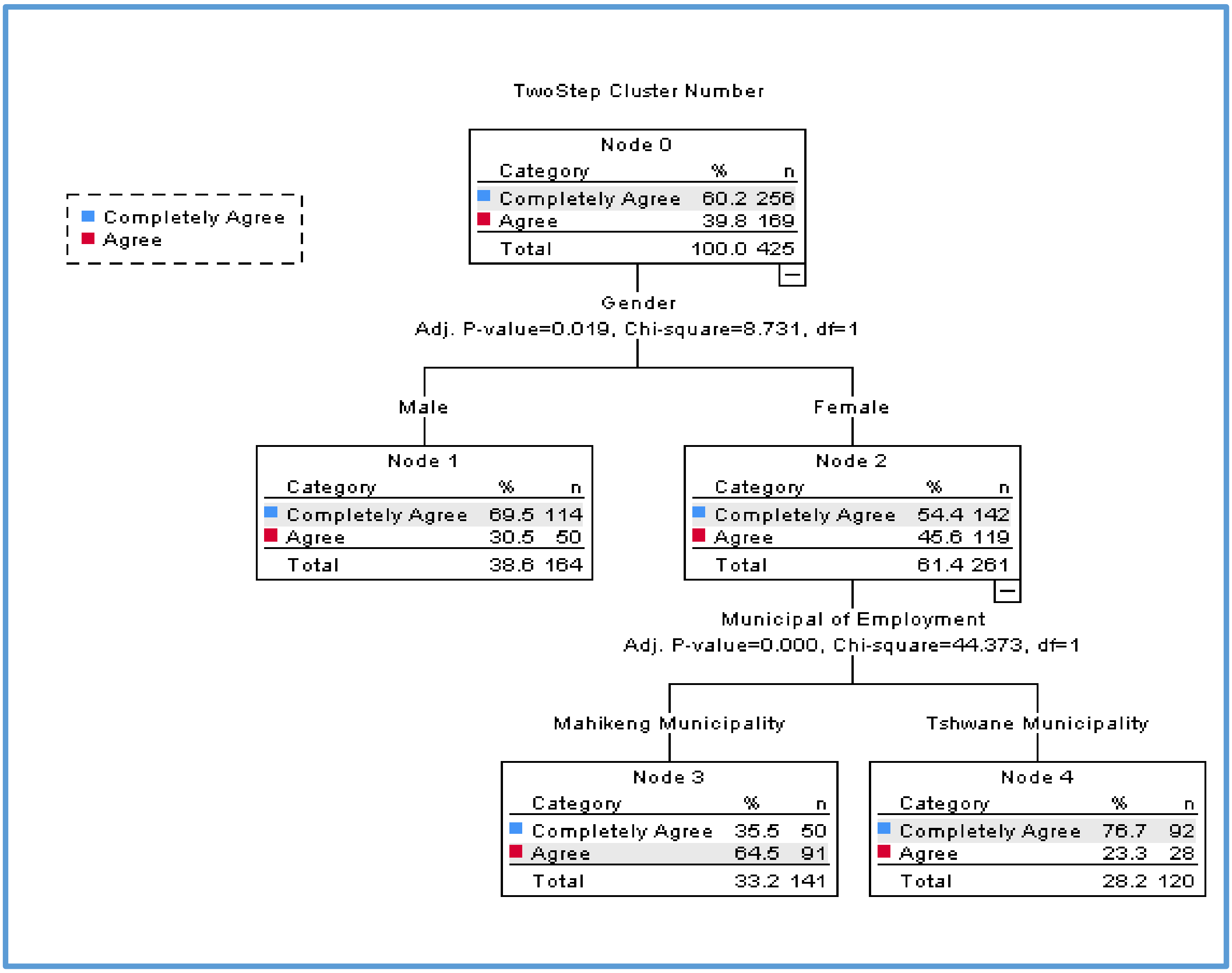


Figure 5.10: Relationship between demographic variables and responses of respondents

Figure 5.9 shows that only gender and municipality of employment were significantly associated with the odds of respondents belonging to either of the two clusters. The Figure further shows that male respondents were more likely to belong to the "completely agree" cluster (69.5%) than their female counterparts (54.4%). In addition, respondents from Mahikeng Local Municipality were more likely to belong to the "Agree" cluster (64.5%) compared to those from Tshwane Municipality, as 76.7% of respondents belonged to the "completely agree" cluster. Thus, the level of "agree" to "completely agree" responses in the study shows that respondents had a fair knowledge of financial literacy as revealed from the findings by Klapper *et al.,* (2015). Considering the fact that questions were structured in a manner that "agree to completely agree" responses stood for positive responses to a fair level of financial literacy, it was established from the analysis of responses that South African households have a good grasp of financial literacy.

