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Financial Services Outreach in Tanzania: Determinants of Financial Exclusion through a Fin scope Lens

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Abstract- Unlike financial services in developed countries, it is necessary to investigate the outreach of financial services in developing countries such as Tanzania. The study investigated the determinants of financial exclusion using data from Fin scope collected from April to July 2017 with a sample of 9,459 adults' aged 16 years and above. The study adopted a multinomial logistic regression for Savings and borrowing models. Through borrowing model, gender, marital status, education, wealth index, access to mobile phone, financial education, payments of utility bills, location and individual income are statistically significant influencing borrowing. The results from saving model reveal that age, gender, marital status, education, wealth index, access to mobile phone, employed, financial education, utility payment bills, household size, location, and individual income are the critical factor for saving among adults. Finally, the study recommends that the government through its respective organs promote and facilitate the investment of financial institutions to the investors who can develop and establish financial services, which are sensitive to young people, and women who are poor. Cell phones are basic infrastructures for financial deepening; banks, microfinance, non-bank payment service, and mobile money service providers should use them at the level whereevery group in the society such as poor people can access and use financial services.Provision of financial education in remote rural still vital to creating awareness on the importance of financial service on economic activities thereby attaining inclusive economic growth.

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I. Introduction

Financial services outreach is crucial for economic growth in developing countries and advanced economies. Financial services exclusion is a bottleneck on daily undertakings in economic activities of any economy (Akudugu, 2013). Banks and other financial institutions that offer different financial services such as credit, saving, insurance, and transactions assume financial inclusion for all us as an essential phenomenon for economic growth and poverty reduction (Musa, Abdullahi, Idi and Tasiu, 2015). Establishing strong and inclusive financial systems will ensure and foster the goals for concrete improvements in the lives of all people (National Financial Inclusion Framework, 2014).

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People need to have full access to reliable financial services, which are low-cost, fair, and affordable that ensures inclusive growth (Sarma, 2009). Financial services should enable individuals to migrate out of poverty through effective use of borrowing, savings, insurance, and transactions. While implementing effective use of financial services, there should be a lesser probability of financially included adults to fall into the poverty pool (Sinclair, McHardy, Dobbie, Lindsay and Morag, 2009).

Ensuring affordability of quality financial services to all people remain the challenge to financial institutions in any country. Only a few countries have achieved the formal financial sector essentially universal coverage of the population, at least for basic services. Some levels of financial exclusion persist in many countries even in advanced economies (World Bank, 2008). Effective use of financial services will ensure active participation in economic activities such as production, consumption, distribution, and exchange that will lead to equitable and sustained economic growth. Financial exclusion is deeply interrelated with poverty that automatically leads to social exclusion. People who are excluded socially, are also more likely to be socially and economically vulnerable (Musa *et al.,* 2015)

Financial exclusion is attributed to several factors based on the level of development and efforts put into place by governments on the matter. However, the frequently reported attributes include but not limited to lack of money, the high cost of accessing financial services, use of a bank account owned by another member of the family. Other causes include; distance to banks, low population density and gender inequality, weak financial literacy, lack of trust in the financial institutions and religious beliefs (Conray, 2005; Demirgüç- Kunt and Klapper, 2013; Fin mark, 2015; Fins cope, 2017). Moreover, financial exclusion can come about because of problems with access, conditions, prices, marketing or self-exclusion in response to negative experiences or perceptions (Sinclair e*t al.,* 2009).

It worth noting the meaning of financial exclusion and inclusion, but it should be noted earlier that there is no single satisfactory definition on the two terms. Different countries define financial exclusion and

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inclusion based on their market perspective (NFIF, 2014; Lotto, 2018). Financial exclusion refers to a "*process whereby people encounter difficulties accessing and using financial services and products in the mainstream market that are appropriate to their needs and enable them to lead a normal social life in the society in which they belong."* (Anderloni,Bayot, Błędowski, Iwanicz- Drozdowska and Kempson, 2008). Furthermore, Fin Mark, (2015) defines financial exclusion that *"individuals manage their financial lives without the use of any financial products or mechanisms external to their relationships. If adults borrow, they rely on family/friends; and if they save, they save at home".*

In Tanzania, financial inclusion is defined as a *"frequent use of financial services in the three dimensions such as measurability and frequent usage of financial services, the types of financial inclusion services offered and the target group, which includes all Tanzanians but with emphasis on the poor, enterprise, low income, women, youth and children to build financial stability in society"* (NFIF, 2014).

Financial exclusion is a phenomenon that draws attention of many people even the 11 Southern African Development Community (SADC) member countries. All governments in this region strive to attain effective use of financial services to foster economic growth and mitigate poverty. It was estimated about 66% of adults have access to both formal and informal financial services which is equivalent to 83.5 million adults in the region. Access to financial services varies in comparison, for examples, 90% of adults in Mauritius, 86% in South Africa, 67% in Tanzania and 40% in Mozambique to mention a few (Fin Mark, 2015).

The series of the Fin Scope surveys and reports in Tanzania depict that, there are the variety of financial products/services that are offered and many adults (16 years and above) manage to access them. The period between 2013 and 2017, the actual number of adults using financial services in Tanzania has grown by 15%.Adults using banking and mobile financial services has grown by 37% and 38% respectively. Formal financial services usage has grown from 58% to 65% from 2014 to 2017. The number of adults who are excluded from financial services has been successfully reduced whereby the gap in accessing financial services is narrowed over time. For example, in 2009 adults who were excluded from financial services was 55%, in 2013 was 27% and in 2017 was 28% of adults (Fin Scope, 2013; Fin Scope, 2017).

This profound achievement results from collaborative efforts between government and financial services providers, dedication to the provision of quality financial services for all and support of implementing agents increase in the uptake of formal non-bank products such as mobile financial services (NFIF, 2017). For example, every second adult in Tanzania, which account to 51% of adults uses mobile financial services, mainly to remit money (Fin Mark, 2015). Access to mobile is a good infrastructure for financial outreach deepening that has facilitated financial services to easily reach the financially excluded population (Lotto, 2018)

The financial sector in Tanzania is dualistic in nature, and it constitutes formal and informal financial institutions. Formal financial institutions sometimes called regulated financial institutions. Regulated financial institutions further classified into banks and nonbanks financial institutions providing financial services such as saving, credit, insurance, and transactions, which include insurance, pension, securities, SACCOS, non-bank payment service providers and mobile money. Informal institutions include; Community Groups such as Village Saving and Loans Association (VSLA), Saving and Credit Association (SACAS), Village Community Banks (VICOBA), moneylenders, Microfinance Institutions (MFIs) (NFIF, 2017).

According to NFIF report (2017) financial sector in Tanzania comprised of 67 banking institutions with 813 Branches, 5814 Bank Agents and 2 Credit Reference Bureau (CRB). 31 Insurance Companies, 115 Brokers and 472 Agents, 1 Stock Exchange, 12 Brokers/Dealers, 4 Custodians, 6 Bond Traders, 16 Investment Advisors, 8 Fund Managers, and 2 Nominated Advisors.5,640 and 231 SACCOS in Tanzania mainland and Zanzibar respectively. Furthermore there were 6 Electronic Money Insurers (EMI), seven (7) non-bank EMI and 398,094 Agents countrywide. These financial institutions play great roles in resolving the issue of financial exclusion. The opportunity to overcome financial exclusion partly depends on access and usage of mobile money that is quick, safe and affordable by many in urban and rural remote areas. If the government, banks, microfinance institutions, and other money services providers work in collaboration to overcome the challenges or constraints hindering will ensure the financial sector provides the deserved service to the economy and its people.

The constraints that are currently reported in the financial markets in Tanzania include; Low level of literacy and numeracy among clients, high cost of financial services, limited formal ownership of land, women marginalization on mobile phone ownership, lack of innovation among Financial Service Providers (FSPs) that limit nontraditional players to innovate, limited distribution of financial institutions and lack of a comprehensive financial consumer protection legal frameworks. Insufficient information on clients, many people do not keep money in digital format, lack of national ID that limit verifications, Lack of mechanisms to generate feedback on user satisfaction from the use of financial services, financial market dynamics that impair strategies and operational decisions by policymakers, regulators and financial services

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providers and shortage of analytical capacity and tools for analysis of financial inclusion data that limit generation of useful information to clients and financial services providers (NFIF, 2017)

There are financial initiatives in the country to resolve the constraints that impede the provision of financial services in the economy and people. The initiatives involve reforms and policies over time. The reforms include The First Generation Financial Sector Reform (FGFSR) was enacted between 1991 and 2003 with objectives of creating an efficient and effective financial system and broadening the scope of financial services. The Second Generation Financial Sector Reform (SGFSR) was initiated in 2006 with one of the objectives being enhancing access to financial services. The National Financial Inclusion Framework (NFIF) of 2014/16, which focused on establishing infrastructures for financial services.The NFIF of 2018/22 with the objective of achieving financial services for all to improve lives for all Tanzanians. Policies in place include Alliance for Financial Inclusion of 2006, the National Microfinance policy of 2000, and the Banking and Financial Institutions Act, 2006 (NFIF; 2014, NFIF, 2017; URT, 2000; URT, 2006).Through these initiatives there continued financial outreach to many people in the country especially on mobile money usage in urban and rural (Lotto, 2018).

