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Informal Financing and the Use of Formal Financial Services among Small Holder Farmers in Kenya

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Abstract
Despite financial inclusion being a key driver of growth and income equality, developing countries continue to have significant proportion of populations without access and usage of basic formal financial services. Instead, most still subscribe to informal financial services, which have low or nonexistent entry barriers. In the context of small holder farmers, informal financial services can moderate their access to finance where there are gaps in the formal financial instrumentation. The present study, therefore, sought to determine the moderating effect of informal financial services on the use of formal financial services among small holder farmers in Kenya. The target population for this study were small holder farmers from Nakuru, Busia, and Kirinyaga counties in Kenya; a sample size of 496 was obtained and selected through purposive and stratified random sampling techniques. Data were collected using copies of a researcher-developed questionnaire and analyzed using multiple linear regression analysis with Stata. The findings reveal that informal financial services did not have a moderating effect on utilization of formal financial services among small holder farmers. The study recommends that the formal financial institutions develop products and work closely with informal financial services to encourage more utilization of financial services.

Keywords: Financial inclusion; Informal financial services; Formal financial services; Small holder farmers.

1. INTRODUCTION

1.1. Background of the Study
Financial inclusion is a purposeful effort to ensure access and availability of financial services such as loans, deposit service, insurance, pension, and payments to the bankable citizens (Acharya and Subramanian, 2009). Leeladhar (2006) defines financial inclusion as the expanding outreach of banking or financial services at an affordable cost to a vast section of disadvantaged groups of society, which may provide them with financial cushion for their sustenance as well as social empowerment. Put differently, financial inclusion is the effort to bring the more than 2.5 billion “unbanked” people who are mostly the poor and women—who currently lack access to basic financial services into formal financial networks (Lagarde, 2014).

Despite the importance of financial inclusion being a driver of growth and income equality, developing countries continue to have significant proportions of individuals and households without access to basic financial services, with at least 80% of adults in these countries being unbanked compared with a world average of 50% and a developed countries average of 8% (Allen et al., 2014). The low rates of financial inclusion, therefore, partly explain why despite the relatively high returns on investments in developing countries, their growth remains low while poverty and income inequalities are relatively high. Low or nonaccess to formal financial services could also arise from involuntary exclusion. Involuntary exclusion may be as a result of a range of factors including low incomes or high risk, discrimination, contractual, and informational framework to price or the kind of products provided (Claessens, 2006). Price of financial
services may be prohibitively high or the features of the product being offered may not be suitable for certain population groups. For example, microentrepreneurs might be unwilling to take out loans that require them to pledge their personal assets as collateral, as it is commonly done in most developing countries. Conversely, Kempson (2006) outlines different underlying reasons or typologies for financial exclusion. These include access barriers such as identity requirements, terms and conditions of bank accounts, levels of bank charges, physical access problems brought about by bank branch closures, and psychological and cultural barriers.

A large number of bankable adult populations in Africa seem to have no financial access as well as usage. In other words, it appears that they are being financially excluded from the economy. Recent studies reveal that most adult and bankable citizens in Africa are not fully financially included within the economy (Demirgüç-Kunt and Klapper, 2013). For instance, nearly three billion adults in the world are reported to have been financially excluded (Swamy, 2014). Furthermore, Demirguc-Kunt and Klapper (2012) opine that of the 50% banked adults who have individual or joint accounts at formal financial institutions, only 22% have savings accounts. The situation in Africa is even grimmer; the recent global financial inclusion index shows that “less than a quarter of adults have an account with formal financial institutions” (Demirguc-Kunt and Klapper, 2012). This gives apparent exasperating contemplation that majority of African adults in many African countries appear to be financially excluded and perhaps use informal financial channels to save and borrow. They perhaps still save under the bed or in the local boxes (Aderonke and Charles, 2010).

The financial system in Kenya has grown rapidly in the last decade. Although the largest economy in East Africa, it has failed to provide adequate access to banking services to the bulk of the population, and lending is skewed in favor of large private and public enterprises in urban areas. This is evidenced by distribution of bank branches at 93% in urban and rural areas and 7% in arid and semiarid areas (Beck and De la Torre, 2007). Kenya has a population of 46 million people and adults with accounts in formal financial institutions in the year 2014 stood at 55.2%, formal savings 30%, and formal borrowing 15% according to World Bank data (Demirguc-Kunt et al., 2015). This information demonstrates that there is financial exclusion and that the poorer sections of the society, who are mainly found in rural, arid, and semiarid areas, have not been able to access suitable financial services.

