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The Mediating Effects of Financial Service Usage on the Relationship between Financial Literacy and Retirement Preparedness in the Cameroon Informal Sector

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ABSTRACT: *The last decade has witnessed significant research interest in the area of financial literacy with specific attention on poverty. However, based on evidence of over 80 papers published since 2014 by the Consultative Group to Assist the Poor, it was revealed that there is no significant comprehensive explanation of how the usage of financial services improves people's financial satisfaction at retirement. To this effect, this study sought to examine the extent to which the usage of both formal and informal financial services affects the retirement preparedness of people engaged in the informal sector of Cameroon. In light of this, the study aimed at justifying the continuous utilization of informal financial services at the expense of formal financial services even when financial service users have access to formal financial services. The study examined individual levels of investment literacy, cash-flow management literacy, credit management literacy, and the usage of formal and informal financial services. The study used the geographical clusters to proportionately select 400 economically active users of financial services from the seven sub-divisions of Yaoundé. Survey data were quantitatively analyzed to test the statistical relationships using the Covariance-Based Structural Equation Model [CB-SEM] with the aid of SPSS and AMOS 24 statistical packages. Findings indicated that the usage of formal financial services and informal financial services hace positive significant statistical effects on retirement preparedness. Also, the study finds that the usage of formal financial services and informal financial services has positive significant mediating effects on financial literacy and retirement preparedness. The study thus proposes the implementation of a dualistiec financial inclusion model that recognizes that both the formal and informal financial services are beneficial in the improvement of individual's retirement preparedness in the informal sector of Cameroon and as well as in the context of developing countries.*

KEYWORDS: Financial literacy, retirement preparedness, usage of formal financial services, and usage of informal financial services.

INTRODUCTION

The low levels of financial literacy and inadequate usage of formal financial services and informal financial services pose challenges to an individual's retirement preparedness in both developed and developing countries. Efforts to step up on retirement preparedness have among others, considered the element of interventions and financial behaviors (Bruggen et al. 2017). The use of financial services is a necessary prerequisite to improved retirement preparedness. However, despite the numerous financial inclusion interventions, the use of formal financial services is relatively low. Evidence points to the prevalent co-existence of informal financial services such as Village Savings and Loan Associations (VSLAs), Rotating savings and credit associations (ROSCAs), Community-based money lenders, Shops, friends, relatives, Burial societies, and the list continues, either as alternatives and or supplements to the formal financial services.

The current study seeks to build a framework for sustainable and happy retirement life. It also establishes whether financial literacy and the utilization of formal financial services and informal financial services will go a long way to enhance retirement preparedness. To strengthen an understanding of the above areas of research interest, this chapter consists of the background of the study, the problem statement, the aim of the study, the objective of the study, the hypotheses, the significance of the study, just to name a few.

Historical background

There have been different attempts over the years by the government of Cameroon to improve the financial situation of its citizens through the provision of various improved financial services. According to (Yunu, 2003) the exploitation of micro-financial institutions is a means to an end and not the end itself. The end is the decrease of persistence and acute poverty from the globe.This takes us to the coming of the African Development Fund in 2005 – 2011 with the Rural Infrastructure and Participatory Development Support Project. The MIDENO scheme was a scheme that was aimed at providing short term loans in-kind and in cash to farmers (FARA, 2006) with the similar Grass Field Participatory and Decentralised Rural Development Project (GP-DERUDEP), which was aimed at providing micro credits to rural farmers (Njimanted, Mbohjim & Dinah, 2015). According to some scholars, all these efforts had little impact on the welfare of participants. Then came the Cameroon cooperative credit unions League as far back as 1963 which was aimed at providing short-term loans to farmers and other petty traders to enhance their retirement preparedness. Micro Finance Institutions (MFIs) in general with Credit Unions being inclusive according to (Akume, & Annicet, 2017) was created to reduce poverty. The Credit Unions have carried out an important role in the rural communities (Hussain, 2014) as such the social and economic value of Credit Unions in the rural communities is also highlighted by (Kristensen, Markey & Perry, 2010).

