Uses of Mobile Phones in Agriculture-based Small and Medium Enterprises in Ulanga District, Tanzania

Article · September 2015

CITATIONS
5

READS
142

2 authors:

Fidelis Kisusi
Open University of Tanzania (OUT)
3 PUBLICATIONS **5** CITATIONS
SEE PROFILE

Alfred Sife
Moshi Co-operative University (MoCU)
39 PUBLICATIONS **1,263** CITATIONS
SEE PROFILE

Uses of Mobile Phones in Agriculture-based Small and Medium Enterprises in Ulanga District, Tanzania

Kisusi[1], F. and A.S. Sife[2]

[1]Ulanga District Council
fidkisusi@gmail.com
[2]Sokoine University of Agriculture
asife@suanet.ac.tz

Abstract

This study examined the uses of mobile telephony in agriculture-based Small and Medium Enterprises (SMEs) in Ulanga district, Tanzania. Specifically, the study examined the innovative uses of mobile telephony and established the contribution of mobile phones to the performance of agriculture-based SMEs. A multi-stage sampling technique was employed to obtain a sample of 104 SME owners for a questionnaire-based survey and 40 focus group participants. Quantitative and qualitative data were analyzed using SPSS programme and content analysis respectively. The study findings indicate that most SME owners were 40 years or younger with almost an equal number of males and females. Nearly all SME owners had formal education with about half having primary education. Expenditure on mobile phones per day was generally high for rural settings. Innovative uses of mobile phones included beeping and usage of applications such as loudspeakers, cameras and voice recording. The use of mobile phones in agriculture-based SMEs had enhanced customer and managerial satisfaction; increased revenue, number of customers, access to markets and sales volume; and improved operation efficiency. It is concluded that the use of mobile phones had enhanced the performance of agriculture-based SMEs. While beeping is used to cut down communication costs, mobile phone applications such as loudspeaker, voice recording and cameras are used innovatively for decision making and record of events. It is recommended that mobile service providers continue devising more useful applications and services that can enhance the performance of businesses. Meanwhile, entrepreneurs should be proactive in using mobile telephony services to enhance their business.

Keywords: *Mobile phones, agriculture, Small and Medium Enterprises, Ulanga, Tanzania*

Introduction

Small and Medium Enterprises (SMEs) serve as the engine of economic growth, source of income and a means for poverty reduction in many developing countries. Such enterprises are also essential for competitive and market efficiency, serve as breeding grounds for entrepreneurs, and provide employment opportunities. In addition, SMEs are recognized as vehicles for innovation of new products and services and they are often effective in utilizing and adding value to local resources. In most rural areas of the developing world, SMEs are mainly agriculture-based in two main forms – engaging in primary production and agricultural businesses. Rural agribusiness is practiced by individual farmers; farmer-based organizations and cooperatives; larger enterprise farm operators; livestock processing and products such as hides and skins, small artisanal tanneries and cheese making; fish processing and marketing (dried, smoked and salted); processing (milling, jams, pickles, syrups, honey, beer making, and oil extraction) (Donner, 2003; IFAD, 2004; IFC, 2011).

Like in many other countries, majority of SMEs in Tanzania fall under the informal sector (URT, 2003). It is estimated that there are more than three million SMEs employing more than 5.2 million people in Tanzania (URT, 2003; Adebayo, 2011; Venkatakrishnan, 2013). The commonly used yardsticks for defining SMEs are the total number of employees, total investments and sales turnover. In the context of Tanzania, SMEs are those engaging up to 99 people or employing capital amounting up to Tshs. 800 million (URT, 2003). Donner 2003, IFAD, 2004; IFC, 2011).

Information and communication are important factors for enhancing the performance of SMEs. Since business is an information-rich activity, accelerated communication of information, in the interplay with other factors, increases productivity, widens markets, simplifies transactions, substitutes for physical transport, and creates new business opportunities, among many other benefits (Roldan and Wong, 2008). Communication is essential for micro-entrepreneurs to contact suppliers, customers, traders, middlemen and other actors. Similarly, accurate and speedy communication is important when it comes to negotiating prices and terms of payment, securing stocks, and coordinating deliveries. Appropriate use of mobile phones in SMEs can therefore enhance their performance by reducing information and communication asymmetry, thereby overcoming market inefficiency by substituting for costly transportation and reducing other costs.

