Mobilization of Domestic Savings in Formal Financial Institutions: The Missing Link to Economic Growth

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Abstract

The purpose of the study was to examine factors that affect a Kenyan household's decision to save in formal financial institutions. This is because domestic saving finances investment and therefore economic growth. A non-experimental research design was utilized using secondary data collected from a national-wide household survey in Kenya in 2009. Cluster stratified probability sampling was used in selecting regions and households that were included in the survey. A total of 6,598 households were used in the survey, using a questionnaire to gather information on financial access. Descriptive and inferential statistics were used for data analysis. The results indicated the factors that influence household's decision to save in formal financial institutions were availability of loans, level of financial information, location of household, sector of employment, expectations about future economic conditions, level of income, number of banks in district of residence, transaction cost and time to nearest bank branch.

Keywords: household savings, formal financial institutions, economic growth,

1.0 Introduction

Research has shown that low domestic savings negatively affects a country's economic growth. This is because domestic saving finances investment and therefore growth. The correlation between saving, investment and growth is especially evident in developing countries. A country that has low domestic savings also relies more on foreign financing which fuels an increase in current account deficit and thereby jeopardizing the sustainability of growth. This dependency also puts a country at a risk of capital reversal with the attendant adverse impact on economic growth. It is therefore pertinent to increase domestic savings to promote economic growth.

Savings facilitate investment leading to an increase in economy's productive capacity (Rillo and Miyamoto, 2016). The importance of savings in economic development cannot be underrated. For example, Rostow's (1956) stages of growth assert that the preconditions for take-off include an initial ability to mobilize domestic savings. Lewis's growth theory indicates that saving is necessary for growth because investment has to be matched by savings (Lewis, 2013). Further, the neo-classical paradigm asserts that sustained growth of output is possible only when there is an increase in the propensity to save and invest (Sahoo et al., 2001).

Higher national savings rate is considered important in reducing a country's dependence on foreign capital (Hussein et.al 2017). Studies also indicate domestic savings as a basic source of investment especially in developing countries (Feldstein 1983, Wood 1995). Mwega (2000) also reports that domestic savings are crucial in increasing finance required to enhance economic growth.

An adequate supply of domestic savings is a core national policy objective, both because of its direct growth effect and also due to the fact that a high national savings ratio in line with an economy's investment needs reduces the economy's vulnerability to unexpected shifts in international capital flows. In addition, as international financial integration continues to expand, high domestic saving helps to ensure macroeconomic stability. According to the neo-classical growth models (Ramsey, 1928; Solow, 1956; Cass, 1965; Koopmanns, 1965), and the endogenous growth models (Harrod, 1939; Domar, 1946; Frankel, 1962; Romer, 1986; Barro and Sala-i-Martin, 2004;), savings play a major positive role in economic growth by financing higher levels of new capital formation.

One of the most fundamental strategies for long term economic growth and development is mobilization of savings so as to generate enough investments (Rostow, 1960). Increased investments can be financed domestically through an increase in the domestic savings level or through foreign funding that can come in the form of foreign aid (grants and loans) or through foreign direct investments.

Although Africa receives a large proportion of foreign aid in comparison to other world regions, the foreign aid's impact on investments has been relatively low in the region. According to Serieux (2009), 35 percent of the financial aid in Sub Saharan Africa (SSA) was used for financing reverse flows (repayment of debt, capital flight and reserve accumulation), 41 percent for purchasing consumer goods (part of which was imported), and only 24 percent was used to increase investments.

Most studies conducted on savings ignore household savings but place emphasis on government, corporate and aggregate savings performance (Sinha and Sinha, 1998; Sinha, 1999; Salz, 1999; Anoruo and Ahmad, 2001). Household savings make up the largest part of aggregate savings in market oriented economies. A study conducted in seven countries in Asia showed that household savings make up one-half to two-thirds of total national savings (United Nations, 1962). Household savings data for India for the period 1950 to 2000 also showed that household savings constituted between 68 percent and 82 percent of the gross national savings, confirming that household savings are an important part of the total national savings. In Africa, household savings dominate national savings, but are not channeled to productive use because most of it is held in non-financial assets that may not be available for on-lending (Aryeetey and Udry, 2000).