5.7.3 RESEARCH OBJECTIVE THREE

The third research objective of this study sought to establish a statistical significant relationship between financial literacy and savings behaviour of households in South Africa. The findings from previous studies revealed that financial literacy (independent variable) plays a positive role in enhancing household savings behaviour (dependent variable). Although some independent variables did not have any statistical relationship with the dependent variable, the independent variables (financial literacy) that had a statistical significant relationship with the dependent variable (household savings behaviour) were identified in this study. Indeed, standardised result from the Path list (Table 5.4) clearly outlined the path coefficients that were significant (p-value < 0.05) with the dependent variable.

Thus, confirmatory factor analysis was employed to verify and confirm factors that were found to be significant with household savings behaviour. These variables were included in the SEM. Thus, the SEM revealed the statistical significant relationship, where variables under financial literacy positively correlated with those that measure household savings behaviour. Although variables under the domain of financial products choice were found to have a negative statistical relationship with those that measure household savings behaviour, the logical interpretation of the negative relationship between financial product choice and household savings behaviour, is an indication that the more individuals know about a financial product and make use of it the lesser they are likely to save. In essence, these financial products include but not limited to credit and loan products, savings and investment, banking and insurance products. Thus, Figure 5.10 presents a summary of the nature of statistical relationship between financial literacy variables and those of household savings behaviour.

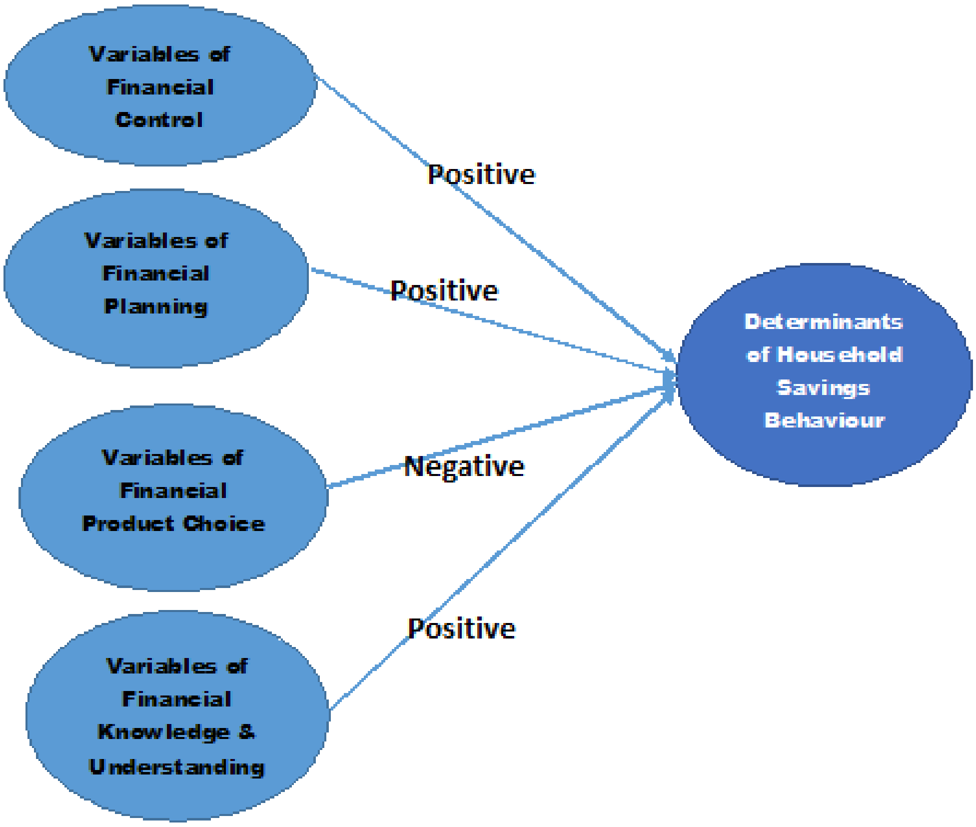


Figure 5.11: Nature of statistical relationship between financial literacy variables and variables of household savings behaviour

Accordingly, the statistical results of this study have succeeded in revealing empirical logic regarding the impact of financial literacy on household savings behaviour. However, in testing the proposed model, the standard model fit indices (AGFI, CFI, SRMR and RMSEA) confirmed that the model fits the data well since all the mentioned indices fell within the standard threshold. Hence, the results of this study empirically establish that financial literacy have more of a positive statistical significant relationship with household savings behaviour. As such, the results are a contribution to the body of knowledge as discussed below.

5.8 CONTRIBUTION TO THE BODY OF KNOWLEDGE

The contribution of this study is based on the results obtained from data analysis. Indeed, the main purpose of research is to fill a gap in the body of knowledge that has not been explored before. One of the main reasons for identifying financial literacy variables that impact on household savings behaviour was to proffer academic contribution that could be used to improve on savings campaigns and initiatives in

South Africa. In essence, the savings campaign programme in South Africa has been on an awareness basis and lacks significant academic impact. Thus, it is important at this point to revisit the research gap identified in this study, so as to evaluate how the study fits into the body of knowledge.

