

Smallholders' Access to and Demand for Credit and Influencing Factors: Policy and Research Implications for Ethiopia

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Abstract

Lack of access to appropriate credit services has been recognized as one of the major obstacles in transforming the subsistence-oriented smallholder agriculture sector. Focusing on individual farm households and SMEs, various studies attempted to examine farmers' and small firms' loan demand and access and influencing factors. Research on the level of access and demand for credit and its determinants among farmers' co-operatives in the African context is scanty. This article aims to address this information gap particularly in relation to the Ethiopian smallholder farmer cooperatives context. The paper is based both on critical review of existing literature and empirical study from Ethiopia. The findings reveal the presence of appreciable gaps not only between credit demand and access, but also between potential and revealed demands. The study argues that apart from the supply side gaps, demand side constraints and other external factors also play an important role in influencing farmers'/cooperatives' access to and demand for credit services. The paper finally draws lessons and implications for policy and research.

Keywords: *Rural credit, credit demand, credit access, demand determinants, farmer cooperatives*

Introduction

Enhancing access to appropriate credit services among resource-poor people has been increasingly considered as one means of tackling poverty. Like many other sectors, timely access to appropriate financial services plays a critical role in catalyzing the development of the agricultural sector. In particular, efforts aimed at transforming smallholder agriculture from its subsistence nature to commercial and market-oriented farming requires access to adequate financial resources. Access to credit helps farmers to acquire necessary farm inputs and technologies, make strategic investments in their farms, exploit opportunities by undertaking value adding activities, and in terms of accessing better market opportunities that fetch them higher return. Some authors (e.g. Mahmood *et al*, 2009) note that agriculture heavily depends on credit more than any other sector because of the seasonal variations in the farm income and a move towards commercial farming.

Several empirical studies reported the impacts of having access to credit on farm households and its contribution to the national economy. In their study in Pakistan, Mahmood *et al* (2009) found that access to credit increased family's per month income from the livestock sector more than double (by 181%). Similarly, Iqbal *et al* (2003) found a positively significant relationship between institutional credit and agricultural GDP in Pakistan. In agreement with these findings, a study from Vietnam (Barslund and Tarp, 2008) reported the fact that households with access to credit were more willing to pursue promising but risky technologies and investments. On the other hand, several studies (e.g. Fletschner *et al*, 2010; Dohcheva, 2009; Chaves *et al*, 2001) reported the adverse effects of credit constraints on farm/rural households. In Peru Fletschner *et al*, (2010) reported that farms which experienced financial constraints on average attained 27% less profit than those which had adequate access to credit. A study conducted in Africa (Misebi *et al*, 2010) similarly reported that shortage of institutional credit is a major contributor to the persistent poor performance of the Nigeria's agriculture sector.

Muayila and Tollens (2012) in their study in the Democratic Republic of Congo found that credit constrained households had lower welfare outcomes than unconstrained ones. Unfortunately, smallholder agriculture has continued to experience lack of access to appropriate credit facilities. The formal financial institutions do not favour lending to rural based resource-poor farmers and other small entrepreneurs for a number of reasons. Analysts (e.g. Olagunju and Ajiboye, 2010; KIT and IIRR, 2010) comment that most commercial banks often tend to allocate their loan funds to less risky sectors and discriminate smallholders and other rural poor. A World Bank study (1994) shows that rural credit from the formal financial institutions is less than 10% in most Sub-Saharan African (SSA) countries. Credit allocated to trade activities is much larger than the share of agricultural production, agro-processing or other rural enterprises (World Bank, 1994; Klerk, 2008).

When one talks of the thinness of credit that goes to the smallholder agriculture sector in many African countries, Ethiopia is no exception. Several studies (e.g. Admasu and Paul, 2010; Admassie, 2004; Chanyalew, 2015) indicate that, as compared to other economic sectors, the financial resources that flow to the smallholder agriculture in Ethiopia is generally low. Though there have been substantial improvements in expanding the financial markets in Ethiopia in recent years, evidence (Admassie, 2004; Bastin and Matteucci, 2007; Komicha, 2008; Chanyalew, 2015) shows the presence of substantial gaps in the rural and agricultural finance supply and demand. An earlier study by the World Bank (1994) suggests that in Ethiopia, lending by the Commercial Banks to agriculture has been less than 5%. Quoting the last Plan for Accelerated and Sustained Development to End Poverty, Wolday (2010) indicated that only 6% of smallholder farmers in Ethiopia had access to financial services. Moreover, almost all of the agricultural credit is of short term nature, with little impact on long-term investment and in effecting transformation of agriculture (Admassie, 2004). In addition, existing financial services are too costly and often not tailored to the farmers' needs (Bastin and Matteucci, 2007).

