



Exploring the constraints of accessing agricultural credit by small-scale oil palm processors: evidence from the kwaebibirem municipal assembly, eastern region, Ghana

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ABSTRACT:

This paper presents a very interesting issue on the agrarian question in Ghana and the rest of Africa: constraints to accessing agricultural credit by small-scale oil palm processors. Such constraints may have implications for investment behaviour into small-scale agro processing activities. Two hundred and sixty four (264) small-scale oil palm processors selected randomly from 10 communities in the Kwaebibirem Municipality in the Eastern Region, Ghana, were interviewed using structured questionnaires. The quantitative data were further triangulated with results of in-depth interview sessions with the managers of two rural banks in the community. It emerged from the study that most of the respondents accessed loans through informal sources with personal savings being the most popular source. The results also showed that significant determinants of factors affecting access to credit by the processors were gender, marital status, guarantor and high interest rate. Accessibility to agricultural credit was constrained by such factors as collateral security, information on credit and literacy rate of clients. The arguments of this paper are very important for policies seeking to solve the issue of improved access to credit by small-scale agro processors in Ghana. The paper therefore makes a strong case for sustained education and awareness creation on credit access. It also calls for actors to unify their efforts through cooperative associations to derive maximum benefits of collective investment of group savings, and increase their chances of accessing formal agricultural credit facilities.

KEYWORDS: Small-scale, oil palm processors, credit, constraints, Ghana

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1.INTRODUCTION:

Agricultural growth in Ghana is increasingly recognized to be central to sustainable economic development (IFPRI, 2019). The agricultural sector plays a very significant role in addressing food insecurity, poverty alleviation and human development challenges (Pawlak & Kolodziejczak, 2020). According to Abdul-Hanan (2016) and Asafo-Adjei & Buabeng (2016), the agricultural sector in Ghana is challenged with issues such as credit access, which may be difficult to administer, while majority of them may lack the needed collateral to be able to borrow from formal sources (Anang & Asante, 2020). However, in situations when collateral requirements are met, the sheer size of potential borrowers may seem to exclude others from borrowing. Consequently, it is possible that small-scale agricultural enterprises may be marginal participants in the credit market in many developing countries. There is no doubt that agricultural credit is very important for sustainable agricultural development to be achieved in any country of the world (Ololade & Olagunju, 2013). Rural credit has proven to be a powerful instrument against poverty and its reduction and development in rural areas (Linh et al., 2019). Farmers may be particularly in need of such instrument possibly because of the seasonal pattern of their activities and the likely important uncertainty they may face.

Agricultural credit is any of the several credit vehicles used to finance agricultural transaction, including loans, notes, bills of exchange and bankers' acceptances, and these types of financing are adapted to the specific financial needs of farmers, which are determined by planting, harvesting and marketing cycles (Adebayo & Adeola, 2008). In a much earlier study, Mudi, (2007), concluded that credit was regarded as a major factor in agricultural development and lack

be one of the most prevalent tools for spinning agricultural development. Again, Anang, & Asante (2020) posit that, access to agricultural credit remains a critical challenge to smallholder farmers in many developing countries including Ghana. This challenge may also be extended to other value chain actors such as small-scale oil palm processors. This is because small-scale agricultural enterprises may often require small loans, which may be of it was usually given as an explanation for many of the problem facing the sector in the developing nations.

Credit has also been considered not only as one of the critical inputs in agriculture, but is also regarded as an effective means of economic transformation and poverty alleviation (Bello, 2020). The implication is that the performance of the agricultural sector depends to a large extent on the availability of credit. Credit affects the performance of agriculture by providing resources for purchase of inputs and the adoption of new technology (Nwankwo, 2008). Accordingly, Kumar et al. (2010) posit that credit is one of the critical inputs for agricultural development, and it may therefore serve as motivation for farmers to undertake new investments and/or adopt new technologies. In developing countries, the role of agricultural credit is closely related to providing needed resources which smallholder agricultural enterprises cannot source from their own available capital (Balana & Oyeyemi, 2022).

