HOUSEHOLDS' INVESTMENT STRUCTURE IN SOUTHWESTERN, NIGERIA

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Abstract

Household investment is a significant part of total private investment that has contributed enormously to economic growth in Nigeria. However, little or no attempt has been made to examine its structure. This study, therefore, examines the structure (volume and pattern) of household (banked and unbanked) investment in physical, human capital and financial asset in southwestern Nigeria in 2021. Analysis of data generated through a questionnaire from a multistage sampling procedure of 909 households, explored by latent class Markov and logistic regression, showed that banked households invested more in physical and human capital assets than unbanked households. The pattern of a financial investment as revealed in the acquisition pattern of financial assets showed that saving accounts remain the dominant financial product owned by the highest number of banked households. Thus for inclusive growth to be achieved, more policy efforts of government, banks and regulatory authorities are needed at ensuring that formal financial services are available and affordable to all qualified adults.

Keywords: Household Investment, Physical and Financial Asset, Acquisition Pattern **JEL Classifications**: D19, D20, E22

Article history-Received: January 10, 2022, Revised: June 25, 2022, Accepted: July 01, 2022.

Introduction

Investment plays a significant role in the growth and development of a nation. It occupies a prime place in determining the living standard and well-being of citizens (Ahmad et al., 2012). It is an essential element in a nation's capital formation process which is predetermined, among other variables, by savings (Romer, 2001). The proportion and rate of economic growth have been attributed to the nation's investment capacity of government, private and foreign government/bodies (Romer, 2001; Ellis, Lemma & Rud, 2010). Until recently, public investment constitutes the major form of nation's asset in many emerging economies. However, the contribution of household investment, a significant component of private investment, to growth has been on an upward trend and playing a significant role in the nation's building (Tran Thi, 2011; World Bank, 2016). Between 2011 and 2013, total private investment in Nigeria experienced an upward trend, contributing more than 30 per cent to the total Gross Domestic Product (GDP). The proportion of household investment from this was more than 43 per cent (National Bureau of Statistics, NBS, 2016). Similarly, in 2015, 2016 and 2017, the total contribution of the private sector to economic growth was estimated at 35 per cent, 42 per cent and 44 per cent respectively. The proportion of household investment in total private investment in these years was estimated to be 75 per cent, 65 per cent and 73 per cent respectively (NBS, 2017). Thus these significant contributions amidst other roles have generated a desire for studies and sustained generation of new knowledge on household investments

Household investment has been a centre of focus and a lead investment over firm investment in total private investment and the business cycle (Ellis et al., 2010). This importance is more pronounced as confidence in the financial market has been eroded following the 2008 global economic-financial crisis which led to dwindling government and foreign investment funding of capital projects that could

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generate employment and income for households. Household investment is therefore considered a last resort and a veritable source of funds for development to improve the living standard of people at the micro-level.

However, despite the significance of household investment, only a few studies had been conducted on its importance and impact on other sectors of the economy (Sharimakin & Dada, 2020; Abubakar & Folawewo, 2019). Studies that attempted to examine its importance could not properly make a clear distinction between the sector and the total private sector. Thus, this could make policy implementation in the household sector misguided and misleading (Tran Thi, 2011). Similarly, previous studies on household investment in Nigeria both focused on Local Government areas or states and failed to adequately include/captured more household investment instruments (probably for lack of data) that could better describe household investment behaviour and resource diversification.

Besides, there is little or no attempt to assess the extent as well as volume and pattern of investment undertaken by this micro-unit in Nigeria. There is also an evidential gap in the literature on the role of access to finance on the structure of the household investment. Findings on the extent and structure (volume and pattern) of household investment are important determinants of the direction of policy intervention towards achieving a stable, sustainable and higher contribution of household investment to economic growth. This study, therefore, raises the following research questions: What are the forms and avenues of household investment in southwestern Nigeria? What are the average volume and pattern of investment of households in southwestern Nigeria?

The rest of the paper is structured as follows. The next section reviews the theoretical and empirical literature. Section 3 discusses the methodology and data. Section 4 presents the results. Subsequently, a discussion of findings was presented in section 5 while section 6 presents the concluding remarks and policy implications

Literature Review

Theoretically, the link between the level and pattern of household investment could be traced to the life-cycle-income hypothesis and consumer choice theory. The life-cycle-income hypothesis was propounded to prove, in consonance with the thought of Irvin Fisher that households are rational in allocating their resources to create a utility-maximising consumption in their entire lifetime (Modigliani, 1986). The theory proposes the notion of household consumer's utility maximisation throughout the entire life period. To achieve this, the theory assumes households save and invest during their active/working ages to spend when they retire or when they are old. The life-cycle hypothesis assumes the nonexistence of bequest and argues that individuals maximise over their lifetime which contradicts the notion of income maximisation over several generations. The theory proposes that individual commences with a negative investment rate; this means that individuals do not invest during the early ages because their consumption is greater than their income, thus individuals invest during the age of late forties and fifties when their incomes are at the maximum level. They, therefore, start to dissave immediately after they retire till they (individuals) die.

The structure of the household investment is vital and instrumental to the quality and quantity of investment that could support the household's capacity to maintain smoothening consumption in old age. Household investment (during active ages) in low-risk instruments that are associated with low returns but higher security is more likely to help the household to maintaining average consumption at old age (since such structural investment has a higher probability of success) while investment in high-risk instruments associated with a higher rate of returns during the working ages is more likely to enable the household to live a better living standard at old age. However, such instruments are more prone to insecurity and failure. Thus a household is, therefore, to decide during active working ages on the proportion of investment on low and high-risk instruments to achieve optimum returns to maintaining smoothening consumption throughout the lifetime

Empirically, a study on the investment structure of households in Germany was conducted by Kaya and Mai (2018). A descriptive analysis of data and probit regression results revealed that households in Germany were risk-averse having the highest proportion of their financial assets portfolio in cash and

deposit. Demographically, financial characterisation revealed that half of the share owners in Germany were 40 to 50 years old and one-fifth were younger than 40 years of age. This suggests that a greater proportion of investments in Germany were undertaken by an active population which supports the life-cycle-income hypothesis. A similar study on the saving and investment structure of rural households in the Cuttack district in India was conducted by Sethy (2016). Analysis of data on fifty (50) rural households showed that more rural households lack knowledge or are unaware of investment opportunities in high-risk investment avenues. They invested only in agriculture and post office. The findings also revealed that the choice of investment was determined by only two factors (safety of the principal and return from investment).

