Journal of Economics and Sustainable Development
ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online)
Vol.6, No.10, 2015

Determinants of Personal Savings in Ghana: A Case of the Cape Coast Metropolis

Emmanuel Aidoo
Division of Academic Affairs, University of Cape Coast, Ghana, West Africa
E-mails of author: eaidoo@ucc.edu.gh;ekaidoo@gmail.com;omegakojo@yahoo.com

Abstract
The critical role personal savings play in the development of any economy cannot be underestimated. Unfortunately, personal savings which forms the fundamentals of national savings has been particularly low in Ghana. The objective of the study was therefore to investigate the factors that determine personal savings in Ghana. A cross sectional data from 250 individual household members in the Cape Coast Metropolis in the Central Region of Ghana was collected and analysed using econometric techniques. The estimation technique used was the instrumental variable (IV) method. The result of the study showed a significant positive relationship between personal savings and disposable income; personal savings and financial literacy; and personal savings and marital status. A statistically significant negative relationship was also found between personal savings and personal assets; personal savings and loan commitments. It was concluded that indeed the level of personal savings is low and attributable to low income levels, low financial literacy and high levels of indebtedness. Consequently, the study recommended that banks should continue to screen, and offer technical advice to loan applicants to help reduce high indebtedness. It was also recommended that the government and financial institutions must also put in place financial literacy programmes for Ghanaians. The study further recommended that the Central Bank of Ghana should ensure that banks and loan companies reduce high borrowing rates to reduce individual interest expenses.
Keywords: personal savings, financial literacy, instrumental variable, assets, disposable income, permanent income hypothesis, Cape Coast, Ghana

1. Introduction

Personal or household savings is arguably the bedrock of national savings of every economy irrespective of the stage of development. Personal savings which is also referred to as household savings refers to the portion of personal income that is not consumed. These savings are often kept in the formal banking system. In some cases, savings are kept in the informal financial sector, a practice which is common in developing countries. Savings in the banking system is crucial in view of the fact that banks are the transmission belts of monetary policies. It is when individuals, corporate organisations save in the formal banking sector that banks are able to make credits available to investors in the form of loans to embark on investments.

Personal savings (or household savings) and corporate savings constitute private savings whereas savings by the government constitutes public savings. Private savings, public savings and foreign savings constitute national savings. Personal or household savings is therefore a critical and the basic component of national savings and must be given the due attention. Problem of low national savings must therefore be tackled at the micro level because low personal savings translate into low national savings.

Mobilisation of personal savings has been emphasised as a prerequisite for economic growth and development in all economies whether under-developed, developing or developed. Irrespective of the stage of development of an economy, adequate personal savings mobilisation will increase the growth rate of the economy. By this argument, it is believed that differences in the rate of capital accumulation in the form of financial savings accounts for why economies are at different levels of development. The veracity of this argument has been ascertained by many researchers who argued that the difference between more economically developed countries (EDCs) and the less developed countries (LDCs) is accounted for by their varied levels of capital accumulation (Myrdal, 1972; Lewis, 1954; Rostow, 1954; Nurkse, 1953).

In underdeveloped economies, low productivity leads to low income, low savings and low capital formation as explained by the vicious cycle of poverty which implies a circular constellation of forces tending to act and react upon one another in such a way that keeps a country in a state of poverty. The Rostow's Theory of Economic Growth states that as a pre-condition for a take-off to a sustained growth, savings and investment must rise from 5 % or less to over 10 % of national income and maintained for two or more decades. Although a handful of countries in Africa have achieved higher savings rates, the bottom line is that the region's savings rate "is not commensurable with the investment needs of 25 per cent of GDP required to reduce poverty by 2015," argues Jean Thisen, a Senior Economic Affairs Officer with the UN Economic Commission for Africa, (Dovi, 2008). At the summit of the African Union in Ghana held in July 2007, the continent leaders launched an initiative to mobilise resources to finance Africa infrastructural development. This laudable idea will however be a mirage if this low trend of saving is not reversed.

In Ghana, available evidence shows that gross domestic savings as a percentage of gross domestic products (GDP) has been lower as compared to many African countries. Between 1980 and 2001, it averaged 6.4% in Ghana, 37.4% in Botswana, 21.4% in Cameroon, 21.6% in Nigeria, 13.9% in Kenya and 7.3% in Malawi (World Development Indicators, 2003). Ghana's saving rate as a percent of GDP of 6.4 % is below what would be the required rate for sustainable growth and development. The country's record of poor savings can be attributed to low level of personal savings which emanates from low personal incomes as compared with expenditure. The Ghana Living Standard Survey Round 5 (GLSS 5) which was conducted between September 2005 and September 2006 provides empirical evidence to support the low level of household income in Ghana. Average annual household income in Ghana from the GLSS 5 data was about GH¢1,217.00 whilst average annual household expenditure was GH¢1,918.00.

Before 1983, the formal banking system of the Ghanaian economy was dominated by state-owned banks which had monopoly over operation and spread. The Barclays Bank and the Standard Chartered Bank, were the only foreign bank in the entire financial system. The opening of branches of the foreign banks was limited to only four cities (World Bank, 1995). Limitation of the availability of financial services, low and negative real interest rates savings resulted in low savings.

