

Nexus between the invisibility of agricultural extension services and rural livelihoods development: Assertions from rural farming communities

Qwabe, Q.N.¹ Swanepoel, J.W.² Zwane, E.M.³ and van Niekerk, J.A.⁴

Correspondence author: QwabeQN@ufs.ac.za

ABSTRACT

Agricultural extension is one of the essential services that are offered by the South African Department of Agriculture, Land Reform, and Rural Development (DALRRD), to facilitate agricultural development in rural communities. The significance of agricultural extension is that it offers new knowledge to farmers and allows space for growth through various interventions such as agrarian transformation and improving livelihoods through the promotion of agriculture as a vehicle for 'pro-poor' economic growth. However, there is a concern that extension services are invisible in resource-restricted and previously marginalised rural communities. The study presented in this paper examined farmer's experiences with extension practitioners and the impact of a lack of extension services on the development of impoverished rural communities. The researchers adopted a qualitative design wherein six focus group discussions were held to gather data from the farmers. Data were analyzed using ATLAS.ti22, a computer-assisted qualitative data analysis software (CAQDAS). Four themes of extension services that have a direct linkage to livelihood development, namely, the impact on rural livelihoods, production challenges, marketability, and economic impact, and the invisibility of extension services, were the central point of discussion.

¹ Lecturer, Centre for Sustainable Agriculture, Faculty of Natural and Agricultural Sciences, University of the Free State, Bloemfontein, South Africa. Email: QwabeQN@ufs.ac.za, ORCID link: <https://orcid.org/0000-0002-0406-7339>.

² Senior Lecturer, Centre for Sustainable Agriculture, Faculty of Natural and Agricultural Sciences, University of the Free State, Bloemfontein, South Africa. Email: SwanepoelJW@ufs.ac.za, ORCID link: <https://orcid.org/0000-0002-0812-2657>.

³ Head of Department, Department of Agricultural Economics and Animal Production, School of Agriculture, University of Limpopo, South Africa. Email: zwane frank@gmail.com or elliott.zwane@ul.ac.za, ORCID link: <https://orcid.org/0000-0002-5933-2910>.

⁴ Head of Department, Department of Sustainable Food Systems and Development, Faculty of Natural and Agricultural Sciences, University of the Free State, Bloemfontein, South Africa. Email: vNiekerkJA@ufs.ac.za.

Keywords: Agricultural extension; Extension services; Livelihoods development; Rural communities; Smallholder farmers

1 INTRODUCTION

Since the inception of agricultural extension in 1925, South Africa has seen notable changes in the agricultural milieu (Koch & Terblanche, 2013). Some of these changes include a rise in national and household food security, conservation of natural resources, and improved standard of living through the promotion of agriculture for economic growth among vulnerable groups, especially those living in rural areas (Zwane, 2012). Despite this, there are concerns about the invisibility of agricultural extension advisors in communities where vulnerable groups need their services the most. For example, the work of Hlatshwayo and Worth (2019), which explored the criteria to determine the visibility of agricultural extension in resource-poor communities, revealed several questions posed by local stakeholders (i.e., civil society, policy-makers, and politicians) about the invisibility and lack of accountability of agricultural extension in communities whom it is meant to benefit.

One of the reasons behind the absence of active participation among extension service providers can be attributed to a lack of self-efficacy caused by several factors such as values and attitudes, lack of motivation, lack of assertiveness, and an inability to demonstrate good problem-solving skills (Igbor, 2019). This is an intrinsic dilemma that would have to be dealt with and possible resolutions could be found through external interventions. A lack of self-efficacy affects one's performance which ultimately works against the aims of extension that are centred around improving the quality of life. This is because self-efficacy is strongly tied with an individual's feeling about their own beliefs and capabilities which subsequently influences their behaviour and routine (Hajloo, 2014). Apart from self-efficacy, it is important to acknowledge that various factors contribute to the scarcity and invisibility of extension services in communities. Some of these factors are a result of internal challenges from institutions that are responsible for extension services. For example, inadequate resources available for extension practitioners, and multidimensional work requirements (Raidimi, & Kabiti, 2017). This study investigated the impact of a lack of extension services on the development of impoverished rural communities, who, according to Swanepoel and De Beer (2007) are trapped in deprivation.

