



The Digital Era and Rural Economy Development: A Case of Selected Small-Scale Farmers in the Former Transkei Homelands Eastern Cape South Africa

*Agyei Fosu –Nelson Mandela University, South Africa | email: agyei.fosu@yahoo.com

Darelle van Greunen–Nelson Mandela University | email: Darelle.vanGreunen@mandela.ac.za

Aim/Purpose	The main objective of this study was to check e-skills, access to and modern ICTs usage among selected small-scale farmers who are major contributors/stakeholders in former Transkei Homeland rural economies.
Background	The role of agricultural information system to support agricultural development cannot be over emphasis. Demiryurek et al., (2008) explains the importance of agricultural information to be that it interacts with other production factors such as land, labor, capital, and managerial ability which can be improved by relevant, reliable, and useful information supplied by extension services, research institutions and other agricultural organizations to help farmers make better decisions. ICT application in agriculture has become inevitably due to its potential in improving agricultural productivity by serving as a platform to access vital agricultural information. As highlighted by Diekmann et al, (2009) that for agricultural extension educators, agricultural professionals, and any other agricultural agency to effectively disseminate agricultural information to farmers, it is critical for that organisation to identify the medium used by farmers to search for information. Considering Diekmann et al, (2009) assertion, one cannot overlook the variables of access and ability/skills in terms of using a medium because of its potential to affect the choice of medium to use.
Methodology	The research design used was a case study since this method enables researcher to closely examine the data within a specific context from a small geographical area. Quantitative (descriptive analysis) and qualitative (thematic analysis) approaches were used to collect data using a structured questionnaire from the small-scale farmers. Participants were selected using purposive sampling approach where the researchers first visited the selected towns to identify the farmers, and then arranged a suitable time to meet them individual to administer and assist the farmers to answer the questionnaire. This made the effective sample of 46 farmers.
Findings	In this study to survey small scale farmers in former Transkei Homelands Eastern Cape Province, South Africa, found that while access to modern ICTs tools was established at Smartphone (100%), Tablets (6.52%), Laptop (10.87%), PC (4.35%), Facebook ((1.30%), Google or any Internet explorer (93.48%), WhatsApp (91.30%), You Tube (82.61%) there were less used of these mediums with only 4.95%, 8.91% and 7.89% using Internet to acquire their agricultural information needs. The findings also revealed a shortcoming in the area of the surveyed farmer's e-skills with high percentage indicating "I can't do this" as reported in Table 3. With regards to challenges encounter by



respondents in terms of using modern ICTs to support their day to day farming activities, respondents cited cost of ICTs gadgets and Internet data, lack of ICTs skills, unreliability of networks.

Impact on Society In view of the findings it is recommended that developmental agencies charged with developing policies to uplift rural people livelihood include key interventions of provide training to improve e-skills, reduce the data cost and improve internet, network connectivity. It is expected that the results of the study will positively influence the development of rural economies in the Eastern Cape Province and other rural economies in other provinces of South Africa.

Keywords Farmers' challenges, modern ICTs tools, ICTs use, rural development.

* Corresponding Author

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Paper Category		
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	<input type="checkbox"/> Higher Education	<input type="checkbox"/> Law
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	<input type="checkbox"/> Training	<input type="checkbox"/> Philosophy
	<input type="checkbox"/> Health Care	<input type="checkbox"/> Religion/Theology
	<input type="checkbox"/> Manufacturing	<input type="checkbox"/> Mathematics
	<input type="checkbox"/> Transportation	<input type="checkbox"/> Physics
		<input type="checkbox"/> Digital Media
		<input type="checkbox"/> Astrology
		<input type="checkbox"/> Social Sciences
		<input type="checkbox"/> Art and Culture
		<input type="checkbox"/> Psychology/Consciousness
		<input type="checkbox"/> Astronomy
		<input checked="" type="checkbox"/> Economics