Ghana liberalised its financial system in 1983 which among other things, introduced free entry into the formal financial sector. The financial institutions within the sector widened from a pre-liberalisation number of about two foreign and five state-owned banks with virtually no non-bank financial institution. As at 1990 (seven years after the sector reform) the Ghanaian banking sector comprised of the central bank-the Bank of Ghana, 9 commercial banks, and 3 merchant banks. This increased to 143 banks 2008 comprising 7 Commercial banks, 8 Universal banks, 9 Development banks, 2 Merchant banks and 121 rural banks (Asamoah, 2008). The liberalisation also saw influx of foreign-owned banks into the country. Since then, banks in Ghana have introduced several innovative products to encourage savings. However, after three decades of the liberalisation, savings are still not at the level that can take the nation to a self-sustained growth.

Since the financial reforms began, there has been slow progress towards active savings mobilisation at the micro level. The slow trend in savings mobilisation since the reform is also quite evident from data on deposit mobilisation at the bank branch level (Aryeetey, 1996). It is logical to presume that the recorded low level of savings can be attributed to low savings at the micro or personal level which has not responded as expected after the financial sector reforms in Ghana. Evidence available confirms that savings rate prior to and after the financial liberalisation has been below 10% of gross domestic product (GDP). The Africa Development Indicators (2001) reported that the annual average savings rate between the years 1975-1984 was 6.3 %, between the years 1985-89 was 5.5% and 8.2 % in the 1990's. These figures confirm that after years of financial liberalisations in Ghana, national savings is still not adequate

This requires further and deeper investigation into the phenomenon. However, most of the previous studies in Ghana have concentrated on savings at the national level rather than tackling the root cause. The studies on household savings also used household heads as sources of data. There is therefore the need to investigate the problem at the micro level. Furthermore, how factors such as financial literacy, interest rates and other demographic factors affect personal savings have not been adequately explored in Ghana. There is a clear knowledge gap as far as how financial literacy and other factors that impact on personal savings from the micro level is concerned.

If the situation is not addressed, the country will continually find itself in the vicious cycle of poverty. Apart from the economic growth that may also be adversely affected, the Ghanaian economy will continue to be at the vagary of the external economy and vulnerable to external shocks. The economy may not be able to insulate itself from external shocks. In spite of how critical this problem is and the fact that it should be a major national concern, studies in this area in Ghana is inadequate. The main objective of the study is to investigate the factors that determine personal savings in Ghana using the Cape Coast Metropolis in Ghana as a case.

2. Literature Review

2.1 Theoretical Foundation of Personal Savings and Dissavings

Individuals have just two choices of what to do with their after-tax income-use it to consume or save it (McConnell and Brue, 1999). Economists have defined saving as the part of after-tax income which is not spent. McConnell and Brue (1999) theoretically explained personal savings as the portion of income that is not paid as taxes or used to purchase consumer goods but which flows into bank accounts, insurance policies, bonds and stocks, mutual funds and other financial assets.

The reasons for personal savings centre on security and speculations. Individuals or households save to provide a "nest egg" for unforeseen contingencies such as sickness, accidents, unemployment; for retirement from workforce; to finance education of children; or for financial security (McConnell and Brue, 1999). McConnel and Brue (1999) maintained that individuals also channel income to purchase stocks, speculating that they will increase in value. The desire to save alone is not enough but should be backed by the ability to save. It

has been emphasised that people may dissave, that is, consuming in excess of after-tax income. This occurs by borrowing and digging into savings that have accumulated over the years. Apart from income, there are other non-income determinants of personal savings. According to McConnel and Brue (1999) disposable income is the basic determinant of household savings, but other factors such as wealth referring to real assets, expectations, indebtedness, and taxation.

2.2 Friedman's Permanent Income hypothesis (PIH)

Friedman (1957) proposed the permanent income hypothesis, which lays emphasis on the importance of long-term income as the main determinant of household consumption (Strydom, 2007). The theory distinguishes between two sources of income, namely permanent income and transitory income. Permanent income is the long-term expectation over the planning period and steady rate of consumption maintained over a lifetime given the present level of wealth, whilst transitory income constitutes the difference between actual and permanent income. The difference arises as a result of "temporary influences" such as a "windfall" gain or loss (Samuelson and Nordhaus, 1995). Friedman (1957) assumed that individuals do not consume from transitory income and that transitory income is immediately channelled into savings with the result that marginal propensity to save on transitory income will approach unity.

2.3 Conceptual Model of Financial Literacy

Hung, Parker and Yoong (2009) postulated a conceptual model of financial literacy, which establishes mutual relationships among financial knowledge, financial skills and financial behaviour. Financial knowledge represents a particularly basic form of financial literacy which is reflected in perceived financial knowledge and influences financial skills which depend on knowledge. The module stated that actual financial behaviour, in turn, depends on all three (actual knowledge, perceived knowledge, and skills). Finally, the experience gained through financial behaviour feeds back into both actual and perceived financial knowledge. The relationships are likely to be imperfect, as each also depends on other factors internal and external to the individual such as attitudes, and resources. Figure 1 illustrates these logical relationships among financial literacy components.