However, a significant proportion of those with access to formal financial services as well as those who are systematically excluded subscribe to informal financial services, which characteristically have low or nonexistent entry barriers. Informal finance has been defined as contracts or agreements conducted without reference or recourse to the legal system to exchange cash in the present for promises of cash in the future (Schreiner, 2001). Historically, this was seen as highly exploitative (Sanderatne, 2003). Some factors such as high transaction costs, institutional barriers, and numerous bureaucratic requirements endear formal financial seekers to opt for informal finance (Aryeetey and Hyuha, 1990). It is also sometimes believed that most of the urban demand for savings and credit facilities from informal financial organizations substitute for demand from formal sources. Elements of complementarity may also influence the relationship (Aryeetey et al., 1990).

For example, a study on formal and informal institutions’ lending policies and access to credit by small-scale enterprises in Kenya found that credit rationing is significantly higher in the formal financial markets as compared with the informal and semiformal financial sectors in Kenya (Atieno, 2001). Atieno (2001) found that concern with loan repayment among formal lenders determines the amount of credit a borrower gets, whereas in the informal financial sector, the main determinant is their limited resource base. She concluded that lending terms imposed by the formal financial sector (emphasizing collateral security) ration a large number of borrowers out of the credit market leaving only a few who can afford the required collateral. In contrast, some of the borrowers do not get what they want from the informal sector due to the limited resource base creating a credit gap in the rural markets in Kenya. However, the limitation of this study is that it focused on the Kenyan informal financial sector landscape in separate geographical areas.

1.2. Problem Statement

Usage of formal financial services is still low. The utilization of formal financial services by the agricultural sector in Kenya is about 38%, which is low compared with the 78% reported for the manufacturing sector. About 66.9% of those who derive livelihoods from agriculture did not have bank accounts in 2015, and 42.6% did not have access to credit during the same period. Moreover, 21.8% of those who derive their
livelihood from agriculture are reported to use informal financial services, while, on average, 16.8% percent did not access insurance services in 2015. Thus, on average, 37.1% of the small holder farmers in Kenya had low utilization of formal financial services (FinAccess, 2016). In view of the low utilization of formal financial services by the small holder farmers in Kenya, there is a need to determine suitable financial inclusion approaches that could raise the level of utilization of the formal financial services among the small holder farmers and hence increase the productivity in the agricultural sector. Otherwise, the negative effects of low utilization of formal financial services would negatively affect agriculture, which is an important tool for promoting both national and rural development. This study, therefore, sought to address this issue and establish the moderating effect of informal financial services on utilization of formal financial services among small holder farmers in Kenya.

1.3. Objective of the Study
The objective of the study is to determine the moderating effect of informal financial services on utilization of formal financial services among small holder farmers in Kenya.

1.4. Research Hypothesis

$H_{01}$: There is no significant moderating effect of informal financial services on utilization of formal financial services by the small holder farmers in Kenya.

2. LITERATURE REVIEW

2.1. Gorith's Theory of Business Refinancing

The study was grounded on the Gorith's theory of business refinancing (1978), which postulates that credit absorption is directly correlated with the rate of business investment, such that with high levels of investment, refinancing is required to fill the gap of higher need for funds. The theory also holds that, whenever, a business does not attain the much anticipated growth, less need for fresh capital is experienced, hence uptake of credit gets low. The theory has one major strength, that is, need for more funds is driven by the rate of business growth and this obeys the laws of trade cycles in which investment is done during periods of business recovery so that funds are not made idle in dead stocks. However, growth of a business or business recovery must be preceded by some economic activities undertaken in the business environment and this means that business operations must continue, yet some business entrepreneurs seek to wait for recovery to invest. Realities of trade cycles notwithstanding, crave for more funds for business investment generally rises with business growth. As commercial agriculture is a never-ending business cycle, it requires constant refinancing. The demand for funds especially for small holder farmers would, therefore, be continuous even in the absence of formal lending structures. Hence, Gorith's theory of business refinancing provides a meaningful insight into the role of informal financing on the development of small-scale agriculture.

