

# **MOBILE PHONES USAGE IN MICRO ENTERPRISE IN TANZANIA AND ITS IMPACT ON THEIR PERFORMANCE A CASE OF MICRO ENTERPRISES IN MOSHI MUNICIPALITY, TANZANIA**

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## **Abstract**

*This study examines the mobile phone usage and its impact on micro enterprise performance in Tanzania. The study was conducted at Moshi Municipality, Kilimanjaro Region, Tanzania. A descriptive research design was employed whereby a total of 70 micro entrepreneurs who are belonging to any of the following categories: secondhand clothing, shoes and handbags, food vendors and saloon owners were randomly selected. Questionnaire and interview techniques were used as research tools in gathering quantitative and qualitative data. Quantitative data derived from closed ended questionnaires were analyzed into percentages while qualitative analysis was done through content analysis to identify, examine, interpret the pattern and themes from the interview and open ended questionnaires. Findings show that mobile phone services contribute positively to micro enterprises business performance. 87% of the respondents used mobile phones services mainly for business purposes. Furthermore, findings revealed that the more the use of mobile phone services by micro entrepreneurs the more the business successes. However the study shows low perceived problems of using mobile phones were encountered by micro entrepreneurs. The study recommends that there is a need to have an awareness campaign on the uses of mobile phones in business activities at grassroots level.*

*Keywords: Informal Business, Micro Entrepreneurs, Small and Medium Enterprises (SMEs), Mobile phone services, Network provider, Firm's performance.*

## INTRODUCTION

In recent years, there has been a rapid growth of mobile phone networks in developing countries. Most of the countries in the developing world have skipped fixed-line infrastructure and leapfrogged directly into mobile technology. At the beginning of the twenty-first century, the average number of mobile phones per 100 inhabitants in Asia, Africa and Latin America and the Caribbean (LAC) has risen by 100-400% in a span of just five years (Orbicom, 2007). In 1995, there were more phone lines in Manhattan than in all of Sub Saharan Africa. Now almost one in five Africans owns a phone. While developing countries are still lagging behind high-income countries in overall Information and Communication Technology (ICT) usage and applications, the mobile phone usage has been regarded as a more accessible and less expensive means to close the digital divide (Wade 2004). Throughout the developing world, millions of people are purchasing mobiles. World Bank Global ICT Department (2005) revealed that, eighty percent (80%) of the world's population lives within range of a mobile or cellular network.

In Tanzania, there is a significant growth in the use of mobile phones in the last few years. The number of mobile subscribers increased from 126,646 in 2000 to 17.8 million in March 2010 (Tanzania Communications Regulatory Authority, 2010 cited by Lwoga, 2010). The data obtained from the Tanzania Communications Regulatory Authority (TCRA) show that, at the end of 2013, the number of mobile phones users/subscribers in Tanzania has stood up to 27,442,823. Nevertheless, ownership and usage of mobile phones seem to be more prevalent compared to the internet and computer. The URT (2012) survey found out that about 59% of small business owners owned a mobile phone. The percentage was much higher in Dar es Salaam (77.8%) and other urban areas (70.9%), but much lower in rural areas (47.2%).

It has been observed that, mobile technology has both advantages and disadvantages in the performance of Small and Medium Enterprises (SMEs). It was considered advantageous because it provided an SME with a low cost base and yet simplifying the ability to communicate with suppliers and customers very easily. According to Roldan and Wong (2008) the importance of mobile phones to micro and small scale business lies in the fact that a mobile phone serves as a productive tool, a gatherer and disseminator of information and a tool to create network opportunities. Similarly, they added that mobile phones provide productive services for business owners when they use them to transact business in the form of completing an order or a bid for a stock phones help to save precious time. The role of mobile phone as a gatherer and disseminator of information is also explained by the authors that, it removes economic boundary which enables the user to reach business partners or customers. Again, mobile phones help to create network opportunities for business owners because of the encounter one is likely to have when using phones (Jensen, 2007). Furthermore, Rabayah and Qalalwi, (2011) noted that