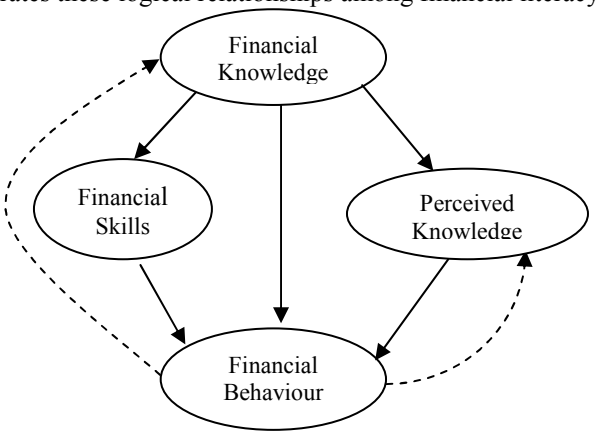

Figure 1: Logical Relationship among Financial Literacy Components

Source: Hung, Parker, and Yoong (2009). *http://ssrn.com/abstract=1498674*

The model provides explanation to financial behaviour of individuals. Thus, financial behaviour depends on the level of financial knowledge, skills as well as perceived knowledge. When a person becomes more financially skillful, his financial skills influence savings behaviour because he is able to calculate his returns on any savings and compare financial options to make informed saving decisions. The individual's financial behaviour gives further knowledge, which promotes more financial behaviours in future.

2.4 Empirical Studies on Personal and Household Savings

Empirical studies of the life-cycle hypothesis have generated a large literature. King (1985) [as cited by Crown, (2002)], noted that saving in retirement is not necessarily inconsistent with the life-cycle hypothesis if one accounts for the aversion of individuals to uncertainty about the future (e.g., how long they will live and future inflation). The study explained that the generosity of pensions reduces the need to save in preparation for retirement and to dissave while on retirement. Life-cycle savings patterns in some European countries such as France, Germany, and Italy that have generous pension systems appear to be consistent with this explanation. Another related explanation for lack of dissaving in retirement is that deteriorating health may limit the ability of individuals to consume at levels that are higher than their pension income. Jappelli and Modigliani [as cited by Crown, (2002)] found evidence of a hump-shaped pattern of savings that is consistent with the life-cycle

hypothesis. .

A study by Lusardi and Browning (1995) examined the household savings behaviour across age, family composition, education, and wealth groups in the United States of America using a bi-variate analysis. The study found out that savings was positive for every age group. Mean savings rate was also found to increase until period after retirement and then decreased. The study further found out that savings rates were higher for married couples with no children and lower for households with children consistent with Smith (1994) cited by Lusardi and Browning who found evidence of positive relationship between savings and marital status. Furthermore, savings was found to be concentrated at the top part of income distribution and the wealth distribution in the United States. The result of the study was obtained through a b-ivariate analysis of secondary data. There is the need for a multivariate analysis using primary data from a developing country. Hence, this study used a multivariate analysis in its analytical approach.

Several researchers have studied the determinants of household savings in developing countries. One of such studies by Smith-Hebbel, Webb and Corsatti (1992) found a positive relationship between income and household savings, a negative relationship between household savings and inflation and a very small coefficient between interest rate and household savings. The apparent limitation of the study was the use of household savings as perfect substitutes for both private corporate savings and public sectors savings. De Laiglesia and Morrison (2008) also conducted a study on household structure and savings using household and individual data from China, Indonesia, Côte d'Ivoire and Ghana The study found that polygamy is negatively related to capital accumulation. Wealth per capita was also found to be significantly lower in polygamous households even after controlling for income, age and literacy of the household head. The analysis showed that households that accommodated inactive members of the extended kin group were wealthier than other comparable households.

Quartey and Blankson (2002) conducted study in Ghana, which examined whether monetary policies affect savings behaviour in Ghana, and ascertained whether household savings are influenced by demographic factors, such as age, occupation, level of education and ethnic background using 1991/1992 and 1998/1999 household data. The result showed that education significantly increased the probability of savings in 1991/2 but same result could not be found in 1998/9. The probability to save increased as one attained higher education, but the marginal effect was not significant. The probability of savings was also found to be dependent on the type of accommodation the households; households living in rented or rent-free accommodation were found to be likely to save more than those living in their own houses. Children and the aged were also found to be more likely to save in 1998/9 than previously. Household size significantly increased the probability of saving in 1991/2 rather than 1998/9.

Lusardi (2008) conducted a study on household savings behaviour in the United States of America. He indicated that given the complexity of financial instruments, the evidence of financial illiteracy raises the question of whether consumers will take advantage of opportunities offered by the financial market. He added that consumers would rather fall prey to scams and unscrupulous brokers. He continued to state that information and financial knowledge could affect many financial decisions. He quoted Douglas Garret and Maki (2001) who found in a study that individuals who were exposed to financial education programmes whilst in high school were more likely to save later in life. For financial literacy programmes to be effective, he suggested that programmes have to be tailored to the size of the problem even though he admitted that, it was not possible to transform low literacy individuals into financial wizards. He also found out that lack of knowledge may be inconsequential, if, for example individuals relied on the help of others to make decisions. In terms of economic importance, both knowledge of interest compounding and ability to perform simple calculations mattered the most for planning. Hung, Parker, and Yoong, (2009) also found out in a study that financial literacy positively predicts financial behaviour.