2.2. Empirical Review

Degryse et al. (2014) conducted a study on informal or formal financing or a blend of the two with evidence on the co-funding of Chinese firms. Using unique survey data, the study found that informal finance is associated with higher sales growth for small firms and lower sales growth for large firms. The study identified a corresponding effect between informal and formal finance for the sales growth of small firms, but not for large firms. Informal finance offers informational and checking advantages, whereas formal finance offers comparatively inexpensive funds. Co-funding, the concurrent use of formal and informal finance systems, is the best choice for small firms. The study was limited to Chinese firms.

De Klerk et al.'s (2013) study in South Africa also established that informal microfinance institutions are widespread, both in urban and in rural communities. These include at least 11,000 “stokvels”—popular rotating savings and credit associations (ROSCAs), village savings and loans associations (VSLAs), and burial societies. Some stokvels extend credit to members, some invest in assets that can generate income for the members, while some are used only to save funds toward a particular event such as the beginning of the school year. VSLAs, modeled along accumulating savings and credit association (ASCA) lines, are now playing an increasingly important role. The savings and credit groups (SCGs) promoted by Save Act in
Kwa-Zulu Natal and the Eastern Cape are good examples. Typically, about two thirds of the savings of these groups is mobilized into loans at any moment. They are a particularly important source of capital for subsistence farmers: in many instances SCGs time the annual distribution of savings and interest to coincide with the beginning of the summer crop planting season, thereby providing the funds necessary to purchase seed and fertilizer, without having to borrow for this high-risk purpose and without needing to generate a flow of cash income to service and repay a loan.

Johnson and Arnold (2012) also found that informal services in the form of ROSCAs are more widely used than banks, and had remained so between 2006 and 2009. Their use is positively biased toward women and those with their own phones and businesses and is now more biased toward those who are educated to secondary level than it was in 2006. This suggests that informal services are, to a degree, complementary to rather than competing with formal and semiformal services at this stage of financial-sector development.

Wachira and Kihiu (2012) in their study further established that distance from a bank continues to pose a big challenge on access to formal financial services. Households have been observed to shift their preference from formal and semiformal financial services toward informal services. How then can Kenya achieve a more financially inclusive society? Policy makers must first be aware of the implicit factors explaining the huge financial exclusion in most developing countries and the benefits that greater inclusiveness have on the development agenda. However, there is a wide gap particularly in Kenya and Africa in general concerning access constraints and implicit socioeconomic factors driving financial exclusion.

3. METHOD(S)

The study adopted a cross-sectional survey research design that allowed the collection of data from several cases in different contexts at the same time, while ensuring that a variety of views over the same issue are captured in a short time increasing the external validity of the study. The study covered small holder farmers in Nakuru, Kirinyaga, and Busia counties of Kenya. These locations are within the same livelihood zones (Lawrence et al., 2011).

In this study, a target population of 2,875,325 comprising small holder farmers from the three counties was used. In sampling small holder farmers, a simple random sampling approach was used. In the first stage, a purposive sample of three counties of Nakuru, Kirinyaga, and Busia was made and a selection of two sub-counties in each county done. In the second stage, a stratified sample proportionate to size random sampling (sampling proportionate to the total number of farm families per county) was performed for Nakuru, Kirinyaga, and Busia with the counties forming the strata. In the third and final stages, the small holder farmers in each sub-county were selected through snow-balling. A total of 496 small holder farmers were selected from Nakuru, Kirinyaga, and Busia counties. Data were collected using copies of a researcher-developed semi-structured questionnaire. Descriptive correlation and multiple linear regression analyses were then conducted using Stata to address the objective.

4. RESULTS AND DISCUSSION

4.1. Utilization of Formal Financial Services

Results of the respondents’ levels of utilization of formal financial services offered by their banks are presented in Table 1.

Table 1 shows that majority (45.8%) of the respondents frequently utilize formal financial services for saving. This is in line with the study that found out that, basic savings products, eliminating account opening costs, in Kenya significantly increased uptake, overall savings, and investment levels among market vendors (Dupas and Robinson, 2013). Overall, savings accounts for low-income households demonstrate strong potential to improve client welfare. Often the beneficial impacts of savings accounts require account features that help people overcome behavioral biases such as fortifying willpower and memory.

