

Youth Participation in Farming Information related Activities in Mahikeng Local Municipality, North West province South Africa

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Abstract

The study assessed socio-economic and information factors influencing youth participation in farming related activities in Mahikeng. A multistage sampling procedure were used to sample 150 youths using a structured questionnaire and a checklist between two schools in Mahikeng local municipality. Data was captured using Excel spreadsheet and were analysed using descriptive and logistic regression model. Descriptive results showed that, the students' age groups in the two schools ranged from 14-35 years of age. Logistic regression results revealed that factors such as lack of support, limited information about agribusiness and extension support influence youth participation in agricultural activities. The study recommends the strengthening of a relationship between youth and the local department of agriculture.

Keywords: Socio-economic factors, Youth, Participation, Agriculture, Information

Abstrak

Studi tersebut mengkaji faktor sosial ekonomi dan informasi yang mempengaruhi partisipasi pemuda dalam kegiatan pertanian di Mahikeng. Prosedur pengambilan sampel multistage digunakan untuk mengambil sampel 150 remaja dengan

menggunakan kuesioner terstruktur dan daftar periksa antara dua sekolah di kotamadya lokal Mahikeng. Data diambil dengan menggunakan spreadsheet Excel dan dianalisis menggunakan model deskriptif dan regresi logistik. Hasil deskriptif menunjukkan bahwa kelompok usia siswa di kedua sekolah tersebut berkisar antara 14-35 tahun. Hasil regresi logistik menunjukkan bahwa faktor-faktor seperti kurangnya dukungan, keterbatasan informasi tentang agribisnis dan dukungan penyuluhan mempengaruhi partisipasi pemuda dalam kegiatan pertanian. Studi ini merekomendasikan penguatan hubungan antara pemuda dan dinas pertanian setempat.

Kata Kunci: *Faktor Sosial Ekonomi, Pemuda, Partisipasi, Pertanian, Informasi*

Introduction

The average age of the African farmer is over 50 years but farming is perceived by many young people as old fashioned and offering little opportunity for a productive future, so they seek well-paid jobs in towns and cities, however, the majority of them lack the skills needed to gain employment in other formal sectors. Ilahiane (2017) further explained that, there is an urgent need to encourage young participation in the agricultural sector, especially in the rural areas, where underemployment is prevalent.

Youth unemployment has become a major global concern following the global economic crisis of 2009, an event that triggered a sharp rise in youth unemployment (Bezu *et al*, 2006) (olden 2014). Nhamo and Chikoye (2017) supported this view by stating that, youth unemployment is a challenge threatening the economic performance of many countries. Olusi (2018) further stated that, the current global youth unemployment rate is estimated to be 12.6% and is expected to remain high for the next five year. Agriculture is the second contributor to the South African National GDP the agricultural sector is characterised by its unique dualistic nature (Tolamo, 2014).

In South Africa, unemployment rate is at the highest level since the dawn of democracy, 27.1% of unemployed citizens are youth of 15 to 35 years of age in the third quarter of 2018 Rutta, (2012). Ruben and Berg (2000). It is said that, quarter of the labour force cannot find jobs especially graduates and skilled workers. Agriculture is said to be the major employer and the only sector experiencing positive growth rate in SA by employing 44.2% of the South Africans in the third quarter of 2017 (statistics SA, 2016). However, Majority of South African youth are not taking advantage of these of these opportunities. Those who do participate, they are interested in farming and no other parts of the value chain. Since 27.7 % of them of the age between 14-34 are not employed, Gavian *et al* (2019) highlighted that, the main reason is because agriculture is perceived to be unattractive to youth and its potential has not been fully realized. Furthermore, majority of young people whom are agricultural entrepreneurs venture into one part of the whole value chain, which is farming, and sell their produce at farm gate with little or no processing (Gavian *et al* (2002)). Thus this paper aims at investigating youth participation in farming related activities in Mahikeng North west province of South Africa.