Previous scholars have conducted studies on financial literacy as well as identified variables and their economic importance to household to make proper financial decisions. Furthermore, studies have also been conducted on the determinants of household savings behaviour as well as the logical relationship between financial literacy and household savings behaviour. However, from the previous works reviewed in this study, it is ascertained that to improve household savings behaviour using financial literacy, both the knowledge of financial and savings variables have to be incorporated. Thus, the incorporation of both financial and savings variables informs savings literacy, which represents the interface between financial literacy and household savings behaviour, thereby filling the gap in research that has generated into a challenge as identified in this study. As such, Figure 5.11 shows the resolved logic in the research gap, which this study has succeeded to fill.

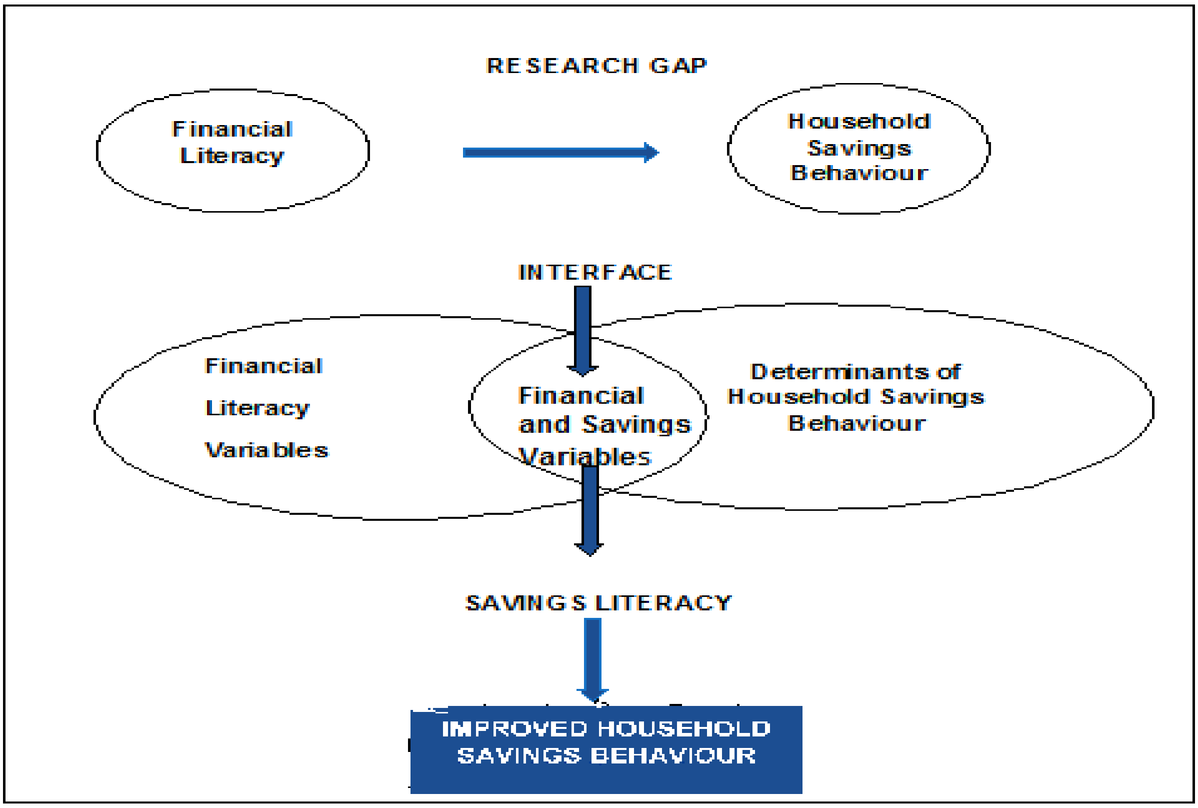


Figure 5.12: Resolved gap in the literature between financial literacy and household savings behaviour

A comparison between Figures 5.11 and 2.4 (Chapter Two of this study) shows a logical situation where financial and savings variables form the basis of savings literacy to improve household savings behaviour. Thus, in the quest to improve household savings behaviour, the researcher has empirically identified financial literacy variables that enhance the savings knowledge of this set of individuals (South African households) who fall within the sample considered in this study. Thus, the results from the SEM helped in revealing the set of variables that had a positive statistical significant relationship with household savings behaviour.

This set of variables was used in this study to build a proposed practical savings literacy guideline for households in South Africa. Thus, Table 5.5 presents the knowledge-based savings literacy module that has a significant academic impact on household savings behaviour using savings campaigns and initiatives in South Africa.

Table 5.5: Savings literacy module for households in South Africa

Theme: financial and savings literacy Financial literacy involves the ability of an individual to read, analyse, manage and communicate about financial terms and concepts that affect material well-being, while savings literacy incorporates knowledge of financial literacy to properly manage one's disposable income to provide for savings, investment and other economic policies that can enhance one's future financial well-being.		
1	**Topic description**	**Evaluation of purchase alternatives** It involves careful consideration whether one can afford an item or not before buying.
	Learning objectives	To equip households with the knowledge to evaluate the affordability of different substitute items before they buy.
	Learning outcome	Households will be able to carefully consider whether they can afford an item or not before they buy it.
2	**Topic description**	**Discipline towards long-term financial goals** It deals with the ability to set long-term financial goals and working hard to achieve them.
	Learning objectives	To help households identify the necessity to set long-term financial goals and working hard to achieve them.
	Learning outcome	Households will be able to identify the knowledge, ability and reason to set long-term financial goals and working hard to achieve them.