Human Elements Addressed		
<input type="checkbox"/> Personality Traits	<input checked="" type="checkbox"/> Development	<input type="checkbox"/> Mental Wellbeing
<input type="checkbox"/> Behaviour	<input type="checkbox"/> Environmental	<input type="checkbox"/> Consciousness
<input type="checkbox"/> Cognition	<input checked="" type="checkbox"/> Social	<input type="checkbox"/> Physical Wellbeing

INTRODUCTION

Widely it is agreed that preservation of human dignity and fulfillment of basic needs of individuals that forms a society should be the foremost duties of every leadership in society. While there is wide agreement on this goal, differences of opinion exist on ways and how these basic needs should be supplied or met by leaders, politicians, policy developers as well as the individuals within society. These differences allow for different paths of development. By using the common denominator of basic needs, Kuhan (1987) identify five basic goals of development to be first economic growth to secure food and other requirements for the population. The second and third goal according to Kuhan is: social justice to reduce inequality, employment as means of earning an income but as well because of its ethical and social. Participation defined in terms of political involvement and social sharing as the fourth goal. The fifth goal: independence, as a freedom from external domination. Kuhan further assert that different societies may have different opinions on the priorities of these goals in the absence of a general theory of development. One can therefore use the criterion of fulfillment of these goals as a measurement in development; thus, development is then understood as a simultaneous progress towards these goals. According to World Bank Report (2013) throughout the world, rural areas tend to have similar characteristics in the sense of populations been spatially dispersed, agriculture often the dominant and sometimes the exclusive economic sector.

The report also reveals that about 50 percent of the world population lives in rural areas often under harsh conditions and in poverty. Although rural areas in South Africa shares much in common with other developing countries, some features and development challenges are unique. The demographics of rural areas in South Africa reflects past policies and the legacy of the former homeland system created by the past apartheid era one of enduring planned hurdles to impede the efforts of rural people to maintain intact families and deliberately to keep them in poverty. The former apartheid system created inequalities which resulted in a dual economy (Berry and Clarke 2002). The first economy which was urban areas formerly exclusive for "White-Europeans" is developed, integrated to the global supply chain, and uses advanced technologies. On the other hand, the second economy mostly rural areas reserved for blacks remains largely under-developed and communities in the economy experiences inequalities and limited opportunities (Ligthelm, 2006; Mbuyisa 2017). The second economy is seen as structurally disconnected from the mainstream economy and is also defined as the space within which those who are marginalized oper-

ate according to Kirsten (2006). With the dawn of democracy in 1996, the Constitution of the Republic of South Africa provided a binding framework for the planning, coordination, and implementation of development (especially rural development) as one of the key foundations of South Africa as a developmental state. Rural development then became a functional domain allocated to the Department of Rural Development and Land Reform (DRDLR 2009). The global transition from industrial to digital economy as a result of introduction of the computer and internet in the late 20th century (Odedra-Straub, 1996), which is characterised by information intensive and communication technologies changed developmental approaches drastically to a point where most researchers, policy makers and developers have argued for an information technology led development strategies that emphasizes the need for Information and Communications Technologies (ICTs) investments in order to stimulate economic development (Dahlman,1992; Hanna,1994; Mody & Dahlman,1992; Sein & Harindranath 2004). This clearly indicates that without information and access to relevant information as well as an application or use of ICTs there can be no growth or development in the 21st century global digital economies. Globally, ICTs and its devices are regarded as an essential tool in dispersing and accessing information hence the role of ICTs in rural economy development cannot be overlooked in whatever rural economy development strategies that are adopted or developed to uplift people living in rural areas and rural economies.