Contrarily, a study by Ngwenya and Paas (2012) on the assessment of ownership of 16 financial products at different life-cycle stages among the four ethnic groups in South Africa (Africans, Coloureds, Asians, and Whites) invalidated the operations of the life-cycle hypothesis. Analysis of data explored by the latent Markov model revealed that the ownership structure of financial products in South Africa could be better described by the innovation adoption hypothesis than the life-cycle-income hypothesis. This is consistent with the results reported by Białowolski and Chávez-Juárez (2021) in an investigation of the household ownership structure of financial products in Chile. Data analysis by latent class estimation techniques revealed that young and intermediate households in Chile owed both the debt-related and main financial products in the same period.

A study on the structure of household investment in 20 provinces in India was conducted by Chander (2006). Analysis of data procured through questionnaires and in-depth interviews showed that potential investors mostly preferred investment in low-risk investible instruments such as gold, national saving certificates and post office. Similarly, Prabhu, Shilpashree and Mahesh (2017) studied the saving and investment pattern of investors in various financial products in Dakshina district, India. The result of descriptive statistics and logit regression revealed that the educated preferred to invest in a traditional investible instrument like gold than investing in modern financial products (such as government bonds and shares). Also, respondents (investors) in the high-income group preferred to invest in equity than traditional instruments. The results also showed that gold and real estate, mutual funds, share and debenture were the three best financial products that attracted the people of Dakshina, India.

A related study of investment patterns based on demographic traits was conducted by Shinde and Zanvar (2015). Data collected through questionnaires were analysed with Analysis of Variance (ANOVA), Mann-Whitney and t-test. The findings showed that the proportion of risky assets to total investment falls as the investors grow older in life. Women were found to be more risk-averse and preferred low-risk and fixed-income investments. Besides, investors in the low-income class preferred to invest in low-risk investments while those in the high-income group invested more in equities and real estate.

The determinant and structure of investment in Thailand were examined by Suppakitjarak and Krishnamra (2015). Analysis of data purposively collected from eight hundred and forty-four samples, estimated by descriptive statistics and ANOVA revealed that the structure of a household's investment was diverse and investors were more interested in conventional investments than government bonds and stocks. However, an increase in the income of investors reduced their tendency to invest in conventional savings

A study on the pattern of investments among farmers in Benue state Nigeria was conducted by Odoemenem et al., (2013). Analysis of data collected through a questionnaire on 120 farmers revealed that 62 per cent of sampled farmers invested in low-risk investment avenues. A similar study on the impact of loan-taking from cooperative society on the level and structure of asset acquisition among farmers in rural communities in Ogun State, Nigeria was conducted by Oluyombo (2014). Data analysis explored by independent student tests and ANOVA on 302 cooperative members revealed that the greatest proportion of investments was made during active years and that members of households invested more in a physical asset. The results also showed that members of cooperatives were more likely to acquire assets than non-members. In a related study, Akeju (2022) investigated the role of access to finance on the level and pattern of household investment in Nigeria. Results revealed that the

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average volume of investment was lower than average borrowing from informal and formal sectors. The results also showed that the acquisition of low-risk financial instruments increased investment probability.

Similarly, a study by Ogundari and Abdulai (2014) on household investment patterns in education and healthcare in Nigeria revealed income, household size, education and sex of household heads as significant variables that predicted expenditure patterns in education and healthcare. This supports the findings of Nwosu et al., (2019), Olaniyan (2011), Himaz (2010) and Lloyd et al., (1999). The results reported above-examined household structure, composition and determinants of investment at various levels without adequate distinction between households, particularly concerning access to finance. Failure to properly distinguish between households as regards access to finance might misinform stakeholders, especially policymakers on the average volume and pattern of investment of households with or without access to formal financial services which could lead to unguided or misleading policy intervention. Thus there is a need to examine and distinguish between the investment structure of banked households from unbanked households as this could better explain the investment behaviour of households and more importantly, for policy implications. This study, therefore, attempts to fill this gap in the literature by examining the structure (volume and pattern) of investment of banked and unbanked households in physical, human capital and financial asset in southwestern Nigeria in 2021.

Data and Methodology

The study area is southwestern Nigeria, principally dominated by Yoruba-speaking people. The entire region is made up of six states (Ekiti, Lagos, Ogun, Ondo, Osun and Oyo state) out of the thirty-six states in Nigeria. However, the study specifically focused on Ekiti, Ondo and Osun states. The choice of these states was based on their financial strands regarding the level of the extent of access to and use of formal financial services for investment and consumption purposes, and Deposit–Loan gap. Ekiti and Osun states were found to have lower Deposit–Loan gaps in the region (CBN 2013, 2014, 2015, 2016, 2017). Ondo state was included because it shares boundaries with Osun state and Ekiti but is among the other states with a high Loan-Deposit ratio. Analysis of access to and use of financial services for investment purposes for the two types of states is thus required for comparative analysis.

The target population for the study were heads of households across the states. The study sampled 945 heads of household across the three states. The selection of sample size was determined using a method proposed by Charan and Biswas (2013) given as:

$$n_0 = p(1-p) \times ({}^{Z_a}/_d)^2$$

Where n_0 is the desired sample size, p is the best guess about the value of the proportion of the intercept z_a is the standard normal deviation or desired confidence level, which takes up a value of 1.96 for two-sided and 1.65 for one-sided when a=0.05, d is the distance (or tolerance), it shows how close to the proportion of intercept the estimate to be. However, since the extent of household investment in southwestern Nigeria is largely unknown, due to insufficient information from previous studies, then p is considered 0.5 (maximum variability), q=1-p (such that q=0.5) and d represents the acceptable margin of error at 3.3 per cent. To compensate for the non-response rate and improperly completed questionnaires due to the peculiarity of the study areas, the study used an attrition rate of 10 per cent (0.10) as calculated using

$$A_{Actual} = \frac{(n)}{1 - q_i}$$

Where q_i =0.10 or 10 per cent (attrition rate)

The total sample size from the above results is 945. However, only 909 sets of questionnaires were collected and adequately filled by the respondents thus making up for analysis

This study classified investment patterns based on the types and riskiness of assets constituting the portfolio. The pattern of investment based on types of assets were classified into physical (land acquisition, building/housing, livestock, farmland/farming activities and industries and businesses), human capital (education and health) and financial asset (bank deposits, insurance, equity/shares, bond/debentures, pension scheme, mutual fund/investment trust and others). The study does not include

investment in durable consumer goods because it is considered a component of consumption expenditure. The classification of a financial asset follows the grouping in Nigerian national income accounting except for the exclusion of currency in hand as households were reluctant to supply information on it. Investment in the physical and human capital asset was the average expenditure (in thousand Naira) spent by a household in the last year while a dummy value of one (zero otherwise) was used to indicate ownership of the specific financial product(s).