3	**Topic description**	**Prompt bills payment** It involves the knowledge and understanding to pay household bills as they fall due.
	Learning objectives	To reveal the benefits of prompt payment of bills as at when due to households.
	Learning outcome	Households will be able to pay their bills as at when due to avoid extra charges and other defaulting consequences.
4	**Topic description**	**Long-term savings plan** It involves savings planned to cover for a long period of time, say five years and above.
	Learning objectives	To identify and evaluate the potentials in saving for a long period of time.
	Learning outcome	Households will be able to identify the right long-term savings package as well as taking advantage of them.
5	**Topic description**	**Cutting down on spending** It involves structuring one's expense plan to avoid over spending.
	Learning objectives	To ensure that households can structure their expense plan in order to meet their financial needs.
	Learning outcome	Households will be able to plan their spending within their budget.
6	**Topic description**	**Acquisition of personal property** It is the process of owning personal properties that appreciate over time.
	Learning objectives	To enhance the knowledge of households on the acquisition of personal properties and their benefits.
	Learning outcome	Households will be able to identify the reason to acquire and retain personal properties for a period of time and also for a possible appreciation.
7	**Topic description**	**Knowledge of savings during inflation** It deals with personal knowledge and understanding to save or not to save during inflation.
	Learning objectives	To enhance the knowledge of households on the right time to save and also to take advantage of low inflationary period.

	Learning outcome	Households will be able to identify the right time to save in an unstable economic situation.
8	**Topic description**	**Savings and investment with a guaranteed interest rate** It is a savings package that has stable and agreed rate of interest.
	Learning objectives	To enlighten the knowledge of households on the conditions involved in the returns on savings and investment.
	Learning outcome	Households will be able to identify the right savings and investment packages with regard to the conditions of their returns.
9	**Topic description**	**Evaluation of credit purchase** In involves careful analysis of purchases in credit as well as the mode of instalment payment.
	Learning objectives	To equip households with the right knowledge to evaluate and analyse credit purchase alternatives.
	Learning outcome	Households will be able to evaluate credit alternatives and make right credit purchase decisions.
10	**Topic description**	**Investment diversification** It is basically a way of investing in more than one investment package.
	Learning objectives	To enhance the knowledge of households on investment diversification.
	Learning outcome	Households will understand the potential in investing in more than one investment package.
11	**Topic description**	**Knowledge of real interest rate** It involves the knowledge and understanding of both numerical and, in theory, the interest returns on savings.
	Learning objectives	To improve understanding of households on how to identify and compute interest rate on savings.
	Learning outcome	Households will be able to identify the right interest rate on savings and also compute the rate of returns.
12	**Topic description**	**Investment in real estate** It involves the process of spending in landed properties.

	Learning objectives	To provide basic knowledge on investment in real estate.
	Learning outcome	Households will be able to ascertain the potentials in investing in real estate.

Table 5.6 provides a layout of sub-topics under savings literacy formed from variables that had a positive relationship with household savings behaviour. Thus, it is believed that by incorporating an academic module into South Africa's savings programmes and campaigns, a positive outcome with regard to household financial and savings knowledge could be improved as well as boosting their savings behaviour.

5.9 SUMMARY OF CHAPTER

The main objective of this chapter was to provide the statistical analysis of data in this study as well as the discussion of results. To begin with, the chapter provided the descriptive analysis and discussion of responses on the demographic characteristics of respondents and their responses to the questions asked under the five different constructs. The SEM was introduced as a statistical tool used in ascertaining the characteristics of the relationships of variables. The correlation and path coefficient analysis were performed since they are follow-up statistical tools to identify variables that have statistical significant relationships between the items used in the study. However, the relationship between the variables produced the SEM, which was properly validated with the proper model fit indices.

Thus, the results of the study were presented based on the objectives of the study and how they were able to provide solutions to the problem under investigation as well as providing answers to the research questions. However, the proposed model was revisited to guide towards productive interpretation of research results and to also reveal the logical direction and relationship between financial literacy variables and variables of household savings behaviour. Thus, the presentation of the research results highlighted the contribution of the study to the body of knowledge. Hence, the resolved logic in the research gap was presented as the incorporation of financial and savings variables into savings literacy recommended for use in order to improve household savings behaviour. The next chapter focuses on the conclusion, summary and recommendations.

