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Critical Analysis of the Changing Phases of Microenterprises with the Use of Mobile Phones

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The author's students assist in collecting the data. Miss Olivia Atito and Mesly Tormeti helped in the analysis of data.

Abstract
The use of cell phones in the life of people generally has become a phenomenon and for that matter many people are seen with mobile phones almost everywhere they are. This practice does not exclude the Small and Medium Scale business operators. They see the use of cell-phones in the operations of their business as necessary simple ways of operating business, fitting, and beneficial. For this reason most possibly, they are encouraged to own more than one cell-phone and use them for many purposes. By observation and chatting with some of the micro-enterprise owners, the researcher becomes interested in finding the ways that cell-phones are used and the effects the usage have on the operations of businesses. Descriptive method of research was employed with a sample size of three hundred and sixty (360). Small and medium scale business owners were involved in the research. Questionnaires were administered to the participants sampled randomly. The data collected was analysed using SPSS with maximum consideration of the objectives set to achieve. The study found that all categories of small business operators use cell-phones in the operations of their businesses. They use the cell-phones in various areas of operations including calculating prices, ordering goods, and tracing the path of goods in transit among others. The participants claim that the use of cell-phone reduces production cost and necessitates the expansion of business. Based on the shortfall in the use of cell-phones in the operations of business by the micro-enterprise operators, cell-phone sellers in the country can organize education for their customers to enable the small scale business operators make other uses (especially access to internet) of the cell-phones other than the voice calls and SMS only.
Key Words: Small and Medium Scale Enterprises/Micro Enterprise, Mobile/Cell Phones, Growth, Operational areas, Marketing Activities

1.1 Background to the study

It is observed that the number of small scale and micro enterprises has been increasing every year in Ghana. Many young men and women are engaging themselves in the operations of different Small Scale Enterprises. Sole Trading organizations are the most liked ones in the Country. The steady growth of microenterprises that has been witnessed globally and their role as an engine of growth and poverty alleviation is undisputable (Pisani and Patrick, 2002). Many people are concerned with the steady and fast increasing number of microenterprises in the country. The growth of microenterprises is particularly important to developing countries where no other income generating options are available (Otero and Rhyne. 1994). This might be the reason for the littering of microenterprises all over the country. Government is also making frantic efforts to promote microenterprises in Ghana for many obvious reasons. Many people believe that the generally acceptable and sustainable way of reducing poverty in developing countries is to promote economic growth, through wealth and employment creation (development of the private sector).

Of late, with the increasing inflow of mobile phones into Ghana, the operations of these small and medium scale enterprises have taken different dimensions. The use of cell phones in marketing the products of the small and micro-enterprises and mobilization of resources is increasing and it may be seen to be contributing positively to the results of business operations of such organizations. It may be seen also that the marketing of the products of these enterprises as well as other activities including purchasing and provision of the other services are some of the areas where the cell phones are used. With the use of cell phones in the operations of these enterprises, it may be possible to establish closer relationship between the customers and the owners of the small scale enterprises as well as their suppliers and other stakeholders.

Many studies have been conducted on the use of mobile phones by SMEs both outside and within Ghana. However, most of these studies were conducted in the urban areas in Ghana even though small scale enterprises proliferate in the rural areas of Ghana. Above all, most of the studies were concentrated on the small scale farmers and not the artisans and the other equally important small and medium scale enterprises. A study conducted by Samuel *et al* (2005) in South Africa showed that small scale industries that used mobile phone have their profits increased. Similar results were ascertained in Tanzania and Egypt by Donnor, (2006). Jensen (2007) researched into the impact of the use of mobile phones on the fishing industries involving SMEs in India (Kerala District) and found out that mobile phone usage led to among other things reduction in the prices of fish across the markets and 8% increment in the profits of the fishermen. Similarly, Esselaar *et al* (2007) conducted a

survey in 14 African countries and found that entrepreneurs who have mobile phones use them more often for keeping in contact with customers and clients compared to any other form of communication. Boadi *et al*, (2008) carried out research on the impact of the usage of mobile phones by farmers and fishermen on their business and found that mobile or m-commerce facilitated cost reduction for farmers and fishermen and this usage enables them to deepen internal and external business relationships. Also, Muto and Yamano (2009) in a similar way conducted research on the impact of mobile phones usage on agricultural markets in Uganda, using a panel dataset on farm household between 2003 and 2005.They found that mobile phone usage was associated with a 10% increase in farmers' probability of market participation for bananas, than maize thereby suggesting that mobile phones are more useful for perishable crops.

This study critically identified some variables to be looked at and measured. The use of cell-phones by the SMS enterprise owners in the operations of their business activities may bring about reduction in costs (production and running costs), improvement in quality of information (types and nature of information), response to customers' requests could be fast and on time too. Prices will be expected to reduce and reduction in contact time as well as reduction in prices leading to increase in customer base and more profit will also be considered. The increase in customer base may come as the result of accurate and timely information provided leading to closer link established between their customers with the use of cell phones.