Credit provision is one of the principal components of rural development, which helps to attain rapid and sustainable growth of agriculture (FAO, 2012). Rural credit no doubt may help speed up the process of agricultural production and productivity. Therefore, to boost oil palm production and productivity activities in Ghana, there is the

need to have credit to enable actors in the industry purchase palm nuts and sustain their agro processing business. In a study, Langyintuo (2020) stated that the lack of access to financial services by smallholders was normally seen as one of the constraints limiting their benefits from credit facilities. However, in most cases, the problem of access to credit, especially among formal financial institutions, may stem from the lending policies of institutions. This, according to Messah & Wangai (2011), may be manifested in the form of prescribed minimum loan amounts, complicated application procedures and restrictions on credit for specific purposes. They further In Ghana, some studies have been carried out to throw some light on access to credit in the agricultural sector, especially as it relates to small-scale farmers (Anang & Asante, 2020; scale agro processing industry, specifically activities of small-scale oil palm processors. This study was therefore motivated by the need to bring more clarity to this very important issue on the agrarian question of Ghana and rest of Africa: constraints to accessing agricultural credit by small-scale oil palm processors. The study was aimed to answer the key question: what are the constraints to accessing agricultural credit by small-scale oil palm processors in the Eastern Region of Ghana?

The specific objectives were to;

- i. Ascertain the demographic characteristics of small-scale oil palm processors in the study area.
- iii. Investigate the small-scale oil palm processors' sources of credit;
- iv. Probe the determinants of factors affecting access to credit; and
- iv. Ascertain constraints faced by the processors in credit acquisition.

Conceptual Framework

Musline & Atuha (2011) define credit as a transaction between two parties in which one, called the creditor or lender, supplies money, goods, services or securities in return for a promise of future payment by the other called

argue that the type of financial institution and its policy will determine the access. In situations when the credit duration and repayment terms demand some security, these is the possibility that farmers or other value chain actors may not have the capacity to meet the requirements; this may serve as disincentive for potential borrowers. Farm households in rural areas do not usually have adequate access to formal credit sources, which provide funds through formal financial institutions such as Commercial Banks (Linh et al., 2019). This situation may contribute to a virtual exclusion of the small-scale farmers from formal credit markets.

Sekyi et al., 2020; Dzadoze et al, 2012; Akudugu et al. 2009). While these studies have contributed empirically to the subject area, few studies have focused on actors in the small debtor or borrower. According to Wolfson (1996), while credit has benefited many economies, the practice has been characterised by both borrower's and lender's risk. Lender's risk, in his opinion, refers to moral hazard, which supports an asymmetric information perspective on the assumption that the borrower has more information than the lender in respect of the possibility of voluntary default. Thus, to minimise the borrower's default possibility, he notes that the lender ought to assess the characteristics, which determine the decision whether to approve a credit application. Generally, economic theory suggests that the lack of agricultural credit militate against the desire of farmers to invest in agricultural technologies (Croppenstedt et al, 2003; Abdulai & Huffman, 2014; Balana & Oyeyemi, 2022). The implication is that less financially endowed farmers may be constrained in their desire to integrate science, technology and innovation in their business activities for the needed efficiency. This paper is underpinned by the model espoused in Balana & Oyeyemi (2022), which theorises that small-scale farmers' access to credit from either formal or informal sources may be influence by such factors as collateral, farm

size, household income, family net worth and demographic characteristics. The size of the farm, which may be an indication of the financial endowment of the farmer, plays a critical part in the formal loan decision process, according to Balana & Oyeyemi (2022), as it provides much needed collateral. In Pakistan for instance, Akram et al. (2008) in a much earlier study, observed that the demand for credit was minimised by unacceptable or inadequate collateral. They concluded in their study that land was the most readily acceptable form of collateral; a situation that prevented a large number of tenants and landless people in participating in the formal credit market.

