

ADOPTION OF MOBILE PHONE USE BY SHEA BUTTER PROCESSORS

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Abstract

This paper analyses the effects of the use of mobile phones on shea butter women micro enterprise growth in Northern Region of Ghana. A total of 200 women shea butter processors were selected from two districts (Sagnarigu and Kumbungu Districts) through multi-stage sampling technique. Data was gathered through semi-structured interviews and focus group discussions. The Pearson's Chi square results indicated that age, marital status and education have significant effects on mobile phone use. The student t test results showed a positive and significant relationship between mobile phone use and enterprise growth in terms of income and output. Network Failure (92%), high airtime charges (60%) and illiteracy (88%) were found to be the three major challenges affecting the use of mobile phones in the shea butter micro enterprise in Ghana. It is recommended that training should be organized for the shea butter processing women on key areas such as mobile phone use and handling of phones. This will enable them to access up-to-date information on shea butter production and marketing. Mobile phone providers should improve upon their services and also come out with various ways of making the airtime affordable for the women shea processors.

Keywords: Mobile phone, Shea butter, Adoption, Service providers

Introduction

According to Beckinsale and Ram (2006), ICT is any technology that is used for gathering information, processing, distribution and use. This research is focused on the use of mobile phone as an important tool for information communication technology (ICT).

Perhaps, one of the positive developments which occurred recently has been the widespread use of mobile phone globally. This development has enabled governments of many countries to connect telecommunication network coverage to their people including the rural people (ITU, 2007). As a result of the enhanced wireless communication infrastructure, mobile communication has become a part of daily life for millions of people. Mobile phones have increasingly become the new form of communication in Ghana and the world as a whole (Sey, 2008; World Bank, 2007). As a result, its ability to improve the lives of many is unquestionable. In Ghana there has been a sporadic mobile phone subscription by the rural and urban populations. In 1992, the number of mobile phone subscribers in Ghana was 19,000, this number increased to 43,000 in 1998 after the Government of Ghana deregulated the telecom industry in 1997 (Frempong, and Atubra, 2011). The deregulation of the telephony sector led to significant improvement thereby increasing accessibility to mobile phones which increased the subscriber base (Frempong 2011). The National Communication Authority (NCA) 2013, indicated that active mobile phone lines as at November 2012 stood at a little over 25 million.

The use of mobile phones has introduced significant changes in most sectors of the economy, especially in the informal sector where many Small Scale Enterprises (SSEs) are changing their ways and means of transacting business, and this has impacted greatly on the telecom industry and has made it the fastest growing sector in the country (Overa, 2006). Mobile phones provide technological services that bring about efficiency in the cost build up resulting in increase in incomes and also suppliers' ability to reach out to the people involved (Aker and Mbiti (2010). They promote social and business networks, and they clearly replace journeys, brokers, traders and other business intermediaries (Donner, 2005, Hughes and Lonie, 2007).

Currently, the number of mobile communication companies has increased since the introduction of private participation in the telecom industry. Ghana now has six different companies in the telecommunication subsector. The companies are Vodaphone, MTN, Airtel, Glo, TiGO and Kasapa (Frempong, 2010). The introduction of e-commerce in developing countries has made it possible for the small-scale entrepreneur to link up with the other actors of the supply chain and hence, improve access to markets.

Women shea processors in their routine business engage with numerous service (network) operators to make good use of their mobile phones. The network/service operators come in different forms. The MTN network has the majority of women processors patronizing it (62%) in their daily transactions. This is followed by Vodafone (27%), Airtel (6.5%) and Tigo (1.5%). Thus, the common network operators in the shea butter micro enterprise are MTN and Vodafone. According to majority of the women shea processors, MTN and Vodafone networks are easily accessible, yet in terms of the transactional cost of network operators, the shea butter processors view both MTN and Vodafone networks as cheaper (Field Survey, 2014) Despite the benefits that ICT in general and mobile phone in particular has on the growth of SMEs, there is little empirical evident to point out the benefits of mobile phone use to the shea butter processing industry. This paper seeks to examine the socio-economic characteristics of women shea butter processors who use mobile phone for business transactions. The paper examines the relationship between mobile phone use and the growth of women shea butter micro enterprise and identifies the network service challenges faced by women in the use of mobile phones.