This micro-credit approach of giving out small loans to individuals is to help them to invest in an income-generating activity which is a means of self-employment to poverty reduction as the provision of microloans to individuals (Weber, 2006). The objective of such schemes is to increase the outreach, usage, and sustainability of financial services in Cameroon, as well as increasing domestic savings and access to credit for increased production, marketing, agro-processing, and smoothen consumption. These efforts aim to improve the incomes of low-income Cameroonians and ultimately get them to enjoy a better overall state of retirement. It was realized that the usage of formal financial services in Cameroon was low, as many Cameroonians, especially in rural areas continued to opt for alternative informal financial services.

Despite these different interventions, the use of formal financial services in Cameroon, as is the case in many sub-Saharan countries of Africa, remains low (Finscope, 2017). The low levels of formal inclusion in many African countries is a sharp contrast to the situation in the developed countries where more than 90% of the people have access to and use of formal financial services (Kunovskaya, The Impact of Financial Literacy on the use of financial services in Russia –Ph.D. , 2010). The low levels of financial inclusion probably explained why people in countries like Cameroon continue to wallowin poverty as they struggle to meet their dair financial obligations, remain insecure about their financial future, and are deprived of a good retirement.

Statement of the Research Problem and Justification

1.1Financial inclusion varies from one country to another (Sha'ban, Girardone & Sarkisyan, 2019) Developed countries have a lower exclusion rate than developing countries (Deminguc-Kunt & Klapper, 2012). In Cameroon, close to 80% of the population is involved in informal economic activities and thus suffers from financial exclusion and poverty (Becker, 2004).

The need for Cameroon to meet up with the Agenda of the UNDP SDGs (UNDP, 2015) to alleviate poverty in all its ramifications by 2030 renders the concepts of financial inclusion and poverty alleviation indispensable policy tools of the era. The objective of the World Bank to universally achieve access to formal finance by 2020 is an endeavor to reiterate the indispensable role of inclusive finance to poverty alleviation as well as socio-economic stability and/or development (World Bank, 2018).

In Cameroon, there is a challenging poverty gap. Close to about 80% of the people are involved in informal economic activities and thus suffer from financial exclusion and poverty. At the national level, about six (6) out of ten households are poor or very poor. Also, about 15.6% of the population is considered to be very poor, 41.2% are considered to be poor while 40.6% are considered neither poor nor rich (ECAM 4, NIS, Cameroon, 2014). (Tegoun, N., and Hevi, K., 2016) posited that about 61% of the households in Cameroon are poor. According to the 2001 and 2014 National Household Surveys, the total population living in poverty has increased from 5.8 million to 6.6 million. At the same time, a disparity of poverty in urban and rural areas and among different geographic regions has been rising. The rural poverty rate rose from 52.1 percent to 56.8 percent. Poverty is highest in the three northern regions and in the northwest, which together comprises 74 percent of the poor population. Due to this high rate of poverty, the financial inclusion rate becomes low.

Considering the aforementioned facts, in Cameroon, those who operate in the informal sector for instance bike riders, petty traders, garage guys, tailors, just to name a few, are neglected, and excluded from formal financial engagements like in the banks especially when it comes to getting credit from the bank. Because of these, the people in the informal sector mostly go for the informal financial services which are not strictly regularized. The chances for these people to better prepare for their retirement are narrow, be they literate or non-literate. Therefore, the intervention of the use of financial instruments in the relationship between literacy and preparedness is important. This study, therefore, is designed to build a framework for which retirement preparedness will be enhanced through the improvement in the usage of formal and informal financial services. This is not only in Cameroon but in Africa and from a global perspective.