Similarly, measures of financial wellbeing, some of which include household income are noted to reduce the probability of being denied credit (Collins & Urban, 2019). According to Briggerman et al. (2009), more liquidity lowers the probability of being denied credit. They also identified another variable, family net worth, which is the difference between the farmer’s total assets and total liabilities at a given point in time. In the opinion of Briggerman et al. (2009), a farmer whose net worth is high, is more likely to get a favourable decision from the lender. Demographic characteristics have also been identified as factors that determine access to credit (Kiai et al., 2016; Asiamah et al., 2021).

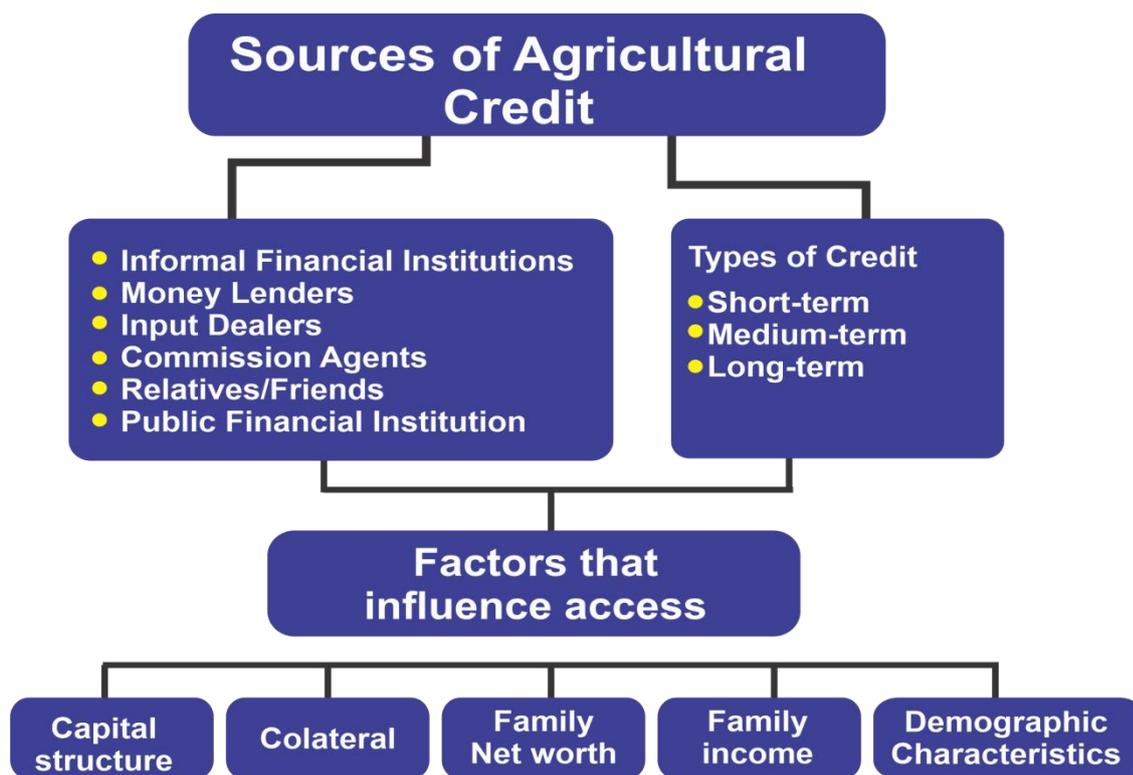


Fig 1: Conceptual Framework Showing Sources of Agricultural Credit and Factors that Influence Access