Households were categorised into Banked/formal financially included (546), informal financially included (186) and financially excluded (177). Banked/Formal included are adults who use commercial deposit money banks. Informal included are adults who do not have or use deposit money banks or formal financial products and services but use informal financial services such as Savings with Rotating Savings and Credit Association (ROSCA), Accumulating Savings and Credit Association (ASCA), Savings and Credit Cooperatives (SACCO). Financially excluded are adults who do not have or use deposit money banks or any informal financial services. It is worth noting that these statuses are mutually exclusive.

The pattern of investment regarding the risk level of products was classified into three categories namely Low Risky Product Portfolio (LRPF), Moderately Risky Product Portfolio (MRPF) and Highly Risky Product Portfolio (HRPF) based on the household's perception of risk associated with the products measured on a five-point rating scale and weighted mean scores (see Appendix 1). Assets were categorised into three Risk Levels (RL) as follows:

Low-Risk Product Portfolio (LRPF) $0 \le RL < 2.1$ Moderate Risk Product Portfolio (MRPF) $2.1 \le RL < 3.0$ High-Risk Product Portfolio (HRPF) $3.0 \le RL < \infty$

Descriptive statistics and multinomial logit regression based on marginal effect were used to estimate the structure of a household's investment. The volume and pattern of financial products were analysed through a method of acquisition technique and the use of a latent Markov matrix which translates to segmentation (i:e distribution of formal financial services held by households) of the household's phase of financial product development.

Results

Table 1 shows that banked household heads invested in education, land acquisition, building/housing, livestock, farmland/farming activities, industry and business, and family health. The results reveal that a significant percentage of the banked households invested in all forms of investment avenues. The average investment made by households that are formally banked in southwestern Nigeria is №24534. The least investment went to health care (№16434) while the highest investment was made in industry and business (№29582). The total investment made ranged between №500 and № 2500000.

The greatest proportion of the banked household (91.3%) had an investment in education with an average volume of ₹24784. The standard deviation of education investment is ₹2150.30, implying that it took about ₹2000, on average for each value in the distribution to deviate from the centre of the distribution. This reveals that the amount expended/invested in education by households is close to one another. It also indicates that the majority of the banked households invested intensively in education. This is consistent with the finding by Olaniyan (2011). This might be connected to access to saving and credit facilities of formal banks. The negative value of skewness is also associated with the results. The negative value of skewness for education shows that majority of the banked households are on the higher side of the mean. The majority invested average volume higher than the average value

Similarly, a significant proportion of banked households invested in land acquisition (72.6%) with an average volume of $\upmathbb{N}26013$. The standard deviation is $\upmathbb{N}2305.4$ which indicates that it took $\upmathbb{N}2305$, on average for each value in the distribution to deviate from the centre of the distribution. This shows that the amount invested by this category of household clustered around the mean, indicating that the majority of the banked households invested intensively in land acquisition. This aligns with the result

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reported by Gonnard et al.(2008) on household's wealth composition across OECD countries and financial risk borne by households

Table 1: Volume and Investment Pattern of Households (Formally Included) in Southwestern Nigeria

Tuna of Investment	Number	Per cent	Mean	Std. Dev.	Skewness	Kurtosis	Min.	Max.
Type of Investment	(546)	(%)	$(\frac{\mathbf{N}}{\mathbf{N}})$	Sid. Dev.	Skewness	Kurtosis	IVIIII.	Max.
Education	499	91.3	24784	2150.30	-0.30	3.114	500	150,000
Land Acquisition	396	72.6	26013	2305.4	-1.1	0.43	6600	2500,000
Building/Housing	354	64.8	26400	2,451.3	0.67	1.23	5000	2,230,000
Livestock	302	55.4	20256	19,201.50	0.784	0.29	1400	85,000
Farmland/ Farming	377	69.0	28269	2761.60	-1.42	0.38	1500	211,000
Activities	311	09.0	20209	2701.00	-1.42	0.38	1300	211,000
Industry &Business	449	82.2	29582	28001.1	-1.132	4.341	500	242,000
Family Health	483	88.5	16434	14,206.2	0.94	1.24	600	37,000
Average			24534					

Source: Authors' computation, (2021).

Among the total sample of banked households, 64.8% invested in building/housing. An average volume invested in building/housing is \(\frac{\text{\tex{

Of the total sample of the banked household, 377(69.0%) invested in farmland/farming activities. Investment in farmland and farming activities involves the purchase of farmland, purchase of insecticide and fungicide, purchase of crop yields, purchase of farm implements and equipment etc. An average volume of \text{\$\text{\$\text{\$\text{\$\text{\$}}}269}\$ was invested with a standard deviation of \text{\$\text{\$\text{\$\text{\$\text{\$}}2761.60}\$, implying that it took about \text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$}}}3000}\$ on average for each value in the distribution to deviate from the centre of the distribution. This indicates that the volume of investment in farmland and farming activities by the banked households are close to one another. It reveals that the majority of the banked households invested intensively in farming. This is supported by the result of skewness. The distribution is negatively skewed with the value of -1.42, implying that most values are concentrated on the right of the mean with extreme values to the left. This indicates that the majority of the banked household invested average volume higher than the mean. It reveals that there was a substantial investment in farming activities by households that are formally banked. This might be a result of access to bank loans which enable the household to invest more than they would have otherwise invested if they did not have access to bank loans and other bank facilities.

The mean household expenditure on industry and business is $\frac{1}{2}$ 9582. On average, each household invested about $\frac{1}{2}$ 30000 in business and industry. The average distance of each point from the mean is 784061601.21. The disparity given by the variance is wide. The standard deviation is $\frac{1}{2}$ 2800 1.1, implying that it took about $\frac{1}{2}$ 28000 on average for each value in the distribution to deviate from the centre of the distribution. The distribution is negatively skewed with the value of -1.132 implying that most values are concentrated on the right of the mean with extreme values to the left. Kurtosis shows a Leptokurtic distribution with the value of 4.341 implying a sharper than a normal distribution with values concentrated around the mean.

Similarly, the mean expenditure on household health care was $\frac{1}{4}$ 6,434. Each banked household, on average, spends about $\frac{1}{4}$ 6000 on health care. The average squared distance of each point from the mean is 201816118.44, the disparity given by the variance is wide. The standard deviation is $\frac{1}{4}$ 14,206.2 implying that it took about $\frac{1}{4}$ 14000 on average for each value in the distribution to deviate from the centre of the distribution. The distribution is positively skewed with the value of 0.94 implying that most values are concentrated on the left of the mean with extreme values to the right. The volume and pattern of investment of households who use informal financial instruments are shown in Table 2 As shown in Table 2 this category of households invested in all the physical and human capital assets. The

total average investment made by households that have informal financial services in Southwestern Nigeria is \$7985.29.m. The least investment was made in livestock (\$4021) while the highest investment was made in industry and business (\$13406). The total investment made ranged between \$200 and \$520000.