Importance of Mobile Phone Use

Several studies have highlighted the role of mobile phones in the growth of small, medium and microenterprises using the experience of Asia and Africa. Generally, mobile phones give people the opportunity to communicate at a distance and with the press of a bottom information is reached immediately. Therefore, mobile phone use has the possibility of increasing SME productivity.

Overa (2006) has argued that mobile phone use leads to reduction in both transaction and transportation costs and these two costs are the determinants of business profitability. According to the authors, the two costs can also affect incomes of both producers and traders, and go a long way to determine the availability and cost of goods to buy.

Mobile phone use has brought Ghanaian communities closer to each other though they may be miles apart (ITU, 2003). Mobile phones have come to improve business to business transactions and this gives people the opportunity to have instant access to information on producer prices precisely (Aker, and Mbiti, 2010). Mobile phone use according to Jensen (2007) can help minimize information distortions and also enable users to have access to marketing and distribution opportunities. Also it facilitates easy movement, convenience and saves time and travel expenses (Bhavnani, et al, 2008).

In Ghana, farmers in Tamale are at a fixed point and get to know corn and tomato prices in Accra through mobile phone use, which is about 658 km (Aker and Mbiti, 2010). Similarly, the reduction in communication cost as a result of mobile phone use has significant economic benefits of improving agricultural and labour market efficiency and also improves producer and consumer welfare (Jenson 2007, Aker 2010).

According to Rayport and Jaworski (2004) as cited by Kwakwa, mobile phones bring about efficiency in production, effective distribution and marketing of products and services and also better understanding of international markets. Kwakwa (2012) came out with several benefits of mobile phone usage to both consumers and producers. According to the authors, the benefits associated with mobile phones are; improved access to information, reduction in search costs, improved coordination among agents, increased market efficiency, improved productive efficiency and effective communication among social networks in response to shocks. Effective communication helps to reduce households' exposure to risks.

According to Duncombe (2012), "mobile phones are able to address three key criteria for inclusive markets, thus, that of facilitating access to market information and transactions, creating direct development impact for the poor through personal access and usage, and having the potential for financial viability, given their relatively low cost, ability to handle and small quantities and transactions". Morikawa (2004) in his study in Japan on the relationship between ICT and innovation activities in the SMEs and profitability found out that ICT was a reliable indicator of better performance especially when it comes to small firms. ICT was found to have a positive relationship with firms' performance.

A study by Kharuddin, et al. (2010) on the adoption of accounting information systems in SMEs in Malaysia, revealed that adopting information systems is a key component of small and medium enterprises business efficiency and competiveness. Similarly, Olusola (2013) in his study on investigating influence of information the technology on the performance of small and medium enterprises in Nigeria argued that mobile phone use plays an important role in increasing productivity and economic activities. He further concluded that, firms are into business to maximize profit and mobile phone use helps not only on productivity but also providing helpful information and making business operation less complicated, time saving and disclose new trends of business and how businesses are supposed to address change.

In Ghana, Boadi et al. (2008) studied the impact of mobile phone use on farmers and fishermen and came out with the view that, mobile phone use or m-commerce brought about cost reduction for both farmers and fishermen, and offered opportunities for strengthening internal and external business relationships. Similarly, a survey conducted in Ghana by Salia et al (2011) revealed that fishermen who use mobile phones in transacting business are able to increase profits and expand their markets through easy contacts with customers. He added that, fishermen who are using mobile phones are free from danger when at sea because they are connected with both their families and other fishermen. Aker (2008) studied the grain market in Niger and revealed that, traders had an increase in profit of 29 percent because they obtained better prices through the use of mobile phone in business transaction. Also, mobile phones were noted to have

brought about a 3.5 percent reduction in average consumer grain prices. Aker (2008) concluded that the use of communications technology had several For instance, search costs were benefits. significantly reduced, coordination among market participants improved, and market efficiency increased as traders became engaged in the search process themselves rather than being on the receiving end of a one-way communications system. Traders expand their reach of searchable markets, sell in more markets, and increase their network of contacts. An average trip to a market located 65 kilometres away in rural Niger can take two to four hours round trip, compared to a twominute call.