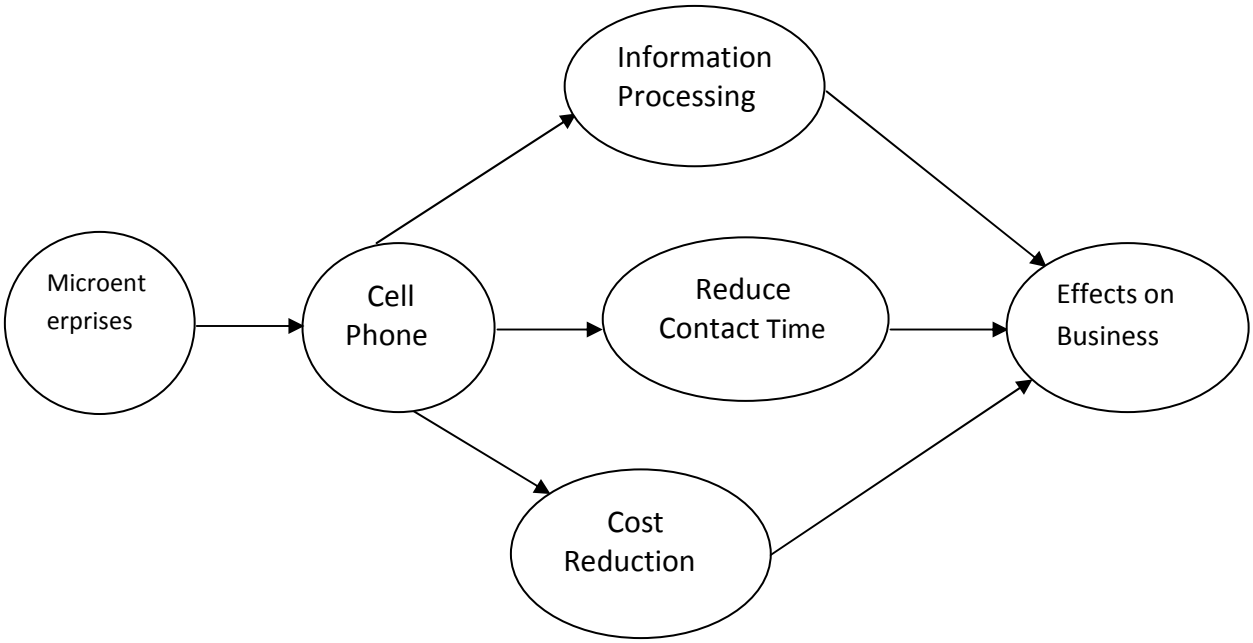

Figure 1: Returns associated with the use of mobile phones in SMEs

1.2 Problem statement

The use of mobile phones has become a necessity as many people are seen nowadays with either one or more handsets. The use of this device by the small and medium scale enterprise owners is also seen to be in the increase the world over. Many people observing the use of this technology would expect a massive growth or otherwise in this sector.

In spite of an increasing awareness in the research literature on the importance of mobile technologies for SMEs in the development context, there are few studies on mobile phones adoption, usage and their impact on the operations of SMEs in Ghana as well as in other developing countries. There is a need to explore more especially how their adoption and usage are improving the economic development and the extent to which mobile phones usage is practiced within SMEs (Bugeja, 2005). Even though for some years now that mobile phones are being used in this country, few changes have been observed in the way the small scale entrepreneurs go about the operations of their businesses. This observable fact has been known by many people. Expected growth in this sector has not been seen and it is worth taking a bold step in studying the usage of mobile phones and the various changes that have been noted to be brought to bear. This will enable people of similar interest to be aware of the results of the use of this new technology. Little is known of the impact of their usage on contemporary organizations and enterprises in Ghana and particularly in the hinter villages surrounding the Ho Municipality.

Most companies or enterprises in the Ho Municipality fall into the SMEs category and therefore may not fully go into the use of cell phones in promoting their marketing activities and hence, there is a need to find out whether the mobile phones usage has been adopted, and if the SMEs use it, to what extent has it been used, what

transformation does it bring about in the production and marketing processes of their business and in the large sense to economic development of SMEs in Ghana, just like other developing countries. The embracement of Information Communication Technology (ICT) in the operations of SMEs as the catalyst for development has only been seen in the much organized companies where competition has become keener.

1.3 Objectives of the study

The research is to explore the different areas of business operations where mobile phones are used in the operations of Small and Medium Scale Enterprises in the villages surrounding Ho (the Volta Region of Ghana) and the effects the usage have on the business organizations. In order to achieve this broad object, it is possible to:

- outline the possible operational areas cell-phones are used by operators of microenterprises
- Examine the components of cost that have changed as a result of using cell phones in the operations of Small and Medium Scale Enterprises.
- analyse major changes that have occurred in the marketing activities of the small and medium scale enterprises as a result of using mobiles phones

1.4 Literature review

Microenterprises are increasing in number in Ghana. Many people are becoming interested in operating microenterprises in order to create jobs and put money into their pockets and that of close relatives to enable them cater for themselves and their families. According to Mead and Leidholm (1994) as quoted by Jonathan Donner (2003), microenterprises are operated in developing countries purposely to support households and are critical part of their economies. Microenterprises are business set ups and operated by five (5) or fewer employees. These types of business enterprises are operated all over the country and they take different forms like trading stalls and retail stores operation, small scale manufacturing, transport service provision, tailoring and seamstressing services provision, small scale agro-processing, just to mention but a few. The degree of permanency, productivity, and formality varies considerably between microenterprises; some are indeed "entrepreneurial," growing firms with skilled owners and productive business models (Duncombe and Heeks, 2001). Majority of these enterprises are simply self-employed and are often struggling to get ongoing and will never grow their businesses into larger enterprises, (Mead and Leidholm, 1998). The growth or expansion of these enterprises is hardly seen in the country. This might be due to the fact that the gains in productivity, profitability, and even basic stability are of the utmost importance to the livelihoods of the households that are involved.

The first cellular phone service in Ghana was initiated by Mobitel in 1992 and about 19,000 Ghanaians owned mobile phones in that year. In 1998 the number of mobile phone users in the country increased to 43,000 and by the middle of 1999 the number increased to 68,000. The total cellar market penetration by September, 2003 stood at 702, 000. Telephone users in the country increased from 218,000 in the year, 2000 to three million (3,000,000) as at the end of the year 2005.