Agriculture in the form of small-scale farms are directly or indirectly livelihoods of majority of people living in rural areas hence increasing the efficiency, productivity and sustainability of small-scale farms is critical to rural people and rural economy development. With the effect of global warming and other factors affecting the environment, farmers around the globe are facing many challenges in the areas of poor soils, drought, erosion, and pests. At the center of all these challenges, mostly small-scale farmers in rural areas are the hardest hit as majority of them do not have the necessary machinery for instance to do irrigating farming and are at the mercies of nature. ICTs and its devices can be used to deliver vital information to rural small scale farmers about crop care, animal husbandry, fertilizer applications, feedstock inputs, pests control, seed sourcing, as well as small scale farmers can use modern ICTs devices and platforms such as Smart phones, Personal Computer (PC), Tablets, Facebook, WhatsApp, Web blog, YouTube, etc., to access the global markets by using these worldwide platforms to advertise and sell their farm products. But all these benefits provided by ICTs can't be harnessed by rural small-scale farmers if they don't have access to ICTs and the skills to use or operate the programs/functions that these ICTs are implemented on. Thus, this study to check

the means of access to modern ICTs, e-skills, and ICTs usage of small-scale farmers in the selected rural areas of former Transkei Homelands in the Eastern Cape Province of South Africa.

BACKGROUND AND PROBLEM STATEMENT

The Eastern Cape was demarcated in 1994 post-democracy. The province consists of the former Bantustan areas of the Ciskei and Transkei that were reserved for designated African groups in terms of the 1913 Land Act, are still, after 1994, governed distinctly and differently from the rest of democrat South Africa (Westaway 2012) and the former white South Africa: - the former Cape Administration areas. The Eastern Cape Province is situated along the Southeast coast of South Africa and dense concentrations of rural and peri-urban settlements occur in most districts and areas. The former Transkei Homeland today are characterised by pervasive chronic poverty, low levels of economic activity, low employment opportunities and high levels of dependency on social welfare (Fhiser & Dra 2006). Orlikowski and Iacano (2001) have highlighted that most researchers in development have taken ICTs artifacts for granted, thus limiting the ability to understand their critical implications for individuals and society. A strong rural economy that is connected to the global digital economies by means of ICTs, internet connectivity can lead to job creation, increased public revenue and a general rise in the standard of people living in rural areas. In addition to the access availed by ICTs for rural economies to participate in the global marketplace without any boundaries or hindrances, opportunity is also created to narrow social and economic inequalities and thereby promoting achievement of bigger development goals. Notwithstanding all these benefits, as pointed by Sahay et al., (1995) rural economies in developing countries have not been able to realise some of these benefits owing to constraints such as lack of access to ICTs, internet connectivity and e-skills. If contributors or stakeholders in rural economies in developing countries are unable to exploit the benefits of ICTs fully, they will be limited to access the global marketplace opportunities and relevant information that are essential to improve individual's life that ICTs present in the 21st century digital economies. The present study is an attempt to know how rural small-scale farmers who are major contributors to the former Transkei Homeland rural economies means of access to ICT, their e-skills and usage of ICTs to enhance their day-to-day farming activities as a yardstick of them been able to exploit the opportunities that ICTs present in the 21st century digital economies. The scope of the study was restricted to small scale farmers in livestock and cropping in selected rural areas in Eastern Cape Province. It will not cover the entire rural areas in the

former Transkei Homeland. It is expected that the results of the study will positively influence the development of rural economies in the Eastern Cape Province and other rural economies in other provinces of South Africa.

RESEARCH OBJECTIVES

The main objective of this study is to check e-skills, access to and ICTs usage among selected small-scale farmers who are major contributors/stakeholders in former Transkei Homeland rural economies. To achieve the general objective for this study, the following specific objectives guided the study:

- To determine which ICTs devices and ICTs functions/programs do the farmers have access to;
- To determine Internet connectivity within the areas where they operate their farms;
- To analyse ease of use of modern ICTs functions/programs on the ICTs gadgets they have access to;
- To determine how they are using the modern ICTs they have access to enhance/support their day-to-day farming activities; and
- To determine some of the challenges participants encounter in using ICTs to support their farming activities.

RESEARCH QUESTIONS AND INSTRUMENT

The above objectives helped guide the determination of the research questions and the design of the research instrument in the form of a questionnaire below. The below sections were designed in the questionnaire based on the themes generated from the research objectives mentioned above.