Introduction

Small and Medium Enterprises (SMEs) serve as the engine of economic growth, source of income and a means for poverty reduction in many developing countries. Such enterprises are also essential for competitive and market efficiency, serve as breeding grounds for entrepreneurs, and provide employment opportunities. In addition, SMEs are recognized as vehicles for innovation of new products and services and they are often effective in utilizing and adding value to local resources. In most rural areas of the developing world, SMEs are mainly agriculture-based in two main forms – engaging in primary production and agricultural businesses. Rural agribusiness is practiced by individual farmers; farmer-based organizations and cooperatives; larger enterprise farm operators; livestock processing and products such as hides and skins, small artisanal tanneries and cheese making; fish processing and marketing (dried, smoked and salted); processing (milling, jams, pickles, syrups, honey, beer making, and oil extraction) (Donner, 2003; IFAD, 2004; IFC, 2011).

Like in many other countries, majority of SMEs in Tanzania fall under the informal sector (URT, 2003). It is estimated that there are more than three million SMEs employing more than 5.2 million people in Tanzania (URT, 2003; Adebayo, 2011; Venkatakrishnan, 2013). The commonly used yardsticks for defining SMEs are the total number of employees, total investments and sales turnover. In the context of Tanzania, SMEs are those engaging up to 99 people or employing capital amounting up to Tshs. 800 million (URT, 2003). Donner 2003, IFAD, 2004; IFC, 2011).

Information and communication are important factors for enhancing the performance of SMEs. Since business is an information-rich activity, accelerated communication of information, in the interplay with other factors, increases productivity, widens markets, simplifies transactions, substitutes for physical transport, and creates new business opportunities, among many other benefits (Roldan and Wong, 2008). Communication is essential for micro-entrepreneurs to contact suppliers, customers, traders, middlemen and other actors. Similarly, accurate and speedy communication is important when it comes to negotiating prices and terms of payment, securing stocks, and coordinating deliveries. Appropriate use of mobile phones in SMEs can therefore enhance their performance by reducing information and communication asymmetry, thereby overcoming market inefficiency by substituting for costly transportation and reducing other costs.

In Tanzania, mobile telephony is one of the fastest growing sectors both in terms of the number of service providers, number of users and diversity of services. By the end of 2013, Tanzania had 27.4 million mobile phone subscribers and six mobile service providers namely Vodacom, Airtel, Tigo, Zantel, Tanzania Telecommunication Limited (TTCL) and Benson. Vodacom had the highest proportion of subscribers (10.2 million), followed by Airtel (8.9 million subscribers), Tigo (6.2 million subscribers), Zantel (1.8 million subscribers), TTCL (210,766 subscribers) and Benson (528 subscribers). However, the actual number of mobile phone users might be higher than available statistics due to sharing of phones among families and friends (TCRA, 2013; Sife, 2014).

The conventional uses of mobile phones include making voice calls as well as sending and receiving short message service (SMS). Nonetheless, increasingly there are more applications and services such as internet, mobile money, cameras, loudspeakers and voice recording as well as innovative uses such as beeping which allows communication between callers and recipients without them having to talk or type messages. Beeping occurs when a caller dials a number, let it ring for a short time, and then hangs up before the call is connected. Beeping is often interpreted based on its source, number of rings, time of the day, social relationships as well as economic differences between beepers and recipients. For example, beeping can send a pre-negotiated message such as pick me up now (Donner, 2005).

Given the increase of mobile telephony in many rural areas, little is known regarding their contribution to the performance of rural-based SMEs particularly, those in agriculture. Previous studies (Matambalya and Wolf, 2001; Pigato, 2001; Matambalya and Susanna, 2001; Chowdhury and Wolf, 2003; Sæbø and Melchioly, 2010; Sife *et al.,* 2010; Collings, 2011) in Tanzania have largely focused on access and usage patterns of mobile phones. Even though Matambalya and Wolf (2001) as well as Chowdhury and Wolf (2003) reported the contribution of ICTs to the performance of SMEs, these studies dealt only with financial indicators. This study therefore set out to examine the contribution of mobile telephony to the performance of agricultural-based SMEs in Ulanga district by focusing on financial and non-financial indicators. Specifically, the study examined the innovative uses of mobile telephony in agriculture-based SMEs and determined the extent to which mobile telephony influences the performance of agriculture-based SMEs.