Bendig, Giesbert and Steiner (2009) on "Savings, credit and insurance: household demand for formal financial services in rural Ghana" simultaneously estimated the determinants of household demand for savings, loans and insurances by applying a multivariate probit model on household survey data from rural Ghana. The result showed that larger household size increased likelihood of household demands for formal savings. A higher asset index was found to be positively related to the demand for savings, loans, and insurance. The fact that assets work in the same direction as the demand for any of the services may be due to the role of assets as collateral for loans on the one hand and assets being an indication of socioeconomic status. The result further confirmed a strong positive effect of remittances on demand for savings products only or in combination with credit, but this was reversed as soon as insurance was demanded in addition to savings.

3. Methodology

3.1. Data and Sampling Procedure

The study relied on cross sectional primary data collected over the period spanning 3rd March, 2011 to 30th April, 2011. Two main data collection instruments used were questionnaire and structured interview guide. The structured interview guide was added to cater for the respondents who could not read and understand the items

on the questionnaire to provide the appropriate responses themselves. A pilot study was conducted at Apewosika community near the University of Cape Coast, Ghana. The reliability of the instruments was determined by the test-retest method where a set of questionnaire was tested and retested on same respondents after which the reliability co-efficient was calculated. The face and content validity were determined by expert evaluation by the supervisors of the study. Content validity was determined by structuring the questionnaire in a way that ensured that the variables in the study were fairly represented.

The study used a one-stage cluster sampling technique to select a sample of 250 respondents for the study. The study area was clustered in terms of the enumeration areas that had been demarcated by the Ghana Statistical Service. The simple random sampling technique was used to select 20 enumeration areas. Within each cluster, the houses were counted and given numbers and every 5th house was selected. Household members of the various households in the houses above 17 years were contacted for the data.

3.2. Model Specification

The empirical model for the study was derived from theories of personal savings which rest mainly on the permanent income hypothesis, the absolute income hypothesis, the life cycle hypothesis and the model of financial literacy. Savings is considered as the after-tax income which is not consumed but flows into bank accounts, bonds, shares etc. This definition of savings is represented as

$$S = Y^d - C \quad \text{----------(1)}$$

According to the permanent income hypothesis Y^d is made up of both transitory income and permanent income:

$$Y = Y_{Pt} + Y_{Tt} \quad \text{----------(2)}$$

In view of the above, the permanent income hypothesis linear savings equation is given as:

$$S_t = \alpha_0 + \alpha_1 Y_{Pt} + \alpha_1 Y_{Tt} \quad \text{----------(3)}$$

Where,

S_t = Personal saving in time t

Y_{Pt} = Permanent income in time t

Y_{Tt} = Transitory income in time t

The theory maintains that individuals save mainly from Y_{Tt} and consume from Y_{Pt} with marginal propensity to save from transitory income approaching unity. From the explanation of the two components of income, remittances, Y^R form part of both Y_{Tt} and Y_{Pt}. Remittances form part of permanent income when it is a regular payment and as such has formed part of expectations. On the other hand, it forms part of transitory income when it is unexpected and a deviation from expectations. Both permanent and transitory incomes therefore have components of remittances. When these components are taken out and summed, remittance enters the savings function given as.

$$S_t = \alpha_0 + \alpha_1 Y_{Pt} + \alpha_1 Y_{Tt} + \alpha_2 Y^R \quad \text{----------(4)}$$

Where Y_{Tt} excludes remittances.

The absolute income hypothesis on the other hand postulated that people save out of current income. From this position, savings depends on $Y_{Pt}, \alpha_1 Y_{Tt}, Y^R$. Now grouping income sources into two, the savings function is modified as:

$$S_t = \alpha_0 + \alpha_1 Y + \alpha_1 Y^R \quad \text{----------(5)}$$

The theory of inter-temporal consumption choice has also postulated that personal savings is a function of interest rate and current income which can be represented as:

$$S_i = \delta_0 + \delta_1 Y + \delta_2 r \quad \text{----------(6)}$$

The conceptual model of financial literacy has postulated that financial knowledge influences financial behaviour. In the context of savings, it is inferred that highly financially literate individuals would save more. This is because highly financially literate individual are much more aware of the existence of alternative savings products. This implies that the relationship between financial literacy and savings is represented in the equation below:

$$S_f = \pi_0 + \pi_1 FL \quad \text{----------(7)}$$

Where FL = Financial literacy
Adding equations (5), (6) and (7),

$$S_t + S_i + S_f = \alpha_0 + \alpha_1 Y + \alpha_2 Y^R + \delta_0 + \delta_1 Y + \delta_2 r + \pi_0 + \pi_1 FL \quad \text{----------}$$

(8)

$$S_t + S_i + S_f = \alpha_0 + \delta_0 + \pi_0 + \alpha_1 Y + \delta_1 Y + \alpha_2 Y^R + \delta_2 r + \pi_1 FL \quad \text{----------(9)}$$

