

Assessing the Effect of Microfinance on Cocoa Production in the Ashanti Region of Ghana

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Abstract

This paper assessed the capacity of microfinance to enhance cocoa production in Ghana. Lack of adequate access to credit has been seen as an important factor that prevents smallholder cocoa farmers from expanding their cocoa farms and getting access to inputs such as appropriate pesticides, fertilizers and seedlings. This situation impacts negatively on their cocoa production and their overall household welfare. By providing credit facilities to smallholder cocoa farmers, it is expected that these facilities would enable such farmers to have access to the needed inputs to improve on their cocoa production. Primary data were collected from two cocoa producing communities in the Ejisu-Juaben Municipality of the Ashanti Region of Ghana. Questionnaire was used to elicit responses from 235 cocoa farmers who were randomly selected from the two communities. Multiple and logistic regressions were used to ascertain the influence of access to credit on cocoa production. The results indicate that access to credit had a significant impact on the cocoa production of farmers. Access to credit was also found to be significantly associated with the likelihood of farmers saving. However, loan repayment was a major problem faced by the farmers, due to the inflexible nature of repayment schedules which do not consider the seasonal and risky nature of their farming activities. It is recommended that appropriate microfinance products such as long-term farming loan products be developed for cocoa farmers since many of the smallholder farmers depend on microfinance institutions (MFIs) for loans to finance their farming activities. Furthermore, Bank of Ghana could encourage more MFIs especially rural banks to be sited near cocoa growing areas and make credit accessible to cocoa farmers.

Keywords: Smallholder farmers, Cocoa production, Microfinance, Ghana.

1. Introduction

Ghana is the second largest exporter of cocoa beans after Cote d'Ivoire (Anang, 2015). As a very important export crop, cocoa accounted for about 8.2 percent of the country's GDP and 32 percent of total export earnings in 2013 (Anang, 2015; ISSER, 2014). In terms of employment, cocoa production serves as a major employer of labour and source of income to most rural people. According to Antonio and Aikins (2009), the livelihood of about 25 to 30 percent of the population depends on the cocoa sector. Furthermore, cocoa accounts for over 67 percent of household income in most cocoa producing areas (Kolavalli and Vigneri, 2011). Total production of cocoa in Ghana increased from 450,000 metric tonnes in 2000 to 710,000 metric tonnes in 2009 and increased further to 900,000 metric tonnes in 2010. The output of cocoa peaked at 1,004,000 metric tonnes in 2011. Output later fell to 835,466 in 2013. In totality, 90 percent of the total production of cocoa comes from smallholder farmers (GAIN, 2012; Harris et al. 2015; Asante-Poku and Angelucci, 2013). This underscores the economic importance of cocoa production as a means for employment generation and poverty reduction (Kumi and Daymond, 2015).

However, inspite of the impressive performance of the cocoa sector over the years, yield productivity of cocoa is lower in Ghana compared to other major producing countries. For instance, whilst the average cocoa yield in Cote d'Ivoire is 800 kg/ha and 1,800 kg/ha in Malaysia (Dormon, Huis, Leeuwis, Obeng-Ofori, and Saki-Dawson, 2004), it is only 400 kg/ha in Ghana. The potential yield for Ghana is however, above 800 kg/ha (World Bank, 2014). Reasons given for the relatively low productivity yield in Ghana include high prevalence of pests and diseases, poor farm maintenance practices, decline in soil fertility, use of low-yielding varieties (Baah, Anchirinah, and Amon-Armah, 2011) and lack of adequate access to credit (Nyemeck, Gockowski and Nkamleu, 2007). This invariably results in low crop yields. Another study by Hutchins et al. (2015), reported that 77 percent of cocoa farmers in Ghana indicated that they were constrained by a lack of capital which prevented them from expanding their cocoa farms and getting access to the appropriate pesticides, fertilizers and seedlings. The lack of capital also prevented them from incorporating adaptation techniques which could help address issues related to rainfall shortage.