South Africa has prioritised three development goals that extension services need to fulfill at a national level (van Niekerk, Stroebel, van Rooyen, Whitfield, and Swanepoel, 2011). These goals include the attainment of national food security, improved resource management, and improved rural livelihoods to ensure sustainable development (see Figure 1). These goals form part of the United Nations (UN) Sustainable Development Goals (SDGs) which serve as a blueprint for all nations to achieve a better and more sustainable future for all people (UN, 2015). For this reason, it is important to investigate the impact of a lack of extension services on the development of poor rural communities, who, according to Swanepoel and De Beer (2007) are trapped in a state of deprivation (i.e., isolation, powerlessness, poverty, vulnerability, and physical weakness).

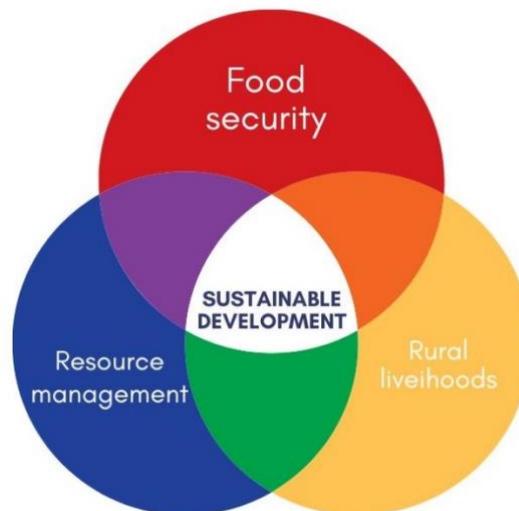


FIGURE 1: Goals of agricultural extension services in South Africa (modelled from van Niekerk *et al.*, 2011)

1.1 Food security

Food security is regarded as one of the three pillars of focus that extension services must fulfill (Van Niekerk *et al.*, 2011). The attainment of food security, as enshrined in section 27(1) of the South African Constitution, is regarded as a basic human right, and it addresses both SDGs One and Two (i.e., no poverty and zero hunger, respectively) (UN, 2021). As it stands, there are less than 10 years left for nations to meet the targets of the SDGs by the year 2030. Yet, since the discovery and subsequent outbreak of the Covid-19 global pandemic, progress towards meeting these targets have been severely stalled. For example, during the height of the pandemic, an estimated 119-124 million people globally succumbed to extreme poverty in the

year 2020, alone (United Nations, 2021). An April 2022 report by the World Bank and the International Monetary Fund (IMF) shows that 860 million people across the globe currently live in extreme poverty (i.e., on less than US\$1.90 a day). Further disconcerting is the United Nations (2021) suggestion that the global poverty rate could stand at 7% by 2030. The stipulated SDG target is to have no more than 3% of the world's population living in poverty. In retrospect, it means that the SDG target to eradicate extreme poverty by 2030 might not be achieved. From a food security perspective, not meeting this target will cause challenges in terms of the availability, accessibility, and sustainability of food. A report by the Food and Agriculture Organization (FAO) specifies the responsibility of extension practitioners in ensuring that the advancement of rural livelihoods is met through the adoption of reformed strategies of communication to achieve rural food security and improved economic status for the rural population (Rivera & Qamar, 2003). To support this assertion, Chege, Lemba, and Semenyi (2018) report that, through the efficient use of extension services, agricultural productivity (a determinant of food security) can be increased.

1.2 Resource management

One of the growing areas of concern globally is the mismanagement of natural resources. The issue of resource management is complex and should not be viewed from a single lens. According to Thapa and Weber (1994), the utilization and management of natural resources are largely affected by institutional, political, and socioeconomic factors. These natural resources are interwoven within households on regional, national and international levels. A 2006 report by the United States Agency for International Development (USAID) indicated that more than seven out of ten people live in rural regions and are dependent on natural resources; a direct result of financial constraints in Africa (USAID, 2006). In South Africa, the significant reliance on natural resources by rural communities can be attributed to the country's triple threat challenge of poverty, unemployment, and inequality (Du Toit, 2017). To address the poor management of resources, extension services must intervene and use their advisory skills to facilitate a change of behavior in resource management.

1.3 Extension services in rural communities

The availability of agricultural extension services provides observable economic benefits among beneficiary rural communities (REFERENCES). For example, in Afghanistan, researchers report that agricultural extension has a positive impact on the net revenue of the

people who benefit from these services as they help to improve the managerial aspects of farming (Moahid, Khan, Yoshida, Joshi, and Maharjan, 2021). Within the South African context, smallholder farmers face numerous challenges that hinder them to optimize their farming enterprises. Examples include inadequate farm management and marketing skills, and the literacy required for farmers to comprehend and interpret market-related information that is necessary for production planning and marketing (Khapayi & Celliers, 2016). This contrast between Afghanistan and South Africa shows that the effective use of extension services could be of significant value for South Africa's economic emancipation of rural communities (Swanepoel & De Beer, 2011).