The findings also indicate that most of the respondents had never accessed loans from their banks (68.2%). Most of the other services are largely never or seldom used; 90.9% of the respondents seldom
input loans. The respondents who never use insurance services are 93.9%. This is in line with the study by Karlan et al. (2016) who argued that despite the potential of insurance products to provide a “risk floor” for farmers and encourage higher-productivity investments and behavior, uptake at market prices is extremely low so microinsurance is not at scale anywhere except when heavily subsidized by the government. There was also poor uptake of financial literacy services (88.3%), investment opportunities (90.2%), safe custody of documents (95.1%), and pension (95.1%). The results show the need for increased use of formal financial services. Despite the fact that financial inclusion begins with having an account, its rewards stem from actively using that account in the management of risk, utilizing it for savings, and making or receiving payments from the account. This study implies, therefore, that there is need to increase account ownership as well as assist people who have accounts make better use of them by accessing services.

4.2. Utilization of Informal Financial Services
There was need to establish the subscription of farmers to informal financial services so as to determine whether this affected their utilization of formal financial services. As such, the farmers were asked how they accessed financial services without using their bank accounts. The results are given in Table 2.

The findings in Table 2 indicate that majority (38.4%) of the farmers accessed financial services informally through their chamas, while 31.5% used their friends to obtain financial services. Others still sourced financing from their families (16.8%) and also from shylocks (13.3%).
4.3. Moderating Effect of Informal Financial Services on Utilization of Formal Financial Services

The study also sought to test the moderating effect of informal financial services on utilization of formal financial services among small holder farmers in the three counties. The Informal Financial Services (IFS) was included as a variable in the robust financial inclusion on utilization of formal financial services model and estimated as shown in Table 3.

Table 3. Moderating effect of informal financial services on utilization of formal financial services.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Busia</th>
<th>Nakuru</th>
<th>Kirinyaga</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of respondents</td>
<td>2.358</td>
<td>7.142</td>
<td>6.512</td>
<td>7.615</td>
</tr>
<tr>
<td>Gender</td>
<td>(.78)</td>
<td>(3.75)</td>
<td>(1.35)</td>
<td>(4.99)***</td>
</tr>
<tr>
<td>Marital status</td>
<td>(−1.57)</td>
<td>(0.29)</td>
<td>(−.37)</td>
<td>(−1.28)</td>
</tr>
<tr>
<td>Household size</td>
<td>(−1.32)</td>
<td>(−.56)</td>
<td>(−2.00)</td>
<td>(−2.09)***</td>
</tr>
<tr>
<td>Education</td>
<td>8.941</td>
<td>(1.59)</td>
<td>(−.28)</td>
<td>(−1.49)</td>
</tr>
<tr>
<td>Occupation</td>
<td>(−5.114)</td>
<td>(−15.564)</td>
<td>7.319</td>
<td>(5.26)***</td>
</tr>
<tr>
<td>Institutional</td>
<td>.005</td>
<td>.505</td>
<td>−.026</td>
<td>.139</td>
</tr>
<tr>
<td>Technology</td>
<td>(−.082)</td>
<td>.345</td>
<td>.152</td>
<td>.212</td>
</tr>
<tr>
<td>Product differentiation</td>
<td>.056</td>
<td>.083</td>
<td>−.370</td>
<td>−.272</td>
</tr>
<tr>
<td>Income</td>
<td>1.479</td>
<td>.510</td>
<td>.559</td>
<td>1.279</td>
</tr>
<tr>
<td>Land size</td>
<td>2.784</td>
<td>1.351</td>
<td>1.478</td>
<td>1.737</td>
</tr>
<tr>
<td>Informal financial services</td>
<td>(−4.491)</td>
<td>5.546</td>
<td>6.288</td>
<td>(−.985)</td>
</tr>
<tr>
<td>F</td>
<td>2.72</td>
<td>10.85</td>
<td>1.80</td>
<td>13.73</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.2458</td>
<td>0.3183</td>
<td>0.2169</td>
<td>0.2544</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.1553</td>
<td>0.2889</td>
<td>0.0964</td>
<td>0.2359</td>
</tr>
<tr>
<td>Significance</td>
<td>0.0032</td>
<td>0.0000</td>
<td>0.0625</td>
<td>0.0000</td>
</tr>
<tr>
<td>No. of observations</td>
<td>113</td>
<td>292</td>
<td>91</td>
<td>496</td>
</tr>
</tbody>
</table>