Source: Balana & Oyeyemi (2022) with modifications by authors

2. MATERIALS AND METHODS:

Study area

The study was carried out in the Kwaebibirem Municipal Assembly, which is located in the south-western corner of the Eastern Region of Ghana, between Latitudes 1 degree 0'W and 0 degree 35.'E and Longitudes 6 degrees 22'N and 5 degrees 75'S. On the North, it is bounded by the Birim North District, on the East by Atiwa District and East Akim Municipalities, on the south by Denkyembour District. The major mountain range, the Atiwa, is found in the north-east of the District around Dwenase and Apinamang. Apart from this area, the general climb in the District is less than 500 meters; in between heights are extensive marshlands. The Birim River traverses the District from the north to the south. Besides the Birim, there are other notable rivers such as Kadepon, Pram, Subinsa, Mmo and Apaam. One major feature of these rivers, except the Birim, is that it easily gets flooded during the rainy season, which affects large tracts of low-lying lands. The District lies within the semi-equatorial climate zone with a double maximal rainfall regime. The highest annual rainfall of 2024mm was recorded in 2011. The District's maximum rainfall period coincides with the planting season. The Kwaebibirem District includes

both large-scale oil palm production, out grower schemes linked with large producers/processors and smallholders oil palm processors selling to the local market.

Population

The population comprised small-scale oil palm processors in the Kwaebibirem Municipal Assembly in the Eastern region of Ghana.

Sampling Procedure and Sampling Size

A multistage sampling technique was used to select the respondents for the study. At the first stage, a simple random technique was used to select 50% (10) out of the twenty (20) communities in the Municipal Assembly t. At the second stage, a list of small-scale oil palm processor groups was obtained from the Office of the Municipal Department of Agriculture.

At the third stage, three (3) oil palm processors were purposively selected from each group and interviewed. A group of oil palm processors have a membership of twenty (20) persons or more. In all ten (10) communities out of twenty (20) were selected for the study. This was done based on time and resources available. The sample size of oil palm processors for the study was two hundred and sixty four (264). Table 1 provides the summary of processors selected from the Municipality and communities.

Table 1. The Population and Sample Size Used For the Study

Communities Selected	Palm oil processor groups	Groups Selected	Number of Persons interviewed
Apinamang	30	10	30
Asempanaye	21	7	21
Afrensi	32	11	33
Asibey -Nkwanta	26	9	27
Asibeykrom	28	9	36
Asuokor	30	10	30
Aponaponso	25	8	24
Kade	20	7	21
Bonkrom	21	7	21
Kunsu	22	7	21
Total	101	85	264

Source: Field Survey, 2021

3. Method of Data Collection

Structured questionnaire was prepared to collect quantitative data for the study. Five (5) enumerators selected from each of the ten (10) communities were trained on interviewing skills as well as meaning and interpretation of each item on the interview schedule of oil palm processors to collect data for the study. The content validated and pretested structured interview schedules were used to collect data from the ten (10) selected communities between April and May 2021. Besides, in-depth interview sessions were held with the managers of two rural banks in the community to make for triangulation of the quantitative data and further to enhance the validity of the findings.

Data Analysis

Descriptive statistical tools such as frequency distribution, and percentages were used to analyse the data for the study and binomial logit estimate was used to investigate factors that affect access to credit. Data collected were coded and entered into the Statistical Package for the Social Sciences (Version 21.0) computer software for analysis.

Descriptive Statistics of Respondents and their Implications

Data collected from sampling of 264 small-scale oil palm processors in the Kwaebibirem Municipal Assembly were made up of 70.8% females and 29.2% males. This affirms the notion that women are mostly active in economic activities that are reproductive in nature (Duffy, 2007). The study showed that majority (40.5%) of the small-scale oil palm processors in the Kwaebibirem Municipal Assembly community interviewed were married, while 33.0% were single. The rest (26.5%) were widows. The high rate of married women and men involved in this activity can be attributed to the fact that such people need to work harder to be able to support their families, take care of their homes and the upkeep of their children. The results in Table 2 showed that the age of the

