ICT factors affecting agritourism growth in rural communities of Lesotho

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Abstract
Agritourism is an important part of a tourism strategy and can improve the livelihoods of farmers in the agricultural industry. Changes that have been brought on by technology have created a challenging environment for farmers that do not have access to and knowledge about technologies available for agritourism. The aim of the study was to explore some of the factors that affect the growth of agritourism as in industry in Lesotho. The study further aims to contribute towards agritourism development, related studies and propose guidelines to overcome negative impacts of agritourism growth.

Multiple-case studies were used as a research strategy. Six commercial farms were selected using non-probability sampling and judgmental techniques. The units of analysis were farms, officials from government and tourists as a group. The units of observation included the individual farmers, farm employees, officials from Ministry of Tourism, Environment and Culture, and individual tourists. Content analysis was used to analyse data collected from face-to-face interviews. The findings show that while technology is viewed as an important component for agritourism growth, issues such as the lack of infrastructure, costs, information, communication and technology literacy, awareness and education are some of the factors that hinder the growth of agritourism. The study concludes by recommending guidelines on how to overcome some of the factors affecting the growth of agritourism.

Key words: Agritourism, agritourist, information technology, infrastructure, training

Source: http://www.alitravelstheworld.com/south_africa/lesotho_postcard.jpg
Introduction

Lesotho is a landlocked country completely surrounded by the Republic of South Africa (Tregurtha, 2012). The population of Lesotho is approximately 2,067,000 and 58% of the population live below the poverty line. Although the country is located in the centre of the largest and most sophisticated economy on the African continent, Lesotho has not yet fully escaped poverty. Instead, it serves as a labour reservoir for South African industries. According to Anon (2012), Lesotho gets its foreign exchange earnings from South Africa and through exportation of garments, diamonds, wool and mohair. The country is also experiencing low economic growth, poor agricultural productivity, low wages, limited industrial skills, poor physical infrastructure and high cost for cross-border logistics. These factors have led to an unhealthy dependence on South Africa and external assistance for employment, income and high level institutions for education and research.

Agritourism is regarded as one of the fastest growing industries in eco-tourism. Hegarty and Przezborska (2005) mention that rural tourism and agritourism are terms that are used interchangeably as agritourism is seen as part of the overall concept of rural tourism. Porcaro (2009:2) defines agritourism as “activities of hospitality performed by agricultural entrepreneurs and their family members that must remain connected and complementary to farm activities”. Havlicek, Lohr and Benda (2011:45) refers to agritourism “as a specific form of local tourism that involves tourists staying on a farm and engaging in daily agricultural activities and learning of the traditional rural activities that take place on the farm which include: - horseback riding, winery tours, agricultural exhibits, farmers markets, fishing, garden tours and on-farm sales.”

Hatch (2006) mentions that agritourism dates back to the late 1800’s when people left cities and went to farms to visit their relatives for a short period of time. It became easier for people to travel to rural areas after the invention of motor vehicles in
the 1920’s. Hatch (2006) further explains that the Great Depression and World War II also gave rise to the first significant interest in rural development in the 1960’s. From the 1970’s, horseback riding and farm petting zoos became popular. In the 1980s and 1990s, farm vacations, overnight stays at bed and breakfast facilities as well as commercial farm tours became popular. Today, the demand continues to grow for agritourism.

Agritourism in Lesotho is also not well documented. The reason for this is the fact that agritourism is still a new concept in Lesotho (Frempong 2008). Limited information can be found regarding agritourism in Lesotho. Mochebelele (2009) mentions that the tourism industry in Lesotho comprises a mix of interrelated service providers which include accommodation and hospitality providers, travel agencies, tour operators and public sector organisations such as insurance and car hire companies. Mochebelele (2009) concludes that these stakeholders need to work together in order to promote the sector and bring both local and international tourists to the destination of their choice. McKeeman and Rozga (2007) highlight the poor quality of tourism products and services, lack of knowledge and limitation of product supply as some of the challenges for the country in seeking to develop the tourism industry. Since Lesotho is constituted mainly rural areas, the majority of communities rely on agritourism as the main source of household income contributing towards the nation’s Gross Domestic Product (GDP).