With the slow but steadily penetration of cell phones in the Ghanaian systems almost twenty years ago, many people regarded them as the surest means of keeping in close contact with relatives and friends. Based on this observation, people who had the cell phones at that time used them to communicate with friends and relatives and nothing else. In view of this, it is in place to say that mobile phones were initially regarded as an important technology for social network in Ghana. It is noted that mobile phones are now used by SME operators in diverse ways in the operations of their businesses in recent times and now the usage of mobile phones by the microenterprise operators for the operation of their businesses is on the increase.

Noting the increase in the use of mobile phones in this direction, some researchers conducted research in various ways to ascertain the effects of the use of mobile phones on the operations of SMEs. They consider variables like profitability, productivity, marketing, etc. Rayport & Jaworki (2002), Lyytinen (1991) concentrated on management aspect and found that small enterprises have problems managing their records effectively. Others, like Storey & Cressy, (1995) studied the environment and market share aspect of small scales enterprises and found that small scale enterprises usually have little control over their environment and have a small share of the market when mobile phones were not in use. Khattab (2009) pointed out that small scale enterprises in Sudan suffer from inadequate marketing and promotion techniques without the use of cell phones. Furthermore, many studies suggested that small and micro enterprises still avoid adopting advanced software applications, (Khan and Khan, 1992, Chen, 1993). This really encouraged the initiation of the study just to find more by critically examining the mode of winning customers, reducing costs, and keeping in touch with all concerned for their businesses, (SMEs) and the effects they have on revenue mobilization and profitability of the small and medium scale enterprises in the Volta Region particularly in the rural areas of the Region, and Ghana generally.

Contact time

Contact time in this research is defined to mean the time taken by the SME operators to interact with their stakeholders (customers, suppliers, government agents, etc.) for the purpose of discussing issues with them in relation to business operations. Before the introduction of mobile phones (ICT), this contact was made by

travelling on foot or by bicycles, cars, or any other means that was available at the time. This usually took quite a number of hours depending on the distance and the nature of the travelling means used. Also, at that time, availability of the means of transportation was inadequate; many people had to wait hours on end for public transport services. Now that mobile phones are very common and widely used, holding discussion with people is faster and done any time anywhere. It is assumed that this contact time is reduced because travelling long distances is rarely done nowadays because cell phones are now used for communication.

Cost reduction

Cost reduction is one of the most important strategies used by most managers if they want to remain in operation. If it is well and effectively done, it will enable the operators of businesses gain competitive advantage. Small scale entrepreneurs must also take good steps towards reducing their costs. It was observed by the researcher that SME owners in recent times did buy their materials and store them for future use but at the present time that cell phones are being used, this has changed; they frequently take delivery of materials from their suppliers exactly at the time they need them for use (just-in-time system) and many other operational activities are also seen taking place within the industry differently. Definitely, this means that management of inventory is no longer done by the small scale enterprise operators on many occasions. Warehousing activities are dismantled but shifted to the suppliers of these materials. With the practice of buying items as and when they are needed, cost will definitely be reduced. In this situation, part of carrying costs will be eliminated so also is the storage cost. According to Duncombe and Heeks (2002), telephone is the information-related technology that has done the most to reduce costs and increase income because it clearly substitutes for journeys and, in some cases for brokers, traders, and other business intermediaries. Low priced Short Message Systems (SMS) and inexpensive used handsets have also contributed to the reduced cost of products, (Beaubrum and Pierre 2001, Minges, 1999). The use of SMS contributes to reduction of running cost since short messages can be sent to customers informing them about the availability of the products and terms of buying the products. Also, suppliers can be reached by SMS for the purpose of business operations. According to Eggleston *et al,* (2002), addition of even a single phone in a village could reduce costly price uncertainty about both the crops the entrepreneurs had to sell and the foodstuffs the people wished to consume. According to Rashid A. T. & Elder L. (2009), ------- the poor always employ different strategies to reduce the cost of mobile phone usage – making a few outgoing calls, miss-calling or “beeping”. In Ghana here too, many people especially the poor, also make night calls especially, when the providers offer free night calls. Micro-entrepreneurs can equally make night calls for social networking in order to reserve the credit for business calls.

Information

Information is important for the operations of enterprises. Information is needed for many purposes. Availability of materials, needs of customers, buying behavior of customers, strategies of competitors and many other pieces of information are needed by micro-entrepreneurs for decision-making. Different processes and equipment can be used to access and obtain these different pieces of information. Receiving accurate and relevant pieces of information on time is also good for the operation of business. Phones also meet the priority information needs of this group of communication rather than processing of information (Duncombe and Heeks, 1999). Of all the ICT services, mobile telephones have increasingly become the dominant service which is accessed by many, (Frempong G, 2009). It appears that mobile phones are gradually becoming conventional primary ICT infrastructure for businesses particularly SMEs. Frempong and his team stated in their survey report that there is emerging empirical evidence about the use of mobile telephone by SMEs for their operations in Ghana. The use of mobile phones makes it possible for entrepreneurs to send and receive information directly from customers and/or suppliers. Receiving information on time, reduction of distortion in information, and asking for clarification of vital point are possible with the use of mobile phones. Information is power, and ICT allows far greater access to information, cutting through gender and status (Duncombe, 2007). Roldan and Wong (2008), explained that the importance of mobile phone to micro and small scale businesses lies in the fact that mobile phones serve as a productive tool, a gatherer and disseminator of information and a tool to create network opportunities.

