



Economic Challenges Limiting Small-Scale Farming Enterprises Development in Rural Areas of South Africa

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Abstract

Small-scale commercial farming has been recognised as a congruent strategy for local economic development. However, there are entrepreneurial challenges that are aggravated by the state of the economy, natural factors and weak agrarian edification system limiting growth in this sector. Therefore, the paper assessed the challenges and entrepreneurial constraints faced by small-scale commercial farmers in rural areas of South Africa. Multiple stage sampling technique was used to select 217 small-scale commercial farmers. Quantitative data were collected through a survey in which structured questionnaires were used. IMB SPPS version 26 and Microsoft Excel version 2016 software were used as data analysis tools. Friedman means ranking technique was used to categorize the challenges in ascending order. Pearson chi-square was used to determine the relationship between the variables. The computed results revealed that financial, water, access to the market, crops and animal diseases challenges are the most prevalent. Subsequently, financial management, marketing, packaging, cross-breeding and human management skills are lacking from these farmers, hence the challenges. Based on the results of this investigation, the paper recommends that the establishment of training programmers to improve entrepreneurship skills should be offered to these farmers, depending on the type of farming.

Keywords: Small-Scale Commercial Farming; Economic Challenges; Entrepreneurial Constraints

Introduction

The world's food security has been squeezed by the rising population and strenuous shifts in agriculture production. While food demands are increasing, the pressure is upon the governments to realize means to improve food security. Small-scale commercial farming has been identified as one important sub-sector in achieving SDGs number 1 and 2 [1,2]. Issues revolving around eradicating extreme poverty, hunger, and reducing unemployment make small-scale commercial farming a strategic subsector to improve livelihoods in rural areas [3]. In 2014, (the year of agriculture in Africa), several African countries committed to investing at most 10% of their annual Gross National Income into agriculture sector

FAO (2017) [7].

The importance of small-scale commercial farming in contributing to food security and employment creation has been reflected in its prioritization in the development agendas for most African countries. Agriculture oriented programs such as the Comprehensive African Agricultural Development Program (CAADP) is an integral part of the New Partnership for Africa's Development (NEPAD) envisioned small-scale commercial farming as a significant player towards food security, income generation and employment creation FAO (2017) [1]. Furthermore, small-scale commercial farming has been identified as a vital agribusiness for inclusive economic development in rural

communities [5,6]. Thus, Small-scale commercial farming is regarded as a significant player in developing countries.

The South African government committed to investing 10% of its gross national income into the agriculture sector after the Malabo declaration in 2014 [1]. This found expression in the Zero Hunger Challenge, Agenda 2063, SDGs and National Development Plan 2030. As such, small-scale commercial farming has been recognized as an economic transformation path. The Department of Agriculture, Forestry and Fishery (DAFF) through Micro Agricultural Financial Institutions of South Africa (MAFISA) injected over R10 billion to finance small-scale commercial farming in rural areas across South Africa ever since 2014 [7]. Despite the efforts by the South African government to end extreme poverty through commercial farming, there are several challenges faced by small-scale commercial farming in rural areas.

Several agronomic constrictions such as lack of farming entrepreneurial skills, drastic climate change, drought, lack of access to capital and water shortages are central constraints identified and affecting the development of small-scale commercial farming [8,9]. The aforementioned challenges are linked to lack of intellectual skills to use the available resources by small-scale commercial farmers [10,11]. The paper aimed to assess different challenges and economic challenged limiting small-scale commercial farming development in VDM.

Study Area, Methods and Data Analysis

The study was conducted in Vhembe District Municipality which is constituted of four local municipalities (Makhado, Thulamela, Musina and Collins Chabane) as shown in Figure 1. Vhembe District is located in Limpopo Province in South Africa.

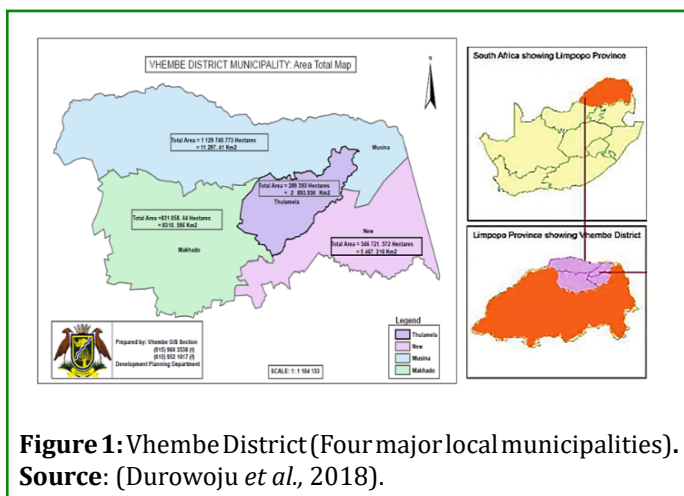


Figure 1: Vhembe District (Four major local municipalities).
Source: (Durowoju *et al.*, 2018).