Another empirical study to confirm the benefits associated with mobile phones is the one by Samuel et al. (2005) which found that about 60 percent of micro entrepreneurs from South Africa, Tanzania and Egypt reported that there was an improvement in the profitability margin of the business when they started using mobile phone for business transactions. De Silva (2008) and Donner (2009) identify mobile phones as an important innovative technology in support of livelihoods, with very clear examples of increasing integration into agriculturalextension, information provision and marketing systems. Mobile phones in support of livelihoods are not limited to agriculture, but encompass new forms of micro-financial service provision and micro-enterprise support, and data gathering and dissemination for projects concerned with social development covering education, health, the environment and humanitarian relief in response to disasters and emergencies. The literature mentions some advantages users of mobile phones enjoy. For example, Kakihara and Sorenson (2002) mentioned the key characteristics of interactivity, spatial mobility, temporal mobility and the contextual mobility associated with mobile phones that are not available when using a land line. Mobile phone use provides users with some degree of flexibility, connectivity, ubiquity and location awareness and this facilitates organizations' operations (Barnes, 2002).

The use of mobile phones by enterprises may be influenced by a number of factors. Beside the mobility attributes of mobile phone use, the costs of use of mobile phones is another significant factor (Zhang and Yuan, 2002) and the personal attributes of the user, the influence of others and the motivation of the user, (Hooper & Zhou 2007). Again, Jensen (2007) studied the impact of mobile phones on the fishing industry in the Indian district of Kerala, and came out with the observation that mobile phone coverage led to among others, a reduction in the irregularities of fish prices across markets and 8 percent increment in fishermen's profits (Rabayah and Qalalwi, 2011). More so, Esselaar et al. (2007) carried out a survey in 14 African countries and found that entrepreneurs who had mobile phones used them more often for maintaining contacts with customers and clients compared to any other form of communication.

A study on the impact of mobile phones on agricultural markets in Uganda revealed that mobile phone coverage is linked with a 10 percent increase in farmers' probability of market participation for bananas, than maize. And this therefore, suggested that mobile phones are more useful for perishable crops (Aker and Mbiti, 2010).

According to Rayport and Jaworski (2004) most businesses and their customers now enjoy the reward of the new ways of exchanging information, communicating and conducting trade. These benefits are therefore, necessary for the economic development of SMEs. A similar study by Jagan et al in Nigeria. (2007) points out the positive impacts of mobile phone use for small businesses and concluded that with the use of mobile phones, trading generally became quicker, cheaper and less risky. Also the speed and access to information increased, communication costs decreased, travel requirements were reduced, and buyers could contact suppliers and customers directly and this has greatly enhanced efficiency and effectiveness. Kotelnikov (2007) added that, businesses stand the higher chance of increasing the efficiency of their operations, reduction in transaction costs, improved communication with both suppliers and customers, and accessing new business opportunities.

Methodology

A cross sectional study design was used in this study. Cross-sectional studies aim at finding out the prevalence of a phenomenon, problem, attitude or issue by taking a snap-shot or cross-section of the population. In a cross-sectional study, data are collected on the whole population or a subset at a single point in time to examine the relationship between variables of interest. The design was employed in the process of data collection. Data was collected on shea butter processors in the two Districts, the seventeen communities and the nine women shea butter processing women groups.