- Section A: Demography of participants
- Section B: Access to modern ICTs devices and Internet
- Section C: Comfort/ability Level in using ICTs functions/programs
- Section E: Determination of how and challenges of using of the modern ICTs functions/programs by participants to support their day-to-day farming activities

LITERATURE REVIEW

PERSPECTIVES ON ECONOMIC DEVELOPMENT AND ICTs

Development can be considered either as a process of improvement with respect to a set of values or, when comparing the relative levels of development of different countries, as a comparative state of being with respect to such values. The values in question relate to desired conditions in society. Economic development then becomes an activity consciously engaged in mainly, but not solely, by governments with the intention of approaching or reaching the set of values (Colman and Nixon 1988). It is natural expectation in the subject of economic development for governments to come up with policies and action plans prescriptions for hastening material progress especially in the poorest areas. The debate on economic development in the poorest areas of societies has centered around two main perspectives: modernization and human development (see UNDP 2001). From the modernization perspective, underdeveloped economic do not have the ability to break out of traditional and outdated modes of production, because they lack the knowledge or resources to do so therefore to achieve economic development, they need to emulate developed nations whose economics have utilized the power of technology, the availability of capital, a skilled workforce, and an entrepreneurial class to achieve growth. According to the human development perspectives, the focus should be on creating a society where individual within a society potential can be realized (Colman and Nixon 1988; Sein and Harindranath 2004). Not only is ICTs an appropriate catalyst for achieving these developmental goals, but also can help poorer countries leapfrog stages of development have been highlighted by Sein and Harindranath (2004). To this study, the definition of technology given by Stewart (1977) is adopted: technology encompasses the skills, knowledge, and procedures for making, using and doing useful things and e-skills is defined to be one's ability to use technology to improve his or her livelihood.

THE IMPORTANCE OF SMALL-SCALE FARMERS IN RURAL ECONOMY DEVELOPMENT

With the rising concerns of feeding an estimated worldwide population of nine billion by 2050 have postulated small scale agribusiness as a focus to create sustainable livelihoods, employment and curtail food insecurity in rural areas (Machethe, 2004; Dercon, 2009; Birner and Resnick, 2010; Fintel and Pienaar, 2016). Agricultural sector has been identified globally as the backbone of the economy of most developing countries and majority of the rural population depending on it have been highlighted by authors such as Stienen, Bruinsma and Neuman (2007). In Africa, similar story exist as the largest economic sector

in most African countries is the agricultural industry. Agriculture in most African countries is largely traditional and practised by smallholders and pastoralists. This type of agriculture is predominantly rain-fed, has low-yielding production, and lacks access to critical information, market facilitation, and financial intermediation services. Thus, increasing efficiency and productivity of small-scale farmers not only offers the best opportunity for economic growth and poverty alleviation on the African continent and other developing economies but also food security is guaranteed. Food security is paramount for the survival of individuals, families and ultimately nations. In South Africa the concept of small-scale farmer is often equated with a backward, non-productive, non-commercial, subsistence agriculture that is found in parts of the former homeland areas. It is generally associated with black farmers while on the other hand, white farmers (no matter how small the farm or agribusiness may be) are generally perceived to be large scale commercial farmers, who are modern and efficient, using advanced technology (Kirsten and Van Zyl, 1998; Van Zyl, 1996).