A correlational descriptive research design was used.

Quantitative data was collected using a closed-ended questionnaire and a sample size of 217 farmers was selected. Cluster sampling method was used to select the respondents to the study. First, four municipalities in Vhembe District were divided into clusters and purposively selected depending on the type of farming practiced (small-scale mixed, crop and livestock farming). Second, since the target population small-scale farmers producing for the market were further purposively selected based on the farming motive¹ and type of farming practiced.² Third, respondents were randomly selected with Thulamela having 74, respondents Makhado 52, Collins Chabane 50 and Musina 41 giving a total sample size of 217. Subsequently, closed-ended questionnaires were used to collect data in different phases. The first phase involved a pilot study (information seeking and testing the survey instrument) in which primary data was collected from few randomly selected farmers across Vhembe District using structured questionnaires and secondary data (location, contact details and types of farmers in Vhembe District) was obtained from DARD database in Thulamela municipality. The collected data from phase one was objectively pretested and a structured questionnaire was constructed to meet the objectives of the study.

Results and Discussion

Quantitative data was captured and analyzed to identify economic challenges and entrepreneurial constraints faced by small-scale commercial farmers in VDM. First, descriptive statistics were carried out to derive the means for the variables used. The study employed the Friedman Test ranking method using Microsoft excel 2016 was then used to rank the computed means in ascending order starting from the lowest mean as number one until the last one as number 10. The challenge ranked number one signifies the most experienced and pressing challenge in small-scale commercial farming. The results are presented in Table 1 (economic challenges) and (skills challenges). Thus, the subsequent section presents results on economic challenges faced by small-scale commercial farming.

Economic Challenges Faced by Small-Scale Commercial Farming

This section presents the results on the Friedman Test for economic challenges experienced by small-scale commercial farming (Table 1). considering the computed Asymptotic Significance of 0.0012 which is less than 0.05, thus, the researcher concluded that the computed means were not equal. Financial challenges computed the lowest mean (2.1), hence, the most experienced constraints by small-scale commercial farmers. Subsequently, water challenges

- 1 Small-scale -farmers were selected as study respondents
- 2 Small-scale mixed, pure crop and pure livestock farming

were ranked second with a mean score of 2.8, hence the subsequent experienced economic challenge by small-scale commercial farmers. Furthermore, access to the market challenge was ranked third with a mean score of 4.6 and access to information as fourth with a mean score on 4.7. Consequently, electricity with a mean score of 8.5 and theft 8.6, were the least experienced economic challenges by small-scale commercial farmers in VDM. Having identified economic challenges calls for strategic intervention such as government handouts and training were possible. Thus, the study further assessed entrepreneurial business skills lacking in small-scale commercial farming and the results are presented in Table 1.

Parameters	Mean Rank	Score
Financial challenges	2.1	1
Water challenges	2.8	2
Access to Markets challenges	4.6	3
Access to Information challenges	4.7	4
Crop and Animal diseases challenges	5.7	5
No Support from the government	6.3	6
Expensive Inputs	6.5	7
Transport challenges	7.7	8
Electricity challenges	8.5	9
Theft challenges	8.6	10
N=217		
Asymp. Sig 0.0012		

Table 1: Freidman Mean Ranking Test: Economic Challenges. Source: Author's Survey (2019).

Entrepreneurial Skills in Small-Scale Commercial Agriculture

Table 1 shows the results for business entrepreneurial skills challenges faced by small-scale commercial farmers in VDM. The researcher analyzed the entrepreneurship skills attained by small-scale commercial farmers. Dichotomous responses (no and yes) were given, and multiple response frequencies were used to analyze the data collected, as shown in Table 1. The results in Table 1 show that most of the respondents gave almost the same response to all entrepreneurship skills. These include financial management skills (74%-No and 26%-Yes), marketing skills (60%-No and 40%-Yes), packaging skills (62% No and 38% Yes), crossbreeding skills (71%-No and 29%-No) and human management skills (75% - no 25%). The results in Table 1 further revealed that information management, farm management, bookkeeping, computer and waste management skills are lacking in small-scale commercial farming. Additionally,

water management and new technology management skills are deficient in small-scale commercial farming. This shows that small-scale commercial farmers lack critical skills to run a productive farm. In line with the economic challenges identified in this section, the researcher further assessed if there is any association ship between the challenges and the entrepreneurship skills identified (Table 2).