Zwane (2012) describes five additional tools that extension services can apply to advance rural development. These include the improvement of food security, conservation of natural resources, dissemination of useful information, sustainability of projects, and empowerment of farming groups. The authors argue that an additional benefit that could be achieved through active engagement of extension services is the maintenance of agricultural biodiversity. This is particularly important in a country like South Africa which is vastly endowed with biodiversity. In agreement with the authors, Abdu-Raheem and Worth (2012) report that ongoing advisory services are effective means of addressing challenges relating to biodiversity at the rural community level.

2. RESEARCH METHODS

2.1 Study Sites and Sampling

The data were generated through focus group discussions (FGD) with smallholder rural farmers whose livelihoods and existence rely on agricultural production. To gather rich contextual data, six communities within three district municipalities of the northern KwaZulu-Natal Province (Figure 2) were purposefully selected. These are Ilembe District Municipality (IDM), King Cetshwayo District Municipality (KCDM), and Umkhanyakude District Municipality (UKDM). The three district municipalities are predominantly rural and were thus selected based on their socio-economic profiles.

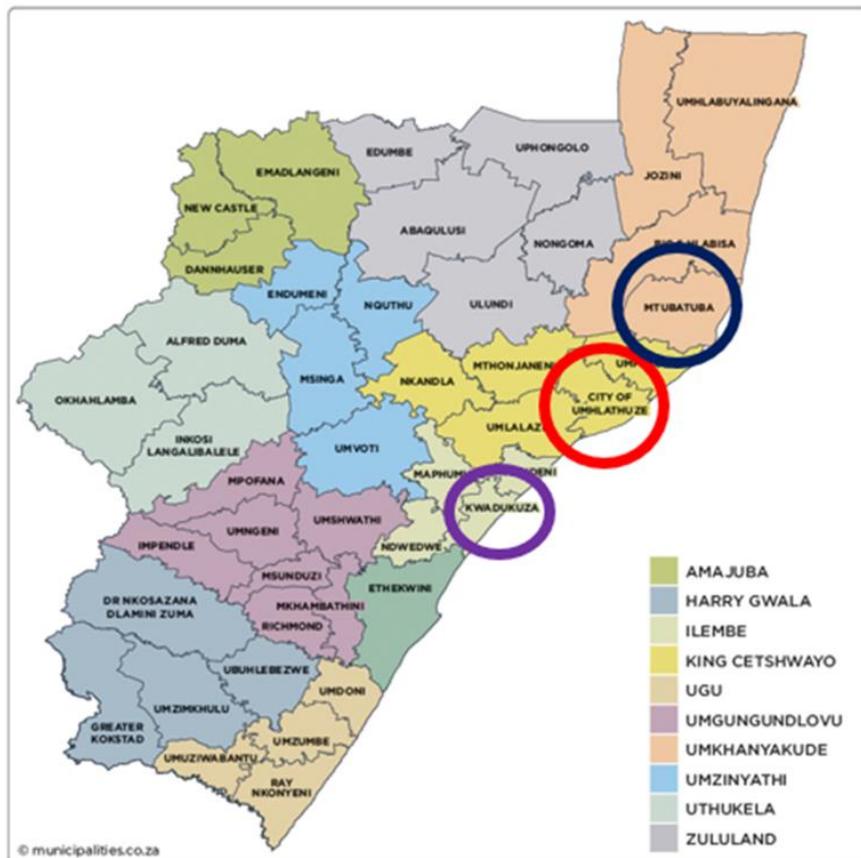


FIGURE 2: Map of study areas in the three selected district municipalities (Google Search Engine)

With assistance from extension personnel and ward councilors, the researchers were able to reach the six targeted groups comprised of five farmers per group. In total, thirty rural farmers took part in the study. With specific reference to IDM and KCDM, previous research shows that most people are unemployed and depend on government grants (Qwabe, Zwane & Swanepoel, 2021). Therefore, the researchers attempted to find the nexus between extension services and livelihood development.