mobile phones can help achieve better prices for services and decrease price dispersion. Besides, the study conducted by Hadingham *et al* (2005) highlights the importance of mobile phones to micro-enterprises in South Africa, Tanzania, and Egypt whereby, approximately 60% of the micro entrepreneurs surveyed in each country reported that the mobile had increased the growth probability of the business. The reduction in communication costs associated with mobile phones has tangible economic benefits, improving agricultural and labour market efficiency and producer and consumer welfare in specific circumstances and countries (Jensen, 2007; Aker, 2008; Aker, 2010; Klonner & Nolen, 2008). Contrarily, it was also cited as a disadvantage because of its limited functionality in terms of its ability to develop as an SME develops. With the existing technology, it was said that mobile phones cannot be used to track inventory, provide cash flow and income statements, or even more basically, produce formal letters, marketing campaigns or brochures (Jensen, 2007; Aker, 2008; Aker, 2010; Klonner & Nolen, 2008).

### **Statement of the Problem**

Tanzania like other developing countries has embraced ICT in firms as the catalyst for development (Kijo, 2004). The ICT is an umbrella term for communication devices and applications, such as print media, radio, television, mobile phone, computer hardware, computer software and network systems. The relevant ICT for Micro and Small Enterprises (MSEs) in the informal sector is the mobile phone (Litondo, 2010). The interesting thing about the mobile phone as a popular ICT is that, it is used by both the poor and the rich. While ICT has become more affordable in recent years, and the informal sector has employed ICT as a means to conduct business, the gap in the use of these devices is still great. Micro entrepreneurs of different categories have different capabilities and challenges in the implementation of ICT, including mobile phones. Thus, this study attempts to examine the mobile phone usage to micro enterprise performance with a particular focus on the extent to which mobile phones are used in daily business operations. The study was conducted in Moshi Municipality, Kilimanjaro, Tanzania.

### **Research Objectives**

The primary objective is to examine the mobile phone usage to micro enterprise performance.

Specific Objectives are:

- i. Determine the extent usage of mobile phones amongst micro entrepreneurs in Moshi Municipality.
- ii. To assess the impact of mobile phone usage by micro entrepreneurs in their business performance.

## Research Questions

- i. To what extent do micro entrepreneurs owning and use mobile phones services?
- ii. How does the usage of mobile phones by micro-entrepreneurs impact their business performance?

## LITERATURE REVIEW

ICTs have been identified as being critical to development and socio-economic growth. Similarly, it has been viewed as having the potential to improve the productivity of small and informal businesses. It is contended that ICTs enable informal businesses to save money, compare prices, respond to customers at a faster rate, cut travel time and cost and find and acquire new customers (Donner, 2007). Several studies have identified ICTs as one of the key tools to support the success of a business (APF, 2008; Kramer et al., 2007; Kodakanchi et al., 2006). The use of advanced ICT devices allow a business to communicate more efficiently with suppliers, customers and business partners, thus improving their competitive advantage in the industry, facilitating market research and improving information access (Inmyxai & Takahashi, 2010).

Mobile data technologies are wireless technologies which are built in mobile devices and provide data connection between mobile devices and other devices or networks. The impact of mobile devices in MSEs results from the mobile device functions and mobile data. Mobile data technologies can improve commerce as they are not limited by place and time. Mobile data technologies which “marries” mobile phones and commerce technologies is seen as eliminating time and distance as barriers for regional businesses in their adoption of these technologies” (Van Akkeren & Harker, 2002).

Esselaar *et al* (2007), in a study that focused on ICT usage among SMEs, showed that, the mobile phone usage was the most important ICT to informal businesses across African countries. Mobile phones are important for development in poor countries because of their ability to bypass the infrastructure barriers in remote or rural areas in Africa. Further, the rapid advancements in technologies and the ease of usage in addition to falling prices of mobile handsets, present the mobile phone as an appropriate and adaptable tool to bridge the digital divide. McCoy and Smith (2007) argue that businessmen in developing countries are welcoming mobile phones as life changing devices.