respondents ranged between 41 and 60 years with 41.3%. The implication of the preceding result is that oil palm processing in the study area largely attracts young people who can be deemed to be energetic enough to withstand the stress involved in processing of the commodity. This result also suggests that majority of oil palm processors in the study area are young who are within the age bracket in which people can be said to be innovative and active at work (Khatun et al. 2020; MoFA, 2011). These processors therefore can make meaningful impact in agricultural production when adequately motivated with the needed agricultural credit. The results showed that majority (38.3%) of the small-scale oil palm processors had secondary education, while 35.6% of the respondents had primary/Junior High School education. Similarly, 24.2% had non-formal education. These results suggest that almost all the respondents were literate enough to be able to read and appreciate the dynamics of the business. Besides, it emerged that the small-scale oil palm processors in the community had acquired a wide range of oil palm processing experience as 39.0% of them had between 11 and 20 years of experience; followed by 36.7% of them who indicated that they had more than 20 years. Only 24.2% of the processors specified that they had between 1 to 10 years of experience in palm oil processing. Experience also plays a key role in this business, because the experienced small-scale oil palm processors may have already dealt with banks to access loans several times in the past, so they most likely may have a better understanding of the terms, conditions and procedure; hence, the cost incurred on the credit is likely to remain low. This facts are in agreement with the findings of Nouman et al. (2013), Oboh & Ekpebu (2011), and Saleem & Jan (2011) who all reported a positive relationship between access to agricultural credit and farming experience.

Table 2. Descriptive Statistics of Respondents

Gender	Frequency	Percentage
Female	187	70.8
Male	77	29.2
Marital Status		
Single	87	33.0
Married	107	40.5
Widow	70	26.5
Age		
21-40	88	33.3
41-60	109	41.3
>60	69	26.1
Educational Level		
Non formal	69	26.1
Primary/JHS education	94	35.6
Secondary education	101	38.3
Experience (Years)		
1-10	64	24.2
11-20	103	39.0
>20	97	36.7
Household size		
1-2	66	25.0
3-4	101	38.3
5-6	97	36.7

Source: Field Survey, 2021

Finally, the results showed that the communities were typically agrarian characterised by large family sizes ranging mainly between 3 – 4 children (38.3 %). The high household size of the majority of the respondents suggests that there is likely to be abundant supply of family labour in the studied area, which can be harnessed for increased palm oil processing. However, the incidence of poverty may not be completely ruled out as some household members may not engage in any income-generating activities. This result is in agreement with Osondu et al. (2014) who stated that in the presence of constraints to farm labour availability, large households tended to use family members as sources of labour. Large households, whose labour is fully employed for agricultural production, are more likely to contribute to labour input for increased and

sustainable production. In this case, credit obtained might be efficiently utilised.

3. RESULTS AND DISCUSSION:

Factors affecting access to credit by small-scale oil palm processors

The significant determinant of factors affecting access to credit by small-scale oil palm processors in the Kwaebibirem Municipal Assembly community were gender, marital status, guarantor and high interest rate. Table 3 presents the results obtained from a binomial regression of factors affecting access to credit by the processors. It is instructive to note that the p-value recorded for the variable “PRIMOCC” (i.e., primary occupation of respondents) was above the threshold 0.05. This indicates that the primary occupation of respondents is not statistically significant in the model. Thus, all other thing being equal, the primary

occupation of a respondent will have no effect on access to credit. In the same vein, the p-value recorded for the variable “EXP” (experience of the respondent) was approximately 0.43. This also suggests that the number of years’ experience the processor possesses does not influence his/her access to credit. Like the two variables (PRIMOCC and EXP), the education level and the collateral ability of a respondent did not influence his/her chance of accessing credit.

On the other hand, the gender of a small-scale oil processor was highly significant at 5%. It must be noted that the gender variable was categorical (female and male) and the baseline category for this analysis was female. It can therefore be seen from Table 3 that the estimate recorded for the gender variable was negative (-0.713). This indicates that the likelihood of a male respondent’s access to credit is lower than that of a female respondent. As the binomial regression was employed for this analysis, it could be statistically explained in odds ratio.

Therefore, the odds ratio for gender was 0.49 $[\exp(-0.713)]$, implying that a respondent who is a male, is approximately 0.5 times less likely to access credit as compared to their female counterparts. These results agree with Khalid (2003) and Ololade & Olagunju (2013) who reported a negatively significant relationship between gender and access to credit.