Methods

This study was carried out in November 2013 in Ulanga district which is one of seven districts of Morogoro region. Morogoro is located about 200 km West of Dar es Salaam City. The headquarters of Ulanga district is located in Mahenge which is 312 km South of Morogoro town. Administratively, Ulanga district has five divisions, 24 wards and 92 villages. According to the latest National Population Census, the population of Ulanga district was 265,203 people in 2012 (URT, 2013). Ulanga district was selected for this study because of the availability of many agricultural activities and good mobile network coverage in many locations within the district.

This study employed a mixed method design which entails collecting, analyzing, and mixing quantitative and qualitative data in a single study (Creswell, 2012). A multi-stage sampling technique was employed in drawing the study sample. Firstly, two divisions namely Vigoi and Lupiro were purposively selected based on the availability of agriculture-based SMEs and availability of mobile networks. Secondly, eight wards (Vigoi, Mahenge, Uponera, Mawasiliano, Lupiro, Kichangani, Milola and Minepa) in Vigoi and Lupiro divisions were selected based on the same criteria used for selecting divisions. Thirdly, eight villages, one village from each ward, were purposively selected based on availability of SMEs and good mobile networks. The villages selected were Vigoi, Mahenge, Uponera, Mawasiliano, Lupiro, Kichangani, Mavimba and Minepa. Finally, 104 agriculture-based SMEs were randomly selected for the study from all villages. Business owners were the study respondents. In addition, 40 business owners from the same eight villages were selected as participations in four focus group discussions (FGD). A questionnaire was administered by face to face interviews. This method is suitable for reaching most rural populations because of their low literacy levels (Laws *et al.*, 2005). Prior to data collection, the instruments were pre-tested in Isongo village which had characteristics that were similar to the selected villages. The pre-testing consisted of 20 SME owners/managers and one FGD involving 10 participants. Quantitative data was analysed using the Statistical Package for Social Sciences (SPSS), and qualitative data were analysed using content analysis.

Results and Discussion

Socio-economic Characteristics of Respondents

The study findings in Table 1 indicate that more than a third (36.5%) of the respondents were between 21 and 30 years old followed by those aged between 31 and 40 years (32.7%). This means, more than two thirds (69.2%) of the respondents were 40 years or younger; suggesting that most SME owners were in the active age group that was capable of adopting mobile telephony. The sample had 52.9% male respondents and 47.1% female respondents. The findings also show that approximately all (98.1%) respondents had attended formal education with nearly half (46.2%) of the respondents having a maximum of primary education followed by those who had secondary education (25%). Since using mobile phones require only basic literacy (Rashid and Elder, 2009), the findings suggest that most respondents had the ability to use the phones.

Nearly two thirds (65.4%) of the respondents had used mobile phones for four or more years. With respect to expenditure on mobile phones, two-thirds (66.3%) of the respondents spent less than Tsh 2000 per day on mobile services while 30.8% spent between Tsh 2000 and Tsh 5000. Very few (2.9%) respondents spent more than Tsh 5000 (equivalent to about 3 USD) per day on mobile phones. It can be said from this trend of expenditure on mobile phones that the services were costly. Nevertheless, it was explained during FGDs that many mobile users were benefitting from free air time promotions offered by service providers. A great majority (81.7%) of the respondents owned one mobile phone while the rest (18.3%) had two or three phones. The commonly cited reason for owning multiple phones was for cost cutting by making calls on same networks. The second reason was for using mobile money services from different providers such as M-Pesa, Tigopesa and Airtel money that are provided by Vodacom, Tigo and Airtel companies respectively.

Table 2: Socio-economic characteristics of respondents (n= 104)

Variable		Freq.	Percent.
Age category (in years)	21-30	38	36.5
	31-40	34	32.7
	41-50	18	17.3
	51-60	12	11.5
	61 and above	2	1.9
Sex of respondent	Male	55	52.9
	Female	49	47.1
Education level	Primary education	48	46.2
	Secondary education	26	25.0
	College education (Certificate & Diploma)	12	11.5
	University education (e.g. Bachelor degree)	10	9.6
	Adult education	6	5.8
	None (Illiterate)	2	1.9
Experience in using mobile phones (years)	1-3	36	34.6
	4-7	42	40.4
	8 and above	26	25.0
Money spend on mobile per day (Tshs)	<2000	69	66.3
	2000-5000	32	30.8
	> 5000	3	2.9
Number of phones	1	85	81.7
	2	17	16.3
	3	2	1.9