Financial exclusion is of great interest to many people in financial services. It draws the attentions of all stakeholders in financial services. The present study investigated the reasons that constrain Tanzanian adults in the course of borrowing and not being able to pay the loans. Finally, the study investigated the determinants for financial exclusion in Tanzania.

II. Statement of The problem

Provision of inclusive and quality financial services is an essential requisite for job creation, economic growth, social uplift, and poverty alleviation. Even though that access to finance is very crucial for economic development, still some of the Tanzanian adults who do not have access to financial services. According to Fin Scope insights of 2017, about 28% of adults (16 and above years) are excluded from financial market mainstream. Financial exclusion causes inefficiency allocation of resources in any economy and imposes high costs of capital accumulation. Furthermore it affects negatively the households' welfare and anyone else in any country. Effective access to the main financial services such as savings and credit is crucial to any society for improvement of peoples' welfare and economic growth. This study investigated the factors that lead to adults' exclusion from accessing financial services that should be addressed to enhance adults to reap the benefits of accessing financial services for their welfare and economic development in Tanzania using data from Fin Scope Survey of 2017.

a) General objectives of the study

Main objective is to investigate the factors that lead to financial exclusion in Tanzania

Specific objectives include the following:

i) To examine the reasons impede borrowing
ii) To examine the reasons for loans delinquency.
iii) To determine the factors influence borrowing and saving.

b) The Significance of the Study

The study is useful to students, researchers, and academicians. The study also provides knowledge to decision makers, policy makers and many other local and international shareholders in the area of financial services. The study has empirical findings that will further serve as the reference to subsequent researches on the same topic.

c) Literature Review

From theoretical and empirical point of view, the study represents an analysis of the adopted theories that are critically examining borrowing and saving phenomena such as Credit, Life cycle and Keynesian theory

d) Theoretical Literature Review

Financial markets particularly credit (borrowing) markets are characterized by "credit rationing," Credit rationing may occur in the financial markets due to imperfect information faced by banks (Stiglitz and Weis, 1981). Asymmetric information may lead banks and other financial institutions to adverse selection effect and moral hazard effect in financial markets in Tanzania. They decide to adopt interest rate and other forms of contract, such as collateral requirements when dealing with borrowers' behavior. Charging interest rates and demand for collateral causes disutility to borrowers due to fear of losing in case of failure to pay back and hence they are forced either to seek financial assistance from informal markets or not to seek it at all (Atieno and Shem, 2001). The theory reflect the situation in current study on the supply side, that when people demand credit meet constraints that are generated from the supply side, that impede them from accessing credit.

Modigliani and Brumberg (1954) pioneered Life-cycle model of saving. They said the major aim of saving is to smoothen consumption path along the lifetime. The model is built around saving and consumption behavior of an individual who is assumed to maximize present value of lifetime utility subjected to the budget constraint. Prediction of this model is that consumption in the income generation period depends on the expectation about lifetime income. Therefore saving can transfer purchasing power from one point to another in someone's life. Other determinants of saving suggested by the model are interest rate on bank

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deposits and wealth (Modigliani, 2005). The current study in particular focuses on saving at micro level. Modigliani theory reflect on macro level. However, the theory still reflect the study that saving is a tradeoff with consumption. People at micro level do save sometimes to soften their consumption along their life paths.

Another model that fits into the study is Keynesian model of saving which pins out that behaviour of saving is supposed to depend on current income completely. Under Keynesian model, saving to income ratio is expected to be an increasing function of income. Even though this model is believed to be able explain saving behaviour in relatively poor countries it also implies people with low income may not be able to afford the sufficient level of saving when they are young and productive to support their consumption during retirement period or at least not as much as people with higher income (Solem, 2012). Keyesian model of saving in its essence looks saving at macro level. The current study is based on micro data, which reflect the same implication that richer people are likely to save than poorer and age plays a great role on saving, thus at earlier and latter age people tend to dissave and tend to save more at working age

Furthermore, financial exclusion is in the light of credit rationing theorem for borrowing, life cycle and Keynesian models for saving which partly explain the reasons for why some other adults are excluded in the mainstream of financial market and excluded some reasons that are significant and crucial in the developing countries like Tanzania

e) Empirical Literature Review

A study was conducted in the UK that applied logit regression model in explaining financial exclusion from five types of accounts, namely; current account, savings account, household insurance, and life insurance. The authors used a sample of 16,000 respondents. The results showed that employment status, household income and wealth were influential variables on financial exclusion. Other variables that were significant included; marital status, age, and educational attainment (Simpson and Backland, 2008).

Dayson and Vik (2011) conducted a study in Rochdale in the UK in 2011on financial exclusion. They used a sample of 50 households in examining the reasons why some people in the UK are excluded from financial services. They employed a descriptive analysis to meet the objective. The results show that some other people don't have bank account because they used Post Office' services (60%), due to little/no money (24%), just refusing accounts (10%), some afraid of bank charges (2%) and some of the respondents said they afraid of overdrawn (2%).

Another study was conducted in Kenya, which used a sample that was drawn from the Nairobi Central Business District. The author adopted a multinomial logit model to analyze the three levels of financial services. The author classified these levels into mobile money transfers, mobile payments, and mobile banking. The results from multinomial logistic regression revealed that gender, education, wealth, tariffs of service and volume of transactions were influential factors. Moreover, the author said there should be the development of financial products and services, which are sensitive to all groups and low-income earners, as well as the creation of awareness on financial services both in urban and rural areas (George, 2012).

A cross-sectional study was conducted on the literature review about the financial exclusion for the poor in across the global. He identified some issues that lead to financial exclusion. The issues among others geographical location plays a significant role in financial exclusion globally. Other forms of financial exclusion that was thoroughly discussed in the review include access, condition, price, markets, and self-exclusion. The reviewer further said that researchers, policy makers, decision makers, and stakeholders should work deliberately on a specific barriers using "bottom-up" approach. This approach will enhance the excluded from the mainstream financial markets to speak out their needs and their predicament (Koku, 2015)

Fufa (2016) conducted a study on determinants of access to credit in Nekemte, Ethiopia. The author used data collected through administered structured questionnaire from 173 respondents. The author adopted binary and multinomial logit models in the regression analysis. The results from logistic regression revealed that age, location, corruption and owning business were related to borrowing from formal financial services. The results from multinomial regression showed that access to financial information, own income were statically significant in accessing credit. The author advised that the government should enact some regulation in the financial markets to enable the commercial bank to relax some of their terms and condition to enhance people to access to credit for the needy.

Chen and Jin (2016) analyzed financial access in China using data from the 2011 China Household Financial Survey. The author employed descriptive analysis, logistic and multinomial regression of different sets of variables and compared the results. The descriptive analysis showed that 53.2% of the sample used to credit the rest did not and only 19.77% used formal credit. The regression results from both models revealed that variables such as marital status, employment, net worth, age, and location were statistically associated with access to credit whereas gender, education, ethnicity and annual household income were not associated with access to credit.

Coeffinet and Jadeau (2017) conducted a study on factors determining financial exclusion in the Euro area. The authors used data from the Euro system's

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Households Finance and Consumption Survey (HFCS). They adopted the probit model to get the probability of being excluded from mainstream financial market. The results showed that the household characteristics such as age (being older), unemployed, lower-income, lower-educated, less wealthy households are less likely to be included in the mainstream financial markets. Other factors are younger, lower-income were less likely to involve in credit.

Lotto (2018) conducted a study on determinants of financial services usage in Tanzania using data from a survey carried out by Sauti ya Wananchi. The survey covered a large part of the country on the usage of mobile money in particular. The author employed probit regression to analyze the factors that determine financial services usage. The findings of the paper revealed that gender, income, good education, and age were statistically significant. The author further said women lack collaterals for borrowing, poor awareness, lack of financial education and low rate of involvement in productive activities such as businesses cause exclusion compared to men. The advice was given to policymakers and the government to women and younger people to access financial services for inclusive growth.