Mostly, ‘SMEs operators use mobile phones in the marketing chain' (Frempong G, 2009). For instance in Bangladesh, farmers use mobile phones to monitor market prices of rice, vegetables and other farm produces, (Dholakia and Kshetri, 2002). Again, Dholakia and Kshetri (2002) reported that farmers in rural Cote d’Ivoire use mobile phones to track the hourly fluctuation of cocoa and coffee prices. Not only were prices of products checked, but also where prices were not attractive to suppliers, they make negotiations for better prices for their supplies (Frempong G, 2009). This shows that there is empirical evidence proving the fact that mobile phones are used to obtain information directly from the Small and Medium Scale Enterprises (SMEs) operators and other stakeholders in the sector. It is not only that but also information obtained with the use of mobile phones will be correct, accurate and reliable for decision making because the information comes direct from the right source.

Working with five-year time series data at three fish markets in coastal India, Jensen and his team found that "the adoption of mobile phones by fishermen and wholesalers was associated with a dramatic reduction in price dispersion, the complete elimination of waste, and near-perfect adherence to the Law of One Price (Jensen's 2007). However, available literatures on use of mobile phones by SMEs have not pointed out how the use of mobile phones can contribute to reducing price dispersion. According to Gough and Grezo (2005), artisans living in townships near Johannesburg in South Africa will not be able to acquire jobs without mobile telephone. Many artisans living near Johannesburg have displayed homemade signboards with their mobile numbers indicating the various services they can provide (Economics, 1999). According to Frempong *G.*, (2009), the experience is not only limited to South Africa, but across the African continent. In Ghana, it is commonplace to see homemade sign boards made by artisans with their mobile telephone numbers fixed on stem of trees and other strategic places advertising their trade, (Frempong G, 2009). Still on advertisement, Frempong again asserted that some SMEs use their mobile phones for SMS advertisement. However, SMEs operators complained about the high cost of SMS advertisement through the networks of telecommunication operators (Frempong G, 2009). For instance it cost GH¢1,500.00 to do SMS advertisement on Kasapa network (Frempong G, 2009). Some operators also receive cell phone calls from their customers when they call to make orders, check availability of stocks and make price negotiations among others before they physically present themselves for the transactions. Some customers argue that, due to the mobile nature of the usage of cell phone, it helps them to 'take their business with them' wherever they go. This re-emphasises the assertion that 'mobility may enable the rise of roaming businesses, just-in-time service and what is called the real time city, (Val Hooper, *et al* (2010).

Mobile phones are not only used to contact customers and suppliers but also to have contact with employees and management of SMEs. Dili Ojukwu (2006) showed that many small and microenterprises have made use of ICT to improve their internal communication and capture and manage its customers more effectively. Managers can give instructions to and direct employees wherever he or she is with the use of mobile phone. This really reduces delay in operating business.

1.5 Material and Methods

For the purpose of this study which is a case study to investigate in order to know how the use of mobile (cell) phones by SMEs operators in conducting their businesses and the possible outcomes and changes taking place in operating their enterprises, it was prudent to employ the descriptive research approach to establish basic assumptions. The choice of this design was based on its main characteristics.

Fraenkel & Wallen (1996) stated that descriptive essays are directed towards the determination of the nature of a situation, as it exists at the time of study. It involves the collection of accurate data for the purpose of determining the nature of the subject of study. For the above expressed nature of the descriptive method of research, it was employed in this research even though it may not be possible to establish cause and effect relationship. In addition, the investigator cannot deduce conclusively the cause of the phenomena or predict what the future phenomena will be.

The descriptive design would therefore enable the identification of the basic factor, which is the existing situation with respect to the use of mobile telecommunication equipment by SMEs in conducting business in the Volta Region of Ghana. The advantage of this type of design is that it follows specific procedures and makes possible interpretation of data collected. This is because it assigns numerical values to non-numerical characteristics of human behavior. More importantly, its findings can form the basis for generalisation about the phenomena under study because of its wide coverage and accurate description. Though descriptive survey is a pre-requisite for finding answers to questions, it is not in itself sufficiently comprehensive to provide answers.

The study is carried out in four districts (Kpetoe-Ziope, South Danyi, Ketu South, and North Tongu) all in the Volta Region of Ghana. The towns within which the small scale entrepreneurs were common, and selected for this study include, Adidome, and Juapong, in the North Tongu District, Kpetoe, and Ziope in the Kpetoe-Ziope District, Denu, Aflao, and Agbozume, in the Ketu South District, Peki, Kpeve, and Have in the South Danyi District. The major occupation of the people in these areas (towns) is farming. Some of the people engaged themselves in trading (selling farm products and different manufactured goods), handicrafts, provision of transport services, selling of fast food, and many others. Most of the farmers in these towns carry out farming on subsistence basis with very few of them farming for commercial purposes.

In all, three hundred and sixty questionnaires were administered personally to the sampled respondents. They were given a day to fill the questionnaires in and submit them to the researcher. This was done to avoid respondents having discussions of the questions among themselves before providing answers since some of them operate in the same area. Out of this number, three hundred and thirty questionnaires were retrieved and three hundred were fully completed by the respondents. Some of the questions in the thirty questionnaires were not answered and were therefore not analysed. This was done to ensure that the results of the study are reliable and show the exact situation on the ground.

The data collected was analysed using the Statistical Package for Social Sciences (SPSS) to determine the table and charts and Chi-Squares to show the relationship between the variable in order to draw conclusions. Data relating to each individual objective were analysed accordingly.

1.6 Results

Table 1: Usage of mobile phones for business operations

OCCUPATION	DO YOU USE MOBILE PHONE		
	Yes	No	Total
Trading	105	0	105
Seamstressing	60	0	60
Hairdressing	30	0	30
Carpentry	25	10	35
Farming	0	30	30
Manufacturing	0	25	25
Transportation	0	15	15
Total	**220**	**80**	**300**

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	263.474[a]	6	.000

Source: Field Survey Data2014

The study reveals that different kinds of the Small and Medium Scale business operators involved in the study include farmers, traders, seamstresses, hairdressers, carpenters, manufacturers, and transport service providers. This means that these small scale business operators are common in the study area.