Innovative Uses of Mobile Phones in Agriculture-based SMEs

The study findings in Table 2 indicate that nearly two thirds (62.5%) of the respondents had been practicing beeping to communicate through mobile phones. It was reported during FGDs that beeping was very common among owners of SMEs with the intention of cutting down communication costs. Beeps originated mostly from friends and relatives (99%), customers (92.7%) and suppliers (76%). More than half (58.3%) of the SME owners reported that beeping was mainly used by their customers when asking for availability of products. Half (50.5%) of the SME owners used beeping when reminding customers to pay their debts and 44.7% of respondents reported that beeping was used by customers when placing orders. Similarly, Donner (2005) reported that customers in Rwanda used beeping when placing orders or when asking about the availability of services they required. Beeping was therefore used innovatively to cut down communication costs in business activities.

Table 2: Innovative uses of Mobile phones (n = 104)

Innovative use	Frequency	Percentage
Beeping	65	62.5
Loudspeaker	66	81.5
Camera	60	74.1
Voice recording	55	52.9
Where beeping originated		
Friends and relatives		99
Customers		92.7
Suppliers		76
Uses of beeping in relation to SMEs		
Used by customer(s) asking availability of products	60	58.3
Used by SME owners to remind customers to pay debts	52	50.5
Used by customers to place orders	46	44.7

Respondents were also asked to indicate how they used various components of their phones, particularly loudspeakers, cameras and voice recording in SME activities. This question was necessary in order to understand further innovative uses of mobile phones in businesses. The findings show that more than four-fifth (81.5%) of the owners of SMEs used loudspeaker, nearly three quarters (74.1%) used cameras and more than half (52.9%) used voice recording to facilitate SME activities (Table 2). These results are consistent with those of Gakuru *et al.* (2008) and Martin and Abott (2010) who reported innovative uses of mobiles' loudspeakers, cameras and voice recording in SMEs.

The findings in Table 3 show further that more than two thirds (67%) of the owners of SMEs used loudspeaker in meetings whenever a member is absent by involving the absentee in decision making via the phone. Nearly two thirds (62.1%) used loudspeakers whenever groups were communicating with extension workers whereas more than half (54.4%) of the respondents used loudspeakers to communicate with loan officers. Again, half (50%) of the respondents used loudspeakers whenever communicating with bulk buyers so that everybody in the group could listen. In addition, FGD participants reported that loudspeakers were used in SMEs to increase transparency in decision making, and to discuss prices and marketing of products. The findings also show that 70.9% of the respondents were using phones' cameras to take photos of good agricultural practices during training. Slightly more than half (54.4%) of the respondents were using cameras to take photos of new products. This tallies

with qualitative findings from FGD participants who reported that cameras were important tools for knowledge transfer, especially when attending exhibitions. Voice recording was mainly used to capture knowledge from seminars so that the information could be reviewed later (73.8%); when making commitments to pay loans (73.8%) and for recording phone conservations when experts provide remote diagnosis and advice (71.8%). Similar functions of voice recording were reported during FGDs.

Table 3: Usage of mobile camera, loudspeaker and voice recording (n = 104)

Mobile applications	Frequency	Percentage
Loudspeaker		
Used when an SME member is absent to involve them in decision making	69	67.0
Used to communicate with experts to clarify agriculture method where by everyone can hear the lesson first-hand	64	62.1
Used to communicate with loan officers to encourage group and individual accountability	56	54.4
Used to communicate with bulk buyers so that no one feels cheated since they all know the proper price	51	49.5
Voice recording		
Records training to review later on	76	73.8
Records fellow group members stating when they will pay back loans to promote accountability	76	73.8
Records phone conservations when experts provide remote diagnosis and advice	74	71.8
Uses of phone on camera		
Takes photo of good agricultural techniques during training	73	70.9
Takes photo of products	56	54.4

Contribution of Mobile Phones to the Performance of Agriculture-based SMEs

In order to establish the magnitude of the contribution of mobile phones to the performance of agriculture-based SMEs, respondents were presented with performance indicators to specify the extent to which mobile phones contributed to each indicator. The results are presented in a descending order that was obtained by computing the mean scores for each item based on a five-point Likert type scale (1 = strongly disagree to 5 = strongly agree). The percentages and mean scores (Likert type scale) for each item to show the direction of responses are depicted in Table 4. For the purpose of this study, a mean score of 4.0 and above denoted that mobile phones had positive contributions to particular performance indicator. Mean scores

of 4.6 and above denoted great positive contributions whereas mean scores below 4.6 but above 4.0 indicated average positive contributions. The computed Cronbach's Alpha coefficient for each score was 0.97, with the overall alpha of 0.975, suggesting that the items used in this analysis were suitable for measuring respondents' perceptions. A widely accepted cut-off is that alpha should be at least 0.70 (DeVellis, 2003).