There have been some empirical studies to confirm the benefits associated with mobile phones. Jensen (2007) studied the impact of mobile phones on the fishing industry in the Indian District of Kerala, and observed mobile phone coverage led to among others, a reduction in the dispersion of fish prices across markets and 8% increment in fishermen's profits. Samuel et al.

(2005) found that about 60% of micro entrepreneurs from South Africa, Tanzania and Egypt reported of an increased in the profitability of the business as a result of mobile phone usage. A study conducted by Jagun *et al* (2008) on the impact of mobile telephony on the development of micro-enterprises in Nigeria found that mobile phones assist in reducing information failures that impact on investment decisions and business activities in developing countries. The study demonstrated that mobile telephony contributed towards the efficient running of markets like the cloth-weaving sector in Nigeria, and showed that increases in mobile penetration have a positive impact on investment in the clothes and weaving sector. More so, Esselaar *et al.* (2007) carried out a survey in 14 African countries and found that entrepreneurs who used mobile phones more often, were able to keep in contact with customers and clients compared to any other form of communication.

In Ghana, Boadi *et al* (2008) studied the impact of mobile use on farmers and fishermen and found that mobile or m-commerce facilitated cost reduction for farmers and fishermen, and offered them opportunities for deepening internal and external business relationships. Muto and Yamano (2009) similarly estimated the impact of mobile phones on agricultural markets in Uganda. Using a panel dataset on farm households between 2003 and 2005, they found that mobile phone coverage is associated with a 10 percent increase in farmers' probability of market participation for bananas, than maize, thereby suggesting that mobile phones are more useful for perishable crops (Aker & Mbiti, 2010). In Kenya the introduction of mobile phone banking services such as M-Pesa provide a platform whereby the mobile phone assists operators in the informal sector to complete simple financial transactions since many poor people in Kenya possess mobile phones (Mwaura, 2009). Molony's (2007) study investigated how the mobile phone was being integrated into Tanzania's business culture. It explored the changes brought about in entrepreneurs' business practices and the importance of trust in relation to new forms of communication enabled by the use of ICTs. The study concluded that trust is associated with social capital ("the social aspects of economic activities that boils down to who you know") and plays a critical role in the use of ICT among micro and small businesses.

## **METHODOLOGY**

Survey design was employed in this study. The study was conducted at Memorial market, Mbuyuni market, Moshi Cooperative University (MoCU) and Double Road Street in Moshi Municipality, Tanzania. The study areas were purposively selected based on the fact that areas appear to have a large number of micro entrepreneurs that would assist in this study.

With no official data on the number of micro entrepreneurs in the selected areas, the study selected a total of 70 micro entrepreneurs irrespective of whether the entrepreneur owned

mobile phones or not but who are belonging to any of the following categories: second hand clothes, shoes and handbags, retailers and small restaurant owners (food vendors) and saloon owners.

Questionnaire and interview were used as research tools in gathering quantitative and qualitative data. Quantitative and qualitative methods were as well used in the data analysis. Quantitative analysis involved the use of percentages derived from closed ended questionnaires while qualitative analysis was done through content analysis to identify, examine, interpret the pattern and themes of interview and open ended questionnaires.