Materials And Methods

Study area

The research is in the North West province, in the Ngaka modiri Molema district, in the Mahikeng local municipality, the population of people living in the Northwest province is 3,7 million (statsSA,2016), of which black Africans make up 95,5%, while

2,3% are coloured, 1,3% are white and 0,8% are Indian/Asian (Stats SA,2016). Mahikeng Local Municipality is a local municipality in Ngaka Modiri Molema District Municipality, Capital City of North West Province, South Africa. Mahikeng is a Setswana name meaning "place of rocks", with the area of 3 698 km² (StatsSA, 2016).

There are 84 239 households in the municipality of which 20,483 are the agricultural households, with an average household size of 3,4 persons per household, census (2011), figures also show that 22% of the population have access to piped water inside the yard while 30,9% have access to piped water in their dwellings (StatsSA, 2016). 59 726 people are employed while 33 167 people are unemployed. There are 12 987 people classified as discouraged work-seekers, the unemployment rate is 35,7%. The unemployment rate among the youth aged 15–34 in the Mafikeng Local Municipality area is 47, 1% (StatsSA, 2016).



Figure 1.2: A map showing an area of the Mihikeng
Source: Google

Data Collection

The study used primary data in the qualitative research that was collected from a selected population of Mahikeng local municipality, a semi- structured questionnaire was used in a class/meeting with youth to identify agricultural activities, the extent of youth participation in these activities as well as analysis of the existing interventions in agriculture that attracted youth.

A structured questionnaire consisting of number of sections was used. The first section was used to determine the demographic information of the participants. Section two which includes a number of questions to determine perceptions of youth in non-farm

activities and students towards agriculture and section three focused on determining factors limiting participation of youth in non-farm activities.

Sample Selection

Respondents will be drawn independently in a random process by means of a table of random numbers. Random sampling is a sampling technique where researcher selects a group of subjects (sample) for a study from a larger group (population) (Tolamo, 2014) he further stated that, each sampling unit of the population had a known and equal chance of being included in the sample. A total of hundred and twenty (120) young people were interviewed using a questionnaire which will be included in the sample. Sixty respondents will be randomly selected from the population, proper sampling will be done in order to attain correct results and so the proper analysis could be done.

Possible sampling methods are classified into probability and non-probability sampling methods, the non-probability sampling methods refer to cases where the probability of including each element of the population in a sample is unknown (Bless et al, 2006) cited by Zamxaka (2015). When a complete population list is not available non-probability sampling is more suitable.

Data Analysis

The research used both qualitative and quantitative data. The raw data from each of the questionnaires through semi-structured and structured questionnaire will be used for analysis. Qualitative data will be organized into relevant categories based on the objectives of the study. Qualitative research will be a set of research techniques, used in the social science, in which data is obtained from a relatively small group of respondents and not analysed with statistical techniques. Qualitative information is information based on people's views, opinions and perceptions. Quantitative data will be analysed by using descriptive statistics.

Logistic regression

Logistic regression analysis refers to a group of techniques, which allow for measurement of the degree of relationship between a dependent variable and independent variables (Bless *et al.*, 2006). Assuming that \mathbf{X} is a vector of explanatory variables and p is the probability that $Y=1$, two probabilistic relationships as stated by Wooldridge (2012) can be considered as follows:

$$p(Y = 1) = \frac{e^{\beta x}}{1+e^{\beta x}} \quad (i)$$

$$p(Y = 0) = 1 - \frac{e^{\beta x}}{1+e^{\beta x}} = \frac{e^{\beta x}}{1+e^{\beta x}} \quad (ii)$$

$$\log \left[\frac{\theta x}{1-\theta x} \right] = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \dots \beta_k X_{ki} + \mu i \quad (iii)$$

Thus allowing the estimation as a linear model for which the following definitions apply:

θ = logit transformation of the odds ratio;

α = the intercept term of the model;

β = the regression coefficient or slope of the individual predictor (or explanatory) variables modelled and

X_i = the explanatory or predictor variables.