III. Methodology

a) Data

The study based on the data collected by the FinScope Tanzania survey that took place from April to July 2017. The survey achieved a sample of 9,459 of adults aged 16 years and above. It collected data about Socio-economic, interest rate and financial literacy of adults in Tanzania. It adopted a multi-stage stratified sampling approach to get a representative sample of adults aged 16 years and above. However, the exclusion of fewer than 16 years on the day that the interview was held was done to avoid the inclusion in the sample too young people and some other people who are not in income-generating activities. Also, FinScope Tanzania 2017 survey believed that people at the age of 16 years and above start engaging in income-generating activities. The sample frame reflected the Tanzania Population and Housing Census of 2012.

b) Model Specification

There are two major types of barriers to financial inclusion. The first type is supply-side barriers, which include cost and poor regulatory framework. The second type is demand-side barriers, for instance socio-economic and cultural factors. This study based on demand-side barriers to financial exclusion using two financial services/products saving and credit. These two services enable and play a significant role in smoothing consumption and protecting adults against financial exclusion. The study adopted the multinomial logit model to estimate the factors that determine financial exclusion. Each product was estimated separately.

Multinomial logit regression technique is employed because the dependent variable has three categories namely; formal, informal and excluded from financial services. In a situation where categories are unordered, the often-preferred strategy is the Multinomial Logistic regression that is the extension of the logistic model. The properties include Sigmoid or S shape (means limiting probability between 0 and 1), equivalent difference property, independent of irrelevant alternative (IIA) which means that adding or deleting outcomes does not affect the odds among the remaining outcomes/alternatives (McFadden, Train and Tye, 1978; Hoffmnan and Duncan, 1988).

Suppose individual i^{th} faces j choices (that is the formal financial institution, informal institution, excluded). Assume the utility of choice j given in Eq. (1)

$$U_{ij} = V_{ij} + \varepsilon_{ij} \quad (1)$$

The general expression for the probability of choosing an alternative *'j' (1, 2, 3 …j)* from a set of j alternative is:

$$Pr\ (i) = \frac{\exp(Vi)}{\sum_{j=1}^{J} \exp(Vj)} \quad (2)$$

If an individual makes choice j specifically, we assume that U_{ij} is the maximum among the j utilities and therefore the model will be determined by the probability that choice j is made which is Prob $(U_{ij} > U_{ik})$ for all other $j \neq k$. The error (ε_{ij}) term is independent. *Pr (i)* is the probability of decision maker choosing alternative *j; Vj* is a systematic component of the utility of alternative j

c) Models estimated.

d) Borrowing model

$$C_{ij} = \beta_0 + \beta_1 Age_{ij} + \beta_2 Gen_{ij} + \beta_3 Mrst_{ij} + \beta_4 Edu_{ij} + \beta_5 Empl_{ij} + \beta_6 Iy_{ij} + \beta_7 PWndx_{ij} + \beta_8 Loc_{ij} + \beta_9 FncEduc_{ij} + \beta_{10} Hhs_{ij} + \beta_{11} NoAdlHhs_{ij} + \beta_{12} UtlBill_{ij} + \varepsilon_{ij}$$

e) Saving model

$$S_{ij} = \alpha_0 + \alpha_1 Age_{ij} + \alpha_2 Gen_{ij} + \alpha_3 Mrst_{ij} + \alpha_4 Edu_{ij} + \alpha_5 Empl_{ij} + \alpha_6 Iy_{ij} + \alpha_7 PWndx1ij + \alpha_8 Loc_{ij} + \alpha_9 AccMop_{ij} + \alpha_{10} FncEduc_{ij} + \alpha_{11} Hhs_{ij} + \alpha_{12} UtlBill_{ij} + \varepsilon_{ij}$$

Where:

S_{ij}= Demand for saving by individual i to financial services providers j. (1 = formal financial institution, 2 = informal institution, 3 = excluded from financial services)

C_{ij} = Demand for credit (borrowing) by individual i to financial services providers j. (1 = formal financial institution, 2 = informal institution, 3 = excluded from financial services)

Age_{ij}= Age of individual i to financial services provider j

Gen_{ij}=Gender of individual i to provider j

$Mrst_{ij}$ = Marital status of individual i to financial services provider j

Edu_{ij}=Level of education of individual i to financial services provider j

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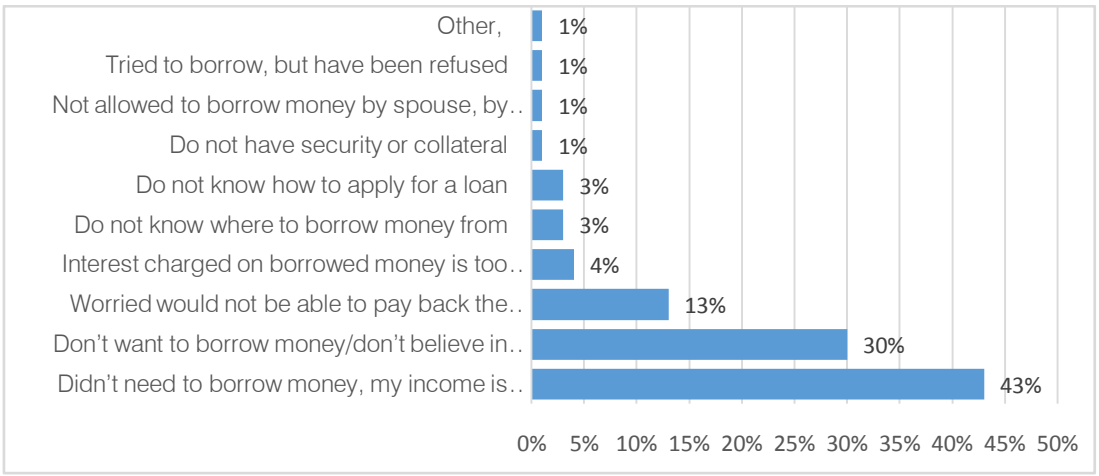
$Empl_{ij}$ = Employment of individual i to financial services provider j
Iy_{ij}= Income of individual i to financial services provider j
$PWndx_{ij}$= Wealth index (properties owned by individual i) to financial services j
Loc_{ij}=Location of residence of individual i rural) to provider j
$FncEduc_{ij}$= Knowledge about financial services (financial literacy) of individual i to provider j
Hhs_{ij} = Household size of individual i to financial services provider j
$NoAdlHhs_{ij}$ = Number of adults in a household i to financial service provider j
$AccMop_{ij}$ = Access to the mobile phone of individual i financial service provider j
$UtlBill_{ij}$ = = Payment of utility bills by individual i financial service provider j
ε_{ij}= Error term

IV. Results and Discussion

In presenting the study' findings and discussion, a descriptive and regression analysis was employed.

a) Descriptive Analysis

The descriptive analysis focused on the research questions. The first question was "*what are the reasons hindering people to borrow in Tanzania?"* This guiding question sought to identify the reasons that hinder people from borrowing from any financial services provider whether formally or informally. People borrow for different purposes in the economy. Adults borrow for investment or to meet their ends. The data that was used to tackle this research question was collected by Finscope Tanzania in 2017 and presented in Figure 1 as follows.



Source: Computed from Fin Scope Tanzania, 2017

Figure 1: Reasons hindering people to borrow in Tanzania (n = 9,459)

With Figure 1 description, about 43% of adults that were involved in the survey said they did not borrow because they worried that they would not be able to pay back the loan. The plausible reason for the situation is the high interest rate that is charged by financial services provider and lack of financial education among adults. Also, adults worry to borrow as consequences resulting from the poor performance in businesses and other unforeseen events that impede their ability to repay the loans. Moreover, adults may fear to borrow because they lack financial awareness related to terms, conditions and regulations tied to borrowing especially in formal financial institution.

Also, some adults do not believe in borrowing as shown in Figure 1 that13% of adults don't believe that borrowing can make a significant improvement in their life.Again, the study revealed that 2.5% of adults said, they do not borrow due to high interest that charged by money services providers. Adults considered interest rate as high because of asymmetric information in the financial markets. The growing literature of financial markets shows that the high interest rate might attract defaulters that cause bad loans to banks. Asymmetric information leads to scrutiny of loan applicants and eventually many applicants are rejected or are willing to be charged the interest. Under this situation credit, rationing is inevitable.

Spouse/family disagreement on borrowing that encountered 3.4% of the adults involved in the survey was another reason that was revealed in the present study. Banks and microfinance institutions require collaterals to pledge for loan disbursement. Some of the spouse/family member fear if the loan not covered, collaterals/assets that were pledged normally are confiscated to compensate the loans.