Parameter	No	Yes
New Technology management skills	192 (88%)	25 (12%)
Waste Management skills	184 (85%)	33 (15%)
Water Management skills	181 (83%)	36 (17%)
Book Keeping skills	180 (83%)	37 (17%)
Computer Skills	175 (80%)	42 (20%)
Human Management skills	163 (75%)	54 (25%)
Finance management skills	161 (74%)	56 (26%)
Information Management skills	158 (72%)	59 (28%)
Cross Breeding skills	155 (71%)	62 (29%)
Farm Management skills	150 (69%)	67 (31%)
Packaging skills	135 (62%)	82 (38%)
Marketing skills	132 (60%)	85 (40%)
N = 217		

Table 2: Multiple Responses Entrepreneurship Skills. Source: Author's Survey (2019).

Table 1 presents Chi-square results for economic challenges and entrepreneurial skills. Pearson Chi-square technique states that if the computed p-value is less than 5%, the null hypothesis, which claims that there is no relationship between the variables is rejected. As such, the computed p-value of 0.021 shows that there is a relationship between financial challenges and financial management skills in small-scale commercial farming. Thus, it can be concluded that the lack of financial management skills leads to financial challenges in small-scale commercial farming. The study assessed if there is an association between access to market challenges and marketing skills. The computed p-value of 0.027 is less than 5% hence the null hypothesis which states that there is an independent association ship was rejected. As such, the researcher concluded that access to market challenges are influenced by lack of marketing skills. In terms of access to information challenges and information management skills, the computed p-value of 0.543 is greater than 5% hence the null hypothesis which claims independent association is not rejected. Thus, the researcher concluded that information management skills do not have an association with access to information challenges.

The researcher further assessed if there is an association between crops and animal diseases challenges and cross-breeding skills. The computed p-value of 0.038 is less than 5% hence the rejection of the null hypothesis. The researcher concluded that the lack of cross-breeding skills might lead to crop and animal diseases challenges. Furthermore, the computed p-value of 0.039 is less than 5% between water challenges and water management skills. As such, the null hypothesis, which claims that there is no association,

was rejected, and it is concluded that the lack of water management skills may lead to water challenges in small-scale commercial farmers. Ultimately, the computed p-value of 0.048 between computer skills and access to information challenges led to the rejection of the null hypothesis. Hence, the researcher concluded that the lack of computer skills leads to access to information challenges in small-scale commercial farming. In this regard, the most experienced challenges are discussed below (Table 3).

Financial Challenges * Financial Management Skills			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18.077**	8	0.021
Likelihood Ratio	20.309	8	0.009
Access to Market Challenges * Marketing Skills			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	13.410**	11	0.027
Likelihood Ratio	13.079	11	0.003
Access to Information Challenges* Information Management Skills			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.85**a	11	0.543
Likelihood Ratio	11.414	11	0.409
Crop and Animal Diseases Management Challenges * Cross Breeding Skills			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.834**	11	0.038
Likelihood Ratio	15.569	11	0.016
Water Challenges * Water Management Skills			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	10.590**	10	0.039
Likelihood Ratio	11.579	10	0.021
Access to Information Challenges * Computer Skills			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18.635**	11	0.048
Likelihood Ratio	18.291	11	0.035

Table 3: Economics Challenges and Entrepreneurial Skills Association Ship.

Source: Author's Survey (2019).

*** denotes statistically significant results at a 95% confidence interval.

Financial challenges: Results in Table 1 revealed that financial challenges are the most experienced constraints of small-scale commercial farming. Similarly, Table 1 revealed that the majority of small-scale commercial farmers do not have financial management skills. Thus, Table 8.3 further revealed that the lack of financial management skills leads to financial challenges in small-scale commercial farming. The results acknowledge [12,13], who stated that lack of capital is

a significant challenge limiting farmers development in rural areas of developing nations. However, these researchers did not link the challenges and the corresponding entrepreneurial skills. As such, the researcher was able to associate the challenges experienced and the attributing skills in small-scale commercial farming.

Water challenges: Water challenges were identified as the

second experienced challenge by the small-scale commercial farmers (Table 1) The researcher further revealed that the majority of the respondents do not have water management skills. Lack of water management skills was found to be associated with water challenges hence the researcher concluded that water challenges in rural areas are not only caused by climate change conditions but also the lack of water management skills in small-scale commercial farming. However, the researcher acknowledged the fact equipment necessary to draw irrigation water to farms is expensive, which may be another cause of water challenges in rural areas [14].

Access to the market challenges: Access to the market has been identified as another persistent challenge experienced by small-scale commercial farmers. Because farming requires stable and reliable markets, it is pragmatic to establish sustainable market channels. Small-scale commercial farmers are well known as producers of perishable products of FAO, 2016. Thus, the need to have marketing skills may help in these farmers to penetrate local, national and international markets. Thus, market access is crucial for small-scale commercial farmers development.