CHAPTER SIX

CONCLUSION, SUMMARY AND RECOMMENDATIONS

6.1 INTRODUCTION

The aim of this study was to examine the relationship between financial literacy and household savings behaviour, using two municipalities in South Africa (City of Tshwane and Mahikeng). The emphasis was on identifying financial literacy micro-variables that have a statistical significant impact on household savings behaviour. Thus, studies on the relationships between financial literacy and household savings behaviour by previous scholars were reviewed evaluated and financial literacy identified as a core determinant of household savings behaviour. Accordingly, the variables of financial literacy were identified and used as independent variables to test their statistical impact on household savings behaviour. Financial literacy variables that were statistically identified to have a significant impact on household savings behaviour were recommended for incorporation into financial and savings literacy to improve household savings behaviour.

6.2 CONCLUSION ON THE KEY FINDINGS

This section of the study provides, in a nutshell, the conclusion on the key findings of the study, and an empirical grounding to support the problem statement investigated in this study. Thus, the key findings of this study are as follows:

a. Previous literature provided a positive theoretical argument on the positive impact of financial literacy variables on household savings behaviour;

b. Financial literacy variables that have a statistical significant relationship with household savings behaviour were identified in this study using uniform statistical tools;

c. Savings literacy was ascertained to be the way forward to improve household savings behaviour with the incorporation of both financial and savings variables;

d. Household knowledge and usage of financial products was found to have negative relationship with household savings behaviour, as it was ascertained that the more households are aware and make use of financial products, the less they are likely to save;

e. There were no significant differences in the level of financial literacy between employees in the City of Tshwane (urban sample) and Mahikeng Local Municipality (rural sample); and

f. Finally, there were no significant differences in the level of financial literacy between the different genders. Although the cluster analysis revealed that female participants belonged more to the “completely agree segment” compared to male, going by the scale of analysis, both gender were found to have a good grasp of financial literacy.

6.3 RECOMMENDATIONS

Taking into consideration the credit economic system in South Africa were individuals are left to make their economic choices, it is important to ascertain how much financial illiteracy lead individuals into a costly economic behaviour and outright financial mistakes. It was argued that there is substantial evidence that more financially savvy people are more likely to plan, save, invest in stocks, and accumulate more wealth. Perhaps financial and savings literate individuals also have been identifying to be less likely to have credit card debt, and when they do borrow, they manage loans better, paying off the full amount each month rather than just the minimum due.

The researcher was able to ascertain financial literacy variables that impact on household savings behaviour. The results of this study provide an explanation of the relationship patterns that exist between financial literacy and the savings behaviour of households in South Africa. Thus, financial literacy was tested empirically in this study and it was ascertained that it impacts on household savings behaviour. Accordingly, the synergy between financial literacy variables and those of household savings behaviour was also been identified in this study to produce an improved household savings behaviour. Indeed, financial literacy improves one’s attitude towards saving, budgeting and planning for future financial balance. As such, the researcher proposes recommendations that have both policy implications and philosophical contributions.

6.3.1 KEY POLICY IMPLICATIONS

Policy implications help in outlining issues that will aid policy makers to make informed decisions. As such, stakeholders involved in financial and savings literacy in South Africa should consider the following recommendations:

a. Financial literacy should be encouraged more in the working environment and in schools to equip people with the right financial knowledge for them to make informed financial decisions.

b. The results revealed financial literacy variables that influence household savings behaviour. As such, these variables should be incorporated into savings campaign programmes and initiatives in South Africa.

c. Savings literacy was identified as the way forward to improving household savings behaviour as it incorporates variables of both financial literacy and savings knowledge.

d. Household savings contributes greatly to economic growth, as such, stakeholders should put more efforts in encouraging households to save.

6.3.2 PHILOSOPHICAL CONTRIBUTIONS

The results of this study revealed some philosophical contributions and outlined an educative mechanism (financial literacy framework) to improve household knowledge with regard to financial literacy and savings knowledge. Thus, the following are recommended to boost the philosophy within this field of study:

a. Financial literacy was conceptualised in this study to improve household savings knowledge.

b. Financial literacy output (financial behaviour, effective choice, financial attitude and financial experience) was identified as mediating factors that enhance savings knowledge.

c. The results of this study provide a structural equation model that confirms the patterns and the statistical significance between financial literacy variables and household savings behaviour.

d. This study has provided the definition and conceptual dimensions of financial literacy and could be used as a guide for future studies.

6.4 LIMITATIONS OF THE STUDY

The study for human knowledge and behaviour is a never-ending process. Financial literacy has a wide scope in the field of study with lots of diverse and, sometimes, complex parts. As such, caution should be exercised when generalizing as some limitations were encountered during the course of the study, from the beginning but not exhaustive and not applicable to other studies and are discussed below.

a. In the quest to have a proper representation of both rural and urban respondents for the study in order to ascertain the differences in the level of financial knowledge, the data was limited to employees of two municipalities in South Africa, namely; City of Tshwane (urban) and Mahikeng (rural).

b. Although there are different determinants of household savings behaviour as identified in the previous studies, however, this study was limited to financial literacy as discussed in the study.

c. This study focused on financial literacy variables, which have to do with knowledge of managing financial resources by individuals to improve their rate of saving.

d. Previous works reviewed in this study included studies carried out within and outside South Africa.

e. The empirical part of this study considered quantitative data from employees of both City of Tshwane and Mafikeng municipalities. Thus, considering the fact that this study data was collected from only two municipalities in South Africa, caution should be exercised when making generalisations.

f. This study focused on ascertaining the statistical significant impact of financial literacy on household savings behaviour.

g. The aim of the study was to propose solutions to long existing challenges of low savings rate among households in South Africa. Thus, the study would contribute as an academic module that could be used to improve household savings behaviour in South Africa.