Table 1, as shown above indicates that 220 Small Scale Business operators use mobile phones for operating their businesses while the remaining 80 of them do not use mobile phones in the operation of business. Those who use mobile phones in business operations, 105 of them are involved in petty trading, 60 of them are seamstresses, 30 are hairdressers, and 25 are carpenters. On the other hand, those who do not use cell phone in the operations of their business, 10 are carpenters, 30 are farmers, 25 are manufacturers, and 15 of them are transport service providers. The above data was tested using a Chi-Square Test with P - value of 0.00 and this falls below the significance level of 0.05 showing that the data was significant with the degree of freedom (df) of 6 and the Pearson Chi-Square value of 263.474[a]. The analysis shows that majority of the Small Scale Enterprise owners use Cell Phone in the operation of their business. This may be due to the fact that mobile or cell phones are affordable and convenient to the operations of the business.

Table 2a: Different ways or areas where Cell Phones are used in SMEs

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Pre trade activity	300	1.0633	0.24397	0.01409
During trade activities	300	1.0333	0.17981	0.01038
Post trade activities	300	1.0167	0.12823	0.00740
All trade activities	300	1.0267	0.16133	0.00932
Ordering goods from suppliers	300	1.1067	0.30920	0.01785
Informing customers about availability of goods	300	1.1000	0.30050	0.01735
Schedules delivery and staying in touch with suppliers	300	1.1667	0.37330	0.02155
Monitoring goods and price strategies	300	1.1400	0.34757	0.02007
Calculating the cost of purchases and sales	300	1.4767	0.50029	0.02888
Follow-up services	300	1.4000	0.49072	0.02833
Marketing/advertising of products	300	1.1200	0.32550	0.01879
Conducting interviews for prospective employees	300	1.7767	0.41718	0.02409

Source: Field Survey Data 2014

Table 2b: Different ways or areas where Cell Phones are used in SMEs

One-Sample Test

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Pre trade activity	-137.49	299	0	-1.9367	-1.9644	-1.9089
During trade activities	-189.45	299	0	-1.9667	-1.9871	-1.9462
Post trade activities	-267.89	299	0	-1.9833	-1.9979	-1.9688
All trade activities	-211.8	299	0	-1.9733	-1.9917	-1.955
Ordering goods from suppliers	-106.06	299	0	-1.8933	-1.9285	-1.8582
Informing customers about availability of goods	-109.51	299	0	-1.9	-1.9341	-1.8659
Schedules delivery and staying in touch with suppliers	-85.064	299	0	-1.8333	-1.8757	-1.7909
Monitoring goods and price strategies	-92.691	299	0	-1.86	-1.8995	-1.8205
Calculating the cost of purchases and sales	-52.739	299	0	-1.5233	-1.5802	-1.4665
Follow-up services	-56.474	299	0	-1.6	-1.6558	-1.5442
Marketing/advertising of products	-100.04	299	0	-1.88	-1.917	-1.843
Conducting interviews for prospective employees	-50.791	299	0	-1.2233	-1.2707	-1.1759

Source: Field Survey Data 2014

The two tables (Table 2a and Table 2b) above are used to show the various activities for which the Small and Medium Scale Entrepreneurs use the cell phones. Different purposes for which cell phones are used by the SME operators were identified and measured using One-Sample Statistics and One-Sample Test. One-Sample Test was used to test whether a sample mean (of a normally distributed interval variable) significantly differs from a hypothesized value. In the one-sample statistics, the Mean, Standard Deviation, and Standard Error Mean were calculated while the Mean Difference, t – value were calculated with degree of freedom (df) of 299 and this gave the Upper and Lower values with Confidence Level of 95%. All these calculations are shown in the tables above.

With the standard deviation of 0.24397 and a standard Error Mean of .01409 and the data with the One–Sample Test at a Test Value of 3, the *t* value obtained is -137.49 with the degree of freedom (df) stated above, the mean difference for the data is -1.9367 with 95% Confidence Interval of the difference, the Lower and Upper Confidence Interval are -1.9644 and -1.9089 respectively. The mean of the variable for this particular sample is 1.0633, which is statistically and significantly different from the test value of 3. This shows that the use of cell phone for pre-trade activities has a significantly lower mean on the One-Sample Test than 3 hence it is true that mobile phones are used during pre trade activities.

Also, from the above test, the mean score is 1.0333, standard deviation is 0.17981 and a Standard Error Mean is .01038. Testing this data with the One–Sample Test at a Test Value of 3, the *t* value obtained is -189.45 with the degree of freedom (df) of 299. The mean difference for the data is -1.9667 with 95% Confidence Interval of the difference obtained for the Upper and Lower Confidence Interval are -1.9871 and -1.9462 respectively. Using the One-Sample Test to test whether a sample mean significantly differs from a hypothesized value, the variable for this particular sample is 1.0333, which is statistically and significantly different from the test value of 3. It is therefore noted that trade activities has a significantly lower mean on the One-Sample Test than 3 hence it is true that mobile phones are used during trade activities.

Moreover, from the test shown in the above tables, the Mean score is 1.0167, Standard Deviation is 0.12823 and a Standard Error Mean is .000740. When this data was tested with the One–Sample Test at a Test Value of 3, the *t* value obtained is -267.89 with the degree of freedom (df) of 299. The mean difference for the data is -1.9833 with 95% Confidence Interval. The Lower and Upper confidence interval is -1.9979 and -1.9688 respectively. The One-Sample Test shows that the mean of the variable for this particular sample is 1.0167, which is statistically and significantly different from the test value of 3. It is therefore clear that the usage of cell phone for post-trade activities has a significant lower mean than the One-Sample Test of 3 and hence, it is true that mobile phones are used during post-trade activities.