Access to farming information challenges: Access to information is essential for small-scale agriculture development [5]. Small-scale commercial farming as a lucrative rural agribusiness requires access to funding, markets, farming methods information for the betterment of their farming. The computed results in Table 1 revealed that information management skills are lacking in small-scale commercial farming. The researcher further revealed that lack of information management skills leads to information access challenges in small-scale commercial farming. These results support Ncube (2017), who revealed that access to institutional information challenges are impeding growth in agribusiness since the majority of the farmers fail to meet their expectations. Thus, access to information is a pivotal element for productive small-scale commercial farming in rural areas.

Crops and animal diseases challenges: Outbreaks of diseases have been a challenge for small-scale agriculture. The results in Table 1 show that crop and animal diseases challenges are experienced by small-scale commercial farmers in rural areas. However, results in Table 1 revealed that lack of cross-breeding skills lead to crops and animal diseases management challenges. The results, however, contradicts a report by FAO (2016) which states that small-scale commercial farmers in developing countries can use biophysical methods to reduce crop and animal diseases outbreaks. Thus, the researcher concluded that crops and animal diseases management skills are crucial for the development of small-scale commercial farming in rural areas.

Findings

- Lack of finance is the most experienced challenge in small-scale commercial farming subsector in VDM. Despite various financial support provided by the South African government to agriculture, most small-scale commercial enterprises face access to finance challenges. However, financial management skills are also lacking in this sub-sector. In this regard, it can be concluded that the lack of financial management skills is leading to mismanagement of finances hence financial challenges.
- Water challenges are regarded as the second most experienced challenges in small-scale commercial farming. Agribusinesses such as crop, citrus and fishery require a constant supply of water. Lack of water management skills was found to be associated with water challenges .
- Access to the market was ranked as the third experienced challenge by small-scale commercial farmers in VDM. The study further revealed that marketing skills are lacking in the majority of the farmers in VDM.
- The findings of the study indicate that access to information is one critical challenge experienced by small-scale commercial farmers. Information is a critical component for productive farming as it provides the current economic affairs hence allowing proper planning by the farmers. The study further revealed that 72% of farmers do not have information management skills. In addition, lack of computer skills was found to influence access to information hence intensifying access to information for productive farming.

Conclusion

Small-scale commercial farming has been recognised as a congruent strategy to alleviate poverty, hunger and chronic unemployment. However, the study revealed that several challenges are still hampering probable development in this subsector. Several challenges were identified in the current study. These are but not limited to financial, water, access to markets, access to information challenges and crop and animal diseases challenges. Correspondingly, the researcher further revealed that the above-mentioned challenges are caused by lack of farming skills such as financial management, marketing, packaging, cross-breeding and information management skills. Immediate intervention in small-scale commercial farming is required. Given different farming opportunities such as income-generating, employment creation and food security, it is imperative to suggest that small-scale commercial farming has the structural and functional capability of adding to local economic development. As such, it is fundamental to note that improving skills in this subsector can lead to productive farming which in turn can add on to food security and employment creation in rural areas. Subsequently, improving

skills in small-scale commercial farming is recommended for the success of small-scale commercial farming. In this regard, the researcher suggests small-scale commercial farming skills development should be emphasised across the rural farming spectrum.

Recommendations

The current study findings show that small-scale commercial farming needs immediate intervention in skills development. The challenges identified in the study are caused by the lack of entrepreneurship skills in this sub-sector. As such, the study recommends aligning agriculture training programmes offered to contemporary challenges faced by small-scale agribusinesses. In this regard, rural development practitioners need to first clearly identify the prevailing and formulate training programmes which is directly related to actual challenges. Furthermore, there is a great need for computer literacy among farmers. Computer literacy enables a blanket of solutions as it connects farmers to the outside world. Thus, harnessing latest technology in skills development for small-scale commercial farming addresses several challenges faced. These training programmes can be implemented through skills development organisations such as SEDA, CASP, LIMA and NYDA with DALR in rural areas. Institution for higher learning should play a part in skills acquisitions through offering a voluntary training programme in surrounding communities.

Because small-scale commercial farming is constituted of the diversity of farmers, Agricultural policies should be based on current evidence and should be also being based on regular assessments. This improves the readjustment of relevant policies for the development of small-scale commercial farming. However, to achieve this, there is a need to recognize small-scale commercial farmers and their economic contribution more fully. This includes enabling policy mix, which includes financial, access to productive land and agricultural measures specifically to develop this sub-sector. The building of strong government intervention, farming stakeholder participation in policy formulation and adequate support for small-scale commercial farmers' schemes in rural areas. The primary aim is to enable small-scale commercial farmers to have access to critical factors of production (water and productive land) which enable agribusiness development in rural areas. Furthermore, there is a need to put economic measures which enable small-scale commercial farmers to have access to the supply chain in local and national markets.

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