6.5 SUGGESTION FOR FUTURE STUDIES

Research requires a lot of academic commitment. As such, financial literacy and household savings behaviour incorporates a broad and diverse discipline that does not only enhance making sound financial decisions by individuals but also contributes to the growth of the national economy. In essence, household savings contributes to the growth of GDP, which cushions the economy against external debts. Thus, for the continuous improvement and advancement of the concepts and the results of this study, research could be conducted in following areas in the future:

a. Research could be conducted to ascertain the relationship between the amount of household monthly disposable income and their monthly savings rate;

b. Research could be conducted to empirically ascertain the reason why some individuals save more than others monthly, but earn the same amount of monthly disposable income;

c. Research could also be conducted to ascertain the statistical significant relationship between financial literacy and financial literacy output;

d. Furthermore, research could be conducted to identify the relationship between financial literacy output and variables of savings knowledge; and

e. Research could be conducted to ascertain the statistical relationships between financial literacy and household portfolio management.

6.6 SUMMARY

The first chapter of this study focused on the background to the study, the problem statement, objectives and significance of the study. In essence, this chapter provided a detailed introduction of financial literacy among South Africans compared to other BRICS nations. The need to improve household savings behaviour was identified, thus revealing the lack of alignment between financial literacy variables and household savings behaviour, especially among South Africans. The effect of low savings rate of households in South Africa with regard to GDP was also discussed.

The second chapter of this study focused on the literature review. A detailed and in-depth analysis of global efforts on the campaign of financial literacy was provided by evaluating existing programmes and initiatives and also the historical development of financial literacy around the world and in South Africa. It was revealed that the widespread financial literacy will provide broad social and economic gains as vulnerable individuals can make better financial decisions and possibly increase capital stock as saving rates increases. Savings programmes and initiatives in South

Africa were evaluated, and efforts made by SASI to promote savings culture among South Africans using savings campaign identified. In addition, theoretical approaches to personal savings behaviour were reviewed and evaluated as they inform household savings rate. In essence, previous literature on the benefits of household savings to the saver and the national economy was also reviewed.

However, the review of previous literature within the field of financial literacy and personal savings helped in identifying the gap in the literature as well as suggesting the way forward to improving the savings behaviour of households in South Africa. Thus, this chapter succeeded in revealing the need for financial literacy intervention as it was established that financial literate individuals should be able to make ends meet, keep track of expenses, plan ahead, make choices of appropriate financial products, and to stay informed on economic changes. Chapter three of this study focused on conceptualising financial literacy towards improving household savings behaviour. Although previous scholars have provided different definitions and meaning to financial literacy, after comparisons with different definitions, financial literacy was seen as a never-ending process of being able to read, analyse, manage and write about the personal financial conditions that affect individual wellbeing. As such, the dimension of the meaning of financial literacy and its concepts were revealed and evaluated as they provide the knowledge direction of financial literacy. In addition, the economic importance of financial literacy to households was also reviewed, as financial literacy has been identified from previous studies as a core skill that helps households to make informed financial decisions.

Furthermore, a conceptualised framework of financial literacy was provided in this chapter, as well as the logic on how financial literacy should be used to improve the savings behaviour of households. Although it was identified from previous studies that the knowledge and familiarity of financial literacy variables provide a financial literacy output, which in return, aids and enhances households to make an informed decision to save, the conceptual framework of financial literacy consists of three major components namely; financial literacy variables, financial literacy output and variables of savings knowledge. As such, all these components were analysed as they provide the synergy that enhances household savings behaviour. Thus, financial literacy variables serve as a skill that enhances the ability of households to better allocate financial resources with regard to savings and wealth creation over their lifetime in a world of uncertainty and imperfect insurance.

Chapter four focused on the methodology used in conducting this study. In essence, the introduction of chapter four provided a concept map of the chapter, which gave the direction on how different stages of the method were to be employed in the study. This study is underpinned by post-positivism philosophy, which provided the guideline on how quantitative data was collected. Indeed, this chapter provided the target population of the study, which involved two municipalities in South Africa, namely; City of Tshwane and Mahikeng. Thus, the objective of this chapter was to ensure that proper techniques are employed and used judiciously to achieve the objective of the study as well as to provide a solution to the problem statement. In order to ascertain the statistical impact of financial literacy on household savings behaviour, chapter five provided the statistical analysis of the quantitative data collected as well as the discussion and presentation of results.