During SPSS analysis, Equation (iii) was used to generate the odd ratios using the maximum likelihood procedure. The logistic regression in this study can be specified by Equation (iv) below:

Logistic regression model used was:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \beta_{12}X_{12} + \beta_{13}X_{13} + \mu_i \quad (iv)$$

In this study, the independent variables of the logistic regression equation (iv) above, (X₁ to X₁₃) are gender differences, ownership of land, access to credit, availability of any agricultural events, source of agricultural information, government interventions, media contributions and availability of youth organs.

Where:

X₁₄= Major improvements

Table 1 Personal and household information of respondents Association between youth participation and farming status

Variables	Unit	Type of variable	Expected sign
Gender differences	Actual gender, Male or Female	Categorical	-
Ownership of land	If they own land or not	Categorical	-/+
Access to credit	Had or did not have access	Categorical	+
Availability of any agricultural events	If they occur or not	categorical	+
Availability of youth organs	If they exist or not	Categorical	-/+
Availability of agricultural inputs	If they have or not	categorical	+
Groups available	If they exist or not	categorical	-
Agricultural support	If they exist or not	categorical	-
Agricultural Institutions available	If they are available and accessible or not	categorical	-
interest enhancement organisation available	If they are available and the perform their duties	categorical	+
Media contribution	If there's media contribution or not	categorical	+/-
Major improvements	If there are improvements or not	categorical	+/-

= Error term

Table 2: Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.	probability
1	11.022	8	0.2	0.000

Source: author's computation

Variables	B	S.E.	Wald	Sig.
Own land	0.152 (B2)	0.371	0.168	0.682
Access to credit	0.392 (B3)	0.412	0.908	0.341
Availability of any agricultural events	0.191 (B4)	0.383	0.249	0.618
Sources of agricultural information available	-0.744(B5)	0.424	3.084	0.079
Availability of agricultural inputs	0.099 (B6)	0.366	0.073	0.787
Groups available	-0.48 (B7)	0.348	1.903	0.168
Agricultural support	-0.021 (B8)	0.384	0.003	0.957
Agricultural Institutions available	-0.037 (B9)	0.376	0.01	0.922
Government intervention	0.694 (B10)	0.381	3.315	0.069
Availability of youth organs	0.302 (B11)	0.364	0.688	0.407
interest enhancement organisation available	- 0.423(B12)	0.427	0.98	0.322
Media contribution	- 0.429(B13)	0.392	1.198	0.274
Major improvements	0.196 (B14)	0.366	0.285	0.594
Constant	0.39 (B15)	0.728	0.287	0.592

Land ownership - has a positive value, indicating a positive relationship between land ownership and youth participation in agribusiness. This positive relationship is shown by a positive number (β_2) of 0.152. This means that the absence of land ownership is the causal factor of Mahikeng local district youth not to participate in agribusiness. If we can hold gender differences and credit access constant, the absence of land ownership lead to youth of the location not to participate in agribusiness.

Access to credit - β_3 has a positive value of 0.392(B₃), indicating a positive relationship between youth participation in agribusiness and lack of credit finance. If β_1 , β_2 , can be held constant, β_3 (which indicates the effect of lack of credit finance on participation of youth in agribusiness) it has a positive value, meaning that the lack of credit finances causes or lead to Mahikeng local district Youth not to participate in agribusiness. This means that the higher the lack of credit finance, the more youth will not participate in agribusiness.

Availability of any agricultural events - has a positive value of 0.191(B₄), indicating a positive relationship between youth participation in agribusiness and the availability of any agricultural events. If β_1 , β_2 , B₃ can be held constant, β_4 (which indicates the effect

availability of any agricultural events on participation of youth in agribusiness) it has a positive value, meaning that the lack availability of agricultural events causes or lead to Mahikeng local district Youth not to participate in agribusiness. This means that the higher the lack availability of any agricultural events, the more youth will not participate in agribusiness.