The study utilized a semi-structured interview, focus group discussions and direct observation. Ouestionnaires were used to collect data from the shea butter processors. The population of the study included all women shea butter processors in the Sagnarigu and Kumbungu districts and mobile phone service providers in the Northern Region. Both probability and non-probability sampling tools were used to gather data for the study. This was done through the use of multistage sampling technique. This type of sampling was used in selecting the two Districts, from the twenty three Districts, two municipalities (Yendi and Savelugu) and one metropolitan (Tamale) in the Northern Region of Ghana. The Districts were purposively selected because of the availability of the shea nuts in and around those Districts. And also most of the active shea butter women groups are found in these two Districts. Purposive sampling was again used to select nine communities from the two districts from which two hundred (200) women shea processors were randomly selected and interviewed across nine (9) groups. Tables 1&2 contain information regarding the selected communities.

| Table1: Sampling at District level. |
|-------------------------------------|
|-------------------------------------|

| 1 0 | | |
|--------------------|-------------------------|---|
| Districts | Communities (Number) | Sampled Communities |
| Sagnarigu District | 6 | Malshegu, Kumbuyili, Sagnarigu, Jisonaayili, Kanvili and Gurugu, |
| Kumbungu District | 3 | Gumu, Kanfehiyili, and Kumbungu-Kukoo. |
| G | | |

Source: Field data, 2014.

Table2: Sampling of Respondents.

| DistrictName of CommunitySample PopulationSample Size | • |
|---|---|
|---|---|

| Sagnarigu | Jisonaayili | 32 | 25 |
|-----------|----------------|-----|-----|
| | Kanvili | 31 | 25 |
| | Gurugu | 52 | 25 |
| | Kumbuyili | 30 | 20 |
| | Malshegu | 20 | 15 |
| | Sagnarigu | 40 | 30 |
| Kumbungu | | | |
| Kumbungu | Gumu | 40 | 30 |
| _ | Kanfehiyili | 25 | 20 |
| | Kumbungu-Kukoo | 25 | 15 |
| Total | | 295 | 200 |

Source: Field data, 2014.

Results and Discussions

Influence of Socio-economic Characteristics on the Use of Mobile Phone

The ages of the sampled respondents are presented in Table 3. The women sheabutter processors age between 30 and 60 years. Majority of them (132) representing 66% had their ages within the age groups 30-49. This is followed by the age group 50-59, which had 53 (26.5%) and the rest 15 (7.5%) fell within the 60 plus age group. The average age group for the shea butter enterprise is therefore, 30-49. The Pearson's Chi-square results recorded (2, N=200) =106.87, and P< .000, which indicates that, age has a significant effect on mobile phone use .Because majority of the respondents are still in the active labour group, it implies that younger women are more likely to go into sheabutter processing as an income generating activity. The results are also an indication that when policy makers attach seriousness to the shea butter industry, the industry will grow to put an end to the many youth migrating to the Southern sector for jobs.

Table 3: Age of Respondents

| Age | Frequency | Percent |
|-------|-----------|---------|
| 30-39 | 52 | 26.0 |
| 40-49 | 80 | 40.0 |
| 50-59 | 53 | 26.5 |
| 60+ | 15 | 7.5 |
| Total | 200 | 100.0 |

Source: Field Survey, 2014. $X^{2}(2, N=200) = 106.87$ P< .000 (Significant)

Influence of Marriage on the Use of Mobile Phones

The marital status of the shea butter processors in the study area is presented in Table 4. As shown in the Table, as many as 184 (92%) out of the 200 respondents were married. While those shea butter processors who were single or divorced were 6 (3%), respectively, only 4 (2%) of them were widowed. The distribution shows that majority of shea butter processors are married and therefore dominates the industry in the research area. The results of the Pearson's Chi square presents $X^2(3, N=200) = 478.88 P < .000$, which indicates a significant effect on mobile phone adoption. This shows that the shea butter enterprise has the highest chance of being sustainable since about 92% of the women are married and are therefore likely to stay back and continue their business without thinking of migrating to other parts of the country for menial jobs. Added to this is the fact that microfinance institutions in the study area use relatively fixed residential arrangements as a major component of the social collateral when lending to women.