Again, it is informative to note that the marital status of respondents was statistically significant at 5% and recorded a negative estimate. The study used respondents who were married as the baseline category for the marital status variable. The negative estimate recorded implies that as compared to respondents who were single and widowed, respondents who were married were more likely to access credit for their small-scale oil palm processing business. This finding is consistent with results obtained by Owusu (2017) in a study in the Afigya-Kwabre District in the Ashanti Region of Ghana, where it a relationship was established between marital status and access to credit.

Table 3. Binomial logit estimate of the factors affecting access to credit by small-scale oil palm processors

Variable	Co-eff.	Std. Err	t-ratio	P-value
CONSTANT	0500407	1.15316	0.433943	0.66433
PRIMOCC	-0.21525	0.272469	-0.70	0.429529
EXP	-0.00417	0.013925	-0.29953	0.764535
GENDER	-0.71307**	0.353228	-2.0187	0.04515
MARITALSTA	-0.86318*	0.436252	-1.9786	0.047858
EDUCATION	-0.02991	0.030536	-0.97953	0.327316
GUARANTOR	-0.506192**	0.235258	2.15168	0.031425
COLLATER	-0.11113	0.309021	-0.35963	0.719123
INTEREST	1.93449***	0.283391	6.82625	8.72E-12

*- 0.1 level of significance ** - 0.05 level of significance *** - 0.01 level of significance

Source: Field Survey, 2021

The variable “guarantor” was highly significant and also recorded a negative estimate. With this variable, there were two categories, “Yes” or “No”, and the baseline category was “Yes”. Therefore, the odds ratio (0.60) for guarantor can statistically be

interpreted that a respondent with a guarantor value of 0.6 was more likely to access credit as compared to those without guarantors. Thus, it is expected that respondents with guarantors had a better chance to access more credit compared with those who did not

have. Lastly, the interest rate was also statistically significant and recorded a positive estimate, implying that as the interest increases, credit becomes more accessible to small-scale oil palm processors, from the point of the lending institution.

Sources of credit for small-scale oil palm processors in the Kwaebibirem Municipal Assembly Community

Table 4 shows that the main sources of credit available to the small-scale oil palm processors in the study area were personal savings (96.2%), friends or relatives (94.0%), cooperative societies (87.1%), money lenders (58.0%), agricultural banks (37.1%) commercial banks (25.5%) and microfinance banks (24.6%). Thus, the major sources of credit among the respondents were personal savings, friends or relatives and cooperative societies, all deemed to be non-institutional credit sources. Cooperative societies accounted for the third dependable

source of credit among the processors, because according to the processors, cooperative societies also performed additional role of helping members to market their produce as well as bulk-purchase of inputs for them. Credit from non-institutional sources may be more attractive, as there may be little or no insistence on collateral security. On the other hand, formal sources of credit had low patronage from the small-scale oil palm processors; a situation which may be due to the lack or limited presence of banks in the study area, coupled with delay in approval and disbursement of loan with insistence on collateral security. Again, the low patronage for commercial banks may be due to the level of asset richness of the processors and the level of access to information about possible credit sources. These views are consistent with Ogunfowora et al., 1972; Ayat et al., 2020 and Chandio et al., 2020.

Table 4. Sources of credit for small scale oil palm processors in the Kwaebibirem Municipal Assembly Community

Source of credit	Frequency	Percentage (%)
Personal savings	254	96.2
Friends or relatives	248	94.0
Cooperative societies	230	87.1
Money lenders	153	58.0
Agricultural banks.	98	37.1
Commercial banks	78	25.5
Micro finance banks	65	24.6