The results shown in Table 2 reveal that about 63 per cent of the total sample household having informal financial instruments invested in education with an average volume of \(\frac{\text{\text{\text{\text{\text{4}}}}}{6928}\), implying that an average household head having informal financial instruments tends to spend an average amount of \(\frac{\textbf{H}}{6928}\) on education. This is a considerable amount and is consistent with the result reported by Himaz (2010) The negative value of skewness and kurtosis are also associated with the result; indicating that the majority of this category of households are on the higher side of the mean score. Among the total sample of households having informal financial instruments, 36.8 per cent invested in land acquisition with an average volume of \$\frac{1}{2}906\$. Though the proportion of households who made investments in land acquisition (36.8%) is lower, compare to those invested in education, building, farming activities, industries and businesses and health, the average volume invested by households in land acquisition is higher than the average volume in education, building, farming activities, industries and businesses and health. This suggests that the cost of acquiring land in southwestern Nigeria is high. The distribution of land acquisition is positively skewed with a value of 0.43 indicating that majority of households having informal financial instruments invested an average volume below the mean. The average volume of investment in building and housing by 40 per cent of households having informal financial instruments is ¥9238. This shows that only a few households invested in building and housing. This might be connected to the fact that only a few numbers of households invested in land acquisition since investment in the building are related to investment in land acquisition.

Table 2: Volume and Investment Pattern of Household (Informal) in Southwestern Nigeria

Type of Investment	Number	Per cent	Mean	Std Dev.	Skewness	Kurtos	Min.	Max.
Type of investment	(186)	(%)	(N)	Sta Dev.	BRE WHESS	is	171111.	TVIUX.
Education	116	62.5	6928	4528.99	-1.6	-1.0	500	72,000
Land Acquisition	69	36.8	12906	8,204.01	0.43	1.2	1500	520,000
Building/Housing	75	40.1	9238	5201.0	0.75	0.46	2100	494000
Livestock	25	13.5	4021	2808.3	1.0	0.33	1400	14000
Farmland/Farming	121	65.1	5284	3274	1.3	2.6	1000	65000
Activities	121	03.1	3204	3214	1.5	2.0	1000	03000
Industry & Business	135	72.5	13406	9250.1	1.6	0.8	500	86,000
Family Health	72	38.6	4114	2910.0	0.4	3.1	200	9400
Average			7985.29					

Source: Authors' computation, 2021.

Besides, it may also suggest that this category of the household does not have access to formal bank services where a substantial amount can be obtained to invest in land and housing. The positive value of skewness for building and housing is associated with results, indicating that the majority of this category of household are on the lower side of the average volume invested. Thus it can be concluded that the majority of the household having informal financial instruments invested below the average volume. There is a low proportion of households having informal financial services that invested in livestock. Almost 14 per cent of this category of household invested in livestock with an average volume of N4021. The lowest proportion of households invested in livestock with a lowest average volume of N4021.

Table 2 reveals that a great number of households having informal financial instruments undertake investment in farmland/farming activities. This is not surprising as agriculture remains the largest employer of labour in Nigeria (FAO, 2013). Besides, a great number of households having informal financial instruments are farmers. The results show that household heads invest an average amount of \$\frac{N}{5}284\$ in farming activities. This low volume of investment suggests that most households who invested in farming activities operate small-scale or subsistence farming. It also reveals that they save and borrow a small amount of money to finance small-scale farming activities. The positive value of skewness for farmland/farm activities is associated with the results, indicating that majority of

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households in this category of financial inclusion status invested an average volume lower than the mean value.

The highest proportion of households (72.5%) having informal financial instruments was observed to invest in industry and business. Investment in industry and business includes small-scale business, petty trading, transportation and communication. This reveals that most respondents who save or/and borrow from the informal sector in southwestern, Nigeria use it for businesses. Few numbers of households have informal financial instruments invested in health care. Only 38.6 per cent of households invested in health care with a low average volume of \$\frac{11}{2}4114. Table 3 shows the volume and pattern of investment of households that are without financial services. Results in Table 3 show that this category of household invested in education, land acquisition, building/housing, livestock, farmland/farming activities, industry and business and family health.

Table 3 Volume and Investment Pattern of Household (Financially Excluded) in Southwestern Nigeria

Type of Investment	Number (177)	Per cent (%)	Mean (N)	Std. Dev.	Skewness	Kurtosis	Min.	Max.
Education	12	6.8	2206	1950.86	1.6	1.3	400	16.000
Land Acquisition	25	14.3	1832	1,758.33	1.9	2.6	1620	25000
Building/ Housing	12	6.8	3554	3,294.79	0.7	1.0	1374	25000
Livestock	58	32.6	3260	2,950.23	0.3	1.4	1956	12500
Farmland/ Farming Activities	121	68.6	3806	3,456.29	1.6	1.2	1956	35500
Industry & Business	29	16.4	2341	2,011	0.7	0.9	500	48,000
Family Health	2	1.3	928	608.10	1.1	2.3	200	6200
Average			2561					

Source: Authors' computation, 2021.

The total average investment made by households that are financially excluded in Southwestern, Nigeria is \(\frac{1}{2}\)2561. The least investment was made in Health care (\frac{1}{2}\)928) while the highest investment was made in farmland/farming activities (\frac{1}{2}\)806). The total investment made ranged between \(\frac{1}{2}\)200 and \(\frac{1}{2}\)48000. Results in Table 3 reveal that there is a low percentage of the household that are financially excluded that invested in education (6.8%), land acquisition (14.3%), building and housing, (6.8%) livestock (32.6%), industry and business (16.4%) and family health (1.3%). However, a sizeable proportion of them invested in farmland/farming activities (68.6%). The results also show that most of the sample households that are financially excluded do not invest in health. Only 1.3 per cent reported having spent on health care with an average volume of \(\frac{1}{2}\)928. This might be connected to illiteracy, the wrong perception about their health status (believing that they don't need any medical check-ups since nothing is wrong with them), irregular income, rural dwelling and particularly, lack of access to financial services. The average volume of investment in education (\(\frac{1}{2}\)206), land acquisition (\(\frac{1}{2}\)1832), building/Housing (\(\frac{1}{2}\)3554), livestock (\(\frac{1}{2}\)3260), farmland/farming activities (\(\frac{1}{2}\)3806) and industry and business (\(\frac{1}{2}\)2341) by this category of household shows that small amount was expended on these forms of investment avenues.