For farmers to be included in the study, three main characteristics were set out. Firstly, they were expected to reside within the identified district municipalities (i.e., IDM, KCDM, and UKDM). Secondly, since the study is focused on the development of rural livelihoods, the farmers had to be from rural communities. The third characteristic concerns the type of farming that the farmers practice. In the context of this characteristic, the researchers were particularly interested in small-scale farmers. The authors acknowledge that South Africa embraces a dualistic economy that is marked by a white-dominated sector (mostly commercial) and the

African reserves (former homelands) which mainly practice subsistence agriculture on a small scale (Gwebu & Matthews, 2018). We, thus, narrowed our research to rural communities that comprised smallholder farmers. The areas presented in Figure 2 emphasize that within the three district municipalities, three regions namely, Mtubatuba, KwaDukuza, and uMhlathuze, were chosen to select the six focus groups. The areas are mostly populated by isiZulu first-language speakers. Thus, the FGDs were held in Zulu. Each FGD was recorded digitally, transcribed verbatim, and translated into English for analysis. There is a possibility that some meaning might have been lost in translation. To mitigate this prospect, the first author, who is an isiZulu first-language speaker, and comes from similar rural communities, read and re-read both the original transcript and translated transcripts to ensure the quality, credibility, and trustworthiness of the data. Other steps taken to ensure data quality are detailed in the section below.

2.2 Analysis

Data analysis was done systematically and concurrently with the data gathering process to maintain credibility and trustworthiness. This included meticulous preparation and organization of data before the final analysis (Elo *et al.*, 2014). Since the discussions were held in Zulu, the analysis followed a three-step process as shown in Figure 3.

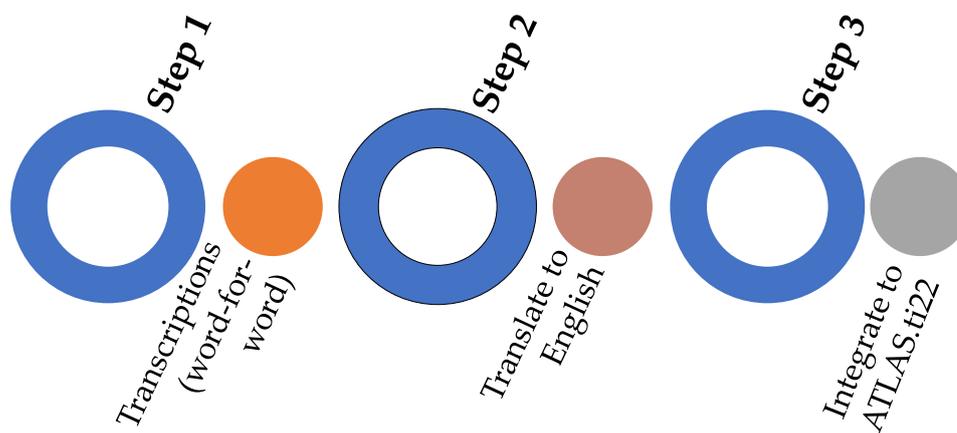


Figure 3: Three-step process for data analysis (Source: Authors)

The first step was the transcription process, wherein the recorded FGDs were transcribed verbatim as a means of retaining the accuracy of the findings. This process involved rigorous checking through each transcript against the taped recordings to avoid inaccuracy of the content and incorrect documentation of terms (see, also, Low, Chen, Lam, and Wong, 2017). The

second step was a word-for-word translation of the transcripts into English. The last step was the integration of data to ATLAS.ti version 22 (ATLAS.ti22), a computer-assisted qualitative data analysis software (CAQDAS). The use of Atlas.ti22 helped with the development of codes, themes, organization, and management of the data (Archer, Janse van Vuuren, & Van der Walt, 2017). The generation of concepts through codes and themes assisted in developing a theory on the invisibility of extension services through an inductive process of defining, categorizing, showing contrast and agreements between data, and presenting a sound and philosophical discussion on the impact of inactive extension services on rural livelihoods.

3. ROLE OF EXTENSION ON LIVELIHOODS DEVELOPMENT

Our analysis revealed several themes. However, through an in-depth analysis of the data, four related themes emerged as significant for this study. In the following sub-sections, we zoom in on each of these themes to make a case for the impact of agriculture on rural livelihoods, production challenges, marketability and economic impact, and the invisibility of extension services among smallholder farming communities.