Let $S_t + S_i + S_f = S$

$$\alpha_0 + \delta_0 + \pi_0 = \beta_0$$
$$\alpha_1 Y + \delta_1 Y = \beta_1 Y$$
$$\alpha_2 = \beta_2$$
$$\delta_2 = \beta_3$$
$$\pi_1 = \beta_4$$

A theoretical model is specified as follows:

$$S = \beta_0 + \beta_1 Y + \beta_2 Y^R + \beta_3 r + \beta_4 FL \quad \text{----------(10)}$$

Equation 10 is augmented with other variables from empirical studies to arrive at the empirical model. These variables are indebtedness, physical assets, age, marital status and other demographic variables.

The empirical model is thus specified as shown below:

$$S = \beta_0 + \beta_1 Y^D + \beta_2 FinLit + \beta_3 Assets + \beta_4 Net\,\text{Re}mit + \beta_5 IntRate + \beta_6 married + \beta_7 ExtFamily + \beta_8 Loan + \beta_9 Age + \varepsilon \quad \text{----------}$$

(11)

Where;
S = Savings
Y^d = Disposable income
$FinLit$= Degree of financial literacy
$Net\ \text{Re}\ mit$ =Remittance income
$Asset$ = Personal assets
$IntRate$= Perception of interest rates
Married = A dummy variable, 1=married and 0=single
$ExtFam$= a dummy taking on the value 1 if the respondent has financial responsibility towards the external family
ε = stochastic error term

3.3. Estimation Technique

The estimation technique used in the analysis was the instrumental variable (IV) method. This technique was used to circumvent the problem of endogeneity because disposable income depends on personal savings, just as personal saving depends on disposable income. The instrumental variable estimation is used when a model has endogenous *X's*, given the following:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + ... + \beta_k x_k + u \quad \text{----------} \quad (12)$$

$$x_1 = \pi_0 + \pi_1 y + \pi_2 z + v \quad \text{----------} \quad (13)$$

In the above case, $\text{cov}(x,u) \neq 0$. An instrumental variable (IV) can be used to solve this problem. In order for a variable, *z,* to serve as a valid instrument for x_1, the following must be true:

1. The instrument must be exogenous
   $\text{cov}(z,u) = 0$
2. The instrument must be correlated with the endogenous variable *x*
   $\text{cov}(z,x) \neq 0$, where z is instrumental variable for *x*

Years of schooling was exogenous and correlated with savings was used as the instrumental variable for disposable income.

3.4 Diagnostic Tests

To ensure that that the result was consistent and unbiased, a test of heteroskedasticity was carried out using the Breusch-Pagan / Cook-Weisberg test for heteroskedasticity. A test of omitted variable was also carried out using Ramsey test of omitted variables.

3.5 A priori Signs

The following are the a priori signs which were informed by theories and empirical literature: $\beta_1>0$; $\beta_2>0$; $\beta_3<0$; $\beta_4>0$; $\beta_5>0$; $\beta_6>0$; $\beta_7<0$; $\beta_8<0$; $\beta_9>0$; *and* $\beta_{10}<0$.

4 Results and Discussions

4.1 Data Analysis

The data collected was analysed in version 10.0 of STATA statistical analysis software. Null hypotheses of the relationships between personal savings and the independent variables were tested. Using the appropriate command, cross correlation among the variables was calculated to check for multicolinearity. Diagnostic tests of omitted variable and heteroskedasticity were then carried out.

Instrumental variable (IV) test was run to determine the coefficients, the standard errors, the *p values*, the *"t"* statistics and the confident intervals. The respective *p values* were compared with the significance level (alpha values) of 5% (0.05). A *p value* less than the 0.05 meant the corresponding coefficient was not zero, statistically significant and therefore rejection of the corresponding null hypothesis

4.2 Result of Diagnostic Tests

To ensure that the result of the regression was unbiased and consistent, diagnostic tests of omitted variables and heteroskedasticity were carried out. Table 1 provides information on test of omitted variables and heteroskedasticity. The test of omitted variable was carried out using the Ramsey's omitted variable test failed to reject the null hypothesis that the model had no omitted variable ($p> 0.05$) and concluded that any omitted variables were not statistically significant. The heteroskedasticity test conducted using the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity tested the null hypothesis that there is a constant variance (H_o: Constant variance.) A post estimation diagnostic test indicated in Table 1 showed a chi square statistic of 276.12 and a p value of 0.000 ($P<0.000$). This result therefore rejected the null hypothesis of constant variance and concluded that there was a problem of heteroskedasticity.

Table 1: Diagnostic tests of omitted variables and heteroskedasticity

Test	Statistic	P value
Ramsey Test of Omitted variables	F(12, 213)=1.31	0.2142
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	Chi Square=276.12	0.000

To resolve the problem of heteroskedasticity, a robust option was added to STATA command for estimation.