Household savings make up a very important part of the national savings and their contribution to national savings rate cannot be underestimated. For these household savings to be available for financing long term investments they need to be mobilized in the formal financial institutions that have deeper financial reach. Studies conducted in Kenya showed that over 74 percent of the households saved in the informal financial institutions and other non-institutionalized forms, 13 percent in semiformal financial institutions while about 25percent of the households had some form of financial savings in formal financial institutions (Finaccess, 2009). Given this scenario, there was need to conduct a study on what affects a household's choice to save in formal financial institutions.

Formal financial institutions (FFIs) include banks, insurance firms, and other institutions that fall under the control of the central bank. They charge lower rates of interest on loans as compared to those charged in informal financial institutions though higher than those charged in savings and credit cooperative societies. FFIs are beneficial to both the individual savers and the economy at large; they insure deposits held with them, hence lower risk of losing customers deposits. Funds intermediated through the formal financial sector can be lent over a larger geographical area and enhances efficiency in the capital market. The success of the monetary policy relies on the central bank's control over the FFIs (Germidis *et al*., 1991).

However, FFIs are perceived to have bureaucratic and complex loan application procedures, high transaction costs and collateral requirements, and are selective when choosing their clientele. Sometimes they fail to cater for the needs of small scale enterprises, low income households who may be unable to satisfy and understand their procedures. Their real deposit interest rates are low or even negative, keeping off potential savers (Germidis *et al*., 1991).

This study sort to determine the factors affecting a Kenyan household's decision to save in formal financial institution

2.0 Statement of the Problem

Household savings make up a very important part of the national savings and their contribution to national savings rate cannot be underestimated. For these household savings to be available for financing long term investments they need to be mobilized in the formal financial institutions that have deeper financial reach, or alternatively improve linkage between FFIs and other informal financial institutions. Studies conducted in Kenya showed that over 74 percent of the households saved in the informal financial institutions and other non-institutionalized forms, 13 percent in semiformal financial institutions while about 25percent of the households had some form of financial savings in formal financial institutions (Finaccess, 2009).

The amount of gross national savings and their availability for onward lending to investors greatly depends on where they are mobilized. Studies conducted in Africa and other parts of the world indicates that savings that are mobilized in the informal financial markets are used for short term purposes(Miracle, *et al.*, 1980; Aryeetey, 1995; Carpenter and Jensen, 2002). There is need for policies that promote higher level of household savings especially in formal financial savings instruments. Significant increases in savings mobilization may not occur if factors attracting potential savers to financial institutions are not considered.

For Kenya to achieve its Vision 2030 agenda, of achieving and sustaining an average economic growth rate of 10 percent per annum until 2030, hence become middle income nation by the year 2030, mobilization of domestic savings is core. The financial sector is expected to mobilize additional savings to support higher investment rates of above 30% of Gross Domestic Product (GOK 2007). Unfortunately this rate has continued to be below the set standard. Gross domestic savings in 2016 was 8.98 percent, 6.46 percent in 2017, then decreased to 6.13 in 2018 (CEIC DATA). Hussen et al. (2017) notes that low savings, generates low savings behavior hence low capital accumulation. Low savings is therefore a great challenge of realizing the goal of becoming a middle-income country. For this to happen, it is important to find out the factors that affect household's choice to save in formal financial institutions.

2.1 Literature Review

The existing theories of savings do not provide a good explanation for savings among the low income households. Economic theories of savings like the life cycle income hypothesis and permanent income hypothesis assume that households have a perfect vision of their future income flows, their consumption levels and their lifespan, and in addition, they behave rationally and with self-control as they prepare for retirement. But as noted by Bernheim and Scholz (1993), the life cycle decision is extraordinarily complex, in that it requires an individual to contemplate labour earnings, investment strategies, macroeconomic trends, and a vast assortment of risks, all over a very long time frame.

Low income households have got limited financial information; hence, they are likely to make sub-optimal long term decisions on consumption and savings. The presence of imperfect credit markets and uncertainties of future incomes, constraints household borrowing, making consumption sub-optimal (Beverly, 1997). Most low income households are faced with low and irregular incomes and hence are credit constrained. Most of the households rarely have incomes that exceed their consumption needs (Wilcox, 1991). In Kenya, most of the households are in the low income group hence the need to conduct the current study.