The refusal was another reason that hiders adults to borrow when they tried to borrow which encountered 1% of the respondents. This implies that

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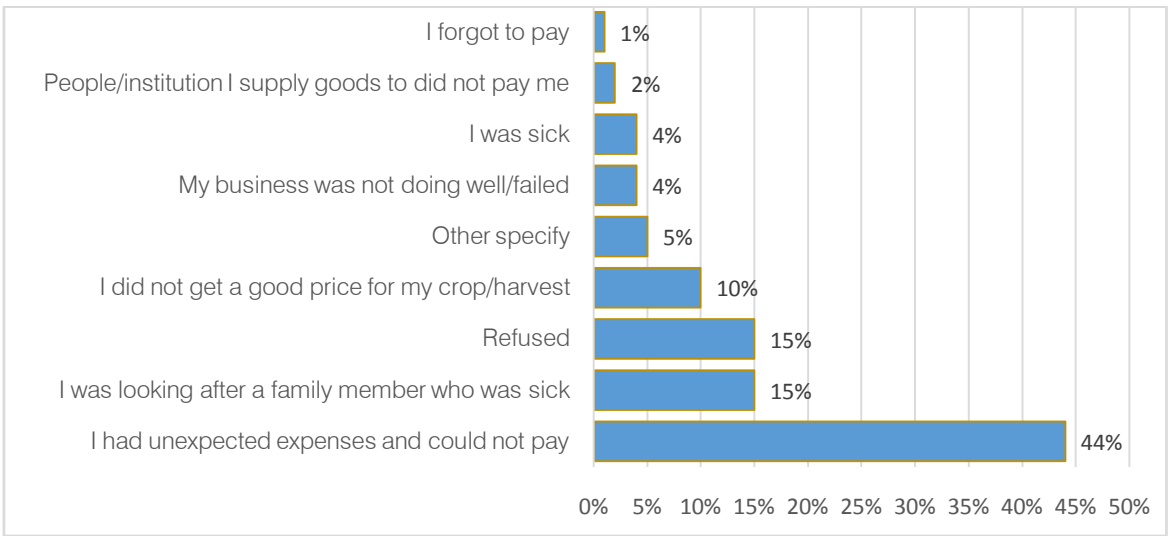
some adults lack knowledge on how to apply successfully for loans perhaps due to failure to present required information and documentation. However, lack of collaterals was another reason that hinders adults to borrow. The study reveals that 1% of adults failed to borrow because they had no collaterals. Moreover, 30.3% of adults did not need to borrow. They said their income is enough to cover all aspects of their lives. It implies that they do not need to borrow money for either investment or social welfare.

The findings in the preceding discussion are consistent with the study of Frangos, Fragkos Sotiropoulos, Manolopoulos, and Valvi (2012) in Greek. The authors found that interest rates, collaterals, and perceptions of customers on financial institutions play a significant role in influencing the decision on borrowing. Furthermore, the study answered the second research question that was *"what are the main reasons for some of the adults not being able to repay the loans?*" this research question was thought to meet the second objective of the study which was to examine the reasons for not being able to repay the loans. Figure 2 below shows the reasons that affect borrowers to repay the loans.



Source: Computed from Fin Scope Tanzania, 2017

Figure 2: Reasons for not being able to repay the loan (n = 9,459)

The findings in Figure 2 reveal that 44% of adults said that they failed to repay the loans due to unexpected expenses that they faced. Unforeseen events reported affecting the payment of the loan. Given the magnitude of the event borrowers, find themselves not able to repay the loan.

The study reveals that 15% of the adults said they failed to repay the loan because of taking care of a family member who was sick. Sickness and accidents mostly are unpredictable phenomena and when happen do affect life equilibrium.Given the reality that economic options are limited to most of adults so they fail to generate income that can enable them to repay the loan. Eventually, financial services providers confiscate the properties that were pledged as collaterals.

Furthermore, Figure 2 shows that 15% of adults refused to repay the loan. Refusal to repay the loan may be attributed by unforeseen events facing the borrowers that limit their capability to repay the loan. Some may refuse to repay the loan because they were not interested in paying the loan from the beginning and the loan officers or moneylenders were not able to detect them when screening their applications for loan. However, some adults may refuse to repay the loan due to limited knowledge on financial education on terms and conditions regarding loans issues and defaulting. About 10% of adults reported that fluctuation in crop price/harvest limited the ability to pay the loan. Some of the adults borrow money for agricultural activities with the expectation of harvesting and competitive price could enable them to repay their loans. If harvest and price are not reliable may affect the capability to repay the loan.

Failure in businesses was revealed in the survey where 4% of adults said failure in their businesses of borrowers made them fail to repay the loan. Lack of capital among adults do make them opt for loans to raise capital to initiate or expand their business' operations. If businesses operations fail which may be caused by different reasons such as limited experience market competition,limited training, and business skills end closing business that would repay the loan.

Other factors that affect repayment of the loans that the survey reveals include; the borrowers' fallen sick, which encountered 4% of adults, some involved in other business, delay in the payment of their businesses 2%, which eventually affected the repayment of the

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loans, and 1% of adults said they forgot to repay the loan they took.

The findings in the present study are in line with the work of Nguta, and Huka (2013) in Kenya. The authors found that failure in business leads to loan delinquency/default. Another work that is consistent with the present findings is the work by Addae-Korankye (2014) in Ghana. The author concluded that unwillingness of borrowers to pay, poor business practices, high interest rate, poor appraisal, loan sizes, and lack of monitoring of borrowers from financial institutions, improper client selection, and illiteracy of borrowers on financial matters cause borrowers to default.

V. Regression Analysis

Table 1: Description and Summary Statistics of Variables

Variables	Description	Mean	Std. Dev.	Min	Max
Age	Actual age of the respondent in terms years	38.1959	16.28111	16	100
Gen	Gender of respondent 1=Male 2=Female	1.564542	.4958431	1	2
Mrst	Marital status of the SMEs operators 1 = Married/living together 2 = Divorced/separated 3 = Widowed 4 =Single/never married	1.785812	1.162975	1	4
Edu	Education of the respondent 1 = No formal education 2 = "Some primary" 3 = "Primary completed" 4 = "Post primary technical training" 5 = "Some secondary" 6 = "Secondary competed" 7 = "University or other higher education" 8 = "Don't know"	3.060049	1.553511	1	8
PW ndx	Wealth index (Properties) owned by the respondent	1.932445	.2509935	1	2
AccMop	Access to mobile phone 1=Yes 2=No	1.079924	.2711897	1	2
Empl	Employment of the respondent 1. Government 2. Private company 3. Own business 4. Small-scale farmer 5. Commercial farmer 6. Working for individual 7. others	-.7983931	.8772479	-1	7
FncEduc	Financial education of the respondent	.1540332	1.359419	-1	2
UtlBill	Payment of Utility Bills of the respondent 1= Yes 2 =No	1.846601	.3603906	1	2
Hhs	A continuous variable showing the size of the Household members	4.742256	2.983666	1	68
NoAdlHhs	A continuous variable showing the number of adults among Household members	2.21165	1.225835	0	33
Loc	Location of the respondent 1 = Urban 2 = Rural	1.276245	.447163	1	2
Iy	Individual Income	5.546464	3.385913	1	14

a) Multinomial Logistic regression

The study adopted Multinomial logit regression and its marginal effect. The marginal effect will measure the probability of an individual to borrow or save in either formal, informal, or being excluded from financial services. Various tests adopted before estimation, such as model fitness (*ovttest),* Multicollinearity test (*vif),* Model specification test *(linktest),* as follows:-

Table 2: Model Fitness

Ramsey RESET test using powers of the fitted values of BORROWING
Ho: model has no omitted variables
F (3, 9441) = 2.70
Prob > F = 0.0441

Source: Computed from Fin Scope Tanzania, 2017

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The above results in Table 2 show that P-value = 0.0441 if we compare with the critical P value = 0.05(If F ($p < 0.05$)) means we fail to reject the null hypothesis (is significant) that the model has no omitted variables. So some quadratic, cubic or otherwise nonlinear variables (or, indeed, nonlinear transformations of the existing variables) are best included them and fit the model.

Table 3: Multicollinearity test using the Variance Inflation Factor (VIF)

Variable	VIF	1/VIF
Age	29.48	0.033922
age2	28.96	0.034525
Hhs	1.86	0.538787
NoAdlHhs	1.81	0.551389
Edu	1.42	0.703977
Iy	1.29	0.775308
UtlBill	1.28	0.783492
Loc	1.28	0.783708
Mrst	1.24	0.803256
Empl	1.19	0.839311
Gen	1.10	0.913149
FncEduc	1.05	0.953510
PWndx	1.04	0.960044
AccMop	1.04	0.964693

Source: Computed from Fin Scope Tanzania, 2017

If VIF is within the threshold of 1 to 10, then we fail to reject the null hypothesis of no multicollinearity. Table 3 depicts that we have no VIF exceeding 10 implying that there is no any severe multicollinearity (Kutner, Nachtsheim and Neter, 2004).

Table 4: Model specification test

BORROWING	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
_hat	.562808**	.2793226	2.01	0.044	.0152757	1.11034
_hatsq	.112011	.0712467	1.57	0.116	-.0276478	.2516698
_cons	.4196372	.2717267	1.54	0.123	-.1130056	.95228

*Notes; ***, **, * Represent significance at 1%, 5% and 10% respectively*
Source: Computed from Fin Scope Tanzania, 2017

Table 4 shows that our model is correctly specified since _hat is statistically significant at 5% as reflected by the probability value of 0.044 while the variable _hatsq is not statistically significant at all. For these results, we fail to reject the null hypothesis of no omitted variable (no functional miss-specification in the model).