## **ANALYSIS AND FINDINGS**

### **Background Information of Respondents**

The demographic characteristics that were considered for this study are gender, age, level of education and type of micro enterprise and years in operating businesses. It was established that 46% of the respondents were male while 54% were female. This implies that, majority of the respondents who were business owners were females. In relation to age it was established that majority of the respondents (48.6%) were aged between 23-36 years. This was followed by those between 37-45years and 16-22 years (23.3 and 14.8 %). Those between 46-55 years followed with 55 years plus formed 9.7% and 3.6 respectively. These findings show that the majority of micro entrepreneur were young and energetic. The use of mobile telephones requires some level of education or literacy. In the survey, the study found out 83% had some kind of formal education, 17 (34%) of respondents had primary school education and 25 (49%) had secondary or technical education while the rest (17%) were degree holders. With respect to the registration status of the businesses, majority 61% (31) of the businesses are not registered, they operate informally. Further, the study revealed that, majority of 66% of the respondents were dealing with second-hand clothes, shoes and handbag businesses, followed by 23% respondents who were in the retail business and small restaurant shops (*food vendors*) whereas 21% were in saloon. It was further found that, 79% of the respondents have been in business operations between 1 – 5 years whereas only 21% having exceeded 5 years of business operations. The study revealed that 12% had more than one type of business while 88% were concentrating on a single business.

### **Usage of Mobile Phones by Micro Entrepreneurs**

Unlike in a formal discussion, this study sought to understand the ownership of mobile phones among the sample, it was found that 97.3% of respondents owned mobile telephones, with only 2.7% who did not have. This indicates that currently a mobile phone is a tool used by almost

everyone in the society. In addition to that, the study revealed that 69.4% of the respondents used one mobile phone while 19.6% used more than one. The few who had more than one mobile phone were subscribing to more than one network provider they commented that, the main reason they had done so was to avoid the poor services received from the network providers.

Further, this study needs to understand the extent use of mobile phone by micro entrepreneurs for business activities. From the interview conducted with micro entrepreneurs, the identified the major uses of mobile phones including making voice calls services, Short Messages Services (SMS), mobile money services and calculator. Further 87% of the respondents narrated that voice calls services were regularly used as a medium of communication with their customers and suppliers. However, the respondents were able to indicate the level of voice calls they made. This study revealed that 18% of micro entrepreneurs made more than 10 voice calls in a day followed by 23% who made voice calls between 4-8 daily, while the remaining 59% made business calls between 1-3 daily. Respondents contend that voice calls give immediate response and takes little time to make it compared to SMS. They further narrated that, SMS services and mobile money services contribute positively in their business activities.

From the survey, study identified a range of mobile money services including balance inquiry, cash deposit, cash withdrawal, airtime purchase, paying bills and money transfer. However, the majority 68% of the respondents (most are second hand clothing and shoe sellers) were frequently use mobile money services (M-Pesa, Tigo-Pesa, Airtel-money) for receiving payments from their customers, cash withdrawal, airtime purchase and paying bills (LUKU and water bills from Moshi Urban Water Supply Authority- MUWSA). The rest 32% use mobile money services for purchasing airtime and cash withdraw only. Further, this study found that respondents were also using their mobile phones calculator application to undertake simple computations on selling price and business profits.

The amount of money spent on a mobile phone per day was also identified whereby 61% of respondents spent 500-1,000Tsh and 39% of the respondents spent between 1,000-2,000Tsh for mobile phone services. The respondents argued that the costs charged by network providers were too expensive to them compared to their business returns. In order to reduce the cost, some micro entrepreneurs opt to buy the daily bundles at a cost of an average between 500-2000Tsh per day (approximately to 1US\$). For instance, Vodacom users buy a bundle at a cost of an average 500-1,000 Tsh. per day (24 hours), that is, from the bundle of 499Tsh a user receives a bonus of 7 minutes call, 300 SMS and 8 Mega Byte (MB), while with Tsh. 649 a user receives 13 minutes call, 450 SMS and 8MB. And with, 999 Tsh a user can make a 20 minutes

call, 1000 SMS and 8MB. These costs vary depending on the network provider. This study further found that Vodacom is the most subscribed network by 46% followed by Tigo by (32%) and (22%) Airtel.