Foreign direct investments suppress domestic entrepreneurship due to their dominance on the domestic markets. They use superior knowledge, high level advertising, and due to enjoyment of economies of scale, they succeed in driving out local competitors and suppress the growth of small scale enterprises. A study conducted by Maxwell (1994) in 11 developing countries in the Pacific, showed that higher foreign direct investments led to lower domestic investments, lower national savings, increased current account deficits and lower economic growth rates. In addition, they lowered domestic savings and investment rates through their cut throat competition and led to collapse of domestic industries.

For economic growth to be self-sustaining, savings should be mainly composed of domestically generated savings (Republic of Kenya, 1965). Domestically generated savings are composed of household savings, corporate savings and government savings. Increases in public sector savings through higher taxes lead to decrease in household and corporate savings and consequently a decrease in productive investments. The marginal propensity for the government to spend is high due to its inability to resist political pressure to spend; hence it may not be relied upon to generate national savings directly. The households and the firms have a crucial role to play in savings generation.

The role of savings in the process of economic growth and development was emphasized early by Rostow (1960), who argued that economic growth evolves in three stages. The first stage is characterized by low savings rate of 5 percent of gross domestic product (GDP) or less. The second stage, which is the take off stage is characterized by savings rate of between 10 percent and 30 percent. The final stage is the maturity stage which is marked by declining savings rates. Breaking out of the initial phase is the most important step towards economic development.

Savings play a major role in improving economic growth through its provision of resources needed for investments. According to the absolute income hypothesis (Keynes, 1936), savings is an increasing function of the gross domestic income, hence increases in economic growth improve savings levels. Policies that improve the saving level, especially the part of savings that end up in the hands of the investors, would improve economic growth.

Developing countries have registered different saving rates over the years. The disparities have been closely reflected in growth performance. With higher savings rates has come higher income growth. The East Asian economies, which were famous for their high levels of investments in physical capital and economic growth from the early 1960's to date, have been characterized by high gross domestic savings of over 30 percent of GDP (World Bank, 1993; Economy watch, 2010). In contrast, savings rates in South Asia, Latin America, SSA and the highly indebted countries have remained generally low at below 20 percent. In 2009, gross national savings as a percentage of GDP was 43.5 percent in developing Asian economies, 32 percent in newly industrialized Asian countries, 31 percent in emerging and developing economies, and 20.3 percent in SSA (Economy watch, 2010).

Some of the reasons for high gross savings rates in East Asian economies have been rapid economic growth, rapid demographic transitions that led to a high proportion of prime age workers, maintenance of macroeconomic stability and policy fundamentals in the form of regulatory supervision of banks, targeted interventions in the form of restrictions to consumer credit, forced savings plans and also their saving culture (World Bank, 1993).

Some of the disincentives to domestic savings mobilization in Africa include low level of financial deepening, low per capita incomes, high dependency ratios, poor terms of trade, highly fragmented financial markets, and high transaction costs for economic agents.

In rural areas, saving mobilization is very costly due to higher level of dispersion of bank branches (Mwega, 1997; Nissanke and Aryeetey, 1998). Citizens in some developing countries have been known to save as much as 30 percent of their income. However, due to lack of access to financial services for most of them either due to demand side constraints or supply side constraints, most of the savings are locked up in form of fallow land holdings, cattle, jewelry or cash under the mattress, which are unavailable for on-lending to entrepreneurs and businesses (Kapoor, 2009). The locked up savings are not productively deployed and this depresses growth and potential tax revenues. The private and public sectors do not have access to this pool of savings, hence they may be forced to excessively depend on external sources of finance in the form of aid, foreign borrowing and private capital flows (Kapoor, 2009).

Mobilizing savings is costly in terms of the transaction costs involved and also the cost of overcoming the informational asymmetries related to ensuring savers are convinced of postponing their consumption to a future date. Financial intermediaries have to convince the savers of the suitability of the investment by improving their reputation and ensuring they adhere to legal and regulatory requirements (De Long, 1991). Improved savings mobilization can improve resource allocation and enable adoption of newer and better technologies, hence improving economic growth (McKinnon, 1973).