Research has shown that lack of adequate access to credit, impacts negatively on various aggregate and household level incomes, technology adoption, agricultural productivity, food security and the overall household welfare of farmers (Nyemeck et al., 2007; Diagne and Zeller, 2001). Nyemeck et al. (2007) asserted that access to credit affects cocoa farmers' outcomes in different ways. The more prominent effect, according to them, is through the alleviation of capital constraints on cocoa production, which ultimately increases the ability of cocoa farmers to acquire agricultural inputs. They further explained that access to credit which helps to ease potential capital constraints reduces the opportunity costs of capital-intensive assets relative to family labour, thereby

encouraging the adoption of high-yielding technologies. Emphasizing the important role access to credit plays in cocoa production, Vigneri and Santos (2009) explained that cocoa production requires the availability of cash throughout the cropping season to enable cocoa farmers to carry out their farming activities such as the timely use of chemicals for the control of pests and diseases and the application of fertilizers. Supporting this view, Nyemeck et al. (2007, p. 215) noted that “the availability and timely delivery of inputs such as seeds, chemicals and fertilizers is probably one of the most effective ways of rising productivity.” This can be made possible with access to adequate credit. Access to credit therefore, has the potential of increasing the productivity of cocoa. Unfortunately, as explained above, most cocoa farmers in Ghana face serious liquidity constraints which invariably affect their productivity.

With its institutional innovations, microfinance could be used as a potential tool to build the capacities of farmers (Asamoah and Amoah, 2015) by making available financial services such as loans, savings and micro-insurance to such farmers. It is expected that access to sustainable small-scale loans would enable small holder cocoa farmers to increase their incomes, and enhance the productivity of their cocoa farming. With the proliferation of microfinance institutions in Ghana, this study seeks to assess the effect of microfinance on cocoa production in the Ashanti Region of Ghana. The rest of the study is organized as follows: Section 2 reviews literature on microfinance. Section 3 presents the research methodology, while section 4 presents the results and discussion. The conclusion and recommendation are given in section 5.

2. Literature Review

This section discusses the definition of microfinance, how microfinance has evolved to its current state and microfinance and cocoa production.

2.1 Microfinance Defined

Adjei (2010) defined microfinance as the provision of financial services to the poor with the intention of helping poor households out of poverty by enabling their engagement in productive economic activities. The Consultative Group to Assist the Poor (CGAP) (2003) also defined microfinance as the provision of a broad range of financial services such as loans, savings, money transfer services and micro insurance to the poor. In line with CGAP’s definition, Quartey (2015) also viewed microfinance as the provision of financial services such as small collateral free loans, savings and micro-insurance to poor households to enable them to start businesses, acquire assets and finance emergency needs. These definitions consider the main areas of financial services needed by the poor to improve their economic conditions. CGAP (2003) pointed out that the poor and low-income people like everyone else, need a diverse range of financial services to run their businesses, build assets, smoothen consumption and manage risks. Cull et al. (2009) argued that access to microfinance is able to expand the ability of households to cope with emergencies, manage cash flows and invest for the future.

2.2 Evolution of Microfinance

In the 1950s, it was believed that the rural areas were important to the economic growth of developing countries and that high-yielding agricultural technologies adopted extensively, would improve agricultural production in these areas (Robinson, 2001). Since farmers could not pay the full cost of such technologies, credit subsidies were required to assist them with such purchases. Governments of developing countries therefore, saw the provision of credit subsidies as a way of promoting agricultural production by small landholders (Ledgerwood, 1999). Supply-leading finance, which refers to the provision of loans in advance of demand for credit, was advocated as a means of generating economic growth in rural areas through the financial system (Robinson, 2001). Consequently, development finance institutions such as Agricultural Development Banks were made responsible for the delivery of cheap credit to poor farmers (Johnson and Rogaly, 1997), to encourage the adoption of various technologies and ultimately increase land productivity, employment and agricultural wages (Armendariz de Aghion and Morduch, 2005). However, many of the state-run banks were operationally inefficient, had high default rates, practiced political favoritism (Adams and Von Pischke, 1992) and were therefore financially unsustainable (Sinha, 1998). During the mid-1970s and the 1980s, the model of subsidized credit was subjected to steady criticism (Ledgerwood, 1999; Johnson and Rogaly, 1997), as it became apparent that it was ineffective in bringing about agricultural growth (Penny, 1983). Penny (1983) argued that there was no need to bribe farmers with cheap credit to adopt profitable innovations if there was a satisfactory market for their outputs.