4.3 Presentation and Discussion of the main Results

Table 2 contains information on the coefficients and the robust standard errors of the coefficients for the respective explanatory variables which yielded the prediction equation given as:

$$S = 11.65 + 0.18Y^D + 0.83FinLit - 0.00034Assets - 0.006Net\,\mathrm{Re}mit + 10.61IntRate$$
$$+ 39.48married + 12.51ExtFamily - 36.86Loan - 1.59Age$$

Table 2: Instrumental variable (IV) regression result

Savings	Coefficient	Robust SE.	P value
Disposable Income	0.175	0.0586	0.003
Financial Literacy	0.832	0.383	0.030
Personal Assets	-0.000337	0.00011	0.002
Net Remittances	-0.006	0.054	0.98
Perception of interest rate	-10.612	13.938	0.446
Married	39.477	13.942	0.005
External Family Commitment	12.512	14.298	0.382
Loan Commitment	-36.856	17.506	0.035
Age	-1.59	1.042	0.127
Constant	11.65139	20.6947	0.574
Number of Observations	250		
Wald chi2	28.61		
Prob>Chi2	0.000		
R Squared	0.6563		

A coefficient of 0.18 was recorded for the relationship between personal savings and disposable income meaning that personal savings increase by approximately GH¢ 0.18 with GH¢ 1.00 increase in disposable income, if financial literacy, personal assets, net remittance income, perception of interest rate, marital status, loan commitment and financial responsibility to the external family do not change. This result fails to reject the null hypothesis that there is no relationship between disposable income and personal savings and retains the alternative hypothesis that there is a significant relationship between disposable income and personal assets ($p<0.05$).This implies that people with higher disposable income are those who save. This is in conformity with the Keynes' absolute income hypothesis, the neoclassical model of savings, the demand side of the vicious cycle of poverty, the Ricardian theory of development and the theory of inter-temporary consumption theory. This finding also confirms empirical studies sby Lusardi and Browning (1995), Smith-Hebbel, Web and Corsadi (1992) and Quartey and Blankson (2002) which found a positive relationship between household savings and income.

A significant positive relationship was also found between personal saving and the level of financial literacy at 5% alpha level ($p<0.05$). Personal savings increased by approximately GH¢ 0.83 when financial literacy score increased by 1 unit if disposable income, personal assets, net remittance income, perception of interest rate, marital status, loan commitment and financial responsibility to the external family do not change. This result rejects the null hypothesis that there is no relationship between personal savings and financial literacy and hence retains the alternative hypothesis that there is a relationship between financial literacy and personal savings.

This implication is that people who are highly financial literate tend to save more in line with the conceptual model of financial literacy which posits that individuals who are financially literate translate this knowledge into actual behaviours in the form of savings. Such people are much more aware of wider range of financial products as well as the benefit of saving, especially being knowledgeable of the time value of money. This finding confirms a study by Lusardi (2008) on 'household saving behaviour: the role of financial literacy, information and financial education programme among African-Americans and Hispanics in the United States of America' which found a statistically positive relationship between degree of financial literacy and savings. The finding also confirms a study by Hung, Parker and Yoong (2009) and Maki (2000) which found that financial literacy predicts financial behaviour. In the studies, it was found that Individuals who were exposed to financial education programmes whilst in high school were more likely to save in later years. This means that people who are financially literate have more information and are better informed to make saving decisions because information is a salient ingredient for decision making..

The result also revealed a negative relationship between personal savings and value of personal assets ($p<0.05$). Personal savings was found to decrease by 0.03 Ghana Pesewas with each GH¢ 1.00 increase in personal asset if disposable income, financial literacy, net remittance income, perception of interest rate, marital status, loan commitment and financial responsibility to the external family do not change. This result thus rejects the null hypothesis that there is no relationship between personal assets and personal savings. Therefore accumulation of physical assets such as land, houses, cars, and household durables means reduction in savings because individuals normally save to enable them acquire properties or assets in the future. It can be explained that individuals who have accumulated more assets have reduced incentive to save compared to those who do not own lots of physical assets. People with more physical assets save less because they consider accumulation of physical assets as a substitute for financial savings.

This finding supports the position by McConnell and Brue (1999) that there is a negative relationship

between wealth and the incentive to save. This is because the greater the wealth of a household, the larger the amount of consumption, and hence the smaller the amount of savings. The result further shows that mean monthly savings is significantly lower among individuals who have loan commitment than individuals who do not have loan commitments ($p<0.05$). The result also shows that mean monthly savings of persons who had loan commitments were GH¢ 36.86 lower than those who do not have loan commitments if disposable income, financial literacy, personal assets, net remittances, perception of interest rate, marital status, external family commitment, and age do not change. This is because people who are indebted or have loan commitments spend a lot of money to service the loans, and are left with little to save. They spend greater part of their incomes to pay off debts. This finding supports the assertion by McConnell and Brue (1999) that when consumer's as a group increase their household debt, they are able to increase their consumption. Increased borrowings enable consumers to increase consumption at each level of disposable income. However, when the level of household debts gets abnormally high, households may elect to reduce their consumption to pay off some of their loans. It can be inferred from this that, as individuals pay off debt, they will be left with little to be saved.