LITERATURE REVIEW

Theoretical Background

In the fields of psychology, finance, counseling and planning, economics, services marketing, and consumer decision making, financial success has gone as far as to attract the attention of scholars (Bruggen et al. 2017). The construct is complex, personal, and needs a comprehensive approach that takes into consideration individuals' perceptions and reactions towards their financial situation (Norvilitis, Szablicki, & Wilson, 2003; O'Neill et al., 2005). A plethora of studies on financial enclosure has given a wide scope of supply-side institutional level barriers (Lemma, 2010; Lee & Marlowe, 2016; Mutandwa & Kwiringiramana, 2015; Kostove et al., 2013) as well as demand-side individual-level barriers (Shem et al., n.d; Sawadi & Tescher, 2008; Marlowe & Lee, 2008; Guin 2015; Inganga et al. 2014). A great number of these studies have been underpinned by a vast number of theoretical frameworks that range from Rational Choice Theory (RCT) to Behavioral Finance Theory, Life Cycle Theory, and/or Prospect Theory (Fogel & Berry, 2006). The claim of these theories is a set of individual behaviors as well as an optimal combination of formal financial services that is desirable to guarantee financial success. The following theoretical underpinning including the Behavioral Finance Theory (Barberis & Thaler, 2003), the Rational Choice Theory (RCT) (Becker, 1976), the Prospect Theory (Kahneman, 2003), and the Life Cycle Theory (Ando & Modigliani, 1963) constitutes the baseline for the conceptual framework of this study.

The development of the Behavioural Finance theory also known as behavioral economics was largely prompted by the Prospect Theory, developed by (Daniel Kahneman & Amos Tversky 1979). The theory is premised on the view of identifying and explaining inefficiencies and mispricing in financial markets as a result of behavioral influence (Hammond, 2015). It is made to understand that some stockholders are not entirely balanced. Somewhere it is maintained that some financial situations can be well clarified by employing theories (Barberis, & Thaler, 2003). The underline premise of this theory hypothesized that a person's behavioral conduct influences his/her financial decision-making process and choices of finance.

In the past years, psychologists have discovered again and again that the assumptions of the Behavioral Finance Theory are descriptively false and incomplete. (Raines, & Leathers, 2011) hold the view that official behaviour enables psychological tendencies to initiate financial behaviour. With the normal control of long-term incomes from investments which are incredible, (Raines, & Leathers, 2011) maintained that stockholders do not have self-assurance in their own decisions and rely on conventional findings when making decisions. (Shefrin, & Statman, 1994) amongst other researchers highlighted that behavioral finance literature recognizes behavioral qualities of making decisions that will have a regular market behavior. As clarified by (Olsen, 1998) there exists no unifying theory of behavioral finance. This theory which can be analyzed to understand different financial outcomes across a variety of sectors influenced by the behaviour of individuals examines the relationship between financial literacy and retirement preparedness, which informed the precise objectives of the study. The prospect theory which attempts to model the way people make decisions was also used.

The second theory relevant for the model development of this study is the Prospect Theory. The Prospect Theory is a theory of the psychology of choice and finds application in behavioral economics and behavioral finance. It was developed by Daniel Kahneman and Amos Tversky in 1979. Prospect theory argues that people make decisions based on the potential value of gains and losses rather than the utility of the decision. The sentiment that arises after when people make errors is known as regret. Investors do not want to regret by denying to sell shares when prices are low and will sell when prices appreciate. Furthermore, investors regret when they keep low-priced stock for too long than when they quickly sell the profitable stock (Fogel & Berry, 2006). Daniel Kahneman developed Prospect Theory as a psychologically truthful substitute for the Expected Utility Theory. Kahneman (2003) explains that in situations where persons have to select between substitutes that consist of risk, prospect theory stipulates how people make decisions. Prospect theory describes the states of mind that would affect a person's decision-making procedures together with regret dislike (Waweru, N., M., Munyoki, E., & Uliana, E., 2008). In agreement with (Kahneman, 2003), on a vital suggestion of prospect theory, it is how economic agents personally frame the conclusion of or an operation in their mind. This theory considers choices made between present consumption and savings for the future. The use of time and credit restrictions explores the controlling effect of monetary factors on the correlation between financial literacy and retirement preparedness, which informed the precise objectives of the study.

Furthermore, the Rational Choice Theory was also considered relevant for the study. It was developed by Becker, (1976). The theory is premised on the assumption(s) that individuals are rational agents who act in their self-interest and have enough information about how to make most of their preferences. The theory in financial decision-making posits that consumers have good knowledge of the pros and cons of each of the available financial products and can choose offerings that give the maximum benefit (Campbell, 2016). Studies have found an association between financial literacy and positive financial behaviors. However, the present study claims that, in the context of a developing country, the use of financial services is the means through which people desire to achieve a good retirement preparedness. Hence, their financial decisions may not always be dependent on the specific knowledge and skills of an individual, but rather on the broader society in which individuals live. This study thus integrates variables derived from rational theories into a theoretical framework thus far dominated by the Prospect, Behavioral, and Rational Choice Approaches to facilitate an empirical investigation into the use of financial services.

The last theory used is the Life Cycle Theory. The Life Cycle Theory is an economic theory that describes the spending and saving habits of people throughout a lifetime. The concept was first developed by Franco Modigliani and his student Richard Brumberg in the early 1950s. This theory deals with economic decisions on the retirement savings of a person's revenue. Primarily established by (Ando & Modigliani, 1963). This depends on the traditional economic method of saving and consumption which holds that an educated person will use less than his revenue in moments of high compensation or during years of work, and will save to make provision for retirement. This permits families to control their consumption over their life cycle (Orazio Pietro Attanasio & Martin Browning, 1995). Given that financial preparedness for retirement is future-looking, the current study deduces from the Life Cycle Theory to explain how people make decisions on accepting current consumption, savings, and investments.

In conclusion, a theoretical model that hypothesizes relationships between investment literacy, cash-flow management literacy, credit management literacy, family size, and usage of formal financial services and informal financial services for improved retirement preparedness has been proposed. The proposed theoretical model was derived from the Prospect Theory (Kahneman, 2003), Rational Choice Theory (Becker, 1976), The Life Cycle Theory (Ando & Modigliani, 1963), and the Behavioural Finance Theory (Barberis & Thaler, 2003). In the absence of a universally acceptable single theory that explains how financial literacy improves retirement preparedness; the current study generates empirical evidence to test a theoretical model drawn from the four theories to provide the mechanical phenomenon.

Empirical Review

Financial literacy is defined as the capability to make choices concerning the usage and the management of money (Worthington, 2006). According to (Shim, et al., 2010), financial literacy is an essential element to accomplish effective adult life not only in developing individuals' monetary administration attitude but also in individuals' mindset. (Lusardi, Pierre-Carl, & Olivia, 2013), propounded that financial literacy is when individuals can carry out information on economic and take possible actions on how to plan their finances and accumulating wealth.

Previous research reported a positive effect on economic literacy on the outcome of finances like investment practices and savings (Hilgert, Hogarth, & Beverly, 2003); (Guha-Khasnobis, Kanbur, Ostrom, 2007); (Mullock, & Turcotte, 2012)). (Nchise & Isoh, 2020) indicates that financially literate individuals are more confident about retirement as they comprehend and accumulate wealth as a way to prepare for retirement. The definition considers the ability to understand financial choices, future planning, wise spending, and manage the difficulties related to life events. For instance loss of a job, retirement savings, or paying for the education of a child ((Nelson, & Advisor, 2011). Other definitions have incorporated knowledge, skills, attitudes, and assurance to manage one's finances well, taking into account one's economic and social circumstances. The later additions to the definition thus envisage that people need to have the understanding and ability to manage their funds while being convinced that they will be dealt with reasonably by financial services providers (BOU, 2017).

Retirement preparedness

Retirement preparedness is a continuous procedure of keeping away resources to enable the provision of revenue at old age for not just survival purposes, but the protection of human dignity (Keizi, 2006). An individual is required to examine the existing financial conditions; classify imminent financial requirements, and generate an asset allocation strategy through saving that will produce steady revenue during retirement (Nchise & Isoh, 2020). This process, if well-arranged and well-implemented protects a great deal of peace of mind, financial security, relaxation, and the accomplishment of the standard of control for the future (Kapoor, Dlabay, & Hughes, 1994). Diverse formats to measure preparedness for retirement have been opined by different studies (Atchley, 1976); (Stawski, Hershey, & Jacobs-Lawson, 2007); (Evans, Ekerdt, & Bosse, 1985); (Glamser, Determinants of a positive attitude toward retirement., 1976); Glamser, 1981; (Helman, & Paladino, 2004). Using revenue replacement rate, (Yuh, Montalto, & Hanna, 1998) described retirement preparedness as the capability of upholding a pre-retirement level of consumption with retirement funds measured through replacement rate of income by the utilization of formal and informal financial services.