The mean rating of all seven items ranged from 4.5 to 4.7 indicating that the respondents perceived that using mobile phones had a significant positive contribution towards the performance of agriculture-based SMEs. Specifically, majority of the respondents either agreed or strongly agreed that mobile phone usage in SMEs had enhanced customers' satisfaction (89.4%) and satisfaction in the management of SMEs (95.2%).

Table 4: Contribution of mobile phones to the performance of agriculture-based SMEs (n =104)

Performance indicator		Percentage of respondents					
	Cronbach alpha	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean score
Customer satisfaction has increased	0.97	1.0	1.0	8.7	17.2	72.1	4.6
Managerial satisfaction has increased	0.97	1.0	1.0	2.9	21.1	74.0	4.7
Revenue has increased	0.97	1.0	1.9	9.6	20.2	67.3	4.5
Sales volume has increased	0.97	1.0	1.9	10.6	19.2	67.3	4.5
Number of customers has increased	0.97	1.0	1.0	7.7	22.0	68.3	4.6
Operating efficiency has increased	0.97	1.0	1.0	6.7	18.2	73.1	4.6
Improved access to markets	0.97	4.8	1.0	6.7	14.4	73.1	4.6

This reflects the fact that good and frequent communications through mobile phones improves the effectiveness of managerial decisions which translates into higher returns from the SME. This assertion is consistent with the observation that use of mobile phones had also contributed to increased revenue in SMEs (87.5%). This confirms earlier findings by Melchioly and Sæbø (2010) who reported that the sales revenue of most SMEs increased because of mobile phone usage. This may be attributed to increased volume of sales as stated by 86.5% of the respondents who either agreed or strongly agreed with the statement that use of mobile phone led to an increase in the volume of sales.

The study results also indicate that an overwhelming majority (91.4%) of respondents either agreed or strongly agreed that the operating efficiency of SMEs had increased with the use of mobile phones. Moreover, FGDs

members revealed that, mobile money services have greatly simplified transactions, thereby increasing efficiency in SMEs. Furthermore, mobile phones have significantly improved access to markets with 87.5% of the respondents either agreeing or strongly agreeing. Similarly, the number of customers increased because of mobile phone usage as indicated by 90.4% of the respondents. Often, mobile phones improve access to markets by attracting more buyers and sellers, communicating information about demand and supply, transmitting information about price and bypassing middlemen. This is consistent with findings by Abraham (2007) who reported that the use of mobile phones had increased the efficiency of markets by decreasing risk and uncertainty.

Conclusions and Recommendations

Based on the study findings and discussions, a number of conclusions have been drawn. First, the usage of mobile phones changes with time, phone models and context. For example, beeping was found to be an important an innovative use of mobile phones in rural areas for social and business purposes. Other phone applications such as the loudspeaker, voice recording and camera were also used innovatively in agriculture-based SMEs particularly to increase participation in decision making, knowledge transfer and keeping record of events. Secondly, the use of mobile phones has significantly increased customer satisfaction and management of SMEs. Mobile telephone use has also increased revenue and sales volume, operation efficiency, number of customers and access to markets. It is therefore recommended that mobile service providers should continue devising more useful applications and services that can enhance the performance of businesses. Furthermore, SME owners and the business community at large should be proactive such that they remain on the frontline in using mobile telephony services that enhance their business.

References

Abraham, R. (2007). Mobile Phones and Economic Development: Evidence from the Fishing Industry in India. *Information Technology and International Development* 4(1): 5 – 17.

Adebayo, K.J., Akinmosin, A.S., Yussuf, S.E. and Dada, A.M. (2011). *Towards Promoting Micro-Enterprises With Information and Communication Technology. An Assessment of the Current Usage Level*. Information Technology for People Centred Development, Lome. 14pp.

Chowdhury, S.K. and Wolf, S. (2003). *Use of Information and Communication Technology and the Economic Performance of Small and Medium Enterprises in East Africa*. Discussion Paper No. 6. Information and Communication Technology, Dar es Salaam, Tanzania. 13pp.