Also, from the above, testing to show whether mobile phones are used during all trade activities, the mean score is 1.0267, standard deviation is 0.16133 and a Standard Error Mean is .00932. When this data was tested with the One–Sample Test at a Test Value of 3, the *t* value obtained is -211.80 with the degree of freedom (df) of 299.

The mean difference for the data is -1.9733 with 95% Confidence Interval of the difference. The Lower and Upper Confidence Intervals are -1.9917 and -1.955 respectively. This means that using the One-Sample Test to test whether a sample mean significantly differs from a hypothesized value, the mean of the variable for this particular sample is 1.0267, which is statistically different from the test value of 3 significantly. As shown in Tables 2a and 2b above, the usage of cell phone for 'all trade activities' has a significantly lower mean on the One-Sample Test than 3 hence it is true that mobile phones are used for all trade activities.

Again, from the Table 2a and 2b above, for 'whether mobile phones are used to order goods from suppliers', the test statistics shows a Mean score of 1.1067, Standard Deviation of 0.30920 and a Standard Error Mean of .01785. When this data was tested with the One – Sample Test at a Test Value of 3, the *t* value obtained is -106.06 with the degree of freedom (df) of 299. The mean difference for the data is -1.8933 based on 95% Confidence Interval of the difference, the Lower and Upper Confidence Intervals are -1.9285 and -1.8582 respectively. Having used the One-Sample Test to test whether a sample mean significantly differs from a hypothesized value, the mean of the variable for this particular sample is 1.1067, which is statistically and significantly different from the test value of 3. It can therefore be said that ordering goods from suppliers has a significantly lower mean than the One-Sample Test value of 3 and hence it is true that mobile phones are used to order goods from suppliers.

Similarly, it can be seen from Table 2a and 2b that test statistics has a Mean score of 1.1000, Standard Deviation of 0.30050 and a Standard Error Mean of .01735 for 'whether mobile phones are used to inform customers about the availability of goods'. Testing this data with the One – Sample Test at a Test Value of 3, the *t* value obtained is -109.51. The Mean Difference for the data is -1.9 with 95% Confidence Interval of the difference giving the Lower and Upper Confidence Intervals of -1.9341 and -1.8659 respectively. Using the One-Sample Test to test whether a sample mean (of a normally distributed interval variable) significantly differs from a hypothesized value, the mean of the variable for this particular sample is 1.1000, which is significantly different from the test value of 3, and the mean is significantly lower than the One-Sample Test value of 3 hence it is true that mobile phones are used to inform customers about availability of goods.

And also, the test statistics has a Mean score of 1.1667, Standard Deviation of 0.37330 and a Standard Error Mean of .02155 and when this data was tested with the One–Sample Test at a Test Value of 3, the *t* value obtained is -85.064 with the degree of freedom (df) of 299. The mean difference for the data is -1.8333 with 95% Confidence Interval of the Difference. The Lower and Upper Confidence Intervals are -1.8757 and -1.7909 respectively. This is clear that, the mean of the variable for this particular sample is 1.1667 as shown by the test, which is statistically and significantly different from the test value of 3. The fact is that, the test shows that the mean is significantly lower than the Test Value of 3 as shown on the One-Sample Test and hence it is true that mobile phones are used to schedule delivery and staying in touch with suppliers.

The test statistics has a mean score of 1.1400, standard deviation of 0.34757 and Standard Error Mean of .02007 and having tested the data with the One–Sample Test at a Test Value of 3, the *t* value obtained is -92.691 with the degree of freedom (df) of 299. The mean difference for the data is -1.86 with 95% Confidence Interval of the difference. The Lower and Upper confidence intervals are -1.8995 and -1.8205 respectively. By using One-Sample Test to test whether a sample mean (of a normally distributed interval variable) significantly differs from a hypothesized value, the mean of the variable for this particular sample is 1.1400, which is statistically and significantly different from the test value of 3. It therefore shows that mobile phones are used by the Small Scale business operators to monitor movement of goods and checking prices.

The mean and standard deviation of the test statistics are 1.4767 and 0.50029 respectively resulting into a Standard Error Mean of .02888 for whether mobile phones are used to calculate the cost of purchases and sales. Testing this data with the One–Sample Test at a Test Value of 3, the *t* value obtained is -52.739 with the degree of freedom (df) of 299. The mean difference for the data obtained is -1.5233 with 95% Confidence Interval of the difference showing the Lower and Upper Confidence intervals of -1.5802 and -1.4665 respectively. Having used One-Sample Test to test whether a sample mean (of a normally distributed interval variable) significantly differs from a hypothesized value, the mean of the variable for this particular sample is 1.4767, which is statistically and significantly lower than the test value of 3. This implies that the participants use cell phones to calculate the cost of.

However, the test statistics shows a mean and standard deviation scores of 1.4000 and 0.49072 respectively and a Standard Error Mean of .02833 was obtained for whether mobile phones are used when conducting follow-up services. Testing this data with the One–Sample Test at a Test Value of 3, the *t* value obtained is -56.474 with the degree of freedom (df) of 299. The mean difference for the data is -1.6 with 95% Confidence Interval of the difference. The Lower and Upper confidence interval is -1.6558 and -1.5442 respectively. Using One-Sample Test to test whether a sample mean significantly differs from a hypothesized value, the mean of the variable for this particular sample is 1.4000, which is statistically and significantly different from the test value of 3. Conducting follow-up on services has a significantly lower mean on the One-Sample Test than 3. It is therefore true that mobile phones are used when conducting a follow-up on services.