Also, retirement preparedness includes the capacity to control one's finances, absorb financially related stuns, attain financial objectives, and possess the means to make choices that take into consideration the pleasure of life at retirement (OECD, 2015). The Consumer Financial Protection Bureau (CFPB) defines retirement preparedness as one's capability to meet present and progressing financial commitments, feel secure in their financial future, and make decisions that will enable them to enjoy life. (Bank of America, 2017). This definition gives a basis for a consumer-driven measure of how people feel about their financial circumstances irrespective of their social-economic contexts. It likewise consolidates financial satisfaction as a part of retirement preparedness that implies a desirable state, where people report acceptable levels of happiness, health, and freedom from financial pressure (Hansen, 2009; Zimmerman, 1995) at old age.

Usage of Financial Services and Retirement Preparedness (RP)

At the macroeconomic level, researchers propose that the inclusion of billions of unbanked individuals into the formal financial system gives them affordable financial services that can assist them to increase people's income, reduce poverty and income inequality (Barik et al., n.d). They further contend that simple access to adequate services such as credit from formal financial institutions can save poor individuals from high costs related to informal credit from loan sharks who charge exorbitant interest rates.

Endeavors to promote the access and utilization of financial services are in any case referred to as financial inclusion means to improve the retirement preparedness of the individual users of financial services. (Muir, et al., 2017), in research on retirement preparedness in the Australian context, found that financial inclusion was one of the most influential contributors to retirement preparedness along with other factors including financial ability, social capital, and income. Indeed, a significant amount of resources have been dedicated to financial literacy programs that aim to increase individual uptake of mainly formal financial services among populations considered to be unbanked. (Thomas & Natarajan, 2018), found that fully banked users of formal financial services had a superior economic situation than the unbanked and under-banked.

Several studies have discovered an effect on financial services and retirement preparedness. (Sarath, Chandra & Manju, 2010) discovered that services such as Credit, savings, and insurance improved the quality of life of low-income households. (Beck et al., 2009) discovered that improved financial services helped reduce poverty and inequality, while a study by (Ismail & Masinge, 2012) found that mobile banking reduced transaction costs for funds transfer, and help users to absorb income shocks without any decrease in household consumption (Jack & Suri, 2014). A study by (Karlan et al., 2014) discovered that weather-based insurance improved the quality of life among farmers in Ghana. Additionally, a study in Kenya found that health savings and investment helped people reduce shocks and vulnerability (Dupas, & Robinson, 2013).

Another study carried out in South Africa (Dean Karlan & Jonathan Zinman, 2010) found that credit increased satisfaction in terms of increased food consumption and the social status of borrowers. (Bauchet et al., 2011) found financial services to positively affect retirement preparedness and subsequently discovering resonance with the financial diaries of (Collins et al.., 2009). This found that low-income families in developing economies utilized an assortment of mechanisms for savings and borrowing to build lump sums of money necessary to address their life cycle needs. A recent study by (Khan & Bhandari, 2018) found that financial service utilization contributed significantly to the economic satisfaction of rural households in India. Most of the funds accessed through formal and informal channels contribute to individuals' retirement preparedness. The study thus Hypothesizes H5 below:

METHODOLOGY

Research Philosophy

Research philosophy deals with the nature, source, and development of knowledge. In other words, a research philosophy is a belief in how information about a phenomenon should be gathered, analyzed, and used (Rajendra**,** 2018)**.** The research philosophy indicates the important assumptions of the author and these assumptions serve as bases for the research strategy. According to (Creswell, 2003), the research philosophy reflects the stance that will be adopted by the study regarding the ontology which is the nature of reality, the epistemology which is how the study sought to obtain knowledge, and the methodology which is the specific methods that were used in the entire research process.

Ontology justifies how social entities explain reality on social actors and how social actors influence reality in social entities (Bryman, 2008). The two contrasting ontological positions are positivism ontological stance and subjectivism ontological stance (Scholarios, 2005). This study presumes that reality exists independently among the users of financial services in Cameroon and therefore assumes an objective ontological position. This position presupposes that social actors do not influence the phenomena under study (Omoijiade, 2014). In other words, knowledge out there exists independently of actors, and thus the role of the researcher is to establish that knowledge. Therefore, consistent with this ontological assumption, the study seeks to generate and test a model to explain how financial literacy, explains the usage of formal financial services and informal financial services for improved retirement preparedness among the people of Cameroon.