There is a huge potential for agritourism development in rural communities that may sustain the rural economy. However, this potential is overlooked. Mnguni (2010) notes that agritourism increases the demand for travel experiences, especially in the rural communities and marketplace where tourists learn about agricultural landscape. Zaei and Zaei (2013) add that the increased demand for agritourism facilities assist in creation of infrastructure utilities and amenities and these are not only used by tourists but become valuable to the local communities as well.

Rural community life could be of high standard if agritourism is developed by farmers (Mnguni, 2010). Dossa, Dumais, Paridaen and William (2001) mention that agritourism can be a vehicle for diversifying and establishing economies for rural communities by creating jobs, increasing community income, provides a broader market base for local businesses and attracting other businesses and small industries. Agritourism can also be a means of diversifying the mix of tourism offerings available to visitors and position rural communities uniquely for market share. Rural communities provide economic and cultural support and for these reasons, it is important to find ways to make rural communities viable (Inusa, 2006). Policies and strategies which can create opportunities for development in rural communities need to be developed. Government and private sector organisations should recognise the significant role rural communities’ play in agritourism, in determining social and economic benefits in developing countries. Inusa (2006) notes that it is important to provide the agritourism sector with possible guidelines that may assist farmers with regards to Information, Communication and Technology (ICT) access, usage and identifies possible ways of overcoming factors that inhibits the use of these technologies in their projects.

The role of ICT has been recognised in agritourism productivity (Pote, 2008). According to Yalcin (2009) the advances in technologies are considered the main sources of growth in land and labour productivity. Information technology-enabled services are useful in improving the capacity and livelihoods of the communities in the agritourism industry (Parker, 2009). For example, mobile cellphones have significantly reduced production and communication costs and provide new
opportunities for agritourism stakeholders in exchanging relevant information through short messages. ICT strengthens the role of agritourism by allowing access to relevant information such as the distribution of product information to the tourism markets and the service of tourist needs that may have effect on the contribution to sales and profits of the farmers (May, Karugia & Ndokweni, 2007; Lawrence, 2009; Mtenga, Dulle, Malekani & Chailla, 2014). The use of ICT in agritourism contributes to improve communication and learning processes amongst farmers, employees, suppliers and customers involved in eco-tourism. Tembo (2008) highlights farmers using information technologies such as computers and electronic-based mechanisms to collect, manipulate and process data automatically so as to control and manage agricultural processes.

When considering the importance of access to and distribution of information for the agritourism industry, inadequate access and knowledge of ICT infrastructure will hinder farmers in rural communities to be able to take part and benefit from the offerings of the emerging information technologies (Conradie, Morris & Jacobs, 2003; Buyukbay & Gunduz, 2011). Despite the fact that ICT has been used for many decades, it is still new to farmers, especially in rural communities of Lesotho. Many farmers do not have access to ICT and as a result, farmers are not utilising the opportunities the use of ICT offers them. It is unclear what factors are playing a role in the under-utilisation of ICT in the agritourism industry in Lesotho. The aim of this research is then to explore the factors that affect the usage of ICT in the agritourism industry in Lesotho. The research further aims to contribute towards agritourism development, to determine the factors that affect the use of ICT in agritourism and to propose guidelines for ICT use by rural farmers in agritourism.

Internet technology contributes significantly to the everyday life of people and is visible in society and agricultural practices (Chong, Shafaghi, Woolaston & Lui, 2010). There are a number of theoretical models that could be used as a practical approach towards information and technology for business operations and other activities. Some of these theoretical models include the Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM) and the Information Innovation Adoption model (IIAM). Alvarez and Nuthall (2006) used two farming communities (Canterbury, New Zealand and Florida, Uruguay) to develop the IIAM that explains the uptake and use of computers with the objective of gaining a better understanding of the processing. The IIAM uses information from both users and non-users of ICT. The views and information from non-users of ICT are critical to improving effective adoption and use of ICT by farmers. Since the research explores the factors that affect the usage of ICT in the agritourism industry in Lesotho, it adopts the IIAM of Alvarez and Nuthall (2006) in order to explore the behaviour of farmers and employees with regards to the use of ICT.