The failure of the subsidized credit prompted donors and other resource allocators to shift attention from state intervention to market-based solutions (Johnson and Rogaly, 1996). A new approach that considered microfinance as an integral part of the overall financial system was therefore adopted (Ledgerwood, 1999). With the new approach came a shift in emphasis from rapid disbursement of subsidized loans to target populations, toward the building of local, sustainable institutions to serve the poor (Ledgerwood, 1999). The Grameen Bank in Bangladesh is cited as a pioneering microfinance institution to pilot a group lending scheme for landless

people (Ledgerwood, 1999; Cull et al., 2009).

The concept of microfinance is not new in Ghana. It has always been a common practice for people to save or take loans from individuals and groups within the context of self-help to start business or farming ventures. Available evidence suggests that the first credit union in Africa was established in Northern Ghana in 1955 by Canadian Catholic Missionaries who were there at the time. However, “susu” which is one of the current microfinance methodologies is thought to have originated in Nigeria and spread to Ghana in the early 1900s (GHAMP, 2006; Asiama and Osei, 2007).

Various financial sector policies and programmes have been undertaken by various governments over the years. These policies have enabled the microfinance sub-sector to evolve and thrive to its current state. Some of the policies undertaken include the provision of subsidized credits in the 1950s and the establishment of the Agricultural Development Bank in 1965 specifically to address the financial needs of the fisheries and agricultural sector. There was also the establishment of rural and community banks (RCBs), and the introduction of regulations such as commercial banks being required to set aside 20% of total portfolio, to promote lending to agriculture and small scale industries in the 1970s and early 1980s. This enabled the commercial banks to play vital roles in the microfinance sub-sector. These roles were however, short lived due to the liberalization of the financial sector in 1986 which made directed lending incompatible with the new regulations and rules governing the financial sector. The promulgation of PNDC Law 328 in 1993 also allowed the establishment of different categories of non-bank financial institutions, including savings and loans companies which play an important role in the microfinance sub-sector (GHAMPS, 2006; Adjei, 2010).

2.3 Microfinance and Cocoa Production

Research on the effect of microfinance on cocoa production is sparse. Nevertheless this section attempts to review some of the few studies available.

Nyemeck et al. (2007), investigated the role of credit access in improving cocoa production in West African Countries. The study showed that access to credit helped to raise total factor productivity in cocoa production from 2029.47 kg to 2307 kg in Cameroon and from 1256.59 kg to 2088.15 kg in Nigeria. The increase in total factor productivity in cocoa production in both countries registered a 14 and 40 percent gains respectively. Another study by Opoko et al. (2009) found that average farm production increased by 40 percent as a result of participating in a group-based microfinance in agriculture programme. The increase in production was worth nearly three times the value of the loan. The estimated programme impact of 638.5 kg equates to a 43 percent increase in revenue for the population of programme members. The findings in both studies showed that access to credit resulted in increases in the cocoa production of the farmers.

In a related study, Obuobisa-Darko (2015), reported that access to credit by cocoa farmers significantly affected the adoption of cocoa research innovations which is expected to increase cocoa yield per hectare. Another research by Onumah et al. (2014), stressed on the need for credit facilities to be given to smallholder farmers. They argued that credit facilities would empower such farmers and improve their practices and capabilities to significantly increase their yields.

Asamoah and Amoah (2015) also examined the role microfinance plays in savings mobilization among small-scale cocoa farmers. The results showed that the microfinance model helped the small-scale farmers to mobilize substantial savings thereby developing the saving culture in them. The savings enabled the small-scale cocoa farmers to gain access to credit to purchase farm inputs which increased their productivity and enhanced their livelihood. While, most MFIs use compulsory savings as a condition for receiving a loan, compulsory savings teaches financial discipline and serve as an additional guarantee mechanism to ensure repayment of loans. (Braun and Woller, 2004; Ledgerwood, 1999).

3. Research Methodology

The study employed a quantitative method of analysis. Primary data was used and the data collection was by means of face-to-face questionnaire administration. A structured interview was also conducted with the management of the MFI situated in one of the communities. Data were analyzed using descriptive and inferential statistics. Means, standard deviation and range were used to describe the data and multiple and logistic regression analysis used to examine the role microfinance plays in cocoa production in the study area.

3.1 Study Area

The study was conducted in two cocoa growing communities (Akyawkrom and Achiase) in the Ejisu-Juaben municipality in the Ashanti region of Ghana. The Ejisu-Juaben municipality lies in the central part of the Ashanti Region and has a total population of 143,762 representing 3.0% of the region's total population (Ghana Statistical Service, 2012). Majority of the population is rural (72.5%) and most people in the municipality engage in agriculture. Thus, while agriculture employ about 62.5% of the working population, commerce and services employ about 31.7% (Ghana Statistical Service, 2012). Most farmers engage in cash crops such as

cocoa, palm fruit cultivation and food crop cultivation. Ejisu-Juaben municipality was chosen for the study because it is one of the cocoa growing districts in Ghana.

3.2 Sampling Procedures

The study used a two stage sampling approach. Stratified sampling was used to divide the Ejisu- Juaben Municipality into two sections, the northern part and the southern part. Simple random sampling was then used to select one community from each stratum. These were Akyawkrom from the northern part and Achiase from the southern part. The total number of households in the Ejisu– municipality was 23,416 (Ghana Statistical Service, 2012a). Akyawkrom has 561 households while Achiase has 711 households (Ghana Statistical Service, 2012b). The two communities have a total of 1,272 households. A proportionate sample of 173 was obtained for Akyawkrom while 220 was obtained for Achiase based on the total population of households in the municipality. Ninety-two (92) out of the 173 households sampled in Akyawkrom, were cocoa farmers, while hundred and forty-three (143) out of the 220 sampled households in Achiase were cocoa farmers. Thus, a total of 235 households in both Akyawkrom and Achiase were surveyed. This is because the population of interest are cocoa farmers. The households in both communities were selected based on a systematic sampling to ensure that every household had the likelihood of being selected.

3.3 Variables and their Description

The variables used in the study are given below:

3.3.1 Dependent Variable

The dependent variable is cocoa output, that is, number of bags produced by a farmer. This was translated into income (monetary terms) and used for the regression.

3.3.2 Independent Variables

The independent variables are access to credit, marital status, community, household size, gender and education. Access to credit refers to the opportunity to get financial assistance. Marital status indicates whether the respondent is married or not. The variable community is coded 1 if respondent is from Achiase and 0 if respondent is from Akyawkrom. Household size shows the number of people in a household. Gender is a variable indicating whether respondent is a male or female. Education was measured by the number of years the household head (respondent) spent on formal education.

4. Results and Discussions

The study revealed that, credit from MFIs enabled cocoa farmers to purchase seedlings, fertilizers, farm equipment and chemicals for spraying the cocoa trees. From the 235 households, the study computed the sample household income and the results in Table 1 showed that, on average, household heads in Achiase and Akyawkrom earned about 4,712.27 Ghana cedis per year. Compared to the absolute poverty baseline of 1,314 Ghana cedis per equivalent adult per year (Ghana Statistical Service, 2014), the cocoa farmers in Achiase and Akyawkrom on the average, live above the minimum living standard in Ghana.

Table 1: Descriptive Summary

| Variable | Observations | Mean | Std. Dev. | Min | Max |
|----------------|--------------|----------|-----------|-------|-------|
| Income | 235 | 4712.265 | 6391.577 | 85.42 | 36000 |
| Household Size | 235 | 6.655319 | 3.332744 | 1 | 17 |
| Education | 235 | 7.565957 | 3.739217 | 0 | 16 |

The income stated above is invariably earned during the harvest season. Most of the cocoa farmers surveyed indicated that they engage in food crop cultivation in addition to cocoa production. Thus, they have multiple sources of livelihood options which they depend on. This is critical to farmers in the cocoa industry given that cocoa has a long gestation period and harvest may not coincide with cropping season. On average there were about 7 persons per household, but a minimum of 1 and a maximum of 17. Education was measured by the number of years of education; the results showed that, on average the household heads spent about 7.57 years in formal education which will translate to about junior high school level education. Nonetheless, there were some cocoa farmers who had secondary and tertiary education.

4.1 Impact of Household Characteristics on the Output of Farmers

Cocoa output (number of bags produced by a farmer) was valued in monetary terms (cocoa income). The study used natural log of income which represents output, as the dependent variable and estimated the model with access to credit and household characteristics as the independent variables. The results showed p-value with the F-statistic (3.87) to be 0.0011, which is significant at 1 percent level of significance. This indicates that, at least one of the coefficients in the model was statistically significant. The R-squared indicates that about 9 percent of the variation in logged income of the cocoa farmers is statistically explained by variation in the independent variables (Table 2).

Table 2: Regression Results of Household Characteristics on output of Farmers (Income)

| Variables | Coefficient | Standard Error. | t | P-value |
|---|-------------|-----------------|-------|---------|
| Constant | 7.415 | 0.362 | 20.47 | 0 |
| Access to credit | -0.428 | 0.205 | -2.09 | 0.038 |
| Marital status | -0.363 | 0.199 | -1.82 | 0.07 |
| Community | -0.090 | 0.218 | -0.41 | 0.68 |
| Household size | 0.045 | 0.025 | 1.79 | 0.075 |
| Gender | -0.121 | 0.192 | -0.63 | 0.529 |
| Education | 0.072 | 0.023 | 3.17 | 0.002 |
| F(6, 228) = 3.87 P-value = 0.0011 R-squared = 0.09 No. Obs. = 235 | | | | |

On the individual coefficients, marital status, gender, household size, community (comm) failed to significantly impact on the output of cocoa farmers at the 5% level of significance. On the other hand, access to credit and education significantly impact on the output of the cocoa farmers at the 5 percent level of significance.

Access to credit however, had a negative impact on logged output, suggesting that output of cocoa farmers who have access to credit was statistically less than output of those farmers without access to credit. It was evident from the study that those who went for credit were the relatively poorer cocoa farmers who had no other options but depended on microfinance institutions for credit to finance their cocoa activities. The study however, revealed that such farmers after receiving the loans find it difficult to repay the loan. Reasons given for this include the inflexible nature of repayment schedule, poor climatic conditions which often affect the yield, inability to effectively manage the cocoa farms. It also came to light that some of the cocoa farmers are unable to apply the right amount of the fertilizers and pesticides. This eventually results in poor cocoa yield which ultimately affect the repayment of the loans. The study further revealed an average default rate for cocoa farmers to be above 30 percent.

The small holder cocoa farmers who were well to do on the other hand, were not likely to go for credit. Such cocoa farmers had bigger cocoa farms and higher productivity and were just satisfied with their cocoa output.

Education was measured by the number of years the household head spent on formal education. As indicated by the results, education positively and significantly impact on the output of cocoa farmers. The coefficient of education was 0.072 with a corresponding p-value of 0.002. The result indicates that, output from cocoa farm was positively associated with higher level of education. It is clear from Table 1 that the mean number of years spent in formal education by the cocoa farmers is 7.57. This is evident of the fact that their little exposure to education makes them open to go for financial assistance more than those without education. This result agrees with other studies which showed that farmers with higher level of education are more likely to negotiate extra income for agricultural activities (De Janvry, Sadoulet and Nong, 2005).

4.2 Impact of Household Characteristics on Access to Credit among Cocoa Farmers

By changing the dependent variable to access to credit, the study estimated a logistic regression, the results are presented in Table 3. From the results, only community (comm) was statistically significant at the 5 percent level of significant. The variable community is coded 1 if respondent is from Achiase and 0 otherwise. The results therefore, suggest that, those from (Achiase) were less likely to have access to credit than those from Akyawkrom. Aside from this, none of the other variables were significant. The study revealed that Akyawkrom had a microfinance institution but Achiase had no microfinance institution. Cocoa farmers in Akyawkrom are therefore more likely to have access to credit.

Table 3: Logistic Regression Results of Household Characteristics on Access to Credit among Cocoa Farmers

| Variables | Coefficient | Standard Error | z | P-value |
|--|-------------|----------------|-------|---------|
| Constant | 1.618 | 0.659 | 2.46 | 0.014 |
| Income | 0.000 | 0.000 | -1.42 | 0.156 |
| Marital status | 0.267 | 0.407 | 0.66 | 0.512 |
| Gender | -0.267 | 0.384 | -0.70 | 0.487 |
| Household size | 0.044 | 0.048 | 0.92 | 0.356 |
| Community | -3.024 | 0.397 | -7.62 | 0.000 |
| Education | 0.030 | 0.047 | 0.63 | 0.526 |
| Log Likelihood = -117.86 LR chi2 (6) = 89.94 P-value = 0.0000 Pseudo R²=0.276 | | | | |

4.3 Savings among Cocoa Farmers

Using savings – a dummy variable coded 1 if the respondents have been saving and 0 otherwise, as the dependent variable, another logistic regression was estimated. The results reported in Table 4 showed that,

access to credit was significantly and positively associated with the likelihood of savings at the 5 percent level of significance. Most MFIs link credit supply with compulsory group and personal savings. This is referred to as cash lien. With the presence of an MFI in Akyawkrom, cocoa farmers in Akyawkrom are more likely to save to qualify for credit to finance their cocoa farming activities.

Table 4: Logistic Regression Results of Savings among Cocoa Farmers

| Variables | Coefficient | Standard Error | z | P-value |
|------------------|-------------|----------------|-------|---------|
| Intercept | -2.107 | 0.689 | -3.06 | 0.002 |
| Income | 0.000 | 0.000 | -1.78 | 0.075 |
| Access to credit | 2.261 | 0.408 | 5.54 | 0.000 |
| Marital status | -0.114 | 0.365 | -0.31 | 0.754 |
| Gender | -0.160 | 0.346 | -0.46 | 0.643 |
| Household size | -0.080 | 0.048 | -1.64 | 0.101 |
| Community | 1.161 | 0.416 | 2.79 | 0.005 |
| Education | 0.079 | 0.044 | 1.79 | 0.074 |

Log Likelihood = -128.43792 LR chi2 (7) = 48.14 P-value = 0.0000 Pseudo R²=0.1578

In the short-term, compulsory savings may seem to negatively affect poor farmers who are compelled to save the little money they earn in order to have access to credit. However, it is argued that compulsory savings teaches financial discipline and serve as an additional guarantee mechanism to ensure repayment of loans (Brau and Woller, 2004; Ledgerwood, 1999). The variable community was also significant, it indicates that residents of Achiase were more likely to save than residence of Akyawkrom. This implies that if the effect of financial institution is controlled for, the farmers in Achiase were more likely to save than residents of Akyawkrom. The likelihood of saving does not however, depend significantly on income, marital status, gender, household size and educational level of household heads.

4.4 Association between Source of Capital and Access to Credit

Due to non-response to some questions related to sources of capital the valid sample size used in Table 5 was 206. Using the chi-square test of association, the study examined association between source of capital for cocoa farming and access to credit. Results indicate no association between access to credit and source of capital, given the p-value of 0.531.

Table 5: Sources of Capital and Access to Credit

| Source of Capital | Access to Credit | | |
|-----------------------------------|------------------|-----|-------|
| | No | Yes | Total |
| Borrowing from Family and Friends | 7 | 11 | 18 |
| Loan from MFI | 8 | 15 | 23 |
| Personal Financing | 76 | 89 | 165 |
| Total | 91 | 115 | 206 |

Pearson chi-square (2) = 1.2646 P-value = 0.531

It can be seen from Table 6 that, majority of the respondents finance their cocoa farm activities with personal funds. A further probe into the reason why many of the farmers preferred financing their farming activities with personal funds instead of going for loans from MFIs revealed the fact that some of the MFIs exert too much pressure on them to pay. Some of the MFIs they complained, employ inflexible repayment methods which do not favour them, considering the seasonal and risky nature of their occupation.

An interview with the management of the MFI located at Akyawkrom which provide credit to majority of the cocoa farmers surveyed indicated that poor repayment of loans is a major challenge they face in doing business with the farmers. This situation according to them affects their liquidity and profitability. They however, attested to the fact that poor weather condition (floods and drought) sometimes result in poor cocoa yield which may affect the repayment of loans.

5. Conclusion and Recommendations

The study sought to investigate the role microfinance plays in enhancing cocoa production. The results showed that access to credit significantly impacted on cocoa production of the farmers. However, those who went for credit were the relatively poorer cocoa farmers who had no other options but depend on MFIs for credit to finance their cocoa farming activities. The study revealed that after taking the loans most of the cocoa farmers find it difficult repaying the loans. The farmers attribute the inability to pay the loans to factors such as inflexible nature of repayment schedule, poor climatic conditions which often affect the yield, inability to effectively manage the cocoa farms. It also came to light that some of the cocoa farmers were unable to apply the right amount of the fertilizers and pesticides. What worsens the situation is their inability to get in touch with extension officers to assist them with the right application of these chemicals. This eventually results in poor

cocoa yield which ultimately affect the repayment of the loans. Thus, while results indicated that access to credit had a positive impact on the output of cocoa farmers, many more cocoa farmers shy away from MFIs due to the inflexible nature of repayment schedule, which often trap some cocoa farmers into a cycle of debt.

The study also found that cocoa production is positively associated with higher levels of education implying that farmers with higher levels of education are more likely to request for loans for their farming activities. With the presence of an MFI in Akyawkrom, it was revealed that cocoa farmers from Akyawkrom were more likely to have access to credit than those in Achiase.

In terms of savings, the study showed that access to credit was significantly associated with the likelihood of farmers saving. It has been observed that most MFIs link credit access with compulsory group and personal savings. Cocoa farmers in Akyawkrom were therefore, more likely to save to qualify for credit to finance their cocoa farming activities. It has been argued that compulsory savings teaches financial discipline and serve as an additional guarantee mechanism to ensure repayment of loans. Compulsory savings, may however, seem to be harsh especially in the short-term, and may negatively affect poor farmers who are compelled to save the little money they earn in order to have access to credit. Majority of the respondents in the study area finance their farming activities with personal funds. This is due to the inflexible repayment methods employed by some MFIs which do not consider the seasonal and risky nature of their farming activities.

Timely access to credit would enable cocoa farmers to have access to inputs which would enhance their cocoa production (Nyemeck et al. 2007; Asamoah and Amoah, 2015). However, recognizing the seasonal and risky nature of cocoa farming activities, appropriate microfinance products such as long-term farming loan products could be developed for cocoa farmers since many of the smallholder farmers depend on the MFIs for loans to finance their farming activities. MFIs typically, provide short-term loans which may be more appropriate for crop farmers. Cocoa farmers on the other hand may need long-term farming loans because of the long gestation periods of cocoa. Such a product would help to improve the repayment of loans since the repayment would be spread over a longer period. It would also ensure some flexibility in the repayment of loans. Furthermore, Bank of Ghana could encourage more MFIs especially rural banks to be sited near cocoa growing areas and make credit accessible to cocoa farmers.

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