*aDependent variable: Formal Financial Services Utilization. The t-values are in parenthesis. The asterisks *, **, and *** represent significance at 10, 5, and 1%, respectively.
The results in Table 3 indicate that there was a very small change (≤1%) in $R^2$ when the informal financial services were introduced as a moderator of financial inclusion factors of formal financial services among small holder farmers in the overall model. Thus, it is evident that the inclusion of informal financial services in the model was not sufficient to produce any appreciable change in the $R^2$; hence, the moderating effect was negligible (<1%). Therefore, based on the moderation rule by the informal financial services did not have a moderating effect on utilization of formal financial services among small holder farmers. As such, it could not be taken as a moderating variable for financial inclusion on utilization of formal financial services among small holder farmers in Kenya. However, it can be seen that informal financial services have a complementarity effect on the formal financial services (Aryeetey et al., 1990). The small holder farmers who used formal financial services also used informal financial services.

The findings revealed that informal financial services did not have a moderating effect on utilization of financial services among small holder farmers according to the moderation rule. This was evidenced by the observation that majority of the independent variables in the counties were largely unaltered by the introduction of IFS as a moderating variable. These findings agree with those of Degryse et al. (2014) whose study on informal or formal financing or a blend of the two with evidence on the co-funding of Chinese firms found that informal finance is associated with higher sales growth for small firms and lower sales growth for large firms suggesting that the informal sector promoted utilization of financial services. The study further identified a corresponding effect between informal and formal finance for the sales growth of small firms, but not for large firms. The results are also in agreement with those of Fridell’s (2007) investigation on the roles of informal, formal, and semiformal microcredit in Jordan credit that established that accessibility and low application costs are the key advantages of informal credit, although these are often perceived to be disadvantages of formal credit. Informal finance was found to be very flexible as the dominant source of informal credit seems to be family, friends, neighbors. De Klerk et al.’s (2013) study in South Africa also found that informal financing from SCGs mitigated access to capital and was a particularly important source of capital for subsistence farmers.

5. CONCLUSION

Based on the preceding findings and discussion, the study concludes that the presence of informal financial services would modify the levels of utilization of formal financial services among small holder farmers in the country. From a theoretical standpoint, the results point out to the fact that the demand for refinancing small holder farming enterprises is high as commercial agriculture is a never-ending business cycle and the demand for funds especially for small holder farmers would, therefore, be continuous even in the absence of formal lending structures. Therefore, avenues of alternative financing such as those in the informal sector still play an important role toward this end. The complementary role of informal financing services is in line with Gorith’s theory of business refinancing (1978), therefore, is seen as filling the gap of more need for funds by providing a source of refinancing.

5.1. Recommendations

The moderating effect of informal financial services on utilization of formal financial services among small holder farmers was not established. The study, therefore, recommends that the formal financial institutions develop products and work closely with informal financial services such as chamas as intermediaries to encourage more financial inclusivity and, hence, more utilization of financial services. The national policy makers should also encourage the registration of chamas and come up with appropriate legislation to anchor their practices on a legal framework.

5.2. Limitations of the Study

Although this study produced meaningful results, it was prone to several limitations that in turn provide avenues for further research. First, the study focused only on three counties of Busia, Nakuru, and Kirinyaga. A study based on three counties limits the generalizability of the results across all counties. Although industry- and area-specific research enhances internal validity, consideration should be taken when generalizing to other sectors and populations.
Second, the results of this study are based on self-reported data of the small holder farmers. Although they are reliable, information that is generated by respondents is not the only source of information that can explain their levels of utilization of formal financial services. At the same time, questionnaire and interview schedules though good tools for data collection, panel data could yield more information. Third, the undertakings by small holder farmers have long-term effects that can only be evaluated through a study for the same small holder farmers for a long period of time.

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Conflict of Interest
None.

References