3.1 Impact of agriculture on rural livelihoods

Several scholars have expressed the positive impact of agriculture on the development of rural livelihoods (Hlatshwayo & Worth, 2019; Rivera & Qamar, 2003; Zwane, 2012). In resonance, we found a link between agriculture and rural livelihoods, and extension services. The farmers who participated in this research emphasized the need to earn a livelihood through participating in agricultural activities. For these participants, participating in agricultural activities provided a means for them to support their families both financially and through the provision of food. These findings are important considering the context of rural communities, which includes the triple threat challenge of inequality, unemployment, and poverty. When asked how farming impacts their livelihoods, the following responses were recorded from some of the farmers:

“Most of the time, like us, as we farm...we are mothers who do not have husbands. We are self-dependent. It means that if we do not grow food then we would suffer a lot.” (P1)

“To speak the truth, most of us in this area are not working. It is hard to find employment, so this is our way of living, our livelihood strategy. Without it we would be dead.” (P2)

“Pension money is nothing. It is nothing.” (P3)

“We would suffer because we mostly depend on planting.” (P4)

The extracts above indicate the important role of agriculture in rural communities. The socio-demographic status of these communities indicated that most farmers have not received formal education and were unemployed (Qwabe, Zwane, and Swanepoel, 2021). Based on this finding, the assertions made by farmers prove true that due to their socio-economic conditions it would be difficult to navigate through life as pension money alone cannot guarantee a sustainable livelihood. One of the interesting findings was that elderly women were the heads of their respective households as they did not have husbands (P1). As such, they are self-dependent and mainly depend on farming to feed their families (P4, P5, P7, and P8). Other responses that were captured include the following:

“...as we plant my child, it happens that the bit that you would have harvested, you can change relish at home.” (P5)

“Without farming, things would be bad, God! We would be poor!” (P6)

“It is better to produce your own and survive on what you have planted. This saves you from always spending at the shops.” (P7)

“Agriculture plays a very important role because take for example the recent looting that took place in the province – I was able to feed my family from my indigenous produce in the garden. If we run out of mealie meal, I can always prepare sweet potatoes and everyone would eat, there would be no hunger.” (P8)

Based on these responses (P1-P8), we argue that through agricultural production, previously disadvantaged groups residing in rural communities can make meaningful contributions to their households by reducing hunger through the production of food. While a compelling argument about the nutritional component of the food produced cannot be made, the first two pillars of food security (availability and accessibility) as declared by FAO (1996), are often met. This also speaks to the contribution to poverty reduction and zero hunger as stipulated in the SDGs (UN, 2021).

3.2 Production challenges

The study also found resource scarcity to be one of the main limitations faced by rural communities. The cause of this can be attributed to the low socio-economic status that rural areas are often subjected to. Supporting this claim are Alexander, Alexandra, and Karen (2018)

who found socioeconomic variables to be the main contributors to rural inequality. In this study, it was found that the challenges that farmers faced included a lack of support from the government and the private sector, poor infrastructure, water scarcity, drought, lack of information (advisory services), and market inaccessibility. In support of this, Khapayi and Celliers (2016) state that the main limiting factors that are faced by farming households include "...poor physical infrastructures such as poor roads, lack of transportation to the markets from the farms, lack of marketing skills and information, poor market infrastructure, high transaction costs, insufficient land availability to expand production, lack of agricultural implements to better production, poor production and farm management skills, as well as low education levels which results in an inability to interpret market information to be used in production planning and marketing". It is the prerogative of extension personnel to ensure that development relating to these factors in rural communities is addressed. However, due to institutional challenges relating to governance, capacitation, and the technical, functional, and professionalising of the extension services (Davis & Terblanché, 2016), the socio-economic development of rural communities remains a challenge.

3.3 Marketability and economic impact

In countries like South Africa, agriculture plays a critical role in the development of rural economies. This is mainly because rural farmers use their produce for monetary gain through informal trading. However, challenges such as poor infrastructure and the challenge to access formal market work are to the disadvantage of the farmers. According to Sumaryanto, Susilowati, Saptana, Suryani, and Suryadi (2021), agriculture as a source of income can be strengthened through the improvement of infrastructure and transportation. In the context of this research, it was found that one of the challenges that were faced by farmers was that they did not have access to information about market accessibility. One of the farmers stated:

"...there is this neighbour of mine who had planted an abundance of vegetables last year. Because no one was there to assist her to access the market, she ended up throwing most of the produce away." (P9)

Within the framework of sustainable agriculture, agricultural production must be economically viable and socially acceptable (Khwidzhili & Worth, 2019). However, as a result of a lack of support from government and non-government institutions, rural communities face the

challenge of reaping the full benefits of participating in the agricultural sector. Consequently, farmers produce at a loss, both during the production process and post-harvest. Compounding this challenge is the invisibility of extension services in rural communities. Hlatshwayo and Worth (2019) define agricultural extension as a set of organisations that support and facilitate people who are engaged in agricultural production to solve problems and obtain information, skills, and technologies to improve their livelihoods and well-being. In agricultural-dependent economies such as IDM, KCDM, and UKDM, extension programmes are not only expected to help increase household food security through subsistence production but to improve the overall scale (productivity and revenue) of smallholder farmers.