Table 4 reveals an investment pattern based on the level of risk across the states in southwestern Nigeria. Results show that most of the banked households in the region invested in a moderately risky portfolio (MRPF), which was followed by an investment in a high-risk portfolio (HRPF). However, a larger percentage of household heads who held informal financial services in the region invested in low-risk portfolios (LRPF) followed by investment in the moderately-risky portfolio. The highest number of households without any financial services across the state were found to invest majorly in the low-risk investible portfolio. From all three states' samples, the banked households from Ondo State have the highest percentage of the high-risk portfolio while an equal percentage of the banked household in Ekiti and Osun state invested in the moderately-risky portfolio. Besides, across all the sampled states, the highest percentage of households with informal financial services who held high-risk portfolios was found in Ekiti. Likewise, the highest percentage of the household without any financial services who held low-risk portfolios were also from Ekiti State. In general, a higher number of the banked household invested in moderately and high-risk portfolios than in other statuses of financial inclusion in Southwestern, Nigeria.

Table 4: State and Investment Pattern in Southwestern Nigeria

		LRPF			MRPF			HRPF	
	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun	Ekiti	Ondo	Osun
Formal	95	91	105	184	158	178	103	102	86
	(24.9)	(25.9)	(28.5)	(48.5)	(45.0)	(48.2)	(27.0)	(29.1)	(23.3)
Informal	50	78	41	38	71	29	22	34	13
	(45.5)	(42.6)	(49.4)	(34.5)	(38.8)	(34.9)	(20.0)	(18.6)	(15.7)
Excluded	32	48	64	21	34	58	21	38	30
	(43.2)	(40.0)	(42.1)	(28.4)	(38.2)	(38.2)	(28.4)	(31.7)	(19.7)

Source: Authors' computation, 2021. Note: low-risk portfolios (LRPF), moderately risky portfolio (MRPF), high-risk portfolio (HRPF).

The pattern of investment among the three statuses of financial inclusion concerning their place of residence is described in Table 5 Greatest proportion of banked households resident in urban cities (39.3%) were found to hold high-risk portfolios while the greatest percentage of banked households (36.48) living in the rural area holds the moderately-risky asset. Analysis and the result in Table 5 reveal that majority of households who are banked reside in urban cities, and they prefer highly-risky portfolios. The result also shows that banked households who reside in rural areas still prefer holding moderately-risky assets to low-risk assets. However, analysis in Table 5 shows that the majority of the household without any financial services resides in rural areas out of which the highest proportion hold a low-risk portfolio. This suggests that location might be a significant factor that influences the pattern of investment. In all, households residing in urban areas were found to invest more in highly-risky investment portfolios than those living in rural areas. The reverse is found for households resident in rural areas who were observed to invest more in low-risk assets than those in urban areas.

Table 5: Location and Investment Pattern in Southwestern Nigeria

		LRPF	M	RPF	HI	RPF
	Rural	Urban	Rural	Urban	Rural	Urban
Formal	73	300	75	324	58	404
	(35.4)	(29.2)	(36.4)	(31.5)	(28.2)	(39.3)
Informal	144	39	133	37	23	09
	(48.0)	(45.9)	(44.3)	(43.5)	(7.7)	(10.6)
Excluded	134	42	108	38	03	05
	(53.6)	(49.4)	(43.2)	(44.7)	(3.2)	(5.9)

Source: Authors' computation, 2021. Note: low-risk portfolios (LRPF), moderately risky portfolio (MRPF), High-risk portfolio (HRPF).

Table 6 Gender and Investment Pattern in Southwestern Nigeria

		LRPF		RPF	HRPF		
	Male	Female	Male	Female	Male	Female	
Formal	378	108	402	93	421	81	
	(31.5)	(38.3)	(33.5)	(32.9)	(35.1)	(28.7)	
Informal	100	68	106	61	93	54	
	(33.4)	(37.2)	(35.5)	(33.3)	(31.1)	(29.5)	
Excluded	81	91	72	82	53	44	
	(39.3)	(41.9)	(34.9)	(37.8)	(25.7)	(20.3)	

Source: Authors' computation, 2021. Note: low-risk portfolios (LRPF), moderately risky portfolio (MRPF), High-risk portfolio (HRPF).

Table 6 shows the investment pattern of households in southwestern Nigeria based on gender for all three statuses of financial inclusion. In all, there was a greater proportion of males who are banked than their female counterparts. Besides, more male respondents were found to hold moderately risky portfolios (33.59%) and highly-risky portfolios (35.1%) than their female counterparts who held more low-risk portfolios (38.3%). However, among the households that were financially excluded, the female gender was observed to hold a more low and moderately-risky portfolio than the male gender. With regards to households holding informal financial services, more households headed by a male were

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found to hold both moderately and highly risky investment portfolios across all three statuses of financial inclusion than their female counterparts.

The distribution of age structure in terms of types of the portfolio held is shown in Table 7. A high percentage of the banked household who invested in the high-risk portfolio in selected states in southwest Nigeria were found among the aged 36-45, followed by those with the age bracket 46-55 years. Likewise, those in the age bracket 36-45 years who are banked also constitute the majority who invested in the low-risk portfolio. However, a high percentage of the household head who held formal financial services and invested in the moderately-risky portfolio were found among the age bracket 18-25 years. In Southwestern, the percentages of banked households holding high-risk portfolios were found to increase with age. This is also true for households holding informal financial services as regards investment in the low-risky portfolio. The data also reveals the status of the investment pattern of the household head without any financial services. The percentage of the excluded holding high-risk portfolio increase as age increase until the age of 56 years and above. In addition, the data show that banked households in southwestern Nigeria invested in a high-risk portfolio than other statuses of financial inclusion (i.e. informal and excluded). Likewise, in all the categories of ages, households without any form of financial services holding low-risk portfolios were more than another status of financial inclusion

Table 7:Age and Investment Pattern in Southwest, Nigeria

			LRPF					MRPF					HRPF		
	18-25	26-35	36-45	46-55	56+	18-25	26-35	36-45	46-55	56+	18-25	26-35	36-45	46-55	56+
Formal	23	48	92	58	65	43	65	87	78	94	46	78	139	101	109
	(20.5)	(25.1)	(38.9)	(24.5)	(24.3)	(38.4)	(34.0)	(27.4)	(32.9)	(35.1)	(41.1)	(40.8)	(43.7)	(42.6)	(40.7)
Informal	03	13	10	34	51	06	14	28	32	56	03	12	12	16	61
	(25.0)	(33.3)	(20.0)	(41.5)	(30.4)	(50.0)	(35.9)	(56.0)	(39.02)	(33.3)	(25.0)	(30.8)	(24.0)	(19.5)	(36.3)
Excluded	23	28	18	24	30	32	10	12	23	21	07	10	08	13	10
	(37.1)	(58.3)	(47.4)	(40.0)	(49.2)	(51.6)	(20.8)	(31.6)	(38.3)	(34.4)	(11.3)	(20.8)	(21.1)	(21.7)	(16.4)

Source: Authors' computation, 2021. Note: low-risk portfolios (LRPF), moderately risky portfolio (MRPF), high-risk portfolio (HRPF).