Research methodology and design

Based on the need to explore the contextual and natural settings that affect the potential growth of agritourism in rural communities of Lesotho, an interpretive epistemological stance were adopted. This approach to research has never been undertaken before in Lesotho. A qualitative method was followed in order to provide rich data about the problem under investigation (Mouton, 1996; Saunders, Lewis & Thornhill, 2009).

Multiple-case studies were used as a research strategy. Non-probability sampling
of the cases with judgemental sampling techniques were used to select a total number of six farms around the rural communities of Maseru that are involved in agritourism. The units of analysis were 23 participants including farm owners, farm employees and tourists visiting the farms as well as officials from the Department of Tourism in Lesotho.

Data was collected by means of interviews using an interview guide with semi-structured questions. The study applied content analysis as an appropriate approach for analysing data collected from face-to-face interviews. Interview questions were compiled to produce reliable response from the sample in order to determine what participants do, think and feel about specific factors affecting agritourism growth. Interviews was recorded and transcribed so that the detailed analysis can be carried out. The data was interrogated using content analysis techniques (Myers, 1997). Data was coded using words relevant to the topic for which themes were identified in the text provided for analysis. Data was then grouped and distilled from the text and list of common themes in order to give expression to the communality of voice across participants.

Findings

A total number of 23 respondents (farm owners and employees, tourists and government officials) that were judgementally selected from the rural communities of Maseru were asked what type of ICT farmers use in rural communities and the information that they need in order to successfully run their farms. They were also asked about the factors that affect the use of ICT in agritourism and how can they use ICT to enhance agritourism growth in rural communities.

The results show that agritourism farmers use several technologies for agritourism purposes. These technologies include: cellphones, radios, televisions, landline phones, computers, internet, digital cameras, fax and voice recorders. The majority of respondents mention that the most accessible ICT in rural communities are radio and television. Some of the respondents regard the internet and faximile as important technologies that farmers can use. Digital cameras and voice recorders are mostly unused technologies. The lack of internet connectivity, sufficient broadband and network coverage in rural communities are major stumbling blocks that hinder the effective use of ICT in the development and growth of agritourism as an industry.

Farmers in rural communities make use of ICT (although with great difficulty) to get access to information relevant to agritourism. However, the lack of adoption of ICT results in farmers’ not accessing information relevant to their enterprises that is available to them. More so, they do not have the ability to push information of their products to the market they operate in. Farmers indicated that they need information on potential markets, the needs of agritourists, the costing structure of agritourism packages and socio-economic and political chances that may affect them. Others mention that they need information on new technologies that are being used in the agritourism industry. Some need information on funding as well as agritourism products and services that they can offer to their customers. Farmers recognise the importance of ICT to access information relevant to agritourism but it does not translate that farmers own these technologies.

Agritourism role players are aware of technologies that are being used in agritourism industry but there are certain factors that affect access and use of these technologies especially in rural communities. ICT is expensive to purchase, use and to maintain. There are no or very little financial assistance for farmers to make it possible to invest in ICT. The lack of infrastructure such as network connectivity, coverage, broadband and absence of
electricity in rural communities hinders the growth and development of agritourism industry. The topography and landscape add to the poor signal strength and in many cases ICT services are interrupted or not available for the users. The level of education in terms of ICT and especially new ICT developments affects the farmers’ ability to use ICT effectively. Some of the interviews said they are aware of these technologies but do not know how to use or maintain them therefore it makes it difficult for them to gain the benefits and explore opportunities that ICT offers.

Despite the lack of infrastructure and the barriers farmers face in rural communities they do make use of ICT, although limited, to gather information relevant to agritourism products and services in a quick and affordable manner. It is mainly mobile phones that are used to communicate with customers and suppliers especially via the use of short messages services (SMS). The use of the SMS service technology is beneficial as it is inexpensive and reduces communication and travelling costs. In some cases farmers use ICT to market their products and services to target market. Farmers also use ICT for business transactions such as online purchase and online banking.