In general, many attribute credit constraints largely to supply side gaps. Most of the studies related to rural finance thus tended to largely focus on examining credit supply and supply side constraints. In addition, some of the studies that attempted to identify credit access and demand by smallholder farmers and other rural entrepreneurs, and factors influencing such credit demand and access reported inconsistent and inconclusive findings. This article thus aims to address this information gap: (1) by critically reviewing relevant literature and drawing out the lessons on demand for and access to credit and factors influencing such demand in the context of smallholder farmers and their cooperatives, (2) empirically identifying smallholder coffee farmers cooperatives credit demand and access under the Ethiopian context. The paper begins by providing background and overview of the role and impacts of access to rural credit. This is followed by a section on methods of the study and data sources. The paper then proceeds to present the findings of the study, which starts by discussing the findings of the literature review and then proceeds to present the findings of the empirical study. We conclude by highlighting some salient issues and implications for policy and research.

Methods and Data Sources

This article is based both on an empirical field study and a critical review of literature pertaining to demand for and access to credit among smallholder farmers. The empirical study is based both on qualitative and quantitative data generated from coffee farmers' cooperatives and other key actors in the coffee sector and rural finance. The survey was carried out in 2013 in eight coffee growing zones of Ethiopia. The quantitative data were obtained from 100 primary cooperatives using a structured questionnaire survey. The qualitative data were obtained through focus group discussions and key informant interviews from representatives of farmers, primary cooperatives, coffee extension, cooperative experts and managers of financial institutions. The data were analyzed using simple conventional statistics and qualitative techniques. For the review work, the nature of the publications on which this article is based is mixed – peer reviewed articles, technical/research reports and conference papers. The publications were obtained from various sources using Google scholar search engine and search of electronic database such as Ebscohostweb, AJOL and ProQuest using key words “credit for agriculture, credit demand, credit supply, credit access, credit constraints, credit demand determinants”. Additional publications were obtained through a manual search of relevant journals and other sources; through visual scanning of references used in relevant literature and by contacting pertinent institutions. The main criteria used to select the literature for the review were relevance to the study issues, year of publication (1990 to 2016) and language of publication (English).

Initially, a large number of publications were obtained. Further relevance was considered in terms of mention of the term 'credit access, demand and/or determinants of credit demand' in the title, objectives of the study or subtitles in some section of the publication. We extracted relevant information using a simple template which includes title, authors, objectives, methodology and key findings.

Findings and Discussions

Credit demand by smallholder farmers: *what does the literature say?*

The popular assumption in the literature is that farm-households' and small scale firms' demand for credit excessively exceeds supply and as a result they are often credit rationed by financial institutions. This assumption implies that all or most rural households show positive demand for credit facilities, and participation in credit service is normally determined by the lending institutions. As a result, most of the theoretical and empirical literature on rural credit and government policies have largely focused on the supply-side constraints, with little attempt to explore household's or firm's demand for the services (Mpuga, 2010; Karlan *et al*, 2011). Among the studies conducted in Ethiopia, Bastin and Matteucci (2007), in their study in two districts of Jimma zone, found presence of an overall gap between demand and supply of financial services in that only 42% of the demand was satisfied. Their study concluded that the entire sample of farmers had a potential demand for credit. Likewise, a study by Pombo and Herrero (2001, *cited by* Green, 2003), reported that up to 80% and 95% of investment demands of small and medium enterprises and micro-enterprises, respectively, remains unsatisfied in some Latin American and African countries. Studies carried out in China (Rui and Xi, 2010; Bing *et al*, 2008) similarly revealed that over three-quarters of rural households were credit-rationed or their demand was not satisfied. Similarly, Muayila and Tollens (2012) in their study in the Democratic Republic of Congo (DRC) reported that 71% of the farm households experienced credit constraints. A closer look at the findings of these studies suggests that credit rationing, limited access to and participation in credit services are common challenges across the different regions; i.e. Africa, Latin America and Asia.

Some however argue that the demand for loan among the farming community and rural poor might not be that strong. Because there could be a number of obstacles that hinder the transformation of potential demand to actual demand. Various authors (*e.g.* Diagne and Zeller, 2001; Komicha, 2008; Dohcheva, 2009; Chaves *et al*, 2001) attest that even if the farm households have access to a particular source of credit and at the same time lack sufficient capital for their investment project, they may decide not to participate in borrowing from that particular source. A study conducted by the World Bank (1994) suggests that many people avoid being in debt, while some might not have a worthwhile activity to be financed by borrowed funds. Therefore, as Diagne *et al* (2000) argue participation in a credit programme is something households or firms choose to do, while access to a credit service is a limiting constraint put up on them.