Tables 8-11 showed the investment pattern of households in financial assets in the selected states in southwestern Nigeria. The investment pattern of households in financial assets reveals the pattern of acquisition of financial products by households that are formally included (banked households). It reveals the order in which financial products are acquired. Since the acquisition of all financial products needed by households cannot be acquired once, it evolves and involves a substantial monetary expenditure, thus the decision on their order of acquisition, therefore, becomes necessary and important to households and decision-makers of financial service providers to develop and maintain a long-term relationship between the household and financial institutions. It is also important as it serves as a good tool to study and explain consumer (household) revealed preference theory at a relatively level of product granularity. (Paas, et al., 2007).

Households were asked to indicate the existing financial products they own and also to put in rank order the products they wish to have in the next available opportunity. Table 8 shows the relationship between a household's existing and the next product preference. The products are listed/ranked in the table based on their increasing level of risk.

Table 8: Markov Matrix Showing Relationship between Households' Present and Next Preferred Product Preference in Southwestern Nigeria

Next Preference	Savings	Pension	Insurance	Government bond	Mutual/ Investment	Share
Current Product				oond	trust	
Savings	0.046	0.222	0.147	0.275	0.256	0.054
Pension fund	0.053	0.184	0.153	0.413	0.153	0.044
Insurance	0.048	0.252	0.143	0.371	0.091	0.095
Government bond	0.071	0.073	0.107	0.214	0.321	0.214
Mutual/Investment trust	0.078	0.063	0.097	0.094	0.418	0.25
Shares	0.042	0.042	0.15	0.2	0.316	0.25

Source: Authors' computation, 2021.

Table 8 reveals that households whose next preference is government bonds are relatively high. This is not unconnected with the low level of risk it possesses among other financial products. There is a significant magnitude of households currently having investment trust and share whose next preference was the same investment trust and share respectively. This might be the fact that they are risk lovers/takers willing to always invest in risky assets for high returns. Surprisingly, a great proportion of households owing saving accounts, pension funds and government bonds are also willing to own risky assets (mutual/investment trust and share). Few percentages of households are willing to have a savings account as their next asset. Each cell in Table 8 can also be interpreted as the proportion of households willing to switch to another product portfolio. About 5 per cent of households currently owing saving accounts are willing to have/switch to share/equity while four per cent wishes to still retain a saving account or open another saving account. In other words, those with saving accounts but ready to switch to other products are more than those willing to retain/stay having only a saving account. This is the same for pension funds and insurance.

Further, each row and column may correspond to a financial product that is likely to be retained, lost and gained by each product. Thus for saving accounts, the result in the row reveals that almost 5 per cent of households currently having saving accounts might be retained, 22 per cent lost to pension, 14 per cent lost to insurance, 27 per cent lost to government bonds, 25 per cent lost to mutual/investment trust and 5 per cent lost to share. Also, the result on the column for savings reveals that 5 per cent of households having a saving account is likely to be retained while 5, 4, 7, 7 and 4 per cents of households have a pension fund, insurance, government bond, mutual/investment trust and share respectively might be gained by saving account. Tables 9 and 10 show the results of the investment (acquisition) pattern of financial products in southwestern Nigeria. Some product ownership of households was transformed into a Markov matrix which translates to segmentation of a household's phase of financial product development (i.e. segment depicts the phase of financial product acquisition pattern). Each segment

represents the product or combination of products that have relatively high penetration. It reveals the phase of household financial development. Using the Latent Markov Matrix (Paas et al., 2007; Ngwenya & Paas, 2012; Białowolski & Chávez-Juárez, 2021), segment 1 depicts the household's ownership of a single product (i.e. saving account). A savings account remains the financial product held by the majority of households that have only one financial product.

The households with only two financial products have the highest proportion of saving accounts (94%) and insurance (91%). Segment three (3) is characterised by household with three (3) financial products in which saving account (98%), insurance (94%) and pension fund (91%) has the highest product penetration. Saving accounts (100%), insurance (76%), pension funds (81%) and government bonds (25%) were the commonest financial products held by households having four products. In segment five, in addition to financial products acquired in segment four, households added investment trust while segment six characterised households having all the financial products.

Table 9: Proportion of Distribution of Formal Financial Services held by Households in Southwestern Nigeria

1	2	3	4	5	6
Saving (100%)	Saving (94%) Insurance (91%)	Saving (98%) Insurance (94%) Pension (91%)	Savings (100%) Insurance (76%) Pension (81%) Bond (25%)	Saving (100%) Insurance (93%) Pension (91%) Bond (12%) Investment (19%)	Saving (100%) Insurance (92%) Pension (81%) Bond (23%) Investment 62%) Share (85%)

Source: Authors' computation, 2021.

Results in Table 10 show a product penetration of households in each segment. The first row in the third column reveals that 94 per cent of the households in segment two own saving accounts. Further, 100 per cent of household in segment 1 has a saving account. The results also reveal in segments five and six where households own risky products, that, the probability of owning the less risky product is also high. This reveals that households who own risky assets are equally owing less risky assets to balance up their numerous financial objectives. This finding is consistent with extant theory on financial product portfolios (Guiso et al., 2002; Kamakura et al., 1991; Paas et al., 2007). The extent of penetration shows that government bond has a low penetration across all the segments.

Table 10: Segment-Specific Ownership of Financial Products in Southwestern Nigeria

			Se	gment		
Financial Product	1	2	3	4	5	6
Savings account	1.00	0.94	0.98	1.00	1.00	0.98
Insurance	0.00	0.91	0.94	0.76	0.93	0.92
Pension	0.00	0.02	0.91	0.81	0.91	0.81
Bonds	0.00	0.01	0.01	0.25	0.12	0.23
Investment trust	0.00	0.02	0.01	0.09	0.19	0.62
Equity share	0.00	0.00	0.01	0.02	0.06	0.85
Total product	1.00	1.9	2.86	2.93	3.21	4.41

Source: Authors' computation, 2021.