Again, the mean score of 1.1200 produced standard deviation of 0.32550 and a Standard Error Mean of .01879. When this data was tested with the One – Sample Test at a Test Value of 3, the *t* value obtained is -100.474 with the degree of freedom (df) of 299. The mean difference for the data is -1.88 with 95% Confidence Interval of the difference. The Lower and Upper confidence interval is -1.917 and -1.843 respectively. Testing this data to find if the sample mean significantly differs from a hypothesized value, the mean of the variable for this particular sample is 1.1200, which is statistically different from the test value of 3. It is therefore clear that cell phones are used to market/advertise products because the mean value is significantly lower than the One-Sample Test than 3.

Finally, the mean of the test statistics is 1.7767, standard deviation is 0.41718 and a Standard Error Mean of is 0.02409. When this data was tested with the One – Sample Test at a Test Value of 3, the *t* value obtained is -50.791 with the degree of freedom (df) of 299. The mean difference for the data is -1.2233 with 95% Confidence Interval of the difference. The Lower and Upper confidence interval is -1.2707 and -1.1759 respectively. Using One-Sample Test whether a sample mean significantly differs from a hypothesized value, the mean of the variable for this particular sample is 1.7767, which is statistically and significantly different from the test value of 3 and the mean value is significantly lower than the One-Sample Test of 3 and hence it is true that mobile phones are used in conducting interviews for prospective employees small scale entrepreneurs.

Table 3: Use of Cell Phone in different ways and its effects on cost

	Mean	Std. Deviation	Increased cost		Decreased cost	
			Frequency	Percent	Frequency	Percent
Ordering goods from suppliers	1.547	.4987	136	45.30%	164	54.7%
Information processing and communication	1.4267	.49542	172	57.30%	128	42.7%
Interaction between suppliers and customers	1.593	.4920	122	40.70%	178	59.3%
Product delivery to customers	1.3733	.48450	188	62.7%	112	37.3%
Usage of phone exclusively for operations of business	1.666	.4722	100	33.3%	200	66.7%
Production of goods and services	1.600	.4907	120	40%	180	60%
Follow up services	1.533	.4997	140	46.7%	160	53.3%
cost of transportation	1.966	.1798	10	3.3%	290	96.7%
The risk or loss of goods in transit	1.650	.4777	105	35%	195	65%
Reduced the handling of physical cash Resulting into loss of money due to the introduction of mobile cash	1.950	.2183	15	5%	285	95%
Reduced the risk associated with travelling	1.983	.1282	5	1.7%	295	98.3%

Source: Field Survey Data 2014

There are different effects of the use of Cell Phone on the operations of business. The effects of the usage of Cell Phone on components of cost are analysed and shown in the table above. The table above showed the mean standard deviation, frequencies and percentages for the various cost components and their effects separately. Considering the mean value of 1.547 and standard deviation of 0.4987 for the ordering of goods from suppliers, the cost associated with it decreased. This may be possible because with the use of Cell Phones, some cost components such as transportation has been sacrificed thus reducing cost. On the other hand, information processing and communication cost increased as per the mean and standard deviation of 1.4267, and 0.49542 respectively because majority of the participants indicated so, but the minority of the respondents said that information processing and communication cost decreased with the use of cell phone. This may mean that those who said that this cost does not increase could be those who do not use the cell phone exclusively for business purposes and for that matter were not able to notice any decrease in cost.

Also, the majority of the participants 178 (59.3%) said that the cost of using cell phone to have interaction between the enterprise and the customers and suppliers made the cost to decrease while the minority 122 (40.7%) confirm that the cost increased.

Moreover, with the mean and standard deviation of 1.3733 and 0.48450 respectively, 188 (62.7%) of the respondents confirmed that using cell phone to carry out activities in connection with delivering goods to customers results into increase in the cost of operating business but the 112 (37.3%) minority said otherwise; that is their production cost decreased when they use the mobile in the process of delivering the goods to their customers.

Also, with the mean value of 1.6666 and standard deviation of 0.4722, 100 (33.3%) of the participants admit that the use of cell phone exclusively for business operations has increased operation cost, while 200 (66.7%) of them has confirmed that cost has decreased for the same purpose. This means that majority has seen reduction in cost of production when they use the cell phone exclusively for the operations of business transactions.

Considering the mean value of 1.600 and standard deviation of 0.4907, 120 respondents representing 40% affirm the fact that the use of cell phone brings about increase in cost of production, while 180 participants representing 60% said that with the use of cell phone in the operation of business, cost of production has decreased. Here, majority confirm that cost of production reduced when they use cell phone.

To add to this, with a mean of 1.533 and a standard deviation of 0.4997, 140 of the participants representing 46.7% admit that the use of mobile phone for follow-up services has increased cost of production while 160 of the respondents representing 53.3% confirm that it decreased cost of production. This means that, majority of respondents noticed that mobile phone usage in the follow up for serving customers has decreased cost of production.

On the other hand, with a mean of 1.966 and a standard deviation of 0.1798, 10 (3.3%) respondents are of the view that the use of mobile phone in business has increased the cost of transportation while 290 (96.7%) respondents admit that mobile phone usage has decreased the cost of transportation due to regular correspondence with suppliers and customers. This means that majority of respondents believe that mobile phone usage has decreased the cost of transportation due to fast and regular correspondence with suppliers and customers.

Also, with a mean of 1.650 and a standard deviation of 0.4777, 105 (35%) respondents are of the view that the use of mobile phone in business has increased the risk or loss of goods in transit while 195 (65%) respondents admit that it has decreased the risk or loss of goods in transit. This means that majority of respondents believe that mobile phone usage has decreased the risk or loss of goods in transit.

Moreover, with a mean of 1.950 and a standard deviation of 0.218, 15 (5%) respondents are of the view that mobile phone usage has increased the handling of physical cash while 285 (95%) respondents admit that mobile phone usage has decreased the handling of physical cash. This situation really reduced the risks associating with losing money especially when large volume of cash has to be carried along. That is, majority of the respondents believe that mobile phone usage has decreased the handling of physical cash.