Source: Field Survey, 2021; multiple response

Constraints faced by small-scale oil palm processors in credit acquisition

Table 5 presents the percentage distribution of respondents according to the constraints to acquiring credit by small-scale oil palm processors in the study area. It showed that majority (99.2%) of the small-scale oil palm processors acknowledged their inability to secure collateral security as a problem, while 95.8% realised the high interest rates on credit as constraints. Others were in the following order, lack of information about

the credit availability (92.0%); education level of small-scale oil palm processors (91.7%) and payments period of the credit (90.2%). These findings are very consistent with those of Ayat et al. (2020) in Pakistan. Similarly, the study observed that commitment fee (89.0%), lengthy time to process loan (71.6%) and mode of repayment (67.4%) were also constraints that affected small-scale oil palm processors access to credit. It is clearly seen that, inability to secure collateral security, high interest rate,

lack of information about the credit availability and education level, had percentages above 90%. This implied that, these were the main constraints, while the However, these constraints may somehow be contained when these processors pull resources together and indemnify whatever inadequacy individual processors may go through. These sentiments were captured by one of the managers in the rural banks in the community during the informal interview session as follows:

“There is a saying that in unity lies strength. This popular axiom, in my opinion, can be used as a basis for the small-scale oil palm processors to address some of their concerns. The banks find it more convenient to deal with groups rather than individuals. Our experience in the past has proven that when

last four were seen as the minor constraints faced in credit acquisition; all these findings were confirmed by recent studies by Chandio et al, (2020) and Ayat et al (2020).

we deal with agro processing groups, the repayment rates for our loans have been better.”

These sentiments are consistent with the findings of Anang & Asante (2020) who concluded that farmer group membership was one of the factors that influenced access to credit. In fact, the in-depth interview sessions with the managers of the two rural banks confirmed the concerns of the processors regarding access to formal credit. However, the managers agreed that with more sustained education and awareness creation, some of these concerns may be easily addressed.

Table 5. Constraints faced by small-scale oil palm processors in credit acquisition

Constraints	Frequency	Percentage
Collateral for accessing Agricultural Credit	262	99.2
High Interest rates on Credit	253	95.8
Lack of information about the credit availability	243	92.0
Education Level	242	91.7
Payments Period	238	90.2
Commitment fee	235	89.0
Lengthy Time to Process Loan	189	71.6
Mode of Repayment	178	67.4

Source: Field Survey, 2021 Multiple response

Conclusion and Policy Implications:

The outcomes of this study obviously add to the body of knowledge in this area of research, which it is believed, will bring adequate clarity in the subject area. The study revealed that oil palm processing activities in the study area were carried out mostly by married females and males who were fairly educated with large household size and still in their productive years. They were mostly full-time small-scale oil palm processors, who sourced credit mainly from informal sources. The result of the binomial logit estimate analysis revealed that gender, marital status, guarantor and high interest rate were significant predictors that affected access to credit by small-scale oil palm processors in the Kwaebibirem Municipal

Assembly community. The small-scale oil palm processors encountered constraints regarding the absence of collateral security, high interest rates on credit, the lack of information about the credit availability, education level and payments period of the credit.

These findings provide the basis for sustained education, communication and awareness creation about the dynamics of credit access and its role in the activities of small-scale agro-processors. The findings have implication for improving access to credit to the oil palm processors in particular and small-scale actors in the processing and value addition value chain in general. The findings can serve as the basis for fashioning out the right policy

framework for the banks and other financial institutions to make themselves attractive to small-scale processors and actors in the agricultural commodity value chain. Obviously, the findings will be resourceful to Ghana's Ministry of Food and Agriculture (MoFA) in support of some of programmes or interventions designed to offer credit support to small-scale farmers. Educational institutions will find the results of this study as good resource for teaching and learning. Furthermore, the Agricultural Extension Directorate of the MoFA will find these findings useful in its education programmes to get farmers and other value chain actors sensitised on the important role credit plays in shaping and sustaining their farming

enterprises. Lastly, the findings bring to the fore the importance of unifying the efforts of the processors through the formation of cooperative societies to facilitate the acquisition of credit through formal sources.

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No potential conflict of interest was reported by the authors.

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