### **Contributions of Mobile Phone to Micro Enterprises Performance**

During the survey it has been found that in all micro enterprises visited, mobile phones were used mainly for business purposes, either through direct calls or sending SMS. When respondents were asked to comment on whether mobile phones contribute to business performance, the majority were agreed. Out of 70, 57 (81.4%) indicated high level of contribution while 13 (18.6%) registered average. Among the benefits mentioned by respondents are; mobile phone can be used anywhere and anytime when need arises, it is more convenient, immediate if employed in business communication. Mobile phone reduces costs and saves time for micro entrepreneurs with limited economic resources. They equally commented that, Voice calls or SMS allowed them to communicate directly with their customers (receiving orders and press order to their suppliers) hence minimize the expenses and time that would be spent in travelling. During the interview with second hand clothing and shoe seller, he commented that;

*“...indeed since I started using the mobile phone my business has become more easy, efficient and effective. Much works which involved travelling has been reduced as someone can just inquire information through mobile phone services such as Voice calls, SMS, WhatsApp messages....”*

In addition, the respondents mentioned the important role of mobile phones in maintaining customer relations. The respondents argued that, mobile phones are used more often for communicating and retaining customers. They also commented that profits were generated from outside not inside, hence there is a need to have a mutual communications with their customers for the survival of their businesses in this era of high business competition. They further argued that, mobile phone has an ability to share business information with other micro entrepreneurs and provide basic information about products price, availability of products and services to customers. Though, 57% of the respondents lamented that, sometimes calls dropouts and or SMS are not delivered to the targeted customers or delay and vice versa, hence it becomes a barrier to communication with customers.

Apart from business voice calls and SMS employed by respondents, the findings show that 87% of the respondents agreed that the use of mobile money services contribute positively into their business activities and life in general. They reported that mobile money services were very important for sending and receiving money since its transactions can be made anywhere at



any time when the need arises, also it saves time and reduces waiting queues. In addition to that, 57% of the respondents had never experienced any challenges form mobile money services while the remaining 43% lamented on the network or service failures. Several times there were difficulties in network connectivity something that may expose customers to be to the risk of losing their money, wasting time or delaying in mobile money transactions. In addition, the cost of mobile money transactional was perceived to be high. Regardless of the perception that mobile money services charges were expensive respondents were still likely to use these services due their mentioned conveniences. Generally, this finding shows that, the more micro entrepreneurs use mobile phone services the more business successes.

## **CONCLUSIONS**

This study examines the mobile phones usage to micro enterprises in Moshi Municipality. From the findings it can be concluded that mobile phone services contribute positively to micro enterprises performance. The study has shown clearly the benefits mobile phone contributes such as, it can be used anywhere and anytime when need arises, it is more convenient, immediate if employed in business communication. In addition, mobile phone reduces costs and serves time for micro entrepreneurs with limited economic resources. Mobile phones play the role in maintaining customer relations through frequently communications and prompt problems solving, hence retaining their customers. Again, mobile phones have an ability to share business information with other micro entrepreneurs and provide basic information about products price, availability of products and services to customers (i.e. information dissemination). However, the findings show low perceived problems of using mobile phones such as difficulties in network connectivity that expose the customers to the risk of losing their money, calls dropouts and or pending texts, or delaying in mobile money transactions, mobile money transactional charges were perceived to be high. Noteworthy, mobile phone services have made a positive contribution to micro enterprise's performance in Moshi Municipality.

## **RECOMMENDATIONS**

Since mobile phone services contribute positively to micro enterprises performance, it is recommended that, there is a need to have an awareness campaign on the role played by mobile phones in business performance (both to micro and small and Medium Enterprises). Similarly, network providers should make an improvement on network services in order to minimize several network failure occasions. Similarly, there is a need to reduce the mobile transactional charges so as to enhance micro entrepreneurs having a consistent and affordable mobile phone services.

## LIMITATIONS

While the empirical results are significant to policy makers, mobile users and mobile network users it's important to highlight some of the limitations encountered by the researcher in course of carrying out the study. Due to time limitation, the data collected were only for those businesses located in Kiboriloni market, Tanzania. This might have limited the researcher to get experiences from those micro enterprises located outside Kiboriloni.