Finally, with a mean of 1.983 and a standard deviation of 0.1282, 5 (1.7%) respondents are of the view that mobile phone usage has increased the risk associated with travelling while 295 (98.3%) respondents admit that mobile phone usage has decreased the risk associated with travelling from place to place to transact business. That is, majority of respondents believe that they do not travel too much again because of the use of cell phone and this brings about decrease in the risk associated with travelling.

Table 4: Changes in business with the use of mobile phones

		Have you experienced an expansion or improvement in business		Total
		Yes	No	
How many do you make contact with in a week	1-10	204	0	204
	11-30	68	5	73
	31-50	0	20	20
	50-100	0	3	3
Total		272	28	**300**

Source: Field Survey Data 2014

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	244.961[a]	3	.000

Source: Field Survey Data 2014

Having examined the operational areas for which cell phones are used and the different effects they have on the production cost and other components of cost, it is necessary to establish the nature of effect these have on the Small and Medium Scale Enterprises. Table 4 just above shows the analysis in relation to the effects the use of cell phone have on the enterprises. It can be seen from Table 4 that 204 respondents make contact with 1 to10 business partners in a week. 73 respondents make contact with 11 to 30 business partners in a week, while 20 respondents make contact with 31 to 50 business partners in a week and 3 respondents make contact with 50-100 business partners in a week. However, all respondents who make contact with 1-10 business partners in a week have experienced an improvement in business as a result of using mobile phones. Also, out of the respondents who make contact with 11 to 30 business partners in a week, 68 have experienced an improvement in business while 5 do not. All the 28 respondents who do not make contact with their business partners have not experienced any improvement in their business operations. This means that they do not use cell phone in the

operation, of their businesses. The data was tested using a Chi-Square Test with a P-value of 0.00 which falls below the significance level of 0.05 hence the data was significant with the degree of freedom, (df) 3 and the Pearson Chi-Square value of 244.961[a]. This means that, majority of the respondents have experienced an improvement in business as a result of using mobile phone for carrying out business transactions. However, respondents agree that using mobile phones for transacting business has saved time, reduced cost and facilitated a closer relationship with customers.

1.7 Conclusion

The researcher involved three hundred (300) Small and Medium Scale business operators in the study. These participants are involved in different areas of operations – farming, petty trading, seam-stressing, carpentry, transportation service, and manufacturing. Majority of these operators are petty traders and a very large number of these operators use cell phone in the operation of their various business transactions. The usage of cell phones is categorized and their effects on the business are also examined.

The study outlined the possible operational areas where the small scale operators use the cell phone. The cell phones are used by small and medium scale enterprise owners in carrying out pre-trade activities, trading activities including ordering of goods, informing customers about availability of goods and services, scheduling delivery of goods, setting prices for goods and services, calculating the price of goods and services, carrying out after sales services, advertising goods and services, and conducting interviews for employees or apprentices. The small scale enterprise owners feel happy in using cell phone in their workshops, stores and any where they carry out their business transactions. The employees also have cell phones in the organizations and whenever any employee leaves the work premises his or her supervisor calls him or her to find out his or her whereabouts. In fact it is established that the use of cell phone by the Small and Medium Scale enterprise operators has become a common phenomenon and they all carry the cell phone any where they go and use them anywhere they find themselves. This gives them the opportunity to carry any form of business operation any time and at any place. The usage of cell phone in this manner can be described as continuous business operations situations. The main use of cell phone is the voice call. Many operators use the voice call because it reduces time used in communication and also most of them do not have higher education and for that reason they find it a bit difficult to compose correct sentences when using Short Message Systems (SMS).

Secondly, the study examines the components of cost that have been affected when cell phones are used in the operational areas of business. Two main effects are identified by the study. These effects include reduction and increase in cost of production. Evidence obtained from the field data collected and analysed showed that when the cell phones are used in ordering of goods from the suppliers, the ordering cost decreased considerably. This is possible because other cost associated with ordering of goods and services have been eliminated as result of using cell phones. Cost of moving human beings from place to place is reduced. Human beings no longer move from place to place to communicate with others; instead they use cell phones to make enquiries and hold discussions with their stakeholders. The study shows that cost increases in two main areas with the used of cell phones. These areas are the usage of cell phones in the processing of information and communication of information to the stakeholders, and the delivery of goods to customers. However, cost reduces in many other areas where cell phones are used. The areas where cost reduces are general interaction between customers and suppliers, exclusive usage for cell phones for business operations, production of goods and services, follow up services, risk or loss of good in transit, reduction in handling of physical cash resulting in loss of money, and risks relating to travelling from place to place. The study clearly shows that reduction in the cost of production based on the use of cell phone in the operations of business by the small and medium scale business operators is real and beneficial to them because organizations aim at maximizing profit. To achieve target of profit maximization, and control the entry of competitors into the market, one of the focus is cost reduction. In this respect the reduction in cost achieved by these groups of business operators can lead to increase in profit if all things are possibly equal.

In the third and final place, the study analyses the major changes that have occurred in the marketing activities of the small and medium scale enterprises as a result of using mobiles phones. This analysis shows that there is massive expansion or improvement in the operations of business. This is possible because the reduction in the cost of operating business has definitely brought about growth in businesses by diversification of operations possibly adding more product line or investing in other business areas. There is possibility of increasing capital by reinvesting profit made and opening more branches in other parts of the country.

1.8 Recommendation

With critical consideration of the findings from the study, many people are using cell phones in these days and it is possible that the number of cell phone users will increase in the future. The cell dealers can organize education for the people to enable them know other uses they can make of the cell phones; for example, accessing the internet to enable them get necessary information from the net, which will help them operate their business effectively.

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