The need for improved ICT infrastructure and services are emphasized by comments and recommendations of the tourists interviewed. The tourists got whatever information they could find from the internet. They expressed a deep need for more information on many topics such as accommodation, what to eat, entertainment, hiking trails, travel opportunities, exchange rates and medical services and advice. Tourists also indicated a need for a wider range and improved tourism products and services.

The importance of agritourism for Lesotho is highlighted by the fact that the government are taking steps to promote higher levels of technology access. They are also promoting the use of ICT in schools and communities. Furthermore, they are in the process of developing and improving existing ICT systems to enhance radio and television transmission for wider coverage and to improve general ICT connectivity.

Discussions

The main issues that were identified with regards to the factors that affect the growth of agritourism as an industry in Lesotho were the lack of infrastructure, network coverage, capital, information and knowledge. Information and the flow of information are from and to the farmers are important. Farmers need ICT to improve their effectiveness (Rajkai, 2010). It is through ICT that they can reach the international markets. While the demand and need for access to technology is increasing, farmers need to bear in mind which technologies are easily accessible and suitable for rural communities. The findings show that radio and television are mostly used and easily accessible technologies even though accessibility to cellular phones has increased.

With regards to lack of infrastructure, it is evident that high cost of ICT infrastructure hinders access and use of certain technologies. Despite the lack and poor infrastructure in the country, the government has been tasked with providing affordable, sustainable, reliable and highly quality ICT as a means of promoting economic development in the country. Lesotho is still among the least developed countries in terms of technology establishments. Among other ICT initiatives and projects, the government of Lesotho has also adopted a National ICT Policy that makes reference and gives priority to the education sector.

The lack of ICT skills and the lack of the awareness of the benefits ICT offers contribute to the low growth in agritourism as the role players are not aware of the potential that the adoption of technologies holds for them. These findings are similar to
Conradie, Morris and Jacobs (2003) who states that the rural areas also have a number of factors that affect and hinder the access to and use of ICT. Some of these factors include ICT illiteracy, ICT access, cultural barriers, technical know-how as well as access to computer networks and usage.

Internet technology contributes significantly in the everyday life of people and is rapidly becoming visible in society and agricultural practices (Chong, Shafaghi, Woolaston & Lui, 2010). There are a number of theoretical models that attempt to guide farmers who wish to use a practical approach towards information and technology for business operations and other activities. Other models attempt to explain the relationship between the user's attitudes and beliefs towards the use of technology. These theoretical models include the Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM) (Davis, 1989; Althunibat, Zain & Sahari, 2011) and the Information Innovation Adoption model by Alvarez and Nuthall (2006). Parker (2009) states that among these models, TAM is said to be the most commonly accepted model because it explains and predicts users’ behaviour of IT. The author concludes that TAM is considered an influential extension of Theory of Reasoned Action (TRA). The IIAM was adapted to give a more clear indication of how the factors influencing the adoption of ICT in Lesotho take place. Figure 1 shows the adapted IAMM framework.

![Figure 1](http://www.ajhtl.com)

Figure 1: Adapted model for ICT use in a developing context (Source: Alvarez & Nuthall, 2006:51)

Added to the IIAM framework are three important role players namely the farm employees, government and tourist, in the process of adoption. The generally community at large were not considered for this research and will be done at a later stage. However, the impact of the three role players as well as the farmer on the community and as a result on agritourism, is shown by the arrows.
Farm employees are important to the farmers in ways such as the face to face contact with tourists, communication by mobile phones and emails and the upkeep of information on websites, social media and more. How the employees optimise the ICT infrastructure available to them will affect the growth of the agritourism part of the farming business. It stands to reason that the relationship between the farmer and farm employee will also greatly the community, the goals and objectives of the farmer and as a result the decision and management style of the farmer and farm operations.