Epistemology refers to what is known, how it is known, and the sources of knowledge (Crotty, 2003). There are three epistemological positions which are interpretivism epistemology, critical theory epistemology, and positivism epistemology. An interpretivist epistemological position suggests the source of knowledge from which researchers approach without necessarily being guided by theory (Easterby-Smith et al. 2004). This approach requires the researcher to stay clear of involvement and personal feelings to generate unbiased conclusions. An interpretivism epistemology is based on critical realism, which claims that no perfect truth exists (Bryman, 2008). However, a positivistic epistemological position assumes that knowledge exists realistically and can be investigated through appropriate measurement, testing, and the use of predictions for a future phenomenon.

This study adopts a cross-sectional quantitative methodology in which sampled study participants were selected, and these were users of formal financial services and informal financial services in Yaounde Cameroon who were administered survey questionnaires. The adoption of the cross-sectional design involved seven different localities in Yaounde which were "Yaounde I" to "Yaounde VII". Data was sourced using questionnaires. As a result of the nature of the study, it adopted a deductive approach of reasoning. This was because theories were tested and verified due to the research variables and content. The target population for the study included Cameroonian adults aged 15 years and above, living in Yaounde Cameroon. Yaounde is administered by the City Council instituted in 2004 (Oben & Ndi, 2014). The Yaounde population grew from 1,237,500 inhabitants in 2000 to about 3.822 million inhabitants presently (2005 National Population and Housing Censuses; Cameroon Demographic Profile, 2019).

A sampling frame is the sample characteristics of a study. It is a list of all those within a target population who can be sampled, which may include individuals, families, or institutions. The importance of the sampling frame is emphasized by (Jessen, Salant & Dillman, 1994). In this study, the sampling frame was represented by people from nine different regions in Cameroon who are based in Yaounde.

A sampling technique is choosing the right choice for the elements of the sample to make it representative of our population (Barreiro & Albandoz, 2001). The sampling technique for this study is the multistage technique. This adopts a cross-sectional design where people in the various subdivisions form a cluster. For the various clusters, people were selected from a cluster to make sure that the correct sample was represented.

The number of subjects needed usually results in exploring the size of the treatment effects the researcher had in mind and the variability of the observational units (Burmeister, 2012). Based on the population, the sample size of this study constitutes was done using the (Slovin's, 2012; Yamane's, 1967) formula for the determination of the unknown sample size with a known population. Based on the 2005 National Population and Housing Censuses, (Cameroon Demographic Profile, 2019) the total population of Yaounde is about 3.822 million inhabitants. In this study, the researcher used Yamane's or Slovin's Formula. This formula is used to calculate the sample size when the total population is known. Given the sample size(n), population size (N), *and* a margin of error (e). Using Yamane's or

Slovin's formula, the researcher surveyed $n = \frac{N}{(1 + Ne^2)}$ people; with a total population of about 3.822 million inhabitants (Cameroon Demographic Profile, 2019), a 95 percent confidence interval, and a 0.05 error margin.

This implies: $$n = \frac{N}{(1 + Ne^2)}$$

Where: $$n = \frac{3{,}822{,}000}{(1 + 3{,}822{,}000 * 0.05^2)} = 400$$

Questionnaires are research instruments that consist of a series of questions developed to gather information from respondents deemed appropriate for the investigation (Kumar, 2005). The study, therefore, used questionnaires. This was because the study provided a possibility of exploring and measuring demographic data and also to measure using nominal data and also to test hypotheses using quantitative data with the use of five Likert Scale and ordinal data.

The study used both secondary and primary data. Secondary data was obtained from published sources, including peer-reviewed journal articles, textbooks, national policy briefs, strategic papers, business reports, and newspapers. Primary data was collected using measures that had previously been used in similar studies but customized and adapted for use in Cameroon.