The chapter also provided the descriptive analysis and discussion of results, which included the demographic characteristics of respondents and responses to questions that addressed the five different constructs. Correlation analysis and path coefficient analysis were used as statistical tools to identify variables that have a statistical significant relationship with the dependent and independent variables. However, confirmatory factor analysis was performed through structural equation modelling, thus helping in establishing the relationship between financial literacy variables and household savings behaviour. Thus, the SEM was properly validated with proper model fit indices that convey the concepts of the model. Hence, the researcher succeeded in statistically establishing the relationship between financial literacy and household savings behaviour.

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APPENDICES

PhD: RESEARCH QUESTIONNAIRE

FOR OFFICE USE ONLY: Respondent Code:

STRUCTURAL GUIDELINE INTERFACING FINANCIAL LITERACY AND SAVINGS BEHAVIOUR OF SOUTH AFRICAN HOUSEHOLDS: A STUDY OF TSHWANE AND MAHIKENG MUNICIPAL EMPLOYEES.

Note to the respondent

I need you to help me ascertain the effect of financial literacy variables on individual savings behaviour. Nowadays, financial literacy has been identified as an essential survival tool because of the fact that lack of financial knowledge leads to poor financial choices and decisions, which could result in undesired financial and economic consequences to individual, financial system and entire economy.

The main objective of this research;

To identify financial literacy variables and ascertain their significant effect and association with savings behaviour of South Africans households.

Instruction to complete the questionnaire

- To complete this questionnaire, it will take 5 -10 minutes of your time. Kindly answer the questions as truthfully as you can. There are six sections (Part A – F), please ensure to read and follow the direction for each part.
- I will like to assure you that the information you provide will be used for research purposes only and will be considered as strictly confidential.
- The information that you are providing won't be considered as personal information since, this questionnaire does not require your personal particulars
- You are advised to mark each response by making a tick or a cross, or encircle appropriate response with PEN (Not a pencil).

In case of any question, please do not hesitate to contact me on the bellow contact information.

Thank you for your cooperation and your valuable time in advance.

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Part A **General personal particulars (Biographic Questions)** **Please mark only ONE option per question on this section below.**			
A 1	Gender: □ Male □ Female	A 2	Age Group: □ 18 – 27 □ 28 – 37 □ 38 – 47 □ 48 – 57 □ 58 and above
A 3	Level of Educational Qualification: □ Secondary/Matric/Grade 12 □ Diploma □ University □ Masters □ Doctorate	A 4	Municipal of Employment: □ Tshwane municipality □ Mafikeng municipality
A 5	Monthly Income level: □ Below R20,000 □ R20,001 – R30,000 □ R30,001 – R40,000 □ R40,001 – R50,000 □ R50,001 and above	A 6	Amount of Monthly Savings: □ Below R1000 □ R1001 - R5000 □ R5001 – R1000 □ R10001 – R15000 □ R15001 and above
Part B **Personal knowledge of Financial Control** **This part of the questionnaire deals with the ability and knowledge of individuals towards financial control**			
B 1	I am involved in the day-to-day money management decisions in my household □ Completely agree □ Agree □ Disagree □ Completely disagree	B 2	I adhere to a financial budget for my household expenses □ Completely agree □ Agree □ Disagree □ Completely disagree
B 3	Before I buy something I carefully consider whether I can afford it or not □ Completely agree □ Agree □ Disagree □ Completely disagree	B 4	Keeping close watch on my financial affairs enhance my future financial well-being □ Completely agree □ Agree □ Disagree □ Completely disagree
B 5	Refusing to draw money out of my savings account to meet household needs, can help settle future expenses	B 6	My ability to set long-term financial goals and working hard to achieve them helps me to meet my future financial needs

	□ Completely agree □ Agree □ Disagree □ Completely disagree		□ Completely agree □ Agree □ Disagree □ Completely disagree
B7	I pay my bills on time to avoid extra charges □ Completely agree □ Agree □ Disagree □ Completely disagree	B8	I balance my budget periodically to checkmate my expenses □ Completely agree □ Agree □ Disagree □ Completely disagree
B9	I check my credit card invoices to avoid possible mistakes and debts □ Completely agree □ Agree □ Disagree □ Completely disagree	B10	I ensure proper allocation of my financial resources for future financial well-being □ Completely agree □ Agree □ Disagree □ Completely disagree
Part C **Personal knowledge of financial planning** **This part of the questionnaire focused on personal ability and knowledge to plan for one's financial well-being.**			
C 1	Providing for a rainy day fund, can cover my expenses in case of emergency □ Completely agree □ Agree □ Disagree □ Completely disagree	C 2	Saving money for long term can help me cover for future household consumption □ Completely agree □ Agree □ Disagree □ Completely disagree
C 3	I live for today and also think about how tomorrow will be taken care of □ Completely agree □ Agree □ Disagree □ Completely disagree	C 4	I believe that money is not just there to be spent on just anything □ Completely agree □ Agree □ Disagree □ Completely disagree
C5	Spending less on immediate consumption can increase my savings □ Completely agree □ Agree □ Disagree □ Completely disagree	C6	Refusing to satisfy my household needs on debt can enhance my future financial well-being □ Completely agree □ Agree □ Disagree □ Completely disagree
C7	Savings and investments provide for future financial balance □ Completely agree	C8	Cutting down on spending can help me meet my financial needs □ Completely agree