A study carried out in Rural Romania (Chaves *et al*, 2001) reveals that the observed scarcity of credit transactions in rural areas was caused by factors that weakened both the supply of and demand for credit. According to this study, weak demand for loans is an important determinant of the limited participation of rural agents in credit markets. Because only 31% of rural households reported having demand for loans. Some authors (*e.g.* Klerk, 2008) argue that due to their limited economic activity and capacity, households in marginal areas do not need much capital. The findings of some of the studies conducted in Ethiopia concur with these arguments. For instance, in their study in Ada'a Liben district of Central Ethiopia, Admasu and Paul (2010) found that only 43% of the respondent farmers were in need of credit, while the majority (57%) did not express need for credit. This study however focused on input loans in food crop growing areas, and may not depict the credit demand and supply situation in cash crop (such as coffee) growing areas. Similarly, Berhanu (2005) reported that some microfinance institutions in Ethiopia were struggling to secure sufficient demand for their existing loan products mainly due to the mismatch between what they offer and what the customers need. The above discussions point to the need for identifying and addressing both supply and demand side constraints if smallholders have to effectively demand for, access and benefit from institutional credit.

Credit demand as related to loan attributes and sectoral choices

Studies discussing credit sectoral choices by farmers suggest that farm households borrow from different sources; but the informal source of credit tends to dominate. Komicha (2008), in analyzing sectoral choice of farm households' and its determinants in two districts of Southern Ethiopia, reported that 55% of the interviewed households borrowed from different sources of credit, but the informal credit sector dominates the rural financial

market. Similarly, Barslund and Trap (2008) in assessing the rural credit markets in Vietnam reported that households obtain credit both from formal and informal sources, with massive differences across regions. Studies also report that various household and farm characteristics, loan attributes and lending requirements influence sectoral choice of credit. Komicha (2007) notes that imperfect financial markets adversely affect credit sectoral choice in Ethiopia. Credit rationing by the formal financial institutions is often cited as one of the factors that push farmers and other small entrepreneurs to switch to the informal credit sources. Among the household characteristics, according to Komicha (2007), the choice of formal sector was positively affected by gender (male had higher probability of demanding loan), household labour, farm size, credit information and extension visit. This implies that women tend to rely on informal credit sources, if at all, which has important policy implications. According to Komicha's study, non-farm income, dependency ratio and interest rate had negative influence on credit demand from the formal source. The widespread prevalence of informal sources of loan with some attractive features for the rural poor (such as flexibility, informality, proximity, etc.) can also partly contribute to farmers' lack of desire to borrow from the formal sector.

As regards preference for loan attributes, studies suggest that farmers often require different kinds of loans for various purposes - both for productive and non-productive purposes. A study conducted in Southern Ethiopia (Komicha, 2007) reports that farm households need credit both for production and consumption purposes, whereas the formal credit sector targets credit for production purposes. Klerk (2008) indicates that while the poorer groups might need micro-credit to cover production costs and emergency expenses, farmers and their organizations involved in cash-crop production often require larger amounts of credit to finance production, inputs, processing and marketing. Schwettmann (1997) similarly notes that farmers' cooperatives need loans for two purposes: to finance their own business operations (pre-financing of crops, input purchases, export financing, purchase of assets), and to provide short-term loans to their members. Empirical studies also show that different segments of the farming community differ in their preference for loan attributes. Unfortunately, as some analysts (e.g. Bastin and Matteucci, 2007; Wolday, 2008) comment the terms and loan products of most financial institutions are not appropriate for agricultural activities and smallholder farmers. Therefore, financial services with diverse and flexible products and terms are needed if the financial requirements of the different strata of the farming community are to be properly met.

Review of factors influencing farmers' demand for credit

Existing studies (e.g. Swain, 2007) comment that the empirical evidence on the factors influencing rural credit demand is quite limited. Atieno (1997) pointed out that though credit programmes have been used as important components of rural development in many developing countries, the limited success recorded in many of such interventions is largely attributed to the failure to properly identify the credit needs of the target groups. Evidences (e.g. Karlan *et al*, 2011) show that farming communities generally face a complex set of risks and uncertainties that complicate their decision to borrow. According to Swain (2002), farmers with small-scale and fragmented holdings located in areas with poor infrastructural facilities often have limited access to new technologies, markets and support services and possibly a low return on capital. This can obviously restrict their demand for credit facilities. In general, some authors (e.g. Atieno, 2001) identified weak entrepreneurship capacity, lack of viable enterprise to finance, risks associated with agricultural production and market for outputs, poor infrastructure and other support services, inability to meet collateral and other requirements, lack of suitable loan attributes (such as credit duration, loan amount and terms of payment), and high costs of borrowing to have a profound negative influence on farm households' borrowing decisions. Various studies attempted to determine factors that have an influence on farm households' or firms' demand for credit in different countries. Although some argue that the main challenge confronting the poor is lack of access rather than the interest rate, the findings of some empirical studies reveal that interest rates negatively influence credit demand. For instance, studies conducted in the Philippine (Briones, 2009), Ghana (Akudugu, 2012), Ethiopia (Komicha, 2007) and Thailand (Wiboonpongseet *et al*, 2006) found that increasing effective lending rate had a negative influence on credit demand. But an earlier study from Kenya (Atieno, 1997) did not find a significant relationship between interest rate and credit demand. This study argues that the insignificance of the interest rate possibly implies the use of non-price credit rationing in allocating credit to farmers. In general, high transaction costs were found to negatively influence formal credit demand in Ethiopia (Komicha, 2007) and China (Tang *et al*, 2010). Likewise, collateral requirement and/or value unsurprisingly had a negative influence on credit demand in Romania (Chaveset *et al*, 2001).