The financial sector in an economy plays a crucial role of matching savers and investors by providing a meeting point where the terms of the loan can be agreed upon. Although this can occur in the absence of financial institutions (among family and friends), the presence of banks, stock markets and venture capitalists facilitate the matching of funds in a more efficient manner. Financial institutions generate and distribute financial information and allocate credit efficiently by ensuring that funds are channeled to the investments with highest returns (Todaro and Smith, 2005). Mobilization of savings involves agglomeration of capital from various savers for investment. Without access to funds from several savers, production processes would be limited to economically inefficient scales. Mobilization also involves creation of small denomination instruments, which enable households to hold diversified portfolio, invest in efficient sized firms and increase asset liquidity. In the absence of financial institutions, households would have to buy or sell entire firms, which may be impossible. By improving the risk diversification, liquidity and size of feasible firms, financial institutions enhance resource allocation. The financial system affects capital accumulation by altering the savings rate and by reallocating savings among different capital producing technologies (Romer, 1986; Rebelo, 1991).

The willingness of the society to save in financial assets is affected by the functioning of the financial markets. The presence of well developed and functional financial markets is important in ensuring that household savings are responsive to changes in interest rates in the economy. Increasing access to diversified instruments, well regulated, supervised and sound financial institutions in the country can increase cash savings in the financial instruments, while the opposite reduces savings (UNCTAD, 2007). In developed countries, credit and money markets are highly organized, economically interdependent and function efficiently. Financial intermediaries in the developed countries are able to mobilize private savings and efficiently allocate them to most productive uses that are critical in economic growth (Todaro and Smith, 2005). By contrast, developing countries operate a dual monetary system; a small and often externally controlled organized money market, and a large amorphous unorganized and unregulated money market. The organized money market mainly caters for the financial requirements of the middle and upper income class and businesses in the modern industrial sector, while the financial needs of the lower income classes are often catered for in the unorganized, unregulated and sometimes illegal money market (Todaro and Smith, 2005).

Much of the economic activities in developing countries come from small scale producers and enterprises, whose demands for financial services are unique and sometimes outside the coverage of traditional commercial banks' lending. The commercial banks are sometimes ill equipped and reluctant to meet the needs of these small borrowers due to the high transaction and administration costs of handling so many transactions, and also the lack of collateral to secure formal loans (Aryeetey, 1995). Most borrowers, therefore, rely on unorganized and unregulated informal financial sector to meet the short term and often small financial needs.

Psychological and sociological factors play a minor role in savings decisions of low income households, where majority of Kenyan households fall. Behavioral theories, on the other hand, have devoted little attention to the low income household's savings.

However, like the institutional theories, they note that characteristics of savings mechanisms influence the saving behavior of households. By having commitment savings, a household is able to defer consumption for the future (Beverly, 1997).

Kibet, *et al.,* (2009) conducted a study in Nakuru, Kenya, which is one of the districts within the country using a sample of teachers, businessmen and farmers in the area of study. The study estimated the savings function based on savings held in financial institutions in one of the districts in Kenya. In Kenya, financial institutions are diverse in type and density across districts. The current study sought to find out the underlying factors affecting the choice of household to save in formal financial institutions from a sample of households selected from all districts in Kenya.

Kiiza and Pederson (2002) used a logistic function to examine factors affecting choice of saving in banks, while Carpenter and Jensen (2002), estimated bivariate probit functions for decision to save in banks and Rotating Savings and Credit Associations in Pakistan (BISIs). Kiiza and Pederson (2002)did not include income and age of household head; which have been shown to affect households' decision to save in formal financial institutions as indipendent variables. The current study used a logistic function for estimation and included income, age of household head, credit availability, bank density, level of financial information, perception of rate of interest on savings in financial institutions, size of household and expectations regarding future economic conditions as indipendent variables in the estimation.

3.0 Research Methodology

This study was conducted in Kenya using data collected from households in all regions, rural and urban areas, all income groups and sectors of employment. Factors affecting the decision to save in a formal financial institution were explored. The study was based on the general utility theory and probability choice models as used in Kiiza and Pederson (2002), Rogg, (2000), Carpenter and Jensen, (2002), Bendig, *et al.*, (2008), Boring, (2010).

The study adopted a non-experimental research design that entailed analyzing data collected from a cross sectional survey of Kenyan households on household financial services. Secondary data that was previously collected in a national wide household survey in Kenya in 2009 was used in the study. Cluster stratified probability sampling was used in the selection of the regions and the households that were included in the survey. A sample of 6,598 representative households was used in the survey.