Table 11 presents the logistic regression results of the effect of socio-economic characteristics on household segment membership/portfolio development. Results show that males have a higher probability to own risky financial products than their female counterparts. Male are more represented in segments five and six. Concerning life cycle stages, households in their intermediate life cycle stage (36years-65years) have a higher probability to own more financial products than other categories. Regardless of status, households in their intermediate life cycle are more represented in segments five and six where there is high financial products concentration and penetration. This, although, is inconsistent with the results on the ownership structure of financial products among four ethnic groups in South Africa, Ngwenya and Paas (2012), but conforms with the life-cycle-income hypothesis (Modigliani & Brumberg, 1954; Wa"rneryd, 1999; Paas et al., 2007) suggesting that as individual grows older, they tend to have higher income which is used to finance past and future consumption. As

expected, the probability of being in the segment with high product penetration and owing a risky asset reduces with the household age sixty-five and above. The probability is also lower in segments 2 and 3 which suggests that pension funds and life insurance are no longer required at this particular life cycle age. However, there is a significant and positive relationship between ownership of saving accounts and households in age sixty-five and above.

The households with more than four official documents have a higher probability to be in a segment with high product penetration. Households with many official documents are more likely to use them for various business transactions which could help/enable them to meet institutional requirements. The likelihood of having saving accounts increases with households with only one to two official documents. Furthermore, the probability of being in the segment with high product penetration is higher in households with high incomes. This aligns with the findings of Paas et al., (2007), Kamakura et al., (1991), Guiso et al., (2002) and, Białowolski and Chávez-Juárez, (2021) Households with higher income can afford to own risky financial products that can yield high returns.

Table 11: Logistic Regression on the Effect of Demographics on Segment Membership in Southwestern Nigeria

Segment Segment	1	2	3	4	5	6
Gender:						
Male	0.056**	0.021	0.082	0.066	0.128**	0.157**
	(0.022)	(0.017)	(0.065)	(0.053)	(0.413)	(0.066)
Life cycle stage:						
Single (no child) 18-35	0.071	0.021	0.132	0.056	-0.045	-0.031
, ,	(0.049)	(0.017)	(0.203)	(0.041)	(0.046)	(0.031)
Married (no child) 18-35	-0.024	0.025**	-0.095	-0.055	0.120	0.045
,	(0.025)	(0.010)	(0.137)	(0.044)	(0.088)	(0.043)
Single with children 18-35	0.426	-0.448	0.066	0.283	0.058**	-0.681**
	(0.328)	(0.356)	(0.048)	(0.229)	(0.001)	(0.167)
Married with children 18-35	-0.099	-0.065	0.072	-0.058	0.323	0.284
	(0.071)	(0.052)	(0.053)	(0.178)	(0.259)	(0.301)
Single (no child) 36-65	-0.085	0.051	-0.241	0.087	-0.088	0.062
	(0.097)	(0.415)	(0.166)	(0.136)	(0.070)	(0.050)
Married (no child) 36-65	-0.882	0.785	-0.086	0.216	0.175**	0.082**
()	(0.668)	(0.550)	(0.089)	(0.393)	(0.041)	(0.013)
Single with children 36-65	-0.052	0.072	0.072	0.085	0.092**	0.081**
	(0.039)	(0.050)	(0.058)	(0.155)	(0.025)	(0.017)
Married with children 36-65	-0.086	-0.088	0.382	-0.310	0.615**	0.443*
THE THE WILL CHILDREN SO SE	(0.068)	(0.089)	(0.643)	(0.347)	(0.144)	(0.085)
All above 65 years	0.522**	-0.254	-0.163	-0.116	-0.083*	-0.134
The moore of Jenis	(0.102)	(0.433)	(0.617)	(0.179)	(0.013)	(0.199)
Official document:	(0.102)	(0.100)	(0.017)	(0.175)	(0.015)	(0.177)
One-two	0.216**	0.063	0.015	0.034	-0.012	-0.001
	(0.046)	(0.051)	(0.012)	(0.050)	(0.046)	(0.004)
Three-four	0.085	0.048	0.534***	0.286	0.349	0.472
Timee Tour	(0.068)	(0.038)	(0.146)	(0.443)	(0.282)	(0.361)
Four Plus(4+)	0.106	0.282	0.528	0.195**	0.266	0.204**
10011105(11)	(0.074)	(0.431)	(0.384)	(0.031)	(0.187)	(0.041)
Income ('000)	(0.071)	(0.131)	(0.501)	(0.031)	(0.107)	(0.011)
18-40	0.587	0.106	0.034	0.082	0.058	0.081
10 10	(0.474)	(0.181)	(0.027)	(0.121)	(0.048)	(0.062)
41-80	-0.091	-0.058	0.042	0.079	0.121	0.107
41 00	(0.075)	(0.083)	(0.065)	(0.063)	(0.332)	(0.196)
81-150	-0.285	-0.308	0.372***	0.485	0.644**	0.285
01-130	(0.289)	(0.442)	(0.102)	(0.360)	(0.124)	(0.445)
151-250	-0.057	-0.019	0.215	0.296	0.487	0.562
131 230	(0.059)	(0.034)	(0.170)	(0.507)	(0.390)	(0.457)
>250	-0.066	-0.025	0.295	0.522	0.519	0.437**
Z 250	(0.046)	(0.010)	(0.244)	(0.621)	(0.125)	(0.162)
N	546	(0.010)	(0.244)	(0.021)	(0.123)	(0.102)
Log-likelihood	-1682.35					
Log-likelillood	-1002.33					

p<0.1, p<0.05, p<0.01. Standard error in parentheses.

Source: Authors' computation, 2021.

Discussion

Empirical studies showed that access to finance creates an avenue for alleviating households' poverty. The existence of a high level of investment gap and poverty are some of the adverse outcomes of inadequate access to finance. To achieve economic growth and development, household investment is importantly necessary and should be given priority. Results of this study reveal that each financially-classified household invested in all investment avenues. However, there are differences in the volume and pattern of investment across the three categories. The total average volume of investment by households that are formally included (¥24534) is higher than households having only informal financial services (¥7985.29) and those without any financial services (¥2561). The volume of investment of banked households in building/housing, livestock, farmland/farming activities and industry and business was greater than the volume of investment of households having only informal financial services and those without any financial services.