Understandably, distance to the lending financial institutions was reported by several studies to have a negative influence on loan demand. For instance, studies conducted in Nigeria (Oni *et al*, 2005; Akpanet *al*, 2013), Ghana (Akudugu, 2012), Pakistan (Khan and Hussain, 2011) and China (Bing *et al*, 2008) found a negative and significant relationship between distance to the lending agency and loan demand. This is not surprising as distance is directly related to cost of borrowing, information asymmetry and accessibility. This has important policy implications for government and financial institutions in terms of improving infrastructure and distribution of their branch networks.

Though most existing studies tend to report presence of a positive association between educational level and demand for loan, there are inconsistencies in the findings of studies conducted in different countries or regions. For instance, educational status was found to have a positive influence on credit demand in Nigeria (Oni *et al*, 2005; Akpanet *al*, 2013), Kenya (Messah, 2011), Uganda (Mpuga, 2010), Pakistan (Khan and Hussain, 2011), China (Rui and Xi, 2010; Tang *et al*, 2010), Ethiopia (Girma and Abebaw, 2015) and Ghana (Akudugu, 2012). Surprisingly, another study from China (Bing *et al*, 2008) reported a negative influence on credit demand, while a study conducted in Thailand (Wiboonpongset *al*, 2006) reported absence of significant relationship between the two variables. Overall, the findings show that education is one of the key variables in influencing the decision to take loans. With regard to the influence of age, contrary to the longstanding belief that as age progresses farmers would be more conservative and reluctant in demanding credit, studies conducted in Uganda (Mpuga, 2010) and Nigeria (Akpanet *al*, 2013) reported that age of the household is positively related to their loan demand. In other words, older farmers were more likely to demand for credit. Possibly this might be related to resource endowment as older farmers often tend to have better access to some critical assets such as land, especially in the African context. However, Bing *et al* (2008), in their study in China found a negatively significant relationship between age and credit demand, while studies conducted in Ethiopia (Girma and Abebaw, 2015) and India (Swain, 2007) did not find a statistically significant association between the two variables.

Another important factor in determining loan demand was gender of the head of household or entrepreneur. A number of studies reported that women were less likely to demand for credit from formal sources in Ethiopia (Komicha, 2007), Uganda (Mpuga, 2010), Nigeria (Ajagbeet *al*, 2012), while a study from Ghana (Akudugu, 2012) surprisingly reported that men were less likely to seek for loan. Another study conducted in Ethiopia (Girma and Abebaw, 2015) did not find a significant association between gender and credit demand. This calls for context specific investigations across various cultural groups or communities as influences of gender is likely to be context specific. Another critical variable in influencing credit demand was farm size, which, for instance, positively influenced demand for formal credit in Pakistan (Khan and Hussain, 2011), Ethiopia (Komicha, 2007), China (Bing *et al*, 2008; Tang *et al*, 2010), India (Swain, 2002; 2007), Vietnam (Barslund and Trap, 2008), Kenya (Atieno, 1997) and Ghana (Akudugu, 2012). This could suggest the fact that farmers with larger farm: (1) are in a better position to provide assets required for collateral, (2) need external loan to finance their farm activities or expansion.

Expenditure for children education and medical care were reported by some studies (e.g. Komicha, 2007; Bing *et al*, 2010; Rui and Xi, 2010) as an important factor in influencing loan demand in different countries (such as Ethiopia and China). Likewise, production and management expenditure was reported to positively influence loan demand in China (Bing *et al*, 2008). Though household or family size was expected to have strong and somehow similar effects across countries, it has shown inconsistencies across countries. For instance, family size was reported to have a positive effect on credit demand in India (Swain, 2007; 2002) and China (Tang *et al*, 2010), while it had a negative influence in Kenya (Messah, 2011), Uganda (Mpuga, 2010) and Nigeria (Akpanet *al*, 2013). The reason behind the positive effect in the Asian context and its negative influence in the African countries could be related to variations in socio-cultural aspects. On the other hand, dependency ratio had some influence on credit demand. Komicha (2007) and Messah (2011) found a negative influence in Ethiopia and Kenya, respectively, while Swain (2007) found a positive association between number of dependents and credit demand in India. Here again we notice some regional variations.