	□ Agree □ Disagree □ Completely disagree		□ Agree □ Disagree □ Completely disagree
C9	Refusing not to sell my personal property can help me to cover for my future household needs □ Completely agree □ Agree □ Disagree □ Completely disagree	C10	Working overtime for extra cash will help me meet my household needs □ Completely agree □ Agree □ Disagree □ Completely disagree

Part D

Knowledge to Choose Financial Products

This part of the questionnaire deals with the level of individual ability to make choices as regards to financial products.

			5 above	4 - 3	2 - 1	None
Please indicate how many of the following banking products you have **<u>Heard of</u>** and **<u>Make use of</u>**; Mzansi Account, Saving Accounts, Current or Cheque Account, Fixed Deposit Bank Account, ATM Card, Debit Card or Cheque Card, Credit Card, Garage Card or Petrol Card, Post Office/Post Bank Savings Account.	D1	Heard of				
	D2	Make use of				

			5 above	4 - 3	2 - 1	None
Please indicate how many of the following credits and loans products you have **<u>Heard of</u>** and **<u>Make use of</u>**; Loan from a micro-lender, Car finance, Overdraft facility, Lay-bye, Hire purchase, Informal money lender, Loan from Stokvel.	D3	Heard of				
	D4	Make use of				

			5 above	4 - 3	2 - 1	None
Please indicate how many of the following investment and savings products you have **<u>Heard of</u>** and **<u>Make use of</u>**; Unit trusts, Education policy or Plan, Investment or savings policy, Shares on the stock exchange, Retirement annuity, Provident Fund, Pension fund, Stokvel/Umgalelo/Savings club, and Savings at home.	D5	Heard of				
	D6	Make use of				

			5 above	4 - 3	2 - 1	None
Please indicate how many of the following insurance products you have **<u>Heard of</u>** and **<u>Make use of</u>**; Car insurance, Household contents insurance, Homeowners insurance on building/house structure, Cell-phone insurance, Life insurance or Life cover, Insurance that pays your loan or borrowing when you die, Disability Insurance, Medical aid scheme, Hospital cash plan, Funeral policy with a bank, Funeral cover through an undertaker, Funeral policy with an insurance company and Funeral cover from a spaza shop or stokvel.	D7	Heard of				
	D8	Make use of				

Part E Financial Knowledge and Understanding This part of the questionnaire deals with household level of knowledge and understanding of financial concepts.			
E1	Imagine that R10, 000 was given to five friends and they were meant to share the money equally, will each one of them get up to R2, 000? □ Completely agree □ Agree □ Disagree □ Completely disagree	E2	Now imagine that five friends shared R10, 000 equally and keep their share as deposit in the bank for one year and inflation decreases for that period, will they get up to R2, 000 and above each? □ Completely agree □ Agree □ Disagree □ Completely disagree
E3	Suppose you put R1, 000 into a savings account with a guaranteed interest rate of 20% per year, will you have up to R1, 200 at the end of the first year? □ Completely agree □ Agree □ Disagree □ Completely disagree	E4	Suppose you invest R1, 000 into a mutual fund with a guaranteed interest rate of 10% per month, will you have up to R1, 300 at the end of the first third months? □ Completely agree □ Agree □ Disagree □ Completely disagree
E5	Comparing the available credit options when buying on instalments, can enhance future household financial well-being □ Completely agree □ Agree □ Disagree □ Completely disagree	E6	Diversify my investments among different assets, decreases the risk of losing money □ Completely agree □ Agree □ Disagree □ Completely disagree
E7	Imagine you have R100 in the savings account and the real interest rate is 10% a year, after 5 years will you have up to R150 in your savings account? □ Completely agree □ Agree □ Disagree □ Completely disagree	E8	Investment on real estate, can give a high rate of return on a long time period □ Completely agree □ Agree □ Disagree □ Completely disagree
Part F Determinants of household savings behaviour This part of the questionnaire focused on the factors that determines household savings behaviour.			

F1	I will increase my monthly savings if my monthly income is increased □ Completely agree □ Agree □ Disagree □ Completely disagree	F2	If the real interest rate on savings increases, I will like to save more to get more returns □ Completely agree □ Agree □ Disagree □ Completely disagree
F3	I will like to save more if tax on savings is favourable □ Completely agree □ Agree □ Disagree □ Completely disagree	F4	The less uncertainty on savings and investment, the more I will like to save and invest □ Completely agree □ Agree □ Disagree □ Completely disagree
F5	If I spend less money on immediate consumption it will help provide for savings against the future □ Completely agree □ Agree □ Disagree □ Completely disagree	F6	I will spend less and save more if I have a smaller family size □ Completely agree □ Agree □ Disagree □ Completely disagree