ICT USAGE BARRIERS IN SMALL SCALE FARMERS

The role of agricultural information system to support agricultural development cannot be over emphasized. Demiryurek et al., (2008) explains the importance of agricultural information to be that it interacts with other production factors such as land, labor, capital, and managerial ability which can be improved by relevant, reliable, and useful information supplied by extension services, research institutions and other agricultural organizations to help farmers make better decisions. ICT application in agriculture has become inevitable due to its potential in improving agricultural productivity by serving as a platform to access vital agricultural information. But there have been concerns about adoption and usage of ICT by farmers and as a result several studies have been done on the subject to help identify the challenges to ICT usage and adoption among farmers. The study conducted by Yao Anyan and Frempong (2018) in Asuogyaman District in the Eastern Region of Ghana to investigate the barriers that hinder the effective use of ICT in farming identified three main barriers namely attitudinal, accessibility and technical skills. Factors like language, traditional constraints, and political will to ensure adequate ICT infrastructure in the agriculture communities have been found to impact on the effectiveness of adoption of ICT by agribusiness (Aleke et al., 2011). The study of Musa et al., (2014) identified socio-economic, cultural influences, technical shortcomings of information providers, and the age of farmers had some relation on the adoption and use of ICT by farmers in Sudan's Gezira State. Nmadu et al., (2013) reported that the problems identified with regards to the usage of ICTs by small scale farmers in Niger State include language barrier, poverty, and illiteracy. The study of Kituyi-Kwake et al., (2008) conducted on Kenya rural

women farmers to analyze access and ICTs usage among them found that cost of the ICTs services, time, and the faraway of the ICTs services, computer illiteracy, poor roads, and cultural taboos to be some of the constraints to ICTs adoption among the women. Chilimo (2008) reported that most of the small-scale farmers who participated in the study of the four rural districts in Tanzania main access to ICTs are radio and mobile cell phones.

RESEARCH METHODOLOGY

The research design used was a case study since this method enables researcher to closely examine the data within a specific context from a small geographical area. The selected areas were Williwvale, Centane, Nqamakwe, Idutywa, Engcobo. The positivist paradigm was seemed fit for this study, thus, taking a positivist philosophical stand. Positivist philosophy refers to the application of quantitative data; hence a quantitative approach was used for the study (Guba and Lincoln, 1994). Quantitative data was collected using a structured questionnaire from the small-scale farmers. Participants were selected using purposive sampling approach where the researchers first visited the selected towns to identify the farmers, and then arranged a suitable time to meet them individual to administer and assist the farmers to answer the questionnaire. This made the effective sample of 46 farmers. The data were analyzed using MS Excel spreadsheet database for conversion into percentages for the descriptive statistics and thematic analysis was used for the open-ended question.

DATA PRESENTATION AND DISCUSSION

Farming in general involves risks and uncertainties, with farmers facing many threats from poor soils, drought, erosion, and pests. Many experts agree that small scale farmers need an innovative boost to help them cope with their daily challenges to increase their production, and therefore cope with high demands of the markets. According to Stienen, et al. (2007) key improvements stem from information about pest and disease control, especially early warning systems, new varieties, new ways to optimists' production and regulations for quality control. This is where ICTs applications become vital. Access to and the use of ICTs and its devices such as computers, internet, geographical information systems, mobile phones, as well as traditional media like radio or television to published or broadcast critical agricultural information about crop care, animal husbandry, pest control, fertilizer applications, etc., to rural farmers by agricultural extension officers and researchers can help bridge critical knowledge gaps that most rural small scale farmers' experiences. Such approach can save cost

and also assist in overcoming the physical barrier challenges one experiences such as lack of accessible roads to most developing countries rural areas. Again, as highlighted by Diekmann et al, (2009) that for agricultural extension educators, agricultural professionals and any other agricultural agency to effectively disseminate agricultural information to farmers, it is critical for that organisation to identify the medium used by farmers to search for information. Considering Diekmann et al, (2009) assertion, one cannot overlook the variables of access and ability/skills in terms of using a medium because of its potential to affect the choice of medium to use. Hence, postulating the findings of this study to be vital on sharing light on rural farmer's access to modern ICTs as well as their e-skills. The findings of the study are presented as follows:

Table 1: Demographic of respondents (N=46)

Gender		
	Frequency	Percentage
Female	18	39
Male	28	60.87
Educational background		
No formal education	13	28.26
Primary education	21	45.65
Secondary education	9	19.57
Post-secondary school education	3	6.52
Farmers location		
Centane	11	23.91
Engcobo	7	15.23
Idutywa	5	10.87
Nqamakwe	14	30.43
Williowvale	9	19.57
Age		
30 – 34	9	19.57
35 – 59	5	10.87
40 – 44	4	8.70
45 – 49	2	4.35
50 – 54	18	39.13
55 – 59	5	10.87
Above 60	3	6.52