Table 4: Marital status

| Marital status | Frequency | Percent |
|---------------------------|--|---------------|
| Married | 184 | 92.0 |
| Single | 6 | 3.0 |
| Divorce | 6 | 3.0 |
| Widowed | 4 | 2.0 |
| Total | 200 | 100.0 |
| Sources Field Summer 2014 | $V_2/2$ $N_2/2(0) = 470.00$ $D_2/2000$ | (Significant) |

Source: Field Survey, 2014. $X^{2}(3, N=200)=478.88 P < .000$ (Significant)

Educational status and Mobile Phone Use

The results show that majority of respondents 176 (88%) of the shea butter processors were observed to have no formal education. Those with basic education stood at (12%) in the shea butter micro enterprise. The Pearson's Chi square results (1N=200) = 115.52 P < 0.000, gives an indication that there is a significant relation between educational status and mobile phone use. Though majority (193) of the women sheabutter processors use mobile phones to transact business, they found it difficult identifying numbers of incoming calls. Respondents reported that they use the services of their children and other members of their households to assist them in identifying numbers when going to make calls. In addition, respondents use symbols from among the features from the phone to identify numbers of people, however this process of identification is limited given that the features in the phone are in itself limited. For example, Madam Amina's narration of her difficulty in mobile phone use is captured in her own words as follows; "*it is not easy using the phone because anytime I want to call any of my suppliers, I have to wait until my daughter is around to help me make the call*". In another instance, Madam Ayishetu indicated that she wished she could send text messages to people she transacts business with. The two isolated situations narrated above are likely to affect the timely supply of shea nuts as well as marketing of finished butter. Thus, low level of education slows down mobile phone use, hence shea butter business activities.

Table 5: Education

| Education | Frequency | Percent |
|---------------------|---------------------------------|------------|
| No formal education | 176 | 88.0 |
| Basic education | 24 | 12.0 |
| Total | 200 | 100.0 |
| a r: 11a 2014 | $V_2(1 N 200) = 115.52 D < 000$ | (0: :0: .) |

Source: Field Survey, 2014. $X^{2}(1, N=200)=115.52 P < .000$ (Significant)

Experience and mobile phone use

The level of experience was measured in terms of the average number of years a shea butter processor has spent in the enterprise of shea processing in the study location. Majority of the processors 102 (51%) had 11 years and over, making them more experienced in the shea butter micro enterprise. This was followed by those processors who had their experience spanning from 6 to 10 years with 55 (27.5%), and the rest of them attaining between 1 to 5 years. The conclusion that can be drawn from the information is that those with more experience in the enterprise are more likely to use mobile phone than those with less experience. To further validate how these two variables were related, the Pearson's Chi square was used and the results recorded (2, N=200) =29.17, P< .000) indicating a significant relationship between the level of experience and mobile phone adoption. This means that as women stay longer in the enterprise, they are able to study the business and are more inclined to adopt new technologies than the less experienced women. Table 5 below shows the distribution of experience in terms of number of years in the business.

Table 6: Experience

| Years | Frequency | Percent | |
|---------------|-----------|---------|--|
| 1-5 years | 43 | 21.5 | |
| 6-10 years | 55 | 27.5 | |
| 11 plus years | 102 | 51.0 | |

| Total | 200 | 100.0 |
|-----------------------------|--------------------------------|-------|
| Source: Field Survey, 2014. | $X^{2}(2, N=200)=29.17 P<.000$ | |

Effects of Mobile Phone Use on Shea Enterprises Access to Shea Nuts

The availability of raw materials for any processing venture is always regarded as key to the overall success of the venture, and shea butter micro enterprise is no exception. As many as 193 (96.5%) of the 200 shea processors agreed that the adoption of mobile phones had improved their access to shea nuts. Out of 193 processors who agreed that there is a relationship between adoption of mobile phone and access to shea nuts, 173 of them (89.6%) said they strongly agreed to the relationship, 20 women (10.4%) processors just agreed to the relationship. Unequivocally, the adoption of mobile phone has increased shea processors' access to shea nuts tremendously. Processors can now make calls to as many suppliers as possible to enquire on the availability and price. According to them, their physical presence is in most cases not required in the process of purchasing the nuts.