3.4 Invisibility of extension services

Our findings show that there is the invisibility of extension services in rural communities. While the reason for this is unknown to the farmers, the researchers believe that this is mainly due to a lack of capacitation and lack of self-efficacy from extension personnel. As previously mentioned, Igbor (2019) asserts that extension practitioners [often] lack motivation and assertiveness, and an inability to demonstrate good problem-solving skills which subsequently influenced their behaviour and routine (Hajloo, 2014). Based on this theory, there is a likelihood that extension personnel have little to no interest in conducting fieldwork and interacting directly with farmers. In addition to the invisibility of extension services, farmers indicated that they have never [rarely] received any advisory support from extension personnel. However, an exception was made for advisors that specifically focus on sugarcane production which is mostly in the non-government sector (P11). Supporting these claims are the following comments that were made by farmers about extension personnel in their respective communities:

“We don’t know anyone; we’re just left abandoned” (P10)

“We only have this sugarcane advisor (pointing at the advisor)” (P11)

“You would know that there is an extension officer, but you just never see them” (P12)

“...she spends much time in the office”(P13)

“I don’t even remember when last I saw our advisor” (P14)

“It is just a saying that there is an advisor in this area, we don’t have one” (P15)

“They do not visit farmers” (P16)

“It hurts us a lot because this person is educated so they must teach us about farming and tell us if we are doing the right thing” (P17)

“My thinking is that our extension personnel grow up in cities and towns where there are no agricultural activities taking place. Then they study agriculture, yet they know nothing about farming. Like our extension officer, she is a city girl, and knows nothing about farming.” (P18)

“As we speak, we produce in abundance, but we do not even have access to the market, yet we have advisors. Kanti, what is their job?” (P19)

“What kills us is that we do not have any advisors that visit us to assist” (P20)

“There is a lot that we could accomplish if we had dedicated extension advisors, honestly” (P21)

“It is only you, the younger generation, that will bring the change, but only if you care” (P22)

While an outcry from the farmers was that government needs to make means of support for infrastructural development, farming inputs, and machinery, advisory services remained at the top of the list. According to Swanepoel & van Niekerk (2018), extension services play a pivotal role in the success of farmers through the provision of training and advisory services. There was a belief among farmers that considering the training and knowledge of extension personnel if they were dedicated to their work – much would be achieved (P17 & P21). This includes frequently making contact with farmers (P16 & P20) and gaining access to markets (P19). Contrary to this, however, is the association of theoretical learning that is not accompanied by any agricultural practical background (P18). Farmers believe that the love for agricultural extension is strongly related to the individual’s level of exposure to farming as agriculture is an applied science. Lack of the practical component and passion for the agricultural extension as a profession results in these professionals (extension personnel) spending much in their offices rather than interacting with farmers (P13).

4. CONCLUSION AND RECOMMENDATIONS

The findings indicate some of the challenges faced by rural farmers in the six selected communities. Some of these challenges include resource scarcity, lack of access to markets, and the invisibility of extension services.

- Extension services have a responsibility to improve the standard of living in rural communities through active engagement with the farmers and by offering the necessary advisory support that is needed by farmers.
- To achieve this, extension norms and standards which are centred around four priority issues (poverty alleviation, attainment of food security, natural resource management, and economic growth) (DOA, 2005), must be met.

It is important to note that while intrinsic values such as self-efficacy may have led to a lack of active participation of extension personnel as proclaimed by Raidimi and Kabiti (2017), the authors acknowledge that the perceptions drawn from farmers may not be sufficient to make definite remarks on the invisibility of extension services and the development of rural livelihoods. Therefore, the authors recommend further research on the organizational culture of institutions that render extension services to rural communities. Such information can be obtained through engaging extension personnel directly as they would be better positioned to articulate matters concerning their institutional culture, policies, and governance. The researchers conclude that studying the perceptions of farmers alone is not sufficient to provide sufficient remarks on a study of this nature. Different perspectives must be explored among both extension personnel and rural farmers to determine the root cause(s) of the invisibility of extension practitioners in rural areas. It is for this reason that the researchers propose further research that focuses on the perceptions of extension personnel to corroborate the findings of this study.

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