According to researchers such as Musa et al, (2013) age, gender, education of farmers does affect adoption and use of ICTs among farmers. The study checked the age, gender, and educational background of respondents. The findings as presented in Table 1 above reveal that: In terms of gender the study found that 60.87% of respondents were males with 39% of females. According to the findings in Table 1 above, there was high illiteracy among the farmers as

19.57% and 6.52% had secondary and post-secondary education respectively. However, literature highlights that the literacy of farmers is critical to understanding new agricultural information and apply new methods, practices in their farms appropriately (Lwoga et al, 2015).

The study checked access to social media, Google, YouTube, smartphone, Laptop, Personal Computer (PC), and Tablet since these tools has become the commonly used modern ICTs platforms/tools for communicating and disseminating information globally. Therefore, the researchers sought to establish among the sampled farmers whether they do have access to these ICTs as well as determining internet connectivity. Table 2 below presents the findings. The results in Table 2 above revealed that Smartphone (100%) was the most popular ICTs device that respondents have accessed to follow by Laptop (10.87%).

Table 2: Access to modern ICTs devices/functions and internet connectivity (N=46)

Type of ICTs Device		
	Frequency	Percentage
Smartphone	46	100
Tablet	3	6.52
Laptop	5	10.87
PC	2	4.35
None of the above	-	-
Internet connectivity		
Excellent	8	17.39
Good	11	23.91
Poor	27	58.70
Modern ICTs functions/programs		
Facebook	42	91.30
Google or other browser	43	93.48
WhatsApp	42	91.30
You Tube	38	82.61
Twitter	13	28.26

None of the above	3	6.52
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The findings also showed a high percentage of accessed of Face Book and WhatsApp both at 91.30% as a common social media platform among the farmers. Internet connectivity was identified as a problem as more than half of the respondents (58.70%) rated poor connectivity. The findings confirm the assertion of Goldstuck (2012) which highlighted that internet and ICTs devices are becoming more accessible in South Africa. Table 3 below reveals the findings of basic e-skills of participants in using modern ICTs programs/functions which they have accessed to, on a scale 1- 4. In order for one to use technology to enhance one’s life or to achieve efficiency in the 21st century global digital and knowledge-based economies, it is critical not only for one to have access to ICTs and its devices but equally so the skills to use or operate the tools.

Table 3: Comfort/ability Level in using ICTs functions/programs (N=46)

<u>BASIC OPERATIONS</u>	I can’t do this (1)	I can do this with some assistance (2)	I can do this independently (3)	I can teach others how to do this (4)
Navigate the WWW using a web browser (e. g Internet Explorer, Safari, Fire Fox, AOL, Google chrome)	54.35	21.74	13.04	10.87
Use a search engine (e.g Google, Yahoo, bing) to search for information on the web	56.52	19.57	13.04	10.87
Email: Send, receive, open, and read mail	47.83	28.26	15.22	8.70
Email: Use advanced features of email (e.g, attachments)	45.65	32.61	19.57	2.17
Social media and instant messaging: subscribe, post and reply.	36.96	6.52	43.48	13.04
Digital images and videos: Use the camera on my ICT device to capture a digital image or a video	30.43	28.26	19.57	21.74
Digital images and videos: attach or send a digital image or a video into social media messaging or email	54.35	30.43	8.70	6.52

The third and fourth objectives of the study were accessed in open-ended questions, but it must be noted that the researchers guided respondents and the findings are presented in common themes with percentages in Table 4 below:

Table 4: Determination of how and challenges of using of the modern ICTs functions/programs by participants to support their day-to-day farming activities