Table 5: Multinomial logistic regression for Borrowing Model

Number of obs = 9,459
LR chi2(26) = 2740.54
Prob > chi2 = 0.0000
Log likelihood = -168.0737
PseudoR2=0.1437

BORROWING	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
Formal						
Age	.0029357	.0018494	1.59	0.112	-.0006891	.0065605
Gen	-.5551198***	.0532458	-10.43	0.000	-.6594796	-.4507601
Mrst	-.0621044***	.0233388	-2.66	0.008	-.1078476	-.0163613
Edu	.2541162***	.0189751	13.39	0.000	.2169257	.2913067
PWndx	-.3062003***	.0956874	-3.20	0.001	-.4937443	-.1186564
AccMop	-.8077335***	.1347458	-5.99	0.000	-1.07183	-.5436366

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Empl	.0353904	.0292887	1.21	0.227	-.0220143	.0927951
FncEduc	-.2724022***	.0192421	-14.16	0.000	-.310116	-.2346885
UtlBill	-.2496975***	.0740777	-3.37	0.001	-.394887	-.1045079
Hhs	-.0088249	.0117347	-0.75	0.452	-.0318244	.0141746
NoAdlHhs	-.016124	.0275484	-0.59	0.558	-.0701178	.0378699
Loc	.46431***	.0618721	7.50	0.000	.3430428	.5855772
ly	-.0183895**	.0087233	-2.11	0.035	-.0354868	-.0012921
_cons	.9249522	.327383	2.83	0.005	.2832933	1.566611
Excluded						
Age	.0143471***	.0018719	7.66	0.000	.0106782	.018016
Gen	.0736364	.0651651	1.13	0.258	-.0540848	.2013577
Mrst	.0635741**	.0269198	2.36	0.018	.0108123	.1163358
Edu	.0241484	.0243725	0.99	0.322	-.0236209	.0719176
PWndx	.0838947	.1381097	0.61	0.544	-.1867953	.3545846
AccMop	.716493***	.0932978	7.68	0.000	.5336326	.8993534
Empl	.0211429	.0439378	0.48	0.630	-.0649736	.1072594
FncEduc	-1.072707***	.0388683	-27.60	0.000	-1.148888	-.9965269
UtlBill	-.0367662	.1028487	-0.36	0.721	-.238346	.1648135
Hhs	.001546	.0132511	0.12	0.907	-.0244257	.0275178
NoAdlHhs	-.0896205***	.033372	-2.69	0.007	-.1550283	-.0242126
Loc	.0761441	.0772911	0.99	0.325	-.0753436	.2276318
ly	.0311606***	.009209	3.38	0.001	.0131113	.04921
_cons	-3.185803	.4169723	-7.64	0.000	-4.003053	-2.368552

Informal (base outcome == 2)
*Notes; ***, **, * Represent significance at 1%, 5% and 10% respectively*
Source: Computed from FinScope Tanzania, 2017

Table 5 depicts the multinomial logistic regression results. The study reveals that gender *(Gen)*, marital status *(Mrst)*, education *(Educ)*, wealth index *(Pwndx)*, access to mobile *(AccMop)*, financial education *(FncEduc)*, payment of utility bills *(UtlBill)*, location *(Loc)* and individual income *(ly)* variables affect borrowing in formal financial inclusion over the informal financial inclusion for borrowing model. In other words, gender *(Gen)*, marital status *(Mrst)*, education *(Educ)*, wealth index *(Pwndx)*, access to mobile *(AccMop)*, financial education *(FncEduc)*, payment of utility bills *(UtlBill)*, location *(Loc)* and individual income *(l_y)* increase the probability of embedding in a group with more relative preference for formal financial services compared to informal financial services.

Age (*Age)*, employment (*Empl)*, household size *(Hhs)* and number of adults in the household *(NoAdlHhs)* were found statistically not significant in explaining the financial inclusion between formal and informal financial services alternatives for borrowing model.

Concerning the adults' choice of exclusion over the informal alternative, age *(Age)*, marital status *(Mrst)*, access to mobile *(AccMop)*, financial education *(Fnc Educ)*, number of adults in household *(NoAdlHhs)* and individual income *(ly)* variables were statistically significant.

However, gender *(Gen)*, education *(Edu)*, wealth index *(PWndx)*, employment *(Empl)*, payment of utility bills *(UtlBill)* household size *(Hhs)* and location *(Loc)* were found statistically not significant in explaining the choice of being excluded and informal alternatives.

The interpretation of the coefficients of the multinomial model is not straightforward (Greene, 2002). For better understanding of the model, the author decided to run for marginal effects after multinomial logit regression. The marginal effects measure the change in the probability of adults' exclusion from financial inclusion concerning a change in each explanatory variable. Marginal effect measures the effects of a change in one category of a dependent variable, under ceteris paribus, on the probability that an individual choose among the alternatives (Fufa, 2016). The results of marginal effects are presented in Table 6 below.

Table 6: Marginal effects after Multinomial logit (Mlogit) for Borrowing Model

Categories of financial exclusion for the Mlogit				
Dependent Variable =	Formal	Informal	Excluded	
Independent variable	dy/dx (P>|z|)	dy/dx (P>|z|)	dy/dx (P>|z|)	X
Age	.0001161(0.777)	.0002362(0.491)	-.000509(0.086*)	38.1959
Gen	-.1310161(0.000***)	-.1078504(0.000***)	-.0993584(0.000**)	1.56454

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Mrst	-.0168233(0.001***)	-.0133205(0.002***)	-.0150002(0.000***)	1.78581
Edu	.0577106(0.000***)	.0480587(0.000***)	.0414218(0.000***)	3.06005
PWndx	-.0739614(0.000***)	-.0604708(0.001***)	-.0578433(0.000***)	1.93245
AccMop	-.2144855(0.000***)	-.1707448(0.000***)	-.1873465(0.000***)	1.07992
Empl	.0073414(0.253)	.0062899(0.241)	.0045207(0.361)	-.798393
FncEduc	-.0208922(0.000***)	-.0277823(0.000***)	.0290804(0.000***)	.154033
UtlBill	-.0561968(0.001***)	-.0469274(0.001***)	-.0397863(0.001***)	1.8466
Hhs	-.0020975(0.420)	-.001723(0.428)	-.0016059(0.405)	4.74226
NoAdlHhs	-.0002141(0.972)	-.0010521(0.837)	.0035552(0.437)	2.21165
Loc	.104193(0.000***)	.0870847(0.000***)	.0734363(0.000***)	1.27624
Iy	-.0054643(0.005***)	-.004224(0.009***)	-.0053076(0.000***)	5.54646
	P(Y = 1) = .36151667	P(Y = 2) = .2576688	P(Y = 3) = .21658166	

*Notes; ***, **, * Represent significance at 1%, 5% and 10% respectively*
Source: Computed from Fin Scope Tanzania, 2017

From Table 6 the marginal effect of gender *(gen)* indicates that female respondents chooses informal credit and exclusion alternatives than male respondents. The marginal coefficients of informal credit and exclusion alternatives are 0.1078 and 0.0993 respectively. However, male respondents chose formal financial services more than female respondents, with their marginal coefficient of 0.1310. This finding indicates that female respondents are concerned with the informal financial services, while male respondents do access formal financial services. The study is in line with the work of George (2012) in Kenya who argued that female tend to be involved in informal financial services or even being excluded from the mainstream financial services compared to males.

The marginal coefficients of formal and informal alternatives for marital status *(Mrst)* are 0.0168 and 0.0133 respectively. However, the marginal effect for exclusion preference in financial service is 0.0150. The findings are evident that married adults choose to access formal financial services whereas other groups chose formal otherwise being excluded from financial services. Chen and Jin (2016) in China support the current study. They argue marital status of adults has effect on participation in financial services selection. Table 6 shows that education *(Edu)* influence financial access among adults. The marginal effects for informal and exclusion categories are 0.0480 and 0.0414 respectively. The findings suggest that as education increase, the probability of accessing formal financial services increases too as the marginal effects for formal financial services shows 0.0577. Adults with lower education access informal and even excluded from mainstream financial services. Coeffinet and Jadeau (2017) in the Euro area, Simpson and Backland (2008) in the UK and George (2012) in Kenya obtained similar findings. Education plays crucial role in influencing financial access as adult increases education increase the probability of accessing formal financial services. Lower education reduces the probability of accessing financial services.