Though the findings from different countries were not consistent, sector of primary engagement was found to influence credit demand. For instance, engagement in non-farm activity positively influenced credit demand in China (Bing *et al*, 2008) and India (Swain, 2007). In Uganda, Mpuga (2010) found a negative relationship between credit demand and engagement in agriculture as a primary activity, and a positive association between credit demand and involvement in industry, administration and commercial activities. Earlier study from Kenya (Atieno, 1997) reported a significant, but negative association between farming experience and credit demand.

In contrary, engagement in farming was found to have a positive influence in Ethiopia (Girma and Abebaw, 2015). On the other hand, Akudugu (2012) found a positive association between cultivation of cash crop and credit demand in Ghana, which might be the case in coffee growing areas of Ethiopia. This is not surprising as production, processing and marketing of cash crops require substantial capital.

Another variable with inconsistent effects is non-farm income. Studies conducted in Ethiopia (Komicha, 2007) found a negative influence of non-farm income on credit demand, while Bing *et al* (2008) found a positive association in China. Other studies from Ethiopia (Girma and Abebaw, 2015) and Kenya (Atieno, 1997) did not find a significant association between the two variables. Likewise, some studies found that income (total) has a positive influence on credit demand in Nigeria (Oni *et al*, 2005) and Kenya (Messah, 2011). Similarly, studies conducted in India (Swain, 2007), China (Bing *et al*, 2008), Uganda (Mpuga, 2010), Nigeria (Ajagbeet *al*, 2012) reported that value of asset and/or net wealth positively influence credit demand. This is in agreement with existing literature which argues that farmers with better capital often reveal higher demand for credit due to two reasons: (1) they are confident and/or able to provide collaterals required by banks, (2) they often need additional external finance to support their operations or further expansion. Moreover, liability was reported by some studies to positively influence credit demand in China (Rui and Xi, 2010; Bing *et al*, 2008). This is in line with available literature which claims that households with higher liabilities may look for additional loans to settle their old outstanding loans and/or for additional business undertakings.

The above findings show that studies conducted in different countries and regions appear to report inconsistent findings with regard to factors influencing credit demand. Even some of the studies conducted in the same countries at times generate conflicting findings. Some variables were found to consistently influence credit demand across countries. Among these, size of farm holding, distance from lending institutions, education of the household head, level of assets or net wealth, education and medical expenditures, age of the head of household, gender of head of household and sector of primary activity appear to influence loan demand across countries in different ways. In general, we were not able to establish a clear distinction between variables that influence credit demand in different regions. The review also points to the thinness of such studies in the African context (with the exception of Nigeria and a few countries) as compared to countries in Asia. The inconsistencies among the findings of the studies carried out in different countries suggest the need for conducting country and context specific studies as national policies and regulatory frameworks and other socio-economic and environmental circumstances have considerable influence on demand for and access to credit. In particular, empirical evidence on smallholder farmer cooperatives' access to and demand for credit and influencing factors is scarce as existing studies tend to focus on individual farm households or SMEs.

Empirical findings on credit demand by smallholder farmer cooperatives

All aspects of coffee business (production, processing and trade) require substantial amount of capital. In general, external loans remain to be the sole source of finance for the vast majority of smallholder farmer (primary) cooperatives for funding their operations such as collecting, processing and selling members' coffee. A study conducted by ATA (2012) reveals that an average multipurpose cooperative in Ethiopia has only about 100,000 Birr capital of its own. In particular, the emergence of a large number of new primary cooperatives and unions in recent years has resulted in increasing demand for external finance. Nevertheless, the study suggests that many primary cooperatives were not coming forward to apply for bank loan for various reasons.

Actual versus potential loan demand

We employed two approaches to capture farmer cooperatives' loan demand – actual and potential demand. When we looked at the number of cooperatives that actually applied for a bank loan, the findings show that a small proportion submitted their loan applications. As indicated in Table 1.1, only 29%; 45% and 38% reported applying for loans directly or through their unions in 2010; 2011 and 2012, respectively. The fact that some farmer cooperatives did not express demand for loans during a particular season does not mean that they do not need a loan at all. Limitations in the cooperatives' institutional and managerial capacity, poor economic and business activities, weak market integration and other internal and external factors may prevent them from effectively demanding loans at a particular point in time.

In terms of volume of loan applied for, as shown in Table 1.1, the amount applied for over the three years (2010 to 2012) appeared to show a rising trend, with some fluctuations among cooperatives and across years. The amount applied for by an individual cooperative varies between 50 thousand and 7 million Birr, with a mean of 1.19; 1.31 and 2.18 million Birr for the three years, respectively. Given the cash requirements of coffee business, in fact the actual volume of loan smallholder farmer cooperatives applied for seems to be on the lower side, which implies that the applicant cooperatives have weak institutional capacity and business activities.

Table 1.1: Summary of cooperatives' previous applications for bank loans

Year	Applied for loan (N = 100)		For those responded yes, amount applied for (Birr)		
	Yes	No	Max	Min	Mean
2010	29	71	5,000,000	50,000	1,190,000
2011	45	55	5,000,000	100,000	1,310,000
2012	38	62	7,000,000	100,000	2,180,000

When we examine the difference among regions for the year 2011, the majority (70%) of farmer cooperatives in the Oromia region applied for bank loans (directly or via their union), while only 20% of those in the SNNP region applied for the same (Table 1.2). The difference between farmer cooperatives in the two regions was statistically significant ($X^2 = 25.253$; $P = 0.001$). This could be possibly due to the presence of the Cooperative Bank of Oromia in the region, which seems to be more coop-friendly in supplying loans than other mainstream commercial banks.

Table 1.2: Differences between regional location and decision to apply for bank loan (N = 100)

Loan application in 2011	Regional location	
	Oromia No. (%)	SNNP No. (%)
Applied for bank loan	35 (70%)	10 (20%)
Did not apply for bank loan	15 (30%)	40 (80%)
Total	50 (100%)	50 (100%)

$X^2 = 25.253$

DF = 1

Sig. = 0.001

When we examine regional differences with respect to loan amounts requested by farmer cooperatives during the year 2011, we found a significant association (T-value = 2.227; $P = 0.028$). As presented in Table 1.3, farmer cooperatives located in the Oromia region, on average, applied for larger volume (837,067 Birr) than their counterparts in the SNNP region (342,000 Birr). This seems to reflect the differences in the institutional capacity and business activities of the cooperatives in the two regions.

Table 1.3: Relationship between regional location and amount of loan applied for in 2011

Region	Number of coops	Mean amount of loan applied for (Birr)	SD
Oromia	50	837,067	1,164,490
SNNP	50	342,000	1,055,420
Total	100		

T-value = 2.227

DF = 98

Significance = 0.028

With the aim of capturing the loan demand of self-constrained cooperatives, we employed a second approach whereby we asked the study farmer cooperatives if they would seriously and genuinely need a bank loan at the prevailing market interest rate for the 2012 coffee season. The vast majority of the interviewed farmer cooperatives revealed having potential demand for institutional loan. In other words, 88% reported that they would seriously need a loan, while only 12% expressed lack of demand for credit during that particular year. The amount of loan demanded by individual farmer cooperative varies from 120 thousands to 7 million Birr, with a mean of 1.47 million Birr. The limitation of this second approach is that it tends to reflect their desire to acquire loans which may not be necessarily transformed into actual or revealed demand without further interventions. Though the minimum and average amount of loan reported to be demanded by a single cooperative appear to be relatively higher than the actual amount applied for, the mean difference is modest.

The findings of the qualitative study that involved different stakeholder groups also show that cooperatives in the study areas, on average, need one to four million Birr loan depending on their institutional capacity and level of business activity, while a few may even require as high as five million Birr and above. Key informants noted that non-coffee businesses such as grain trade require lesser amount of capital as compared with coffee business activities. The considerable difference observed between the number of cooperatives that actually applied for a loan and those which have shown having potential demand possibly points to the presence of inhibiting factors that stop cooperatives from effectively applying for bank loans. It is important to note that the volume of loan demand expressed by the cooperatives included in the current study may not fully represent the demands of some of the strong cooperatives with vast coffee processing and marketing activities in other parts of the country such Jimma.

Purpose for which loan is needed

Farmer cooperatives have various financial requirements in terms of volume, duration and purpose for which loan is needed. However, most banks tend to believe that cooperatives just require working capital for seasonal fresh or dry cherry purchase. The critical need for long-term loans for acquiring processing facilities and short-term crop advance to member farmers often seems to be undermined. The findings of the current study show that the duration of the bulk of the loans obtained over the three years (2010 – 2012) ranges between 1 and 12 months, which obviously does not allow them to undertake long-term investment activities. Among the cooperatives that received loans over the three years, more than half indicated obtaining loans with one year maturity period. The rest reported receiving loans of six month and shorter maturity period. This shows the prevailing gaps in terms of medium- and long-term loan supply to farmer cooperatives.

When asked the purpose for which cooperatives need loan, close to 40% said they would use it to trade dry cherry. The rest indicated that they would use the loan for marketing dry and/or fresh cherry as well as to obtain processing and other facilities. The fact that, surprisingly, a larger proportion of the cooperatives indicated requiring loans for trading dry cherry alone or together with some amount of fresh cherries indicates that they predominantly purchase and sell coffee without undertaking any value adding activities.

Likewise, when asked the purpose for which farmer cooperatives used the loan they had previously acquired, they reported using it for trading various types of coffee and other commodities. About 58 – 63% used it to purchase dry cherry during the period 2010 to 2012. In addition, some reported purchasing dry coffee alongside red cherries or other commodities. A few cooperatives used the loans to acquire processing facilities or to undertake long-term investment. This could be due to the fact that the loans were of short-term nature and do not allow such long-term investments. This could also be related to cooperatives' weak capacity in strategically planning to undertake long-term investment activities. This calls for interventions that would enhance cooperatives' awareness and capacity to add value to the products they trade at least through primary processing activities, time and place of marketing. In terms of preferred time to receive loans, 78% want to obtain between September and December which is a peak coffee harvest season. The rest reported that they would need loan after January which implies that they need it for traditional trade activities that does not add value to their coffee. In terms of loan repayment schedule, the study suggests that an annual lump-sum repayment arrangement at the end of the harvest season is more suitable for coffee farmer cooperatives. As indicated in Table 1.4, the larger proportion (67%) favour annual repayment schedule, at the end of harvest season. In general, loan repayment schedule should be aligned with proper time of marketing of coffee to avoid the price fall during the peak harvest season.

Table 1.4: Preferred time of loan repayment

Preferred time of repayment	Number and percent of cooperatives (N=97)
Monthly during coffee harvest time	4 (4%)
Quarterly	14 (14.5%)
Every six months	14 (14.5%)
Annually at the end of harvest season	65 (67%)

Credit access by smallholder farmers' cooperatives: empirical findings

Are farmer cooperatives priority sectors for banks' lending activities?

Concurring with previous studies from Ethiopia (such as Admasu and Paul, 2010; Admassie, 2004; Chanyalew, 2015), the current study suggests that access to institutional loans is very limited when it comes to farmer cooperatives and those engaged in agriculture (production) activities in general. While the focus of the state banks (Commercial Bank of Ethiopia and Development Bank of Ethiopia) has recently shifted to financing major government development projects, selected priority private investments and export promotion, private commercial banks on their part highly focus on export-oriented activities in an attempt to generate foreign currencies.

As compared with other economic sectors, agriculture is claiming a tiny proportion of the loan portfolio of most commercial banks. Data extracted from the annual reports of eight major private banks in Ethiopia reveals that less than 3% of their loan portfolio goes to agricultural production for the period July 2011 to June 2012. In general, domestic trade and services, international trade and construction enjoy the lion's share of the loan portfolio of private banks. The service sector is preferred over agriculture as it is said to be more liquid with high turn-over, as well as involves some saving deposits. Almost all key informants were of the view that given limitations in the capacity of smallholder farmer cooperatives and tightness of the financial system, banks show great reluctance to reach out to smallholder farmers and their cooperatives.

Institutional loans for coffee are mainly provided to unions (higher level structures who are involved in coffee export), private coffee suppliers and exporters and, to a certain extent, to large scale commercial producers. Interestingly, even the government commercial bank appears to focus on large scale commercial farmers and coffee traders (coffee suppliers) in channelling loan finance. This finding is in agreement with previous studies (e.g. Wolday, 2010; World Bank, 2015) which report that larger and well-established borrowers, estates, wealthier individuals and traders are more likely to access institutional finance with better terms and conditions than small-scale farmers operating in the production end. A World Bank study (2015) notes that the levels of creditworthiness and access to loan increases as coffee moves up the supply chain, which enjoys more value, profit, and income.

Farmer cooperatives' access to institutional loans

All the interviewed smallholder farmer cooperatives concur that lack of access to appropriate financial resources is a major impediment to the growth of their cooperatives' business and institutions. The study, for example, shows that during the 2010/11 coffee season, farmer cooperatives in East Hararge zone applied for a loan amounting to 90 million Birr from different sources. However, eventually they were able to secure less than 15 million Birr. During this survey only 39%, 61% and 41% of the interviewed farmer cooperatives reported receiving loans from some sources during the years 2010, 2011 and 2012, respectively. The mean amount of loan they received over the three years (2010; 2011 and 2012), was 347,901 Birr; 486,015 Birr and 580,847 Birr, respectively. Some of them received as small as 20,000 Birr which is too meagre to undertake meaningful coffee processing and trade activities. The vast majority (over 90%), unsurprisingly, indicated that the amount of loans they had received was not adequate for the intended purposes. This shows the presence of substantial gaps between credit demand and supply; i.e. farmer cooperatives were indeed experiencing severe credit rationing.

Table 1.5: Summary of cooperatives' loan access between 2010 and 2012

Year	Did you take loan? (N=100)*		If took loan, how much (Birr)		
	Yes	No	Max	Min	Mean
2010	39	61	1,873,858	20,000	347,901
2011	61	39	3,467,104	43,250	486,015
2012	41	59	2,182,549	50,000	580,847

*Some of these loans were obtained from their respective unions

When we analyzed the difference in accessing loans among smallholder farmer cooperatives located in the two regions, over three-quarters of the interviewed cooperatives in the Oromia region were able to receive loans in 2011 as compared with 44% for those located in SNNP region (Table 1.6). The association between the two variables was also statistically significant ($X^2 = 12.148$; $P = 0.001$). This could be largely due to the presence of Cooperative Bank of Oromia and relatively stronger primary farmer cooperatives and unions in the Oromia region.

Table 1.6: Relationship between regional location and loan access in 2011 (N = 100)

Received loan in 2011	Cooperatives' regional location	
	Oromia (No and % of coops)	SNNP (No. and % of coops)
Yes	39 (78%)	22 (44%)
No	11 (22%)	28 (56%)
Total	50 (100%)	50 (100%)

 $X^2 = 12.148$

DF = 1

Sig. = 0.001

At present unions are almost the sole providers of loans to many primary cooperatives in the study areas. When we asked the study primary cooperatives the sources of loans they had obtained over years (2010 to 2012), the vast majority (74 – 84.50%) indicated receiving from their unions. Between 10% and 17% reported receiving both from unions and banks. A few farmer primary cooperatives reported receiving loans directly from banks. The main limitation of union loans is that they often provide small amount of loans of short-term duration, which often reaches primary cooperatives late in the season. In addition, those primary cooperatives which are not affiliated to unions cannot access such loans. The survey shows that Microfinance institutions and Rural saving and credit cooperatives were not serving farmer cooperatives for various reasons, such as lack of financial capacity and unsuitability of their loan products for cooperatives' business. Previous studies (e.g. ATA, 2012) similarly observed that MFIs are not well-positioned to extend loan service to cooperatives. This calls for interventions and measures that improve primary cooperatives access to bank loans.

Lack of access to loan finance seems to emanate both from limitations related to the borrower farmer cooperatives and constraints facing the lending banks. Lack of collateral, poor financial records and system, lack of credit history, lack of awareness (whom to approach and how to apply for loans), weak business and management capacity and failure to repay loans in the past are among the prominent constraints on the part of farmer cooperatives. High perceived risk level of the agriculture and coffee sector, lengthy and complicated bank requirements and processes, lack of alternative lending institutions in rural areas, lack of loan products with the right choice, and liquidity problem are among the limiting factors on the part of the lending banks. These are in addition to the challenges posed by policy and regulatory environments.

Conclusions and Implications

A review of studies conducted in different developing countries shows that there are substantial gaps in existing supply and demand for credit among farmers and other rural entrepreneurs. Farmers need loans of different terms and nature for various purposes. In terms of credit sectoral choices, existing literature report that majority of the farm households borrow from different sources, and the informal credit sector appears to be the dominant one. The result of the review also shows that different segments of the farm households differ in their preferences for loan attributes and products. Thus the one-size-fits-all approach to credit product provision may not meet the needs of the majority of the rural poor. Though various studies attempted to identify farmers' and small entrepreneurs' loan demand and its determinants, they tended to focus on farm households or SMEs, and predominantly on experiences in Asian countries. Studies that adequately established credit demand of farmers' cooperatives operating under various policy and socio-economic contexts are scant. In particular, most of the studies conducted on rural finance in Ethiopia were carried out in food crop producing areas and/or focused on supply side constraints. Thus their findings may not provide a full picture of the credit situations among coffee producing farmers and their co-operatives.

The empirical findings show that in Ethiopia smallholder agriculture in general and the production end of the coffee sub-sector in particular are suffering from shortage of financial resources, currently claiming a tiny share of institutional loans. The vast majority of the cooperatives included in the current study have potential demand for institutional loans, which are required for various purposes. Nevertheless, the revealed demand was found to be relatively low. Evidences suggest that a number of factors hinder the transformation of potential demand into revealed demand. Weak institutional capacities and business activities seem to largely prevent cooperatives from transforming their potential demand to revealed demand. Thus deliberate efforts need to be made to enhance their organisational and managerial capacity. In addition, lending requirements of the financial institutions and nature of loan products, some of the government policies and regulatory frameworks, access to infrastructure and support services, environmental conditions (as related to agriculture production activities) and other external factors

appear to influence farmers and their cooperatives access to and demand for institutional loan. Therefore, policies and interventions aiming to improve smallholder farmers' access to rural finance need to take into account these multi-dimensional obstacles and constraints. More importantly, if commercial banks have to widely reach out to smallholder farmers and their cooperatives with suitable and alternative loan products, there is a need to create a more favourable policy and regulatory environment. Given the unique nature of farmer cooperatives and their benefits to the farming community, it is worthwhile to treat them differently in providing financial resources and other support services.

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