The study also found a mean monthly savings of GH¢39.48 higher for married people than individuals who are single or in cohabitation if personal assets, disposable income, financial literacy, net remittances, perception of interest rate, marital status, loan commitment and financial responsibility to the external family do not change. Married people are therefore more likely to save than people who are single or cohabiting. This finding confirms a study by Smith (1994) as cited by Lusardi and Browning (1995). The relationship emanates from the fact that married people save more so as to meet family commitment such as payment of school fees, buying books for children, buying clothing for children, paying medical bills and meeting other unforeseen family needs. It is also because married people complement each other financially and are likely to save more than those that are not married yet. Another explanation is that; some married couple may receive financial support from grown up children who are also working.

The study, however, found out that the following have no relationship with personal savings in Ghana: perception about interest rate, age and financial responsibility towards the external family. Overall, the study established that disposable income, financial literacy, personal assets, net remittance, marital status and loan commitment explain 66% of variations in personal savings.

5 Conclusions and Recommendations

5.1 Conclusions

The study investigated the factors that determine personal savings of Ghanaians with particular reference to the Cape Coast Metropolis. The problem arises from the fact that personal saving which is the basic component of national savings has been rather low in Ghana. Available evidence indicates that that national savings are low in developing countries and even worse in Ghana. In spite of this, most studies on saving in Ghana have concentrated so much at the national level. The study therefore tackled the problem from the very root cause, the micro level, which gives more details of the problem.

The theoretical foundation of savings and theories of savings such as the permanent income hypothesis, the life cycle hypothesis and the conceptual model of financial literacy and related empirical literature were reviewed. The empirical literature reviewed included empirical studies on the life cycle hypothesis; determinants of household savings behaviour in developed countries; determinants of personal savings in developing countries; household savings and macro financial policy in Ghana; the role of financial information and education programmes on household savings behaviour; and savings, credit and insurance: household demand for formal financial services in rural Ghana. The cluster sampling technique was used to select 250 respondents for the study. A cross sectional primary data collected using questionnaire and structured interview guide was analysed. The instruments were pre-piloted to test for internal reliability of the items. The test-retest method was to measure the reliability of the items. The questionnaire proved to be reliable overall with a reliability coefficient of $\alpha = .997$ and correlation coefficient, $r=0.994$.

The descriptive statistics showed a mean average propensity to save of 0.19 and an average monthly savings of GH¢110.83 out of mean average monthly disposable income of GH¢578.44. The regression result showed a significant positive relationship between personal savings and deposable income ($\beta=0.175$, $p=0.003$); personal savings and financial literacy ($p=0.030$, $\beta=0.832$); and personal savings and marital status ($\beta=39.477$, $p=0.005$). On the other hand, a statistically significant negative relationship was found between personal savings and assets ($\beta=-0.0003$, $p=0.002$); and personal savings and loan commitments ($\beta=-36.86$, $p=0.035$).

The study confirmed that personal savings is low in Ghana and attributed to a number of factors including low disposable income. It is therefore anticipated that when income of individuals increases, savings will also increase at the individual level and possibly at the national level. It also concluded that reduction in income taxes and other taxes that affect the income of personal businesses will result in significant improvement in savings. In this regard, making people aware of tax reliefs and encouraging them to apply is likely to improve personal savings.

Furthermore, it is concluded from the study that as individuals accumulate more and more physical properties, such individuals will save less. In this regard, individuals who inherit properties from others have little motivation to save. Banks who want attract new customers and encourage them to save will be successful when they target people with less assets. It can also be concluded from the study that when people are equipped with financial literacy skills, it is expected that personal savings will go up. Hence, the phenomenon of low savings in Ghana is partly attributable to low level of financial literacy or lack of financial sophistication on the part of Ghanaians. So long as many people continue to have low financial literacy, savings will continue to be low. People may open bank account, for instance, but the accounts will be for purposes such as receiving salaries and accessing loans other than for personal savings.

Another conclusion that is drawn from the result is that, as the proportion of the population that is married increases, it is anticipated that personal savings will increase. As such, at any point in time, when the proportion of the population that is married reduces, personal savings will fall. It is also concluded that as long as Ghanaians continue to contract loans from banks, individuals and other financial institutions without channelling these loans into productive ventures, savings will continue to fall, and any attempt to improve personal savings will fail.

5.2 Recommendations

First of all, it is recommended that banks and other financial institutions must continue and improve screening of loan applicants and also provide them with technical advice so that they are not overly burdened with loans. This recommendation stems from the findings of the study that majority of the respondents were indebted one way or the other. The recommendation is also informed by the fact that loan commitments have negative relationship with personal savings. The fact that many people are indebted is an indication that people are not using personal loans to engage in profitable ventures. It is further recommended that vigorous public financial literacy programme should be put in place by financial institutions as well governmental agencies so as to improve the level of financial literacy among Ghanaians. The content of the education programmes must include financial concepts, availability of financial products and calculation of interest on savings and other products.

As has been stated already, majority of the respondents had loan commitments which had negative impact on their savings. When this finding is situation in the high borrowing rate regime, especially high borrowing rate charged by savings and loan companies in Ghana, low savings can be attributed to high expenditure on interests. As a result, it is recommended that the Central Bank must ensure that savings and loan companies, banks and other financial companies must reduce high borrowing rates.