Wealthy *(PWndx)* adults have a higher marginal effect of 0.0739 on the usage of formal financial services compared to other alternatives. The marginal effect for informal financial services and exclusion are 0.0605 and 0.0578 respectively. Wealthy adults have a higher probability of using formal financial services. The results supported by Simpson and Backland (2008) in the UK, George (2012) in Kenya, Chen and Jin (2016) in China and Coeffinet and Jadeau (2017) in Euro area concluded that wealthier people tend to access financial services unlike the poor one.

Similarly access to a mobile phone *(AccMop)* increase the probability of access to formal financial services with the marginal effect of 0.2145 relative to other alternatives. The marginal effect of informal financial services is 0.1707 and for financially excluded is 0.1873. The adults who have reliable access to a mobile phone have access to formal financial services compared to other alternatives. They use of mobile phones as devices for electronic money for transfers, payments, and savings. The increase in access to mobile phones has increased the probability of using formal financial services. Adults with no access to mobile phones are more likely to be excluded from financial services mainstream in the economy. This result is in line with the work of Lotto (2018) in Tanzania who argued that mobile phones usage increases the probability of access to financial services as they serve as devices for electronic money transactions.

Also, the marginal effect of financial education *(FncEduc)* variable indicates adults choose to borrow in informal financial services and even being exclusion than in formal financial services. The marginal coefficients of informal financial services and exclusion are 0.0278 and 0.0291 respectively. The results of this study reveal that adults with financial education fear terms and conditions attached to loans by formal financial institutions. The marginal effect for formal financial services is 0.0209. The result is supported by Maciejasz-Swiatkiewiez (2012) in Poland that found adults with financial education prefer borrowing in institutions, which pose out favorable terms and conditions

Table 6 shows that payments of bills *(UtlBill)* influence borrowing in formal financial services relative to other alternatives with the marginal effect of 0.0562. Payment of bills requires adults to use official channels

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to complete transactions. The marginal effect of informal financial services and exclusion from borrowing are 0.0470 and 0.0398 respectively. The findings reveal that adults who pay bills have a high probability of using and even borrowing in formal financial services than adults who do not pay bills. The finding is in line with the work of Cole and Greene (2016) in the U.S. who argue that payment of bills increases the probability of financial services usage.

Location of adults *(Loc)* influences financial inclusion. Urban dwellers have a high probability in inclusion in formal financial services relative to other alternatives with marginal effect of 0.1042. The marginal effects of informal and exclusion from borrowing are 0.0871 and 0.0734 respectively. Fufa (2016) in Ethiopia and Chen and Jin (2016) in China argue that geographical location of an adult plays important role in influencing access to financial services. These results signify that being in town improves the usage of financial services at both levels of formal and informal financial service. Rural dwellers are constrained by several factors from accessing to financial services especially in formal financial services. They lack documentation for loans, no collaterals and limited outreach of financial institutions in remote rural.

Individual income *(Iy)* influences adults borrowing from formal financial institutions. The marginal effect for formal financial services is 0.0055. It implies that adults with high income have a high probability of using formal financial services such as banks and micro financial institutions relative to other alternatives. The marginal effect of informal financial services and exclusion from borrowing are 0.0042 and 0.0053 respectively. Coeffinet and Jadeau (2017) in Europe area support the findings. Lower income reduce the probability of borrowing from formal financial services whereas informal or exclusion being the favorable options for them.

Table 7: Multinomial logistic regression for Saving Model

SAV	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
Formal						
Age	-.0088512***	.0023279	-3.80	0.000	-.0134137	-.0042887
Gen	-.6943619***	.0686626	-10.11	0.000	-.8289383	-.5597856
Mrst	-.0585037	.0297718	-1.97	0.049	-.1168553	-.0001522
Edu	.2320657***	.0260304	8.92	0.000	.1810471	.2830842
PWndx	-.0740309	.1366906	-0.54	0.588	-.3419396	.1938779
AccMop	-1.364845***	.1743371	-7.83	0.000	-1.706539	-1.02315
Empl	.1196273***	.0423494	2.82	0.005	.036624	.2026307
FncEduc	-.1144931***	.0241417	-4.74	0.000	-.1618098	-.0671763
UtlBill	-.1627285	.103779	-1.57	0.117	-.3661316	.0406746
Hhs	-.0345851***	.0112598	-3.07	0.002	-.0566539	-.0125163
Loc	.8281262***	.0813819	10.18	0.000	.6686206	.9876319
Iy	.0000686	.0108169	0.01	0.995	-.0211321	.0212693
_cons	1.829705	.4463855	4.10	0.000	.9548053	2.704604
Excluded						
Age	.0045197**	.002052	2.20	0.028	.0004979	.0085415
Gen	-.0683771	.0706543	-0.97	0.333	-.206857	.0701027
Mrst	.0303339	.0300859	1.01	0.313	-.0286333	.0893011
Edu	-.0837513***	.0288637	-2.90	0.004	-.1403231	-.0271794
PWndx	.3588936**	.1649266	2.18	0.030	.0356434	.6821437
AccMop	.8474369***	.0965928	8.77	0.000	.6581185	1.036755
Empl	-.0674773	.0622549	-1.08	0.278	-.1894945	.05454
FncEduc	-.3048271***	.0249401	-12.22	0.000	-.3537087	-.2559455
UtlBill	.4611014***	.133179	3.46	0.001	.2000754	.7221274
Hhs	-.0106203	.0105982	-1.00	0.316	-.0313923	.0101518
Loc	-.0187178	.0911915	-0.21	0.837	-.1974499	.1600143
Iy	.0161914	.0101874	1.59	0.112	-.0037756	.0361584
_cons	-2.695256	.499253	-5.40	0.000	-3.673774	-1.716738

Informal (base outcome)

*Notes; ***, **, * Represent significance at 1%, 5% and 10% respectively*

Source: Computed from Fin Scope Tanzania, 2017

Table 7 depicts the multinomial logistic regression results. The study reveals that Age *(Age)*, gender *(Gen)*, education *(Edu)*, access to mobile phone *(AccMop)*, employment *(Empl)*, financial education *(FncEduc)*, household size *(Hhs)*, location *(loc)* affected

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saving in formal financial inclusion over the informal financial inclusion in the first equation for adults.

In other words, Age *(Age)*, gender *(Gen)*, education *(Edu)*, access to mobile phone *(AccMop)*, employment *(Empl)*, financial education *(FncEduc)*, household size *(Hhs)*, location *(loc)* increase the probability of saving in formal financial services relative to other alternatives.

Marital status *(Mrst),* wealth index *(PWndx),* payment of utility bills *(UtlBill),* individual income (ly) were found statistically not significant in explaining saving between formal and informal financial services alternatives.

Concerning the adults' choice of exclusion over the informal alternative, age *(Age),* education *(Edu),* wealth index *(PWndx),* access to a mobile phone *(AccMop),* financial education *(FncEduc)* and payment of utility bills *(UtlBill)* variables were statistically significant in explaining the phenomenon.

However, gender *(Gen)*, marital status *(Mrst)*, employment *(Empl)*, household size *(Hhs)*, location *(Loc)* and individual income *(ly)* were found statistically not significant in explaining the choice of being excluded and informal alternatives.

Like the borrowing model, the coefficients of multinomial logistic regression from the saving model in Table 7is difficult to interpret them. Interpretation of coefficients form is complicated and misleading, so it worth running marginal effects after multinomial logistic regression. Marginal effects simplify interpretation, and the results are meaningful. Table 8 presents the marginal effects of saving model after multinomial logistic regression.

Table 8: Marginal effects after multinomial logit (Mlogit) for Saving Model

Categories of financial exclusion for the Mlogit				
Dependent Variable =	Formal	Informal	Excluded	Mean
Independent variable	dy/dx (P>|z |)	dy/dx (P>|z |)	dy/dx (P>|z |)	(X)
Age	-.0026015(0.000***)	-.0021521(0.000***)	-.0018189(0.000***)	38.5188
Gen	-.1647087(0.000***)	-.1337019(0.000***)	-.1077387(0.000***)	1.61269
Mrst	-.017238(0.010**)	-.0142631(0.008***)	-.0120604(0.006***)	1.7924
Edu	.0649726(0.000***)	.0535394(0.000***)	.0448173(0.000***)	2.85225
PWndx	-.0516517(0.097*)	-.0446694(0.080*)	-.0417475(0.048**)	1.94618
AccMop	-.4151604(0.000***)	-.3443554(0.000***)	-.2929095(0.000***)	1.10404
Empl	.0357554(0.000***)	.0296176(0.000***)	.0251113(0.000***)	-.851109
FncEduc	.0001704(0.975)	.0023358(0.600)	.0064936(0.076*)	.137639
UtlBill	-.0830201(0.000***)	-.0709631(0.000***)	-.064678(0.000***)	1.88063
Hhs	-.0075322(0.003***)	-.0060603(0.004***)	-.0047701(0.005***)	4.76305
Loc	.2057734(0.000***)	.1677867(0.000***)	.1367797(0.000***)	1.25228
ly	-.0014905(0.541)	-.0013311(0.503)	-.0013268(0.413)	5.58806
	P(Y = 1) = .43980464	P(Y = 2) = .27803762	P(Y = 3) = .20555113	

*Notes; ***, **, * Represent significance at 1%, 5% and 10% respectively*
Source: Computed from FinScope Tanzania, 2017

Table 8 above shows that the Age *(Age)* of the adults' shows that an increase by one year in the age of adults will increase the probability of saving in formal financial institutions. The marginal effect of the preference in formal financial services choice is 0.0026. The probability of choosing informal and exclusion alternatives is 0.0021 and 0.0018 respectively. The result is in line with the work of Tuesta, Sorensen, Haring, and Cámara, (2015) in Argentina who argued that age of adults faces has to influence on accessing financial services.