Common themes	Modern ICTs (device, functions/programs) commonly used	Percentage (%)
To acquire information on prices of farming inputs such as seeds, fertilizers, etc.	Social media (in terms of searching information on agricultural social media platforms)	2.31%
	Internet (in terms of browsing to search)	4.95%
	Smartphone (to search in terms of voice calls communication only)	92.74%
Checking planting seasons, diseases, pests, and control measures	Social media (in terms of searching information on agricultural social media platforms)	2.17%
	Internet (in terms of browsing to search)	8.91%
	Smartphone (to search in terms of voice calls communication only)	88.92%
Acquiring postharvest information such market prices for produce, adding values to produce, customers etc.	Social media (in terms of searching information on agricultural social media platforms)	1.96%
	Internet (in terms of browsing to search)	7.89%
	Smartphone (to search in terms of voice calls communication only)	90.15%
Challenges in using modern ICTs	Some of the challenges respondents highlighted include: <ul style="list-style-type: none"> • ICTs gadgets are very expensive • Internet mobile data are expensive • Unreliability of networks • Lack of ICTs skills 	

The findings in Table 4 reveal a very important insight about the surveyed farmers. The most modern ICTs used to search information among the re-

spondents is mobile phone in terms of voice calls to acquire information on input prices, market prices, disease and pest control measures, planting time and very few uses internet tools such as Google, Web Blogs and social media platforms to search or acquire about other key information like new farming methods, water management practices, new farming technologies, etc which has potential to optimize their farm activities. Interestingly these platforms are mostly the common places where researchers disseminate their research findings. This clearly indicates that although the survey farmers have accessed to modern ICTs, but they are not using these tools to seek agricultural information as they should considering how information are disseminated in the 21st century era.

CONCLUSION AND RECOMMENDATION

Due to factors such as climate change most rural small-scale farmers in developing countries faces many challenges on food production. ICTs adoption and use by rural small-scale farmers especially for the purpose of acquiring agricultural information would be expected to serve as a linkage between agricultural research outputs and farmers adopting such research outputs to lead to improved productivity thereby, making studies to establish the status of rural small scale farmers' access to modern ICTs tools and their e-skills very necessary. In this study to survey small scale farmers in former Transkei Homelands Eastern Cape Province, South Africa, found that while access to modern ICTs tools was established at Smartphone (100%), Tablets (6.52%), Laptop (10.87%), PC (4.35%), Facebook ((1.30%), Google or any Internet explorer (93.48%), WhatsApp (91.30%), You Tube (82.61%) there were less used of these mediums with only 4.95%, 8.91% and 7.89% (as showed in Table 4) using Internet to acquire their agricultural information needs. The findings also revealed a shortcoming in the surveyed farmer's e-skills with high percentage indicating "I can't do this" as reported in Table 3. With regards to challenges encounter by respondents in terms of using modern ICTs to support their day-to-day farming activities, respondents cited cost of ICTs gadgets and Internet data, lack of ICTs skills, unreliability of networks. The findings of the study show similarities to past studies by researchers such as Chilimo (2008), Nmadu et al., (2013), Kituyi-Kwake et al., (2008). For instances, the findings of the study on ICTs adoptions and its implications for Agriculture in Sri Lanka by Jayathilake, et al., (2008) revealed cost of technology, lack of training and inability of farmers to use ICTs as the most limiting factors that affects its adoption and use. It is recommended that key interventions to improve ICTs usage to acquire agricultural information needs among the surveyed farmers should include training to improve e-skills, reduce the data cost and improve internet,

network connectivity. This study was exploratory and further research is recommended on issue of pattern of seeking of agricultural information.

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AUTHOR'S BIOGRAPHY

Agyei Fosu is a PhD candidate in the Department of Information Technology at the Nelson Mandela University.

Dr. Darelle van Greunen is a Professor in the School of ICT at NMMU. Her background is multi-disciplinary, ranging from languages to psychology to computer science. The focus of her research is using ICT as an enabler in solving real-life problems. She also considers the role of the human in engaging with technology to ensure a positive user experience.