The survey utilized a detailed questionnaire to gather information on financial access. The relevant data that was utilized in this study was household demographics, income and expenditure, access to financial institutions, savings, insurance and financial literacy. The choice of Independent variables was informed by both theoretical and empirical savings literature. The logit model was used to analyze factors affecting households' decision to save in formal financial institutions.

3.1 Data Analysis

Data was analyzed in several steps. First, descriptive statistics for the variables in the study were computed. Second, diagnostic checks and tests were done to test for statistical problems inherent in the cross-sectional data. Third, regression analyses were conducted using logistic functions to identify factors affecting decision to save in formal financial institutions.

4.0 Findings of the Study

4.1 Descriptive statistics

To understand the landscape of the households included in the study, descriptive statistics for the variables were obtained. The study used a total of 6598 households that were drawn from all over Kenya consisting of 71 percent from rural areas and 29 percent drawn from urban areas. Among the households included in the study, 76 percent derived their earning from the informal sector while 24 percent from formal sector implying that the informal sector has continued to play a significant role in employment creation in Kenya.

Among the households included in the study 25 percent had some form of financial saving in FFIs. 76.7 percent of heads of households did not perceive the rate of interest on savings in FFIs as low. This can imply that the low participation in saving in FFIs was not due to low returns to savings but could be due to other factors. Most households had a lot of financial information regarding IFIs and less about SFFISs and FFIs as reflected by the fact that 84 percent, 53percent and 41 percent had a high level of financial information on IFIs, SFFISs and FFIs respectively. Majority of Kenyans are not well informed on FFIs and this could be limiting the level of savings generated in them.

The average age of head of household was 45.76 years with a standard deviation of 13.56 years showing that majority of them were still in the economically active age. Potential for household saving mobilization in Kenya is high, because majority of the heads of households are in the middle age, where, according to the life cycle hypothesis, savings are

positive (Ando and Modigliani, 1963; Modigliani and Brumberg, 1954). The average number of years of formal education was 7 years, or primary education with a standard deviation of 5 years. The mean number of bank branches in each district of residence was 54 with a standard deviation of 111. Bank density was highly skewed with majority of the branches of major banks in urban areas.. The average transaction time measured in time taken to get to a branch of a bank was 22 minutes. The average monthly income per household was Kshs. 14,250, average monthly savings per household was Kshs.2566.

Table 4.1 Means of Quantitative Independent Variables in Formal Financial Institutions

Variable	Mean
Age of head of household in years	43.24
Level of formal Education in years	11.00
No. of bank Branches in district)	105.00
Transaction time in minutes	10.58
Transaction Cost(Kshs)	77.44
Savings per month in Kshs.	5940.00
Number of people in a household	4.00
Income per month in Kshs.	31,118.00

The age of head of household among those who were saving in FFIs was lower than for those who were saving in other forms of financial institutions. Those who were saving in FFIs had a higher level of education and in addition, used more time to nearest bank (higher transaction time) than those who were saving in IFIs and SFFIs. If a client needs a lot of time to get to the bank, it can act as a hindrance to frequent withdrawals, which in a way can encourage savings. Low physical accessibility to banks and other formal financial institutions reflected by the lower bank density and higher average transaction time to nearest bank branch reduces savings in formal financial institutions and boost savings in other financial institutions due to substitutability nature of savings.

The level of savings per month in households that were saving in FFIs was higher compared to savings level in households who were saving in SFFIs and IFIs. The study confirms findings in Robinson, (1994) that higher household savings are available to financial institutions that offer financial security. A large household size can deter savings in FFIs as reflected by the higher household size among those who were not saving in FFIs.

Savings in FFIs are boosted by increased incomes as shown by higher average monthly income in households who were saving in FFIs. The relatively limited access to institutional saving opportunities and incentives among low income households leads to low saving levels (Beverly, 1997). This confirms findings by Robinson, (1994) that as household income increase; a household saves in a financial institution with more financial security, hence graduate to formal sector with greater income. Further, higher income can increase the demand for other financial services offered by banks, such as check off payment systems hence need for formal saving mechanisms.

4.2 Inferential Statistics

Overall the logistic model of the decision to save in FFIs explained 41.38 percent of the variations in the probability to save in FFIs. A total of 5696 observations were included. The results of logistic regression equation of decision to save in FFIs are presented in table 4.2.