Government holds the key for future growth of agritourism in Lesotho. The cost of the infrastructure is high and individual farmers and communities cannot afford building their own ICT infrastructure. The impact of government involvement in agritourism by means of education, infrastructure and economic assistance such as a combined international marketing effort will be great and will largely assist the farmer in setting goals and objectives and increase the quality of decision making. Government do have funding schemes available for farmers but farmers do not know about these schemes and do not have appropriate channels available to them to access the funds.

Although the agritourism industry is still very small and in fact struggling, tourist albeit in small numbers are discovering Lesotho as an agritourism destination. The more agritourism farmers use ICT, the easier it will get for tourist to visit their establishments. Once again the effect of the tourist will flow through the whole model as indicated by the arrows. The tourists recognised that investments in ICT by the farmers to be expensive and without support will find it difficult to adopt ICT.

There are many role players that contribute to the growth of agritourism in any country. Some of the role players are primary and others secondary. They all need to work together to successfully promote the agritourism sector (Mochebelele, 2009). Only the four entities (farmers, employees, tourists and government officials) directly involved and interrelated to one another as shown in figure 1 were used for the research. As indicated in the findings tourists requested a wider range of tourists' products and packages, improved quality of the offerings and services. This supports the findings of Mckeeman and Rozga (2007) as they showed the poor quality of products and services, the limited product supply and low level of ICT infrastructure.

For farmers that offer agritourism products, communities involved in and government a set of guidelines was developed and proposed. As far back as 2006 Inusa proposed that a set of guidelines to assist farmers be developed for agritourism. The following is guidelines proposed to farmers and do not include guidelines for government ICT development.

The guidelines:

i. Identify technologies that are being used in the agritourism industry
ii. Explore which of these technologies are available for farmers in rural communities.
iii. Determine barriers that inhibit access and use of these technologies.
iv. Determine the cost of technologies in general (purchase, maintenance).
v. Identify sources of funding for acquisition of technologies.
vi. Establish relationship with government, IT specialists and other stakeholders involved in agritourism.
vii. Determine the cost of information access through the use of technologies.
viii. Determine the cost of training for ICT use.
ix. Identify awareness programmes that specialise in technology use in businesses.
x. Ensure that infrastructure needed for ICT use is available in the area.

xi. Enhance ICT use in rural communities as a priority for sustainable development.

xii. Where applicable outsource ICT operations to companies dealing with connectivity, development, design and online marketing such as social media.

Conclusions

Technology plays an important role in promoting sustainable development and improving the lives of farmers in rural communities. Agritourism offerings depend largely on ICT. Farmers are aware of certain technologies that are used in agritourism sectors and also perceive these technologies as important tools that can be used to improve the quality of information relevant to agritourism and to assist in promoting agritourism products and services to a wider market through the use of electronic media.

The study shows that the role of technology in agritourism has been recognised. However businesses that do not have access to technologies such as the internet and other related technologies and as a result may not benefit from electronic services that are offered and will not be able to compete globally. Farmers do not consider ICT as an option because of the lack of access to technologies for them. This is a major challenge for the agritourism industry and all role players in the industry will have to work together to develop an agritourism strategy that addresses these challenges in order to enable the farmers adopt technologies available and to transform the industry.

The study identified the different types of technologies farmers use in rural communities and these consist of mobile phones, radio, television and computers. Although mobile phones radio, television and computers are mostly used by the majority of farmers, they are unable to use these technologies to their fully extent because of factors that hinder them from optimising the potential of ICT. Factors such as the lack of infrastructure and knowledge, the acquisition costs of technology and accessibility among others, should be taken into considerations as they are the main factors affecting the use and growth of agritourism sector in rural communities of Lesotho.

It is recommended that all the role players in the agritourism industry in Lesotho work together to mitigate the risks that are inhibiting the growth of agritourism. Special attention needs to be given to education and training not only for farmers but also for local communities and government. Where access to internet is available, marketing opportunities created by technologies such as social media need to be utilise as well as optimised. The lack of infrastructure needs to be addressed at the highest governmental level. This research only included four of the many role players in the sector. Research needs to be done on the influence of the rural communities, travel agents and passenger services. Further research on the needs of the role players and how to address the needs still needs to be done.

References