Sources of agricultural information available - has a negative value, meaning that there is a negative relationship between the youth participation in agribusiness and the Sources of agricultural information available. This implies that the Sources of agricultural information available has nothing to do with Mahikeng local municipality youths not participating in farming activities as well agribusiness. An increase in number of youth not participating in farming has nothing to do with the Sources of agricultural information available, since it is shown by $-0.744(B_5)$. Since β_5 is negative, this shows a negative relationship between participation in agribusiness and the Sources of agricultural information available.

Availability of agricultural inputs - has a positive value of 0.099 (B_6) indicating a positive relationship between youth participation in agribusiness and the availability of any agricultural inputs. If β_1, β_2, B_3 and B_4 and B_5 can be held constant, β_6 (which indicates the effect of availability of agricultural inputs on participation of youth in agribusiness), it has a positive value, meaning that the lack availability of agricultural events causes or lead to Mahikeng local district Youth not to participate in agribusiness. This means that the higher the lack availability of any agricultural input, the more youth will not participate in agribusiness.

Groups available - has a negative value, meaning that there is a negative relationship between the youth participation in agribusiness and the availability of agricultural support groups. This implies that the availability of agricultural support group has nothing to do with Mahikeng local municipality youths not participating in farming activities or agribusiness. An increase in number of youth not participating in farming has nothing to do with the availability of agricultural support groups, since it is shown by $-0.48 (B_7)$. Since β_7 is negative, this shows a negative relationship between participation in agribusiness and the availability of agricultural support groups.

Agricultural Institutions available - has a negative value, meaning that there is a negative relationship between the youth participation in agribusiness and the agricultural Institutions available. This implies that the agricultural Institutions available has nothing to do with Mahikeng local municipality youths not participating in farming activities or agribusiness. An increase in number of youth not participating in farming has nothing to do with the agricultural Institutions available, since it is shown by $-0.037(B_9)$ Since β_9 is negative, this shows a negative relationship between participation in agribusiness and the agricultural Institutions available.

This means that we fail to reject $H_0 (\beta_9 = 0)$ and conclude that the agricultural Institutions available does not affect the youth participation in agribusiness, agricultural Institutions available is the causal factor of Mahikeng local district youth not participating in agribusiness.

Government intervention - has a positive value of 0.694 (B_{10}) indicating a positive relationship between youth participation in agribusiness and the government interventions. If $\beta_1, \beta_2, B_3, B_4, B_5, B_6, B_7, B_8$ and B_9 can be held constant, β_{10} (which indicates the government interventions on participation of youth in agribusiness) it has a positive value, meaning that the lack availability of government interventions will lead to Mahikeng local district Youth not to participate in agribusiness. This means that the

higher the lack government interventions, the more youth will not participate in agribusiness.

Media contribution - has a negative value, meaning that there is a negative relationship between the youth participation in agribusiness and the media contribution. This implies that the media contribution has nothing to do with Mahikeng local municipality youths not participating in farming activities or agribusiness. An increase in number of youth not participating in farming has nothing to do with the media contribution, since it is shown by -0.429 (β_{13}). Since β_{13} is negative, this shows a negative relationship between participation in agribusiness and the government interventions.

Conclusions

The findings of the study revealed that young people hold a positive view about agriculture and agricultural careers. The respondents were able to indicate the role that agriculture play in their life, in the community and in the country. There was also a clear indication of negative consequences that may result if agriculture could be abandoned. The majority of the respondents disagreed with the notion of saying that agriculture or agricultural activities or rather events is an option for the under-achievers, or that agriculture is meant for whites. It was clearly indicated that the majority of the youth were not aware of opportunities available in the agricultural sector such as the employment opportunity to alleviate poverty and increase the employment rate.

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