This supports the results reported in the literature that households who have access to formal financial services are more likely to invest than those without access to formal services (Jacoby 1994; Dehejia & Gatti, 2002; Beegle et al., 2003; Burgess & Pande, 2004; Beck et al., 2007; Mastroyiannis, 2007; World Bank, 2008; Ashraf et al., 2010; Ellis et al., 2010; UNDP, 2013; Hao Manh Quach, 2016; Akinlo & Sharimakin, 2020; Akeju, 2022). The volume of investment of banked households in the acquisition of land is 6 and 8 times greater than that of households with informal services and those without financial services respectively. Also, the average volume of investment of banked households in family health is four (4) and sixteen (16) times that of households having informal services and those without any financial services respectively.

There was a greater volume of investment in education, acquisition of land, building/housing, livestock, farmland/farming activities and industry and business; and health by households having informal financial services over households that are financially excluded. This is consistent with the finding of Ellis et al., (2010). An average volume of N6928, N12906, N9238, N4021, N5284, N9725, N13406 and N4114 were respectively invested in education, land acquisition, building/housing, livestock, and farmland. Farming activities, industry and business and family health by households having informal financial services which were all lower than the average amount invested by the banked households but greater than the average amount invested in all investment avenues by households who are financially excluded.

There was a clear distinction in the pattern of investment among the three categories of the household. A high percentage of the sampled banked household invested in education (91.3%), land acquisition (72.6%), building/housing (64.8%), livestock (55.3%), farmland/farming activities (69.0%), industry and business (82.2%) and family health (88.5%). On contrary, a very low percentage of total sampled households without financial services invested in education (6.8%), health (1.3%), purchase of the land (14.3%) Building/Housing (6.8%), livestock (32.6%), farmland/farming activities (68.6%), and industry and business (16.4%). This reveals that being formally banked increases a household's perceptions and attitudes towards investment in a physical and human capital asset. This aligns with the result reported by Ellis et al., (2010) that formal financial services in Kenya were used more for investment purposes than other forms of provisions

Likewise, findings show and imply that households without financial services do not usually have a pre-planned form of investment. They could not plan to invest in a specific investment avenue at a particular period unlike those with bank accounts. Investment in any physical asset by households who are financially excluded does not necessarily depend on savings or borrowing but rather on the staggered and inconsistent inflow of meagre income from low-income generated businesses and agriculture in which a greater proportion is spent on consumption. They invest as income flows in, and not as planned. The finding of this study shows that the greatest number of households hold moderately risk portfolios out of which bank deposits constitute the greatest proportion. This is followed by the proportion of households having a low-risk portfolio. Households without any financial services were found to constitute the greatest proportion of those having a low-risk portfolio. Conversely, households who are banked constitute the greatest proportion of those having highly-risky asset portfolios.

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The acquisition pattern of households in formal financial services in southwestern Nigeria shows that saving accounts remain the dominant product owned by virtually all households who are financially (formally) included, and it was also the base of all financial products acquired by households. This conforms with the results of previous findings (Stafford et al., 1982; Paas et al., 2007; Ngwenya & Paas, 2012). Households were found to acquire financial products in nearly the same order. Besides, the order of acquisition was found to follow levels of risk of products where less risky financial products were acquired before high risky assets.

An analysis of acquisition patterns also reveals the influence of the life cycle stage and hierarchical motive of savings. Young household heads were found to acquire financial products that are less risky that can satisfy basic needs. However, as they grow older and have higher incomes, they invest in more sophisticated products for asset accumulation. This is in support of the findings of Kamakura et al (1991) in their acquisition pattern analysis for cross-selling objectives that a consumer in an attempt to balance his many financial goals attempts to acquire financial products based on the life cycle stage. Results in the data reveal the level of financial maturity of households and the 'extent of difficulty of some products. (difficult products are those that need greater resources to acquire, are highly risky and possess lower liquidity; Kamakura, et al.,1991). A more mature household acquires more financial products (segments 5 and 6) than less mature households.

Further, the acquisition pattern follows a conventional consumer utility maximisation function where products that satisfy consumer basic needs (e.g. savings) were acquired before other products which satisfy higher-order objectives (e.g. investment trust, share etc.). Another important observation and finding are that the acquisition pattern of financial products in southwestern Nigeria follows the four hierarchical saving motives (Canova et al.,2005; Warneryd, 1999) namely cash management, precautionary motive (buffer saving), down-payment motive (goal-saving) and wealth management. A savings account helps to manage cash acquired before products which helps the households to develop a financial reserve to meet unexpected contingencies. Next is the acquisition of financial products (investment trust) for the accumulation of financial deposits to acquire assets like a house, car or other durables. Last is the acquisition of financial products (investment trust and shares) to manage the household's wealth and businesses

Conclusion

The summary of the study underscores that households in southwestern Nigeria invested in physical, human capital and financial services; and that both formal and informal financial services are important determinants of a household's level of investment. Results revealed a significant difference in the volume and pattern of investment undertaken by banked and unbanked households. Households that are formally included invest more in physical and human capital assets than those that have informal and without financial services. The investment structure in southwestern Nigeria supports the influence of the life-cycle hypothesis. A greater proportion of investments were undertaken by intermediate households who also owned most main financial services while young and old households own debt-related financial services. Nevertheless, further studies could be conducted in other southwestern states and other regions in Nigeria to assess the generalisability of the result reported in this paper.

Since investment is an important determinant of growth, more effort is needed to increase household access to formal finance. The cost of using formal financial services should be lowered to encourage and attract households to use formal financial services. Bank and regulatory agencies should increase efforts to develop products that meet the need of the poor, particularly, households that are not formally included. There is an urgent need on the part of policymakers, government agencies, banks and regulators to rise and synergise to increase the level of financial inclusion in the southwestern region and Nigeria at large.

Lastly, since socio-economic characteristics were found to be statistically significant in the acquisition pattern of financial products in southwestern Nigeria, banks can use this result to develop products and services that are tailored towards these characteristics to market their saving options and increase their outreach to a significant number of people and clients who were hitherto excluded from the financial mainstream. It is also important as it serves as a good tool to study and explain consumer (household) revealed preference theory at a relatively level of product granularity.

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Appendix 1
Household Awareness and Perception Risk Levels of Products in Southwestern Nigeria

Product	Level of Risk Weighted Mean Score	Awareness Weighted Mean Score
Bank deposits	2.61	1.12
Insurance	2.84	1.01
Equity share	4.877	1/32
Bond/debenture	4.06	1.67
Pension scheme	2.33	1.26
Investment trust	4.76	1.58
Building/Housing	1.86	1.00
Livestock	2.18	1.01
Industry/Business	3.69	1.35
Purchase of land	2.52	1.06
Farm land	1.24	1.27

Source: Authors' computation 2021.