The marginal effect of the gender *(gen)* indicates that female respondents chooses to save in informal credit and exclusion alternatives than male respondents. The marginal coefficients of informal credit and exclusion alternatives are 0.1337 and 0.1077 respectively. However, male respondents chose to save in formal financial services more than female respondents, with their marginal coefficient 0.1647. This finding indicates that female respondents are concerned with the informal financial services, while male respondents do save in formal financial services. The study is in line with the work of Ozturkkal and Davutyan, (2016) in Turkey, which founded that female, tend to be involved in informal financial services or even being excluded from the mainstream financial services compared to males.

The marginal coefficients of formal and informal alternative for marital status *(Mrst)* are 0.0172 and 0.0143 respectively. However, the marginal effect for exclusion preference in financial service is 0.0121. The finding an evident that who are married choose/access saving in formal financial services whereas other groups chose informal financial services and exclusion. Ozturkkal and Davutyan, (2016) in Turkey support the present study, which revealed the marital status of adults affect on participation in financial services selection.

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Table 8 shows that education *(Edu)* influences saving among adults. The marginal effects for informal and exclusion categories are 0.0535 and 0.0448 respectively. The findings suggest that as education increase, the probability of accessing formal financial services in saving increases too. The marginal effects for formal financial services show 0.0650. Adults with lower education save in informal and even excluded from mainstream financial services. Choudhury and Bagchi, (2016) in India, Ozturkkal and Davutyan, (2016) in Turkey, Tuesta, Sorensen, Haring, and Cámara, (2015) in Argentina and Tambunlertchai, (2018) in Myanmar obtained similar findings. As adults increase education, increase the probability of accessing formal financial services.

Adults who own wealth *(PWndx)* have a higher marginal effect of 0.0516 on saving in formal financial services compared to other alternatives. The marginal effect for informal financial services and exclusion are 0.0447 and 0.0417respectively. Wealthy adults have a higher probability of using formal financial services. The results supported by Gina, Chowa and Ansong, (2012) in Uganda who said wealthier people tend to access financial services unlike the poor one.

Similarly, access to a mobile phone *(AccMop)* increases the probability of saving in formal financial services with the marginal effect of 0.41516 relative to other alternatives. The marginal effects of informal financial services is 0.3443 and for financially excluded is 0.2929. The adults who have reliable access to a mobile phone have a high probability of saving to formal financial services compared to other categories. They use the mobile phones as devices for electronic money for savings. The increase of the mobile phones have increased the probability of using formal financial services/product. Adults with no access to mobile phones are more likely to be excluded from financial services mainstream in the economy. This result is in line with the work of Lotto (2018) in Tanzania who argued that mobile phones usage increases the probability of financial inclusion as they serve as devices for electronic money transactions.

Individuals who are employed in formal sectors *(Empl)* has marginal effects of 0.0357 implying that adults who are employed in formal sectors have high probability of saving in formal financial institutions. The marginal effects of informal and exclusion alternatives are 0.0296 and 0.0265 respectively. Employed adults may also prefer to save in informal financial institutions than being excluded from financial services. The work Choudhry and Bagchi (2016) in India support this result; their findings argue that being employed in formal sectors increase the probability of using financial services/product.

Also, the marginal effect of financial education *(Fnc Educ)* variable indicates adults choose to save in informal financial services or being exclusion. The marginal coefficients of informal financial services and exclusion are 0.0023 and 0.00649 respectively. The results of this study reveal that adults with financial education fear terms and conditions attached to saving by formal financial institutions prefer to informal to formal financial services. The marginal effect for formal financial services is 0.0001. Gina, Chowa and Ansong (2012) in Uganda revealed that adults with financial education prefer saving in informal financial institutions that pose out favorable terms and conditions relative to other alternatives.

Table 8 shows that payments of bills *(UtlBill)* influence saving in formal financial services relative to other alternatives with the marginal effect of 0.0830. Payment of bills requires adults to use official channels to complete transactions. The marginal effect of informal financial services and exclusion from borrowing are 0.07096 and 0.0647 respectively. The findings reveal that adults who pay bills have a high probability of saving in formal financial services than adults who do not pay bills. The findings are in line with the work of Cole and Greene (2016) in the U.S. who argue that payment of bills increases the probability of financial services usage.

Households size *(Hhs)* influences saving in formal financial institutions with the marginal effects of 0.0075 relative to other alternatives. A change in family size increases the probability of saving for future use. The marginal effects of informal financial services and exclusion are 0.0060 and 0.0048. The result of this study is in line with the work of Oswald (2014) in Uganda who concluded that household size influence the usage of financial products.

Location of adults *(Loc)* influence saving. Urban dwellers have a high probability in saving in formal financial services relative to other alternatives with the marginal effect of 0.2058. The marginal effects of informal and exclusion from borrowing are 0.1678 and 0.1368 respectively. The results signify that being in town improves the usage of financial service at both levels of formal and informal financial services respectively. Rural dwellers are constrained by several factors from accessing to financial services especially in formal financial services due to limited outreach of financial institutions in remote rural. Choudhry and Bagchi (2016) in India, Ozturkkal and Davutyan, (2016) in Turkey and Gina, Chowa and Ansong, (2012) in Uganda support the findings of the current study. Location plays a great role in the saving with financial institutions.

Individual income *(Iy)* influenced the saving of money by adults from formal financial institutions. The marginal effect for formal financial services is 0.0014. It implies that adults with high income have high probability of using formal financial services such as banks and micro financial institutions relative to other alternatives. The marginal effect of informal financial

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services and exclusion from borrowing are 0.0013 and 0.0013 respectively. Adults with marginalized income will as well be limited from formal financial services whereas informal or exclusion being the favorable options for them. The findings of this study is in line with the work of Ozturkkal and Davutyan, (2016) in Turkey, Gina, Chowa and Ansong, (2012) in Uganda, Tambunlertchai, (2018) in Myanmar and Tuesta, Sorensen, Haring, and Cámara, (2015) in Argentina who argue that individual income is crucial for inclusion in financial services.

VI. Conclusion and Recommendations

The study has contributed to the knowledge on are of financial exclusion and financial services outreach in Tanzania. It has dealt with reasons hindering people to borrow and not being able to repay the loan in Tanzania. The reasons that hinder adults to borrow include, some adults worry may not be able to pay back the loans (43%), some do not believe that borrowing can make significant improvement in their life (13%), some adults said they do not need to borrow (30.3%), spouse/family disagreement on borrowing (3.4%), some adults said, they do not borrow due to high interests (2.5%). Other reasons were refusal when the adults tried to borrow (1%) and lack security/collaterals (1%)

The main reasons for some of the adults not being able to repay the loans include; unexpected expenses (44%), taking care of a family member who was sick (15%), refused to repay the loan (15%), fluctuation in crop price/harvest limited the ability to pay the loans (10%), failure in their businesses of borrowers (4%). Other reasons that revealed by the study include; the borrowers' fallen sick (4%), delay in the payment of their businesses (2%) and some adults forgot to repay the loan they took (1%)

The results from multinomial logistic regression demonstrate that there are interdependence and significant relationship between the borrowing and gender, marital status, education, wealth index, access to mobile phone, financial education, and payments of utility bills, location and individual income. The results from saving model reveal that age, gender, marital status, education, wealth index, access to mobile phone, employed, financial education, and payments of utility bills, household size, location, and individual income are the critical factor on saving among adults

The study recommends that government, financial institutions and consumers of financial services should collaborate in a holistic way. The government through Ministry of Finance and Planning (MoFP), and the Bank of Tanzania (BoT) formulate policies that will make banks, microfinance institutions and community-based groups to relax their credit and saving regulations and operations, which encourage borrowing and saving as main and common financial services that foster economic activities. The government through its institutional framework penetrates support to enable financial institutions operating in rural areas to establish infrastructures for reliable financial services provision. Moreover, the government needs to provide financial education to create awareness on financial services to enable lower income earners, younger people and women to access credit and saving.