Table 4.2: Marginal effects for Decision to save in Formal Financial Institutions

Independent Variable	Marginal Effect	P>z
Credit Availability in FFIs	0.586***	0.000
Level of financial information about FFIs	0.250***	0.000
Credit Availability in SFFIs	0.192***	0.000
Location of household	0.154***	0.000
Credit Availability in IFIs	0.148***	0.002
Sector of employment	0.109***	0.000
Expectations about future economic conditions	0.108***	0.000
Level of formal education	0.106***	0.000
Perception on rate of interest paid on savings in SFFIs	-0.088**	0.017
Number of people in household	-0.022***	0.000
Household level of income per month	0.013***	0.000
Bank density in district of residence	0.004***	0.000
Interaction of bank density and location of household	-0.004***	0.000
Transaction cost to nearest bank	0.002***	0.000
Transaction time to nearest bank	0.001**	0.027
Age of the head of household	0.005	0.221
Age of the head of household squared	-0.000	0.278
Perception on rate of interest paid on savings in FFIs	-0.036	0.387
Gender of the head of household	0.012	0.493

*** and ** imply coefficient significant at 1 and 5 percent levels respectively.

Pseudo R^2 = 41.38 percent , Number of observations = 5696

These findings can be concluded as follows:

1. The availability of loans in all the three financial institutions; FFIs was found to be crucial when households are making a decision to save in FFIs as reflected by their statistically significant coefficient at 1 percent level. Households, who had access to credit from FFIs, had a probability of 0.59 of saving in FFIs compared to those who had not accessed credit.

2. The coefficient of level of financial information about services offered by FFIs was significant at a 1 percent level in affecting the decision to save in FFIs. Households with high level of financial information about FFIs had a higher likelihood of saving in FFIs with a probability of 0.25 compared to those who had lower level of financial information.

3. The coefficient of the location of a household was statistically significant at 1 percent level and those residing in urban areas had a higher probability of saving in FFIs.

4. The sector of employment was found to be crucial when households were making the decision to save in FFIs and had a statistically significant coefficient at 1 percent level. Those deriving their main earnings from the formal sector had a higher probability of saving in FFIs.

5. An increased level of formal education was found to be positively contributing to probability of savings in FFIs, at 1 percent level. Households who had a formal education of above primary education had a higher probability of 0.11 of saving in FFIs compared to those who had a primary or below level of education.

6. Expectations about future economic conditions was crucial for saving in FFIs as indicated by its statistically significant coefficient at 1 percent level. Households that were optimistic about future economic conditions had a higher probability of 0.11 of saving in FFIs.

7. The coefficient of perception on level of rate of interest on savings in SFFIs was statistically significant at 5 percent level. Households that perceived the rate of interest on savings in SFFIs as high had a lower likelihood of saving in Formal financial institution.

8. The number of people in a household was important in influencing the decision to save in FFIs with a statistically significant coefficient at 1 percent level. Increase in household size by 1 person reduced the probability of saving in FFIs by 0.02.

9. The level of income of a household was found to significantly contribute in the decision to save in FFIs. With a statistically significant coefficient at 1 percent level. An increase in a household's income by Kshs. 10 increased the probability of saving in FFIs by 0.13.

10. The coefficient of the number of banks in a district of residence was statistically significant at a 1 percent level. An increase in bank density in a district by 1 branch increased the probability of saving in FFIs by 0.004.

11. The coefficients of transaction cost and transaction time to nearest branch of a bank were found to be statistically significant when making a decision to save in FFIs at 1 percent and 5 percent level respectively. An increase in transaction cost by Kshs.10 increased the probability of saving in a FFIs by 0.02, while an increase in transaction time to nearest bank branch by 10 minutes increased the probability of saving in a FFIs by 0.01.

5.0 Recommendations

From the empirical findings, a number of policy implications can be drawn:

Credit availability in financial institutions was found to increase the probability of saving in each type of institution. The government of Kenya, through the ministry of finance and the central bank should ensure that the recently introduced credit reference bureau caters for all types of households.

There is a need for the ministry of finance, commercial banks, insurance firms and other development banks to invest in financial literacy and marketing programmes to improve the knowledge and understanding of financial services and their availability. This can be done through field training.