ANALYSIS AND FINDINGS

The quantitative methodology of research involves using numerical data to quantify the social phenomenon under study. Therefore, appropriate techniques were used to analyze the data and generate accurate findings for the study to explain the study phenomenon, consistent with (Ong & Puteh 2017). This chapter, therefore, illustrated the step-by-step approach used in data cleaning, processing, and presentation of the final study or survey. To accomplish these tasks, the study employed two software packages which are Statistical Package for Social Scientists (SPSS), and Analysis of a Moment Structures (AMOS) software.
The data that was collected for this study were subjected to a systematic process of cleaning that included missing value analysis and testing for outliers. This was to ensure that the data was clean and acceptable for reliable analysis.

Statement of Hypothesis

***H1a** – Usage of formal financial services (FFS) has an effect on retirement preparedness (RP).*
***H1b** – Usage of informal financial services (IFS) has an effect on retirement preparedness (RP).*
***H2a** – Usage of formal financial services has a mediating effect on financial literacy and retirement preparedness.*
***H2b** – Usage of informal financial services has a mediating effect on financial literacy and retirement preparedness.*
***H3a** - The Family size mediates the usage of formal financial services and retirement preparedness in Cameroon*
***H3b** - The Family size mediates the usage of informal financial services and retirement preparedness in Cameroon*

Pattern Matrix

	Component		
	1	2	3
FFS1: Currently, have an account with a Bank/ MFI	.851		
FFS2: My account is used to receive wages.	.756		
FFS3: Frequent payments have been made to my account over the last 12 months	.944		
FFS4: Many withdrawal transactions are carried out in my account every month.	.902		
FFS5: Over the past 12 months, money has been saved and set aside in my account	.903		

FFS6: Usually borrow from Bank/Insurance company/MFI for needs such as building, school fees	.773		
FFS7: There is a current outstanding loan from a Bank/Insurance company/MFI	.730		
IFS1: Currently have an account with a savings Group		.963	
IFS2: Often saves with a savings group / with Friends/Relatives or a Shop Keeper		.924	
IFS3: saving in a savings group /friend/relative, or shopkeeper over the past 12 months		.906	
FS1: Cannot save because of many children at home			.820
FS2: Cannot save because of many kinsmen (family members) at home			.822
Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.[a]			
a. Rotation converged in 4 iterations.			

Source: Field Data 2021
Note: FFS = Formal financial services; IFS = Informal Financial services; FS = Family size

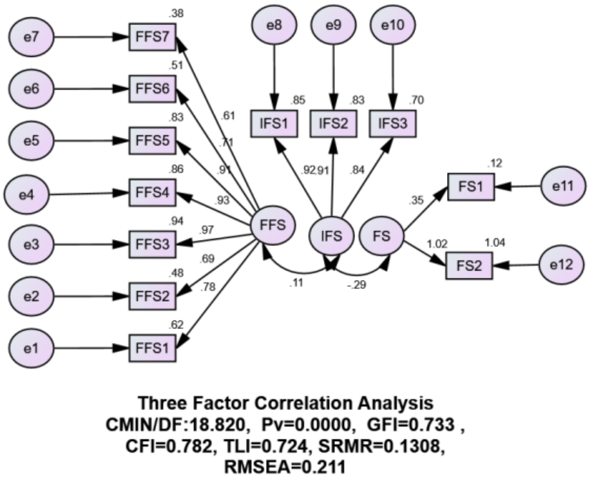
Pattern Matrix

	Component	
	1	2
RP1: Do monthly savings with a bank/MFI set aside for my retirement	.725	
RP2: Have a monthly saving retirement skim with an insurance company.	.916	
RP3: Do monthly saving with the CNPS	.829	
Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		

Source: Field Data 2021
Note: RP = Retirement preparedness

As shown in table 1 above, data was cleaned using principal component analysis and promax rotation. The results displayed in the combined exploratory factor analysis table above represent those indicators of the various latent constructs that were retained. Further analysis was done using confirmatory factor analysis (CFA) in order to confirm the validity and reliability of the aforementioned latent constructs used in this study. The result obtained is presented below.