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References Références Referencias

1. Addae-Korankye, A. (2014). Causes and Control of Loan Default/Delinquency in Microfinance Institutions in Ghana. *American International Journal of Contemporary Research*. *4(12)*.
2. Ampudia M. and Ehrmann, M. (2017), "Financial inclusion-what's it worth?" *European central bank working paper series* nb. 1990, January
3. Anderloni, L., Bayot, B.ł B ędowski, P., Iwanicz-Drozdowska, M. and Kempson E. (2008), Financial services provision and prevention of financial exclusion. Directorate-general for employment, social affairs and equal opportunities inclusion, social policy aspects of migration, streamlining of social policies. European commission
4. Atieno, R. and Shem, O. (2001), "Financial Dualism and Financial Sector Development in Low Income Countries", *Saving and Development Journal*, 25(4), 413-438
5. Chen, Z., and Jin, M. (2017). Financial inclusion in China:use of credit. *Journal of family and economic issues*, 38 (4), 528– 540. Doi: 10. 1007/s 10834-0179531-x.
6. Choudhury, S.R., and Bagchi, D. (2016). *Financial exclusion- a paradox in developing countries. Journal of economics and finance*. 7(3), 40-45. DOI: 10.9790/5933-0703014045
7. Chowa, G. A. N., Masa, R. D. and Ansong, D. (2012). Determinants of saving among low-income individuals in rural Uganda: evidence from assets Africa. *Advances in applied sociology.* 2(4), 280-291. http://dx.doi.org/10.4236/aasoci.2012.24037. Retrieved on 30th December 2018
8. Coffinet, J., and Jadeau, C. (2017).Household financial exclusion in the Eurozone: the contribution of the household finance and consumption survey. IFC- National bank of Belgium workshop on"data needs and statistics compilation for macro prudential analysis" Brussels,Belgium,18-19May 2017

© 2019 Global Journals

9. Cole, A. and Greene, C. (2016). Financial inclusion and consumer payment choice, *Federal Reserve Bank of Boston.* http://www.bostonfed.org/economic/rdr/index. Retrieved on 30th December 2018.
10. Dayson, K.T and Vik, P.M,(2011).Research into financial exclusion in Rochdale-final technical report.*The University of SalfordUK*.http://usir.salford.ac.uk/19315/ retrieved on 21 October 2018
11. Demirgüç-Kunt, A., and Klapper, L. F. (2012). Measuring financial inclusion: The global findex database, *Working Paper No. 6025*. http://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-6025. Retrieved 6 August 2018
12. Demirgüç- Kunt, A., and Klapper, L. F. (2013). Measuring financial inclusion: Explaining variation in use of financial services across and within countries. *Brookings Papers on Economic Activity*, 2013, 279–340.
13. Fin Mark Trust. (2015), "*An excluded society? Financial inclusion in SADC through a Fin Scope lens"*. Johannesburg, South Africa. Published: July 2015
14. Fin Scope Tanzania (2013). *Widening your financial future; financial sector deepening trust: Dar es Salaam, Tanzania,* available online: www.fsdt.or.tz/.../FinScope-Tanzania-2013.Retrieved on 4 August 2018
15. Fin Scope Tanzania (2017). *Insight that drive innovation; financial sector deepening trust: Dar es Salaam, Tanzania,* available online: www.fsdt.or.tz/.../FinScope-Tanzania-2017URL. Retrieved on 6 August 2018.
16. Fin Scope Tanzania. (2017), *Fin Scope Tanzania surveys*. Dar es Salaam: Financial Sector Deepening Trust (FSDT)
17. Frangos, C. C., Fragkos, K. C., Sotiropoulos, I., Manolopoulos, G., and Valvi, A. C. (2012). Factors affecting customers' decision for taking out bank loans: a case of Greek customers. *Journal of marketing research & case studies,* Vol. 2012 (2012), Article ID 927167, 16 pages, DOI: 10.5171/2012.927167
18. Fufa, F. G. (2016). Determinants of access to credit and credit source choice by micro, small and medium enterprises in Nekemte, Ethiopia. *International Journal of African and Asian Studies.* Vol. 28.
19. George, P.G. (2012). Factors determining financial inclusion: the case of mobile money transfer services in Nairobi: A research project submitted to the school of economics, university of Nairobi in partial fulfillment of the requirement for the award of Master of Arts degree in Economics. Unpublished Dissertation.
20. Greene, G. H. (2002). *Econometric Analysis (fifth Ed.)*. Upper Saddle River, New Jersey: Prentice Hall.
21. Hoffmnan, S. D. and Duncan, G. J. (1988). Multinomial and conditional logit discrete-choice models in demography. *Population Association of America*. 25 (3), 415-427. http://www.jstor.org/stable/2061541. Retrieved on 20th October 2018
22. Koku, P. S, (2015) "Financial exclusion of the poor: a literature review", *International Journal of Bank Marketing*, 33(5), 654-668, https://doi.org/10.1108/IJBM-09-2014-0134. Retrieved on 21st October 2018
23. Kutner, M.H., Nachtsheim, C.J. and Neter, J. (2004), *Applied Linear Regression Models*, (4th ed), Boston-Mass, McGraw-Hill Irwin.
24. Lotto, J. (2018). Examination of the status of financial inclusion and its determinants in Tanzania. *Sustainability. 10, 2873; doi: 10.3390/su10082873*
25. Mazumder, R. (2013). The vicious circle of financial exclusion: an empirical study in West Bengal. *Indian Journal of Finance*. 7. 38-46.
26. McFadden, D., Train, K., and Tye, W.B. (1978). *An application of diagnostic tests for the irrelevant alternatives properties of the multinomial logit model*. Charles River Associates, Inc. Cambridge, Massachusetts.
27. Modigliani, F. (2005), *The Collected Papers of Ando Modigliani*, Massachusetts, the MIT press
28. Modigliani,F. and Brumberg. (1954), *Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data*, New Brunswick, N.J, Rutgers University Press.
29. Musa, A., Abdullahi, B., Idi A, and Tasiu, M. (2015). Drivers of financial inclusion and gender gap in Nigeria. *The Empirical Econometrics and Quantitative Economics Letters*.4 (4), 186-199
30. National Financial Inclusion Framework. A Public-Private Sector Initiative; National Council for Financial Inclusion: Dar es Salaam, Tanzania, 2014.
31. National Financial Inclusion Framework. A Public-Private Sector Initiative; National Council for Financial Inclusion: Dar es Salaam, Tanzania, 2017.
32. Nguta, M. H., and Huka, G. S. (*2013).* Factors influencing loan repayment default in micro-finance institutions**:** the experience of Imenti North District, Kenya. *International journal of applied science and technology*. 3(3)
33. Oswald, K. (2014). Utilization of savings and credit by household characteristics in Uganda and the implications for linkage banking programs. *All Theses.1887*.https://tigerprints.clemson.edu/all_theses/1887. Retrieved on 21st October 2018
34. Ozturkkal, B., and Davutyan, N. (2016). Determinants of saving- borrowing decisions and financial inclusion in a high middle-income country: the Turkish case. *Emerging markets finance and trade.* Doi: 10.1080/1540496x.2016.1187596
35. Simpson, W. and Buckland J. (2008), "Examining evidence of financial and credit exclusion in Canada

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from 1999 to 2005", *Journal of Socio-Economics*, University of Manitoba, Manitoba
36. Sinclair S., McHardy F., Dobbie L., Lindsay K. & Morag Gillespie M. (2009),"Understanding financial inclusion", *Friends Provident Foundation*.
37. Solem, H. (2012). Does recent volatility in the housing market challenge traditional models of saving? a study on the importance of housing wealth forexplaining household saving in the United States during the crisis, *NHH - Norges handelshøyskole and HEC Paris*. Bergen / Paris, Spring 2012. Published thesis.
38. Stiglitz, J. and Weis, A. (1981), "Credit Rationing in Markets with Imperfect Information", *American Economic Review,* 71(3), 393–410
39. Tambunlertchai, K. (2018). Determinants and barriers to financial inclusion in Myanmar: what determines access to financial services and what hinders it? *The Singapore Economic Review*. 63(1), 9-26. http://doi.org/10.1142/S0217590818410011
40. Tuesta, D., Sorensen, G., Haring, A., and Cámara, N. (2015). Financial inclusion and its determinants: the case of Argentina. *Working Paper 15/03*, Madrid, January 2015
41. URT (2006). *The Banking and Financial Institutions Act*, 2006
42. URT, (2000). "*National Micro Finance Policy*", 2000
43. World Bank (2008). Finance for All? Policies and Pitfalls in Expanding Access, Washington DC.
44. World Bank Group. (2015). Tanzania Mainland Poverty Assessment. Washington, DC: World Bank Group.

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