The government through the relevant ministries needs to put measures that can enhance household incomes which were found to significantly increase the probability of saving in FFIs. Better infrastructure, lower cost of doing business and higher security can increase the profitability of existing businesses and also attract new investors. This can help to improve the incomes of those who are in paid employment.

Bank agencies can be introduced by all formal financial institutions to ensure the households are able to save where they do their regular shopping including the village kiosks. There is a need for the FFIs to improve the rate of interest on savings deposited with them to ensure households are attracted to their savings products.

The government should allocate more funds to education budget, not only to primary and secondary education but also for adult education which increases literacy among the adult population. This would ensure that in the future, most households can save in FFIs as supported by the findings of this study which showed that increased level of formal education increased the probability of saving in FFIs.

From the study findings, increased income level enhanced the level of household savings. Raising the disposable incomes of the informal sector where majority of Kenyans derive their earnings would go a long way towards boosting the level of household savings.

To improve savings in FFIs, there is a need for the government to ensure the population is confident of future economic conditions through economic stability. High inflation rates may hinder savings in FFIs when households become pessimistic about the future. This calls for good policy measures to control the rate of inflation. This is because expectations' regarding future economic conditions was seen to play a crucial role in making decisions to save in FFIs.

The government through the ministries of medical services and public health need to continue funding family planning programmes to ensure that population growth rate and household sizes are reduced in order to encourage higher levels of household financial savings.

References

Anoruo, E. and Ahmad, Y. (2001). *Causal Relationship between Domestic Savings and Economic Growth: Evidence from Seven African Countries.* African Development Bank, Oxford: Blackwell publishers.

Aryeetey, E. (1995). *Informal Finance in Africa: Filling the Niche.* Nairobi: African Economic Research Consortium / East African Educational Publishers.

Aryeetey, E. and Udry, C. (2000).   Savings in Sub-Saharan Africa. Ce*nter for International Development,* Working Paper No. 38.

Barro, R., and Sala-i.Martin, X. (2004). *Economic Growth* (2nd Ed). New Delhi: Prentice Hall of India.

Bernheim, B., and Scholz, J. (1993). Private Saving and Public Policy. *Tax Policy and the Economy, 7,* 73-110.

Beverly, S. (1997). How Can the Poor Save? Theory and Evidence on Saving in Low –Income Households. *Centre for Social Development,* Washington University, Working Paper No. 97(3).

Carpenter, S., and Jensen, R. (2002). Household Participation in Formal and Informal Savings Mechanisms: Evidence from Pakistan, *Review of Development Economics*, 6(3), 314-328.

Cass, D. (1965). Optimum Growth in an Aggregative Model of Capital Accumulation. *Review of Economic Studies*, 32, 233-240

Cass, D. (1965). Optimum Growth in an Aggregative Model of Capital Accumulation. *Review of Economic Studies*, 32, 233-240

De Long, J. (1991). Did J. P. Morgan's Men Add Value? An Economist's Perspective on Financial Capitalism. *The Business Enterprise: Historical Perspectives on the Use of Information.* University Of Chicago Press, 205-236.

Domar, E. (1946). Capital Expansion, Rate of Growth and Employment. *Econometrica*, 14, 137-147

Economy Watch. (2010). Gross National Savings (percent of GDP) data for all countries. *www.economywatch.com.* Accessed on 14/05/2010.

Feldstein, M. (1983). Inflation, income taxes, and the rate of interest: A theoretical analysis. In *Inflation, Tax Rules, and Capital Formation* (pp. 28-43). University of Chicago Press.

FinAccess. (2009). *National Survey 2009: Dynamics of Kenya's Changing Financial Landscape.*   Financial sector deepening, Nairobi.

Frankel, M. (1962). The Production Function in Allocation and Growth: A Synthesis. *American Economic Review*, 52, 995-1022.

Government of Kenya, Ministry of Planning and National Development, 2007: Kenya Vision 2030

Harrod, R. (1939). An Essay in Dynamic Theory. *Economic Journal*, 49, 14-33.

Kapoor, S. (2009). *Domestic Resource Mobilization in Poor Developing Countries.* G-24 Policy Brief No. 54.

Keynes, J. (1936). *The General Theory of Employment, Interest and Money.* New York: Harcourt, Brace & Co.