Access to Market for Shea Products

The results show that 193 (96.5%) of the 200 processors alluded to the fact that mobile phone use provides them a wider opportunity to sell their shea products. Thus, the findings show a positive relationship between mobile adoption and the growth of shea butter micro enterprise because women processors explain that there is an expanded (quick) market for shea products. The respondents said they use their phones for marketing, sales and for product purchases. This conclusion actually corroborates the conclusion reached by Rabayah and Qalalwi (2011) that with the use of mobile phone, one is able to communicate with customers or suppliers and also make arrangements to conveniently supply products to customers.

Growth of the Shea Butter Enterprises

Expansion in the shea butter enterprise is used to measure the relationship between mobile phone adoption and the growth of shea butter micro enterprise processing as indicated in the presentation in Table 7. This variable does not only embody intensification of the shea processing but includes new entrants in the shea butter enterprise. From a total of 200 processors interviewed, it can be observed that majority of them (88%) said they strongly agree that the enterprise had seen some growth/expansion as a result of mobile phone adoption in their business. Another 8.5% of the processors agreed that mobile phones adoption had caused the growth/expansion of shea butter processing. The evidence provided above suggests that there is a relationship between mobile phone use and enterprise expansion in the shea butter industry. Mobile phone use impacts positively on both the income of shea processors and output of shea butter.

| Mahila | - | Expansion of shea | butter enterprise | | |
|--------|-------|-------------------|-------------------|--------------|-------|
| Mobile | phone | Strongly agree | Agree | Have no | Total |
| use | | | | Mobile phone | |
| Yes | | 176 | 17 | 0 | 193 |
| No | | 0 | 0 | 7 | 7 |
| Total | | 176 | 17 | 7 | 200 |

Table 7: Expansion of shea butter enterprise

Source: Field Survey, 2014.

The student t statistic was used to test the mean differences between the incomes before mobile phone adoption and after the mobile phone adoption. The same was done for output before and after mobile phone adoption. The analysis indicates that there is a significant difference between income and shea butter output in terms of before and after adopting mobile phone use. Table 8 below explains the results.

Table 8: Test of Mean Difference of Income and Output Before and After

| Description | | | Standard | t value | Significant |
|-------------|--------|-----|------------|---------|-------------|
| | Mean | Ν | deviations | | level |
| Income BA | GH¢110 | 193 | .64742 | -17.164 | |

| Income AA | GH¢250 | | .78026 | | 0.000*** | |
|--|-----------|-----|--------|---------|----------|--|
| Output BA | 75kilos | 193 | .32124 | -18.381 | | |
| Output AA | 115 kilos | | .62941 | | 0.000*** | |
| Source: Field Survey, 2014. BA(Before Adoption) AA(After Adoption) *** Significant at 1% | | | | | | |

The analysis on the relationship between mobile phone use and income revealed that, income levels of respondents who adopted mobile phone use registered a tremendous increase as compared to the time they did not use mobile phones. The processors had a mean income of Gh¢110 before mobile phone use and this increased to Gh¢250 after adoption and use of mobile phone technology. This shows that the adoption and use of mobile phones have a positive impact on the income levels of respondents implying that mobile phone use contributes to alleviating poverty among the women processors. The tests confirm the above response by the women who strongly agreed that mobile phones helped to increase incomes of respondents since mean income before adoption of mobile phone technology moved from Gh¢110 to Gh¢250 after adoption of mobile phone technology. The finding falls in line with the World Bank argument that companies in low and middle income countries that continually adopt innovation have higher sales and employment figures as compared to companies that have not (Schware, 2005). Also, the findings support the view that productivity that enhances agricultural innovation contributes to high incomes of farm households, poverty alleviation, and food security in developing countries (Nguezet et al, 2011).