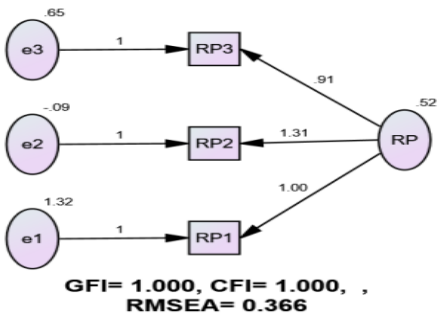
CFA for FFS, IFS, and FS



Source: Field Data 2021

The Confirmatory Factor analysis for formal financial services, informal financial services, and the family size was presented in the diagram below to indicate how well the observed items in EFA can represent the factors observed. This was also done concerning the model fit indices such as the Tucker Lewis Index (TLI), The Comparative Fit Index (CFI), and the CMIN/DF. These all have thresholds that should be accepted if the observed variables are to be considered good indicators of the latent constructs of formal financial services.

CFA for RP



Source: Field Data 2021

The Confirmatory Factor analysis for retirement preparedness was presented in the table below to indicate how well the observed items in the EFA can represent the factors observed. This was also done concerning the model fit indices such as the Tucker Lewis Index (TLI), The Comparative Fit Index (CFI), and the CMIN/DF. These all have thresholds that should be accepted if the observed variables are to be considered good indicators of the latent constructs of retirement preparedness.

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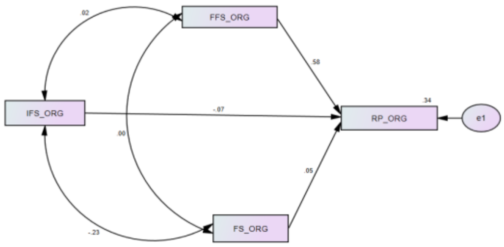
SEM - Formal Financial Services, Informal Financial Services, and Family Size.



STRUCTURAL EQUATION ANALYSIS

CMIN/DF = 7.252, PV = 0.000, GFI =,989,
CFI = 0.979, TLI = 0.978, IFI = 0.989, RMSEA=0.012

Source: Field Data 2021

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
RP_ORG	<---	FFS_ORG	.488	.035	13.922	***	par_1
RP_ORG	<---	IFS_ORG	-.080	.049	-1.635	.102	par_2
RP_ORG	<---	FS_ORG	.078	.064	1.220	.222	par_3

Source: Field Data 2021

Hypothesis Testing

Hypothesis	**P-Value at 95% CI**	**Decision/conclusion**
Usage of formal financial services has a significant effect on retirement preparedness. (FFS_ORG on RP_ORG)	P-V = 0.000 < 0.05 (significant at 1%, 5% and 10%)	Reject the null hypothesis.
Usage of informal financial services has a significant effect on retirement preparedness. (IFS_ORG on RP_ORG)	P-V = 0.102 > 0.05 (not significant)	Decline to reject the null hypothesis.
Family size has a mediating effect on Usage of financial services and retirement preparedness	P-V = 0.222 > 0.05 (not significant)	Decline to reject the null hypothesis.

Source: Field Data 2021

DISCUSSION, CONCLUSION

Usage of formal financial services has a significant effect on retirement preparedness. (FFS_ORG on RP_ORG). This can be seen on the table above where the Pvalue for hypothesis 1 and hypothesis 2 is significant within a 95% confidence interval being $P \leq 0.000$ for H 1. Usage of informal financial services (IFS) has an effect on retirement preparedness RP. Usage of formal financial services has a mediating effect on financial literacy and retirement preparedness. Usage of informal financial services has a mediating effect on financial literacy and retirement preparedness. The Family size mediates the usage of formal financial services and retirement preparedness in Cameroon. The Family size mediates the usage of informal financial services and retirement preparedness in Cameroon. It is recommended that, families with a larger family size and who have invested in the live of the family members are likely to have a better living at their old age when they will not be able to work for income again. This can either be done with the use of formal or informal financial services. Therefore parents with large family sizes should invest in the family so that the children will in turn assist them at their old age. The study, also, recommends that financial inclusion strategy in developing countries like Cameroon with dualistic financial sectors should also adopt dualistic financial inclusion models predicated on the promotion of both formal and informal financial services as a means to enhance retirement preparedness.

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