Acknowledgement

My sincere gratitude goes to Prof. I. K. Acheampong and Dr. Mark K. Armah both of the Department of Economics, University of Cape Coast for their supervision, expert guidance and constructive criticisms. I am also grateful to the Africa Economic Research Consortium (AERC) for their financial support. I also acknowledge the effort of my wife Ms. Ellen Odame of the Agriculture Development Bank, Ghana for sharing her banking experience to improve the paper. The efforts of Mr. Matthew Kofi Quaidoo of the University of Cape Coast and Cecil Nelson Odame, and other assistants for the help rendered in collecting the data for the study is also appreciated.

References

Aryeetey, E. (1996). *The formal financial sector in Ghana after the reforms.* London: Chameleon Press Ltd.

Asamoah, G. N. (2008). The impact of the financial sector reforms on savings, investments and growth of gross domestic product (GDP) in Ghana. *International Business & Economics Research Journal, 7,* 73-84.

Bendig, M., Giesbert, L., & Steiner, S. (2009): Savings, credit and insurance: Household demand for formal financial services in rural Ghana. *German Institute of Global and area studies (GIGA) working papers*, *no. 9* Retrieved June 13, 2010 from http://www.gigahamburg.de/workingpapers.

Browning, M., & Lusardi, A. (1995). *Household saving: Micro theories and micro facts.* Unpublished working paper, McMaster University, Ontario, Canada.

Crown, W. H. (2002) *Life cycle theories of savings and consumption* Retrieved on 16th March, 2009 from http://www.encyclopedia.com/doc/1G2-3402200229.html

De Laiglesia, J. R. & Morrisson, C. (2008). Household structures and savings: evidence from household surveys. *OECD Development Centre Working Paper, No*. 267.1-71

Dovi, E. (2008). Boosting domestic savings in Africa. *Africa Renewal, 22, 12.*

Hung, A. A., Parker, A. M., & Yoong, J. K. (2009). Defining and measuring financial literacy. Retrieved from http://ssrn.com/abstract=1498674.

Lewis, W. A. (1954). *Economic development with unlimited supplies of labour*. In A. N. Argawalla, & S.P. Singh (Eds.), *The economics of underdevelopment,* (pp. 400-49). New York: Oxford University Press.

Lusardi, A., & Mitchell, O. S. (2006). Financial literacy and planning: implications for retirement wellbeing. *Wharton School, University of Pennsylvania, Pension Research Council Working Paper no. 1.*

Lusardi, A., & Mitchell, O.S. (2007). Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of Monetary Economics*, *54,* 205-224.

Lusardi, A., (2008). Household savings behaviour: The role of financial literacy, information and financial education programs (Electronic version). *NBER working paper series* 13824. Retrieved from http://www.nber.org/papers/w13824.

Lusardi, A., (2008). *Household savings behaviour: the role of financial literacy, information and financial education programs*. Paper presented at the conference, "Implications of behavioural economics for economic policy" held at Federal Reserve Bank of Boston from September 27-28, 2007.

Maki, D., Douglas, B., & Garrett, D., (2001). Education and saving: the long-term effects of high school financial curriculum mandates *Journal of Public Economics, 85*,435–565.

McConnell, C. R. & Brue, S. L. (1999). *Economics, principles, problems, and policies* (14th ed.). New York: McGraw-Hill Companies Inc.

Myrdal, G. (1972). *Asian drama: an inquiry into the poverty of nations*. Abridged edition by Seth S.

King, of the Twentieth Century, Fund Study. New York: Vintage Books.

Nurkse, R. (1953), *Problems of capital formation in underdeveloped countries*. Oxford: Blackwell.

Quartey, P. (2002). *Finance and small and medium enterprise development in Ghana.* Unpublished PhD thesis submitted to University of Manchester.

Quartey, P., & Blankson, T. (2002). Low savings in Ghana: does policy matter? In E. Aryeetey & R. Kanbur (Eds.), *The economy of Ghana: analytical perspectives on stability, growth and poverty*, (pp 153-171) Accra New Town: Woeli Publishing Services.

Rostow, W.W. (1954). *The take-off into self-sustained growth*. In A.N. Argawalla and S.P. Singh (Eds.), *The economics of underdevelopment*, (pp. 154-86). New York: Oxford University Press.

Samuelson, P. A. & Nordhaus, W. D. (1995). *Economics.* New York: McGraw Hill.

Schmidt-Hebbel, K., Webb, S., B. & Corsetti, G. (1992).Household saving in developing countries: first cross-country evidence. *The World Bank Economic Review*, 6, 529-47.

Strydom, P. (2007). Savings behaviour by South African households. Retrieved on May 22, 2008 from www.fnb.co.za/economics/econhtml/docs/Savings Households.pdf.

Schmidt, L & Sevak, P. (1994). Gender, marriage and asset accumulation in the United States. *Feminist Economics,12, 139-166.*

World Development Index (2003), *World Development Indicators*, Washington: World Bank

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/ All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

Academic conference: http://www.iiste.org/conference/upcoming-conferences-call-for-paper/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar