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To cite this article: Emmanuel Kombiok & Olivia Agbenyega (2017): The characteristics of financing arrangements for the production and marketing of shea (*Vitellaria paradoxa*) butter in Tamale in the Northern Region of Ghana, *Southern Forests: a Journal of Forest Science*, DOI: [10.2989/20702620.2016.1255403](https://doi.org/10.2989/20702620.2016.1255403)

To link to this article: <http://dx.doi.org/10.2989/20702620.2016.1255403>



Published online: 02 Feb 2017.



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The characteristics of financing arrangements for the production and marketing of shea (*Vitellaria paradoxa*) butter in Tamale in the Northern Region of Ghana[§]

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Shea (*Vitellaria paradoxa*) butter is an important internationally recognised economic commodity because of its food and medicinal potentials. However, access to finance for small-scale forest enterprises such as shea butter production and marketing remains a fundamental problem, which affects the growth and performance of these enterprises. This study, therefore, assessed the financing schemes and delivery mechanisms available for the production and marketing of the product in Tamale, Northern Region of Ghana. It also identified the financial structures available to shea butter producers, including constraints of the financial delivery mechanisms. Using a social survey, the study purposively selected and interviewed 83 women who engaged in shea butter processing. Of these, 86% were full-time processors of shea butter and 14% were involved in other businesses, such as petty trading, groundnut and rice processing. The study revealed low patronage of financial services as only 18% of the respondents took loans. A high proportion (82%) of the respondents were under contract financing with companies that purchased the shea butter. This financing arrangement made it difficult for the women to expand their activities as they usually were unable to negotiate and receive competitive prices for their shea butter. Non-governmental organisations and some financial organisations were involved in providing technical support services to the producers. However, there was an absence of continuous support services in credit management. The high illiteracy rate (97%) of shea butter producers made it challenging for the women to access formal training programmes to make them aware of opportunities that exist for financing their business. There is the need for targeted collaboration among stakeholders to improve existing financing schemes. In the long term, there should be policies to standardise the activities of the shea butter industry to improve access to credit, which could lead to the sustainable growth of these enterprises.

Keywords: credit, forest products, women

Introduction

The shea tree (*Vitellaria paradoxa* C.F.Gaertn.) is a wild and naturally growing indigenous species found in the savanna belt of West Africa, specifically abundant in the northern savanna areas of Ghana. This species thrives in 19 countries across Africa, including Ghana (Addaquay 2004). It covers almost the entire northern Ghana, involving an area of about 77 670 km², which includes Western Dagomba, Southern Mampurisi and Eastern Gonja (which has the densest stands). Other regions, such as the Brong-Ahafo, Eastern and Volta regions, have sparse cover of the tree species. The shea tree is economically important in northern Ghana because it thrives in the harsh dry conditions of the savanna region and provides a range of products and services, which support rural households when cultivation begins and food stocks are low (the lean season). Thus, it is a ready source of revenue during this period. Generally, in the dry savanna region of northern Ghana, non-timber forest products (NTFPs) are very important as a source of income

for rural households. Commercialisation of NTFPs tends to be linked with larger questions of social justice, social welfare, land reform, rural poverty and political empowerment (Neumann and Hirsch 2000). Commercialisation has also been associated with efforts to politically empower and economically advance some of the most disadvantaged sections of society, such as the landless, rural women and indigenous people (Neumann and Hirsch 2000). In the Sahel region of sub-Saharan Africa, the shea industry has been identified as a potential contributor to the economic empowerment of women (Kent and Bakaweri 2010; Kent et al. 2014). Most women in this region are poor subsistence farmers who depend on a short period of rainfall for one season of cropping. Women, therefore, process the seeds of the shea tree into butter as an income-generating activity (Fobil 2011). In northern Ghana, more than 600 000 women depend on the income generated from trade in shea butter and other shea-related products (SNV 2006).

[§] This article is based on a paper presented at the African Forest Forum workshop 'Forests, People and Environment' held on 4–5 September 2015 preceding the XIV World Forestry Congress in Durban, South Africa

In recent times, the fatty extract from the seeds of *Vitellaria paradoxa* has emerged as an important economic commodity, internationally recognised because of its potential range of uses in the pharmaceutical, confectionery and cosmetic market (Glew and Lovett 2014). It has become an important export commodity in Ghana. The importance of the shea tree in Ghana's economy became evident in the 1970s when there was the need to find substitutes for the confectionery and cocoa butter industry (Fobil 2011).

To take advantage of the economic benefits of shea nut processing, women in Tamale in the Northern Region of Ghana have formed small-scale enterprise groups to produce shea butter. However, barriers in terms of skills, capital, organisation, labour-intensive production with outdated technology and unregulated markets, characterise these small-scale enterprises (Derbile et al. 2012). Generally, inadequate financing arrangements, including lack of credit, are recognised problems that affect the development of small-scale industries in developing countries. In general, such industries report difficulties in financing their activities; moreover, access to credit is highly gender sensitive, and credit-constrained enterprises usually have lower levels of productivity (Piabuo et al. 2015). Even though shea butter production is a potentially lucrative business for women in rural communities, financing continues to be one of the constraints that affect entrepreneurs involved in the production and marketing of shea butter. Inadequate financing and credit availability also affect other commodities and agro products (Afful-Koomson et al. 2015).

The financing problem associated with shea processing activities has two dimensions: (1) inadequate production and marketing capital, and (2) ineffective financing mechanisms for shea butter processing (Ademola et al.

2012; Derbile et al. 2012; Kent et al. 2014). Women who engage in the processing of shea butter usually do not have their own savings or capital to finance their activities. Credit facilities are generally unavailable because financial institutions consider these women as high-risk clients. These women, therefore, experience financial difficulties because they are unable to access loans without collateral; they have inadequate business management skills and poor marketing information. The women processors in Tamale have to deal with challenges in obtaining adequate monetary inputs to finance their activities. Attempts to boost shea butter processing and marketing have mainly focused on improving human resources and the political framework of the industry (Aboba 2011). Very little attention is focused on financial constraints, how it affects the enterprise and livelihoods of rural women who engage in butter production. The aim of this study, therefore, was to assess the financing schemes and the financial delivery mechanisms available for the production and marketing of shea butter in the Northern Region of Ghana with a view to determining the impacts on processing and marketing of shea butter.

Methods

Study area

The study area was Tamale, the administrative capital of the Northern Region of Ghana (Figure 1). It occupies approximately 750 km², which is 13% of the total area of the Northern Region (Tamale Metropolitan Assembly 2012). The metropolis is located between 9.16° and 9.34° N and 00.36° and 00.57° W, and is approximately 180 m above mean sea level. The study area experiences a unimodal rainfall pattern from April/May to September/October

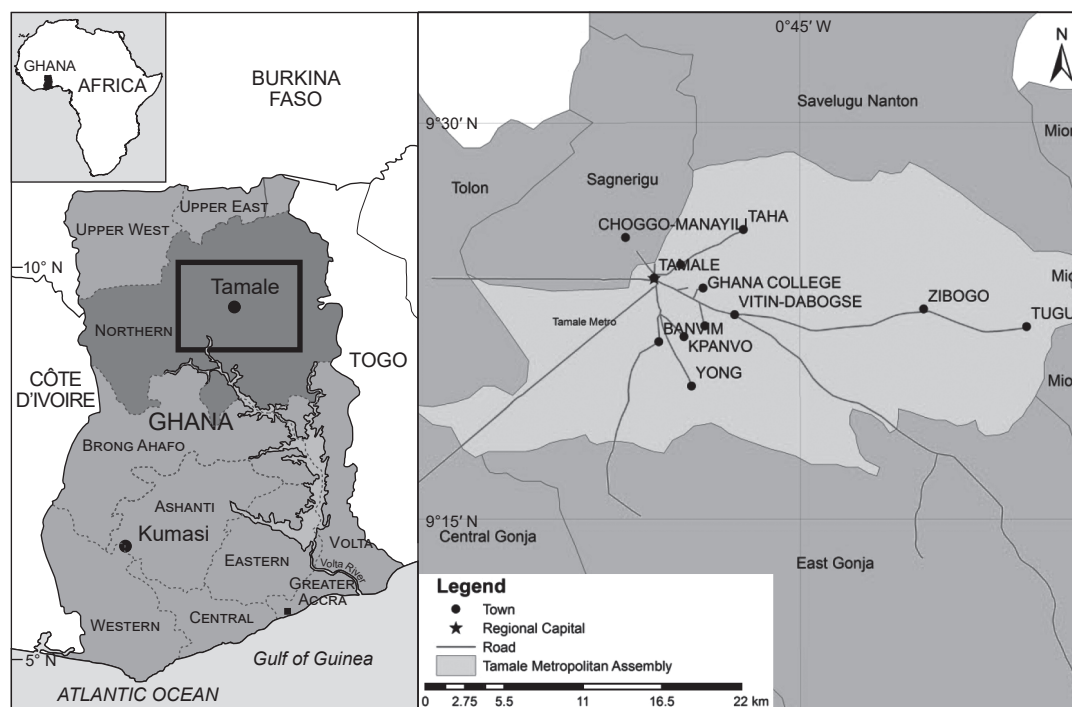


Figure 1: Map of Ghana showing the location of Tamale where the research was conducted

with a peak wet season in July/August. Tamale has a mean annual rainfall of 1 090 mm, and a dry season from November to March with day temperatures ranging from 33 to 39 °C. There are few water bodies and seasonal streams, which contain water in the rainy season and are dry during the dry season. The dominant vegetation is woody savanna, with tree species such as *Parkia biglobosa* (locust/dawadawa), *Azadirachta indica* (neem), *Adansonia digitata* and *Bombax costatum* (kapok tree).

Method of data collection

Data for this study were collected with the use of questionnaires administered to 83 female respondents who were purposively selected with a focus on describing the characteristics of financing arrangements on the production and marketing of shea butter. The questionnaire used closed and open-ended questions to collect information on the socio-demographic characteristics and household livelihood activities, including the availability of financing, marketing and other support services for shea butter processing. The study also collected information on the various financing arrangements available to the respondents. Data collection was preceded by a pre-test, to determine whether the phrasing of questions clearly communicated to the respondents what was enquired. It was realised that respondents did not understand some of the questions as intended, and these had to be revised. Respondents were selected from five shea butter processing groups made up of 479 women from five communities. The average size of a group was 95 women and the groups did not have any unique distinguishing features. Table 1 reveals the selected processing groups, number of women in each group and the number of respondents that were selected.

Method of data analyses

The data were analysed using SPSS 16 (SPSS, Inc., Chicago, IL, USA). Data collected were summarised by means of descriptive statistics, such as frequencies and percentages. Qualitative data were grouped into themes describing financial arrangements for shea processing.

Results

Demographic characteristics of shea butter processors in the study area

Thirty-six percent of the respondents were between the

Table 1: Number of women interviewed in the processing centres within the communities

Community/ processing groups	No. of women in group	Proportion of sample (%)	No. of respondents
Kasalgu/SeKaf Ghana Limited	240	50.1	42
Sagnarigu/Africa 2000 Network	50	10.4	9
Gurugu	40	8.3	7
Jisonayili/Tungteiya	85	17.7	14
Tampe-Kukuol/ Tiyumba	64	13.3	11
Total	479	100	83

ages of 30 and 40 years, 34.9% were in the age range of 41–50 years, 25.1% between 51 and 60 years, and 4% were aged over 60 years (Table 2). Given that 96% of the respondents were between the ages of 30 and 60 years, this establishes the fact that shea butter processing is an important source of employment for economically active women in rural communities. The survey also revealed that 95% of the respondents were indigenes, i.e. Dagombas, from the Northern Region of Ghana and the remaining 4.8% were migrants from other regions in Ghana, especially Upper East and Upper West. The shea butter industry thus offers employment to both natives and migrants, although it employs a greater percentage of indigenous women from the local area. About 63.7% of the women have household sizes of between five and 10 individuals, while 31.3% had more than 10 persons in their household. A few of the respondents (5%) have less than five individuals in their households. About 97% of the respondents have no formal education. Only 3% of respondents had primary school education. With low levels of education, the women reported that they did not have the confidence to attend formal training programmes that created awareness of the potential financing opportunities available for their cottage industries.

Sources and prices offered for different grades of shea butter

Shea butter producers have different sources of obtaining nuts for processing. A majority of the women (75.9%) bought shea nuts from fruit collectors. These collectors extract the nuts, which they then sell to the processors. A few respondents (2.4%) claimed to purchase shea fruits and extract the nuts for butter processing. Others (21.7%) combined the collection and purchase of shea fruit for butter processing. Though the study identified three main grades of shea butter, the processing centres encountered in this study produce mainly the first and second grades. First-grade shea butter was edible and highly valued in the cosmetic and pharmaceutical industries. It sells for US\$1.95–2.00 kg⁻¹. Second-grade shea butter, which is used in the food industry for confectionery, chocolates and edible oils, sells for US\$1.23–1.71 kg⁻¹. Third-grade shea butter is of very low quality and locals use it as a waterproof agent for building purposes and soap-making in the village. Fifty-one percent of the respondents had a ready market for shea butter because they have contract agreements with buyers who purchase all the butter they produce for export. However, 49% noted that buyers were not always readily available and when they produce large amounts of shea butter, buyers dictate low prices.

Table 2: Age range of respondents engaged in shea butter processing

Age range of respondents (years)	Number of respondents	Percentage of respondents
30–40	30	36.0
41–50	29	34.9
51–60	21	25.1
over 60	3	4.0
Total	83	100

Shea butter production methods amongst rural women

Four major groups of people were involved in the shea butter activities. These were the fruit collectors, individuals who buy nuts from collectors, the processors and exporters of the shea butter. In relation to the production, most of the rural women used the traditional method of processing the shea nuts into butter because of lack of funds to acquire the required tools for semi- or fully mechanised systems. Using the traditional process resulted in poor-quality butter, therefore shea butter processed using this method did not attract competitive prices. The women mentioned that if they acquired the necessary equipment they would be able to produce high-quality butter that would give them competitive prices. Some financial organisations have established technical support services to provide processing facilities for these producers.

Financing shea butter production for rural women

The study identified two major sources of financing shea butter processing: contract financing and microcredit financing. Eighty-two percent of respondents used solely contract financing, whereas 18% used a combination of these two means of financing. All of the women reported that the main advantage of contract financing was that it provided a readily available source of finance for their processing activities. The disadvantage was that they had to sell all of their produce at the prices offered by the financiers. Regarding microcredit financing, the main advantage mentioned by all of the women was that it gave them control over who to sell their shea butter to, while the disadvantages were the high interest rates and difficulties in managing weekly repayments of the loans. Three main companies were identified as the major contract financing buyers: SeKaf Ghana Limited, Savannah Fruits Company and Tungteiya Processing Centre. These have two main modes of operation; some establish their own processing centres, whereas others train and pre-finance production of women groups who have their own processing facilities. The companies developed this financing model to ensure a constant supply of consistently high-quality shea butter from producers. As part of operationalising the model, the company establishes a shea butter village equipped with processing facilities, such as drying and sorting platforms required for effective production. These are materials the women could not afford. In addition, all three companies in partnership with technical support institutions, such as SNV Ghana, provided training in improved shea butter processing methods to enable processors to produce the quantity and quality clients require. This allows the company to monitor the production process and to certify that the quality of shea butter meets the required standards. At the end of the production period, the women make commitments to sell their products to the company as a first priority.

Given that inadequate credit is a severe constraint in shea butter production, the contract financing agreement provides the women with money to purchase shea nuts, which they process at the facility. On average, the women process 480 kg of nuts for butter production per week. This could earn the women about US\$257.14 but they usually receive less because of the payment for the nuts and the

use of the facilities for processing. The women do not pay interest on the financing contract agreements they receive from companies for the purchase of shea nuts. For example, when they produce 40 kg of shea butter, for which they should have received US\$80.00, the financing buyer pays them US\$31.43 because the sum of US\$42.86 is deducted for shea nuts and US\$5.71 as the cost of using the equipment for processing. On average, the women make US\$4.49 per day from participating in contract arrangements with the buyers. All of the respondents indicated that they are unable to determine whether the company was offering a fair price for their products because they had nothing to compare with and had to accept whatever price the financiers offered.

Action Aid Ghana, Bonzali Rural Bank, Christian organisations, DANIDA-Dalung and Tiehisuma Women's Support Group are some of the institutions that provide microcredit financing services in the form of loans to processors. However, only 18.1% of the respondents had used the loan facilities from these organisations, whereas 81.9% have never accessed these microfinance arrangements (Table 3). The 15 women who had used microfinancing schemes had to pay interest on the loans that they received; the remaining 68 respondents had never taken loans.

The respondents who patronised loans received average amounts ranging from US\$43.00 to US\$105.00 at interest rates of 20% to 25% for a four-month loan cycle and were expected to make weekly payments. These conditions included the strict weekly repayments expected of clients. Microfinancing companies disbursed loans three times a year in March–June, July–October and November–February. Those who had never used microfinancing depended mainly on contract financing from buyers and marketing companies and in some cases used their own capital for self-supporting production. The microfinance organisations do not require the women to provide collateral for loans; rather, other group members serve as guarantors.

The microfinancers implemented this loan practice at two levels. Loans disbursed to individual members are determined in two stages using consensus and transparency. During the first stage, group members propose and agree on how much they consider each individual within the group should receive for their processing activities based on their scale of operations. The second stage involves the larger group that guarantees or rejects loan amounts for individual members proposed at the first stage. The acceptance or rejection of loans was based on how the group perceived the recipient's ability to handle the weekly

Table 3: Loan profile of respondents in the processing centres, amounts disbursed and associated interest rates in Tamale

Processing centre	Respondents without loans	Respondents with loans	Total loan disbursed (US\$)	Interest rate (%)
Kasalgu	35	7	571.43	25
Tiehisuma	5	2	108.57	20
Sagnarigu	6	3	108.57	25
Tiyumba	9	2	142.86	20
Tungteiya	13	1	42.86	25
Total	68	15	974.29	

repayments of the loan. Thus, when a member defaults, all group members are responsible for repayment of the loan. This promotes collective responsibility to ensure members repay loans. When one person defaults, it affects their future prospects of receiving loans, so it is in the interest of all the women that loans are repaid. To ensure loans are paid back on schedule, microfinancing companies target shea butter processors who have lucrative setups, seek to expand their business, and would be able to cope with the strict weekly repayments.

Women's perceptions of access to financial arrangements for shea butter production

Processing and trade in shea butter was a full-time activity for 85.5% of the women, whereas 14.5% engaged in part-time processing in addition to other secondary income-generating activities, such as groundnut processing, rice processing and petty trading. Contract financing was very popular as 81.9% of the respondents had received contract financing from some companies. At the start of operations, the company would give the women money for processing with the agreement that they would sell the finished product to them. The processors consider the financing arrangement as not beneficial for their income-generating activities.

All of the respondents claimed that the unavailability of effective alternative credit facilities compels them to keep using contract-financing facilities offered by the buyers, which are sometimes unfavourable. The women were of the opinion that the availability of a range of financing options, and pricing information, would allow them to choose the most favourable financing contracts in order to sell to those offering the highest prices. Respondents indicated that though they need loans to buy nuts, they were unable to access loans for various reasons and they could not rely entirely on contract financing because they provide financial services to clients only when they need to buy shea butter.

About 80% of the 15 respondents who had obtained loans from microfinancing services indicated that they were not satisfied with the loans. Respondents' reasons for being dissatisfied included the small amounts of cash disbursed, which is not sufficient to increase production (25%), and 33.3% stated that the loan amounts were not enough to cater for both their business and household. This indicated that some of the women are using part of the loan for household and domestic needs. Furthermore, 16.7% of the women mentioned the difficulty in coping with the weekly repayments. For the 15 respondents who had received loans, only five of them were given pre-disbursement training on how to use the loans and carry out their processing activities to ensure easy repayment of the loans. However, 16.7% of those who had received loans were satisfied with the conditions because they could expand their operations with the amounts received, they were able to cope with the repayment schedules and the interest rates were within acceptable limits.

For future activities, respondents preferred an increase in the loan amounts received from the microfinance companies to enable them to expand their processing activities to increase their incomes. For those who purchase shea nuts, an increase in the loan amount will enable the

women to purchase more nuts during the glut season for storage. They also wanted the weekly payments changed to arrangements that are more flexible. All of the respondents believed that the mismanagement of loans by some recipients was the reason for the small loan amounts offered. In spite of the arrangements put in place to ensure that loans disbursed are used for the intended purpose, some women are still using the loans for household activities. This has led to default in repayments. Generally, loans are used for other purposes because of the low incomes that are not sufficient to meet their daily needs. Even though the women are engaged in the most difficult and time-consuming aspects of shea butter production, they believe their incomes would improve if they were able to participate in markets outside their communities. They perceive themselves as mere producers of raw shea butter for companies who have local and international markets. Moreover, they are compelled to sell all their shea butter to financing companies because they could not market it themselves outside Tamale or gain access to export markets. Respondents acknowledged their overdependence on contract, microfinancing and marketing services provided by the companies. Without these companies, their processing activities will collapse. This affirms the perception of the women that the absence of these financing companies would create problems in the production and marketing of shea butter.

Constraints of financing mechanisms available to shea butter producers

Respondents identified a range of constraints associated with the financing mechanisms available to them. Their main concern was with the contract buyers who usually determine and fix prices without their involvement. The women had no control over the process of fixing prices and neither could they negotiate with their financiers for an increase in prices. This arrangement is problematic to them, especially when they had non-contract buyers who were prepared to offer a higher price. It could be argued that the pre-determined price these producers are offered protects them from experiencing fluctuations in prices. The women believed that this arrangement is not allowing them to enjoy higher incomes from selling to other buyers who are always ready to offer prices that are higher than that of their financiers.

Support services for production and marketing

The respondents suggested that the companies should provide improved support services in the form of training workshops to develop the capacity of the women to produce and market their own shea butter in other local and possibly in international markets. Contract financing companies should move away from creating a dependency situation where women are unable to handle processing and marketing activities without them. As much as possible, the companies should facilitate the process of making the women independent and capable of efficiently expanding and managing their businesses to participate on the international platform. This could help to boost profits and confidence in their ability to manage highly profitable and successful small-scale industries. The companies could create platforms where groups have different levels of

involvement. The women could go through a learning process that will allow them to advance through the stages of marketing their products with very little assistance. Gradually, they transform the current high dependence on contract and microcredit financiers.

Discussion

Rural women in shea butter processing

In this study, most of the women shea butter processors were indigenes. The reason for the involvement of more indigenes could be that women who possess knowledge of the location of shea trees are those who usually engage in shea processing (Greig 2006). Women who know the local area would naturally be more involved. The women, who had low levels of education, were unable to access formal training programmes to make them aware of opportunities that exist for financing their cottage industries (Greig 2006). In a similar study, high illiteracy levels were identified among shea butter producers in the Tamale (Pufaa 2010).

There are three main methods of extracting shea butter: traditional, semi-mechanised and fully mechanised systems (Addaquay 2004). However, this study identified the traditional method as the main process used by most women. Using rudimentary processing technology, which results in low returns to labour, is a common feature where women are the main NTFP processors (Neumann and Hirsch 2000). Traditional processing usually results in poor quality and unhygienic products, hence buyers offer low prices to processors using these methods (Aculey 2007). The equipment processors require to upgrade to expand their operations include nut crushers, roasters, kneaders and a hydraulic/screw press (Wallace-Bruce 1995; Issahaku et al. 2011). These technological advancements could greatly improve extraction rates from between 20% to 40% for the women (Addaquay 2004). Some non-governmental organisations (Kent and Bakaweri 2010) have tried to address these problems by establishing technical support services in the form of processing facilities for shea butter producers.

Importance of different grades of shea butter

The three main grades of shea butter identified in this study had different uses and prices. The first two grades were highly valued for industrial uses and high prices were offered. However, the community members used the third grade, which was of lower quality, as a waterproof agent for earthen walls, doors and windows. In rural communities, the use of poor-quality shea butter as a waterproof agent was a common practice (Marchand 1988). With reference to prices received for their shea butter, nearly half of the women received low prices, even when they produced shea butter in the first two grades, which was of high quality. This supports the assertion of Laube (2015) that shea processors often receive exploitative prices. Furthermore, Neumann and Hirsch (2000) have observed that even in situations of expanding markets and increases in prices, the economic situation of NTFP processors does not change.

Characteristics of financing schemes for shea butter producers

Along the shea butter value chain are fruit collectors, women

who buy the fruits from the collectors, processors of shea nuts into butter and the buyers who export the commodity (Kletter 2002). Some of the women purchased shea fruits for processing because of the perceived hazards, such as snake bites associated with picking fruits (Schreckenber 1996). For shea butter production, most of the women were engaged in contract financing, whereas a few used microcredit facilities. Similarly, in a study of agro-processing industries, Derbile et al. (2012) reported that 78% of rural industrialists had never utilised credit for capitalisation purposes. This suggests low patronage of credit facilities (Derbile et al. 2012) because of relatively high interest rates and other conditions set by loan providers. The disadvantage of contract financing was that processors had to sell all of their produce to the financiers without the opportunity of negotiating the price (Kent and Bakaweri 2010). Yidana (2009) also identified two of the major contract buyers the women were compelled to sell to whose operations guaranteed a constant supply of good-quality shea butter. This situation was because the women did not have their own operating financial capital to support their activities. Inadequate credit is a severe constraint in shea butter production (Ademola et al. 2012). With reference to the shea butter prices the companies offered, the women had inadequate information and were unable to decide whether these were competitive. In similar situations, women have reported mixed opinions on their level of influence over pricing decisions; most felt they had to plead with the buyer, who decides the price (Kent and Bakaweri 2010). In rural areas, prices offered for shea products are generally low (Hatskevich et al. 2011). According to Laube (2015), prices offered to shea processor are usually unfair rather than beneficial to the women. Furthermore, Sidibé et al. (2012) have reported similar findings when a key informant accused buyers of opportunistic behaviour in their refusal to remunerate women according to the quality of shea butter. Moreover, for those who obtained loans, pre-disbursement training on the use of loans was not a routine practice. This affirms similar observations by Issahaku et al. (2011) that most loan recipients do not receive training before disbursement of funds. This emphasises the need to train recipients to understand the need to avoid misapplication of loans (Aniah et al. 2014).

The women recognise limitations in the existing financial arrangements, yet it offers the most accessible means of financing their production activities and selling their shea butter. Therefore, appropriate financing and marketing arrangements are required for the continued existence of the shea butter processing industry (Kent et al. 2014). Sidibé et al. (2014), citing a situation in Mali, reported how access to finance helped women groups expand their area of production. Sidibé et al. (2012) also propose the incorporation of women processors into international markets as a development pathway in sub-Saharan Africa. Ndow (2012) describes the situation in Burkina Faso where UNIFEM started assisting women groups to boost their ability to produce shea butter and to link them directly with potential export markets. The aim was to give women groups the opportunity to increase their access to the world market and to improve Burkinabé women's economic returns from shea nuts. In particular, UNIFEM linked one group, the

Association Songtaab-Yalgré, directly with foreign buyers; this arrangement provided a good start for the group and resulted in a success story (Ndow 2012). The shea butter producers in the Tamale metropolis could benefit from similar arrangements.

Conclusions and recommendations

This study assessed the financing schemes and financial delivery mechanisms available for the production and marketing of shea butter in Tamale in the Northern Region of Ghana. Financial services available to shea butter producers were contract financing and microcredit schemes. Shea butter producers do not have control over the sale and price of their products. They have to sell to their financiers who trade in other markets within and outside Ghana. Moreover, most of the women had never received loans and the few who had were not satisfied with the conditions associated with the loans.

Most of the respondents had firm contract transactions, while others had arrangements where buyers provide credit to support processing activities only when they need to purchase shea butter. The women perceive that the existing contract arrangements do not allow them to enjoy high financial returns. Given that they had no suitable alternatives, they continue to patronise these services. This underscores the need to make alternative and flexible financial arrangements readily available to shea butter producers to enhance their livelihoods.

We recommend that for local producers to take advantage of the potential economic benefits of producing and marketing of shea butter, governmental and non-governmental organisations should provide direct linkages with foreign buyers. Producers also need tailor-made financial services, capacity-building workshops, extension services and access to information that could equip them to function as independent economic agents. Existing financial arrangements should support and equip rural women to take informed decisions on how to operate profitable and sustainable income-generating activities.

Extension training workshops should be organised to improve the processing, business management and marketing skills of the women. It would be important to initiate non-formal education programmes to help the women to keep simple records and manage the accounting demands of their economic activities. The women should be encouraged to 'think outside the box' in their processing activities to survive in an industry that needs to evolve to meet the high standards of technological advancement.

There should be provision of services, such as training on credit management, to sustain and improve financing schemes. Given the numerous challenges in the shea butter industry, collaboration and networking among stakeholders such as producers, forestry officials, government agencies, non-governmental organisations and end users of the product is required. Effective collaboration amongst various stakeholders would facilitate the regulation and standardisation of the shea butter industry to promote diversified and sustainable livelihoods for the hardworking rural women who are committed to reducing poverty in their family and communities.

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