Kibet, L., Mutai, B.,Ouma, D.,Ouma, S.,and Owuor,G.(2009). Determinants of household saving: Case study of smallholder farmers, entrepreneurs and teachers in rural areas of Kenya. *Journal of Development and Agricultural Economics*, 1(7), 137-143.

Kiiza, B., and Pederson, G. (2002). Household Financial Savings Mobilization: Empirical Evidence from Uganda. *Journal of African Economies* 10(4), 390-409.

Koopmanns, T. (1965), *On the Concept of Optimal Economic Growth: The Econometric Approach to Development Planning.* Amsterdam: North Holland.

Lewis, W. A. (2013). *Theory of economic growth*. Routledge.

Maxwell, F. (1994). Financial Development in Asia: Some Analytical Issues. *Journal of Development Studies*, 30, 578-628

Mckinnon, R. (1973). *Money and Capital in Economic Development.* Washington, DC: The Brookings Institution.

Mwega, F. (1997). Saving in Sub-Saharan Africa: A Comparative Analysis. *Journal of African Economies*. 6 (3) (Supplement), 199-228.

Mwega, F. (1997). Saving in Sub-Saharan Africa: A Comparative Analysis. *Journal of African Economies*. 6 (3) (Supplement), 199-228

Nissanke, M., and Aryeetey, E. (1998). *Financial Integration and Development: Liberalization and Reform in sub-Saharan Africa.* London: Routledge.

Ramsey, F. (1928). A Mathematical Theory of Saving. *Economic Journal*, 38, 543-559.

Rebelo, S. (1991). Long-Run Policy Analysis and Long-Run Growth. *Journal of Political Economy*, 99(3), 500-521.

Republic of Kenya. (1965). *African Socialism and its Application to Planning in Kenya*. Sessional Paper No. 10: Nairobi: Government printer.

Republic of Kenya. (2007). *Vision 2030 Strategy for National Transformation: Accelerating Equitable Economic and Social Development for a Prosperous Kenya.* Ministry of Planning and National Development. Nairobi: Government Printer.

Rillo, A. D., & Miyamoto, J. (2016). Innovating financial inclusion: Postal savings system revisited.

Romer, P. (1986). Increasing Returns and Long-Run Growth. *Journal of Political Economy,* 94, 1002-1037.

Romer, P. (1986). Increasing Returns and Long-Run Growth. *Journal of Political Economy,* 94, 1002-1037.

Rostow, W. (1960). *The Stages of Economic Growth: A non-Communist Manifesto*. London, Cambridge University Press.

Rostow, W. (1960). *The Stages of Economic Growth: A non-Communist Manifesto*. London, Cambridge University Press.

Sahoo, P., Nataraj, G., & Kamaiah, B. (2001). SAVINGS AND ECONOMIC GROWTH IN INDIA: THE LONG-RUN NEXUS/ÉPARGNE ET CROISSANCE ÉCONOMIQUE EN INDE: LE LIEN À LONG TERME. *Savings and Development*, 67-80.

Salz, I. (1999). An Examination of the Causal Relationship between Savings and Growth in the Third World. *Journal of Economics and Finance.* 23(1) 90-98.

Serieux, J. (2009). Aid and Savings in Sub-Saharan Africa: Should We Worry about Rising Aid Levels. *International Policy Centre for Inclusive Growth.* Working paper. No.50.

Sinha, D., and Sinha, T. (1998). Cart before Horse? The Saving-Growth Nexus in Mexico. Economics Letter, 61, 43-47.

Solow, R. (1956). A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics,* 50, 65-94.

Todaro, M. and Smith, S. (2005). *Economic Development,* (8th Ed). New Delhi: Pearson Education Press.

UNCTAD. (2007). Rethinking Industrial Policy. Nueva York: United Nations Conference on Trade and Development.

United Nations. (1962). *Economic Bulletin for Asia and the Far East*, 13(3).

Wilcox, D. (1991). Household Spending and Saving: Measurement, Trends and Analysis. *Federal Reserve Bulletin, 77*(1), 1-17.

Wood A (1995): "Determinants of Private Savings in Barbados" Savings and Development. No.1–1995 (XIX). (79-95) Milan, Felice Tambussi.

World Bank. (1993). *The East Asian Miracle: Economic Growth and Public Policy*. World Bank Policy Research Report. New York: Oxford University Press.