The relationship between output and mobile phone use

The results revealed that before the adoption of mobile phone use, the mean output was 75 kilos of

shea butter and increased to 115 kilos after adoption of mobile phone technology. The result of the t test shows a significant difference in output after mobile phone adoption. The results can be interpreted to mean that mobile phone use has the potential to develop the shea processing industry and hence serve as a lucrative business for women in Northern Region of Ghana. It goes to confirm the previous assertion that mobile phone use brings about increase in output, which was strongly agreed by the respondents.

Challenges facing shea butter processors in mobile phone usage

The use of mobile phone in the transactions of shea butter processing faces a number of challenges (Table 9). The major challenge as explained by the shea butter processors is network failure. One hundred and eighty five (185) respondents representing 92% complained about poor network or network failure. This is followed by high illiteracy with one hundred and seventy six (176) respondents representing 88%, one hundred and twenty (120) respondents said high costs of airtime was one of the challenges that impeded their effective use of mobile phones in their processing business and the other challenge they claimed also impeded the use of mobile phone is high cost of mobile phones and the durability of the said mobile phone with about ninety two (92) respondents representing 46%. This is represented in Table9 below:

| ruble 31 Chantenges hading shear batter processors in Mobile phone asage | | |
|--|-----------|------------|
| Challenges | Frequency | Percentage |
| Network failure | 185 | 92 |
| Illiteracy | 176 | 88 |
| High cost of airtime | 120 | 60 |
| High cost of mobile phones | 92 | 46 |
| and the durability of such | | |
| phones | | |
| Source: Field Survey, 2014. | N=200 | |

 Table 9: Challenges facing shea butter processors in Mobile phone usage

Source: Field Survey, 2014.

Conclusion

The findings of this study show that there is a significant relationship between respondents' socioeconomic characteristics and their level of mobile phone use. Majority of the women are between the ages 30-49 years. More than half of the women processors in the two Districts of the Northern Region of Ghana have adopted mobile phone use in their business transactions Also, due to lack of formal education and training, some of the processors face a lot of challenges in the use of the mobile phones. The few processors, who had the privilege to have education, did not go beyond Basic Education, and so have difficulties in mobile phone usage. The marital status of respondents has a significant relationship with the use of mobile phone. Majority of the women processors are married and are committed to the business. The level of experience too, is an important factor influencing the mobile phone technology adoption. The number of years one stays in a business enterprise gives one the ability to adopt to new technologies.

The study's findings revealed that there is a positive relationship between mobile phone use and the growth of the shea butter micro enterprise. This implies that the small shea enterprise is able to increase access to raw materials like shea nuts, and is able to access quick markets for its products. Also mobile phones enable the small shea firm to increase output and income leading to increased growth.

The study again indicated that the dominant mobile phone services used by the women were MTN Ghana, Vodafone, Airtel Ghana and Tigo.

Finally, the study revealed that the women still faced a lot of challenges using mobile phones in their business transactions. Respondents identified challenges like network failure, high cost of air time and illiteracy, among others.

In order to improve the use of mobile phone technology for the shea butter processing women, factors such as network failure, high cost of airtime, illiteracy, high cost of mobile phones among others should be addressed. Training should be organized for the shea butter processing women on how to use the mobile phones in their business activities to enable them have access to information on production and marketing. And also come out with policies that would help regulate the cost of airtime and making their service effective and affordable. This should be done by the network service providers in collaboration with the various ministries concerned.

The various network service providers should improve on their networks in order to minimise the frequent network failures. Furthermore, promotional packages should be encouraged in order to make airtime economical for the shea butter processors. Non-Governmental Organisations (NGOs) like SEKAF Ghana limited, Savannah Fruit Company, and Japan International Cooperation Agency (JICA) among others that have interest in the shea butter business should come out with training packages that are geared towards creating awareness on the use of mobile phones in business transactions. NGOs like Pure Company Limited, SEKAF Ghana and Christian Mothers among others should provide the shea butter processing women with credit facilities in the form of loans or pre financing that will help increase their capital and make them able to buy airtime which seems to be costly.

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