Collings, S. (2011). *Phone Charging Micro-businesses in Tanzania and Uganda.* Global Village Energy Partnership International, London. 22pp.

Creswell, J. (2012). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. (4th Ed.), Upper Saddle River, Pearson Education, New York. 30pp

DeVellis, R.F. (2003). *Scale Development: Theory and Applications.* (2nd Ed). Thousand Oaks, California. 18pp.

Donner, J. (2005). The rules of beeping: *Exchanging Messages Using Missed Calls on Mobile Phones in Sub-Saharan Africa, Submitted to The 55th Annual Conference of the International Communication Association,* 26 - 30 May 2005, New York, USA. 19pp.

Donner, J. (2003). *What Mobile Phones Mean To Rwandan Entrepreneurs.* Mobile Democracy Essays on Society, Self and Politics, Vienna, Passagen Verlag. 410pp.

Gakuru, M., Winters, K. and Stepman, F. (2009). Innovative farmer advisory services using information and communication technology. *Workshop Africa Perspective on the Role of Mobile Technologies in Fostering Social Development,* 1 - 2 April 2009, Maputo, Mozambique. 12pp.

IFAD (2004). *Rural Enterprise Policy, Quintily*. International Food and Agriculture Development, Rome, Italy. 45pp

IFC (2011). *Scaling Up Access to Finance for Agricultural SMEs Policy Review and Recommendations*. International Finance Corporation, Washington DC. 14pp

Laws, S., Harper, C. and Marcus, R. (2005). *Research for Development: A Practical Guide.* SAGE Publications, London. 56pp.

Martin, B. and Abbott, E. (2010). Development Calling: The use of mobile phones in agriculture development in Uganda. Iowa State University and Volunteer Efforts for Development Concerns. [http://mak.ac.ug/documents/IFIP/Dev elopmentCalling.pdf] site visited on 25/8/2013.

Matambalya, F. and Wolf, S. (2001). *The Role of Information and Communication Technology for the Performance of SMEs in East Africa: Empirical Evidence from Kenya and Tanzania.* Discussion Papers No. 42. Center for Development Research, Bonn. 30pp.

Sæbø, O. and Melchioly, S.R. (2010). ICTs and Development: Nature of mobile phones usage for SMEs economic development an exploratory study in Morogoro, Tanzania: ICT and Development Research *International Federation for Information Processing Technical Commission Relationship between Computers and Society Workshop* Voices from Africa. at Makerere University, Uganda. 22 – 23 March 2010. 13pp.

Pigato, M.A. (2001). Information and communication technology, poverty and development in Sub-Saharan Africa and South Asia. [http://www.wor ldbank. org/afr/wps/wp20.htm] site visited on 23/2/2013.

Rashid, A.T. and Elder, L. (2009). Mobile phones and development: An analysis of supported projects. *Electronic Journal on Information Systems in Developing Countries* 36(2): 1 – 16.

Roldan, G. and Wong, A. (2008). *Building Micro-Enterprises Through.* Information and Communication Technologies Bangladesh. 18pp.

Sife, A.S. (2014). *Mobile Phone Applications for Agricultural Extension in Tanzania;* Worldwide mAgri Innovations and Promise for Future, Jakarta 327pp.

Sife, A.S., Kiondo, E. and Macha, J.G.L. (2010). Contribution of mobile phones to rural livelihoods and poverty reduction in Morogoro Region, Tanzania. *Electronic Journal on Information Systems in Developing Countries* 42(3): 1 – 15.

TCRA (2013). Quarterly Telecom statistics. [http://www.tcra.g o.tz/publicatio ns/teleco mStatsDecember13.pdf] site visited on 16/4/2014.

URT (2003). *Small and Medium Enterprise Development Policy 2002.* Ministry of Industry and Trade, Dar es Salaam, Tanzania. 42pp.

URT (2013). *Population and Housing Census 2012.* National Bureau of Statistics, Dar es Salaam, Tanzania. 264pp.

Venkatakrishnan, V. (2013). Mobile phones and micro and small Enterprises performance and transformation in Dodoma, Tanzania. *Presented at Research Poverty Alleviation 19th Annual Research Workshop held at the Ledger Plaza Bahari Beach Hotel,* Dar es Salaam, Tanzania, 09 -10 April, 2013. 47pp.