## REFERENCES

- Africa Partnership Forum (APF) (2008), "ICT in Africa: boosting economic growth and poverty reduction", paper presented at the 10th Meeting of the Africa Partnership Forum, Tokyo.
- Aker, Jenny C. (2008). "Does Digital Divide or Provide? The Impact of Mobile Phones on Grain Markets in Niger." BREAD Working Paper 177.
- Boadi, R.A...et al (2008) Preliminary Insights into M-commerce Adoption in Ghana. Information Development, 23, 253-265.
- Donner, (2007). The use of mobile phones by micro entrepreneurs in Kigali, Rwanda: Changes to social and business networks Information Technologies and International Development 3 (2):3-19
- Esselaar, S., et al... (2007), "ICT usage and its impact on profitability of SMEs: a case of eight African countries"
- Inmyxai, S. and Takahashi, Y. (2010), "Performance contrast and its determinants between male and female headed firms in Lao MSMEs", International Journal of Business and Management, Vol. 5 No. 4, pp. 37-52.
- Jagun, A., et al (2008), "The impact of mobile telephony on developing country microenterprise: a Nigerian case study", Information Technologies and International Development, No. 4, pp. 47-65.
- Aker J C. and Mbiti I M. (2010). "Mobile Phones and Economic Development in Africa." CGD Working Paper 211. Washington, D.C.: Centre for Global Development
- Jensen, Robert T. (2007). "The Digital Provide: Information (Technology), Market Performance and Welfare in the South Indian Fisheries Sector," Quarterly Journal of Economics, 122(3): 879 – 924
- Kijo N.D. (2004). Impact of Investment in and Utilization of ICTs on Market Extension: Overview of Small and Medium Enterprises in Tanzania, Master of Business Administration, Dissertation of the University of Dar es Salaam.
- Klonner, Stefan, and Patrick Nolen.(2008). "Does ICT Benefit the Poor? Evidence from South Africa.
- Kodakanchi, V., et al (2006), "An economic development model for IT in developing countries", Electronic Journal of Information Systems in Developing Countries, Vol. 28 No. 7, pp. 1-9.
- Litondo O. K. (2013). Mobile Phones and E-Commerce among Micro and Small Enterprises in the Informal Sector: An Empirical Investigation of Entrepreneurship in Nairobi. PhD Thesis Published by Shaker Verlag – Germany
- McCoy, J. and Smith, G. (2007). Mobile end-user service adoption studies: A selective review. Scandinavian Journal of Information Systems, 14, 301-35
- Molony, T. S. J. (2005). "Food, Carvings and Shelter: The Adoption and appropriation of Information and Communication Technologies in Tanzanian Micro and Small Enterprises." Dissertation, University of Edinburgh.
- Muto, et al (2009). "The Impact of Mobile Phone Coverage Expansion on Market Participation: Panel Data Evidence from Uganda" World Development.

Mwaura, P. W. (2009). Networks, Information and Small Enterprises: New Technologies and the Ambiguity of Entrepreneurs, *Information Technology for Development* Vol. 10(4) 221 - 232.

Orbicom. (2007) *Emerging Development Opportunities: The Making of Information Societies and ICT Markets*. Ottawa: IDRC.

Roldan, G., Wong, A. (2008) *Building micro-enterprises through information and Communication Technologies (ICT) in Bangladesh*.

Samuel, J., N. et al (2005). "Mobile Communications in South Africa, Tanzania, and Egypt: Results from Community and Business Surveys."

Tanzania Communications Regulatory Authority, (2010)

Van Akkeren, J., & Harker, D. (2002). Mobile data technologies and SME adoption and diffusion: An empirical study on barriers and facilitators. *Australasian Journal of Information Systems*, 9(2), 1-16

Wade, R.H. (2004) *Bridging the Digital Divide: New Route to Development or New Form of Dependency*, In the *Social Study of Information and Communication Technology Innovation, Actors, and Contexts*. New York: Oxford University Press.

World Bank Global ICT Department, (2005). "Financing Information and Communication Infrastructure Needs in the Developing World: Public and Private Roles."