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Land access and youth participation in agriculture. The case of Zimbabwe.

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Declaration

I hereby declare that I have done this thesis entitled “Land access and youth participation in agriculture. The case of Zimbabwe” independently, all texts in this thesis are original and all the sources have been quoted and acknowledged by means of complete references and according to Citation rules of the FTA.

In Prague, 06 August 2021

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Trevor Tanaka Moyo

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Abstract

Since the year 2000 when the Fast-Track Land Reform Program was introduced, agriculture in Zimbabwe moved from commercial production to subsistence levels with most large farms being unproductive and/or underutilized. As a result of this, Zimbabwe has been on the edge of man-made food insecurity and deteriorating agriculture sector. Agricultural development in developing countries is very crucial to increase food security as well as provide employment for the youth. The youth constitute over 60 % of the population in Zimbabwe and engaging them in agriculture is an important step towards achieving sustainable agricultural development. Despite this prominence of agriculture, more than 70 % of the young people in Zimbabwe are unemployed and their participation in agriculture remains very low. In most study cases, the youth are excluded in agriculture due to lack of access to land, lack of access to finance, inadequate access to agriculture information, lack of experience and/or skills in agriculture, lack of access to markets and low profitability in agriculture. The main objective of the study was to explore factors that affect youth participation in Zimbabwean agriculture. A sample of 155 agriculture students from Gary Magadzire School of Agriculture, Great Zimbabwe University was purposively selected, and convenience sampling was employed for sampling purposes. Descriptive statistics were used to summarise and present the responses concerning factors that influence youth engagement in agriculture. The independent samples t-test was employed to compare mean differences between the students who were involved in agriculture and those who were not involved. Lastly the Linear Regression Model was used to analyse the factors that influence the interest of the students to work in agriculture. From the t-test there were significant difference between the two groups in terms of access to land, year of study, age and occupation of parents. Results from the model showed that lack of access to finance had significant influence on the respondents' interest to work in agriculture whilst it was opposite for lack of access to land and information. Combined the study findings showed that lack of access to land and finance negatively affected youth engagement levels in agriculture.

Key words: Youth, Land Access, Agriculture, Participation.

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List of Abbreviations

MOA – Ministry of Lands, Agriculture, Water and Rural Resettlement

GoZ – Government of Zimbabwe

GZU – Great Zimbabwe University

RBZ – Reserve Bank of Zimbabwe

TYPE – Typology of Youth Participation and Empowerment

1 INTRODUCTION AND LITERATURE REVIEW

1.1 Introduction

Today the world agricultural production is estimated to grow by 70 % between 2005/07 and 2050, the 72 % of which is expected to be from developing countries, among them Zimbabwe (Doering & Sorensen 2018). It is an undeniable fact that young people are the energy of today because far from being beneficiaries of the Sustainable Development Goals (SDGs), young people have been active architects in its development and continue to be engaged in the frameworks and processes that support its implementation, follow up and review (United Nations 2018). Henceforth this should provide broad opportunities for the youths in developing countries. However regardless of the above, the participation of young people in agriculture in developing countries remains very low.

1.1.1 State of the Nation: Agriculture, Youth Unemployment, and the Economy

Once known as the breadbasket of Africa until the year 2000, Zimbabwe used to be the main exporter of wheat, corn, and tobacco. However today, the country happens to be the net importer of foodstuffs from the West. In 1998, agriculture contributed a total share of 18.89 % to the country's GDP but currently contributes 8.31 % to GDP as of 2018 according to the latest available statistics (World Bank 2018). This represents a 56.01 % decrease in agricultural performance in the last 2 decades. At the same time, more than 50 % of the population is now considered food insecure with most households unable to obtain food to meet basic needs due to hyperinflation (Macheka 2019). In rural areas, a staggering 5.5 million people are currently facing food insecurity whilst in urban areas approximately 2.2 million people are food insecure and lack access to minimum public services including health and safe water. A glance at the country's current HDI of 0.571 which is below the World Average of 0.737 aids to the explanation of the low standards of living.

However, while the agriculture sector of Zimbabwe has rapidly declined in performance in the past two decades, agriculture remains the core sector of Zimbabwe's economy. With more than 60 % of the population being in the rural areas, agricultural activities provide employment and income for 60 to 70 % of the population (FAO 2020). In this view, it is important to understand

that over 60 % of Zimbabwe's economy is dominated by the informal sector. Young people account for more than 60 % of the country's population and unemployment rate as a percentage of total labor force is 5.73 % (World Bank 2020). This statistic is based on the ILOSTAT (2020) definition that unemployment is the share of the labor force that is without work but available for and seeking employment. However, this indicator does not tell us about the standards of living of the Zimbabwean labor force hence the HDI mentioned above gives a better account as to why young people choose occupation outsides agriculture or rather choose to migrate the country.

A significant number of reports in Zimbabwe offer disputing statistics ranging from 60 % to 95 % (Chipenda 2018). These figures paint a different picture of the unemployment situation in Zimbabwe depending on how the informal sector is treated but shows that a significant number of young people is either unemployed or working in the informal sector. In that concern, ILOSTAT (2020) also clarifies that the problem is not the quantum of employment but the quality and adds that most people would still count as employed under the new standards, but that the majority are employed in the informal economy characterized by low wages, poor working conditions, little or no social security and representation.

With the ailing agriculture sector living standards remain very low and there is an increasing threat to food security as well as the future of agriculture. Currently the youth employment in Agriculture, Forestry and Fishery Industry is pegged at 37 % with 41 % being males and 32 % females. Among these only 31 % males and 4 % females are directly involved in the operation of agriculture, forestry, and fishing (ZIMSTAT 2019). In response to these future threats by low youth participation in agriculture, the government of Zimbabwe has been proactive in drafting agricultural policies considering the aspect of youth empowerment. These will be reviewed later in the text, and they include National Youth Policy of 2000, Productive Sector Facility (PSF) of 2004 and Agricultural Sector Productive Equipment Facility (ASPEF) of 2005.

1.1.2 The Youth and the Land Reform Program

Land has been the top disputed issue in Zimbabwe since the introduction of the Fast-Track Land Reform Program in 2000. The Land Reform Program not only came with changes to the land

ownership, but also changed the agrarian structure of land distribution in Zimbabwe as well as ownership and security (Mazwi et al. 2017). This was followed by the redistribution of the large commercial farms (15.5 million hectares) to native majority. These farms were then restructured into smaller farms that is; Old Resettlements (3.5 million ha.), A1 (4.1 million ha.) and A2 (3.5 million ha.) farm models. The remaining 3.5 million hectares of large-scale commercial farms was and still is largely distributed in favor of the well politically connected members of the society. At this point, this was also comprised of the youth generation of 2000 who are today out of that age bracket. Until today land grabs are still taking place in Zimbabwe due to lack of security and other various government driven reasons. As more study findings and audits prove that only a few elite individuals have access to productive land (Hove & Nyamandi 2016), it is now a common perception that only politically influential people gain access to not only farm lands but huge tracts of land. More empirical evidence also points out that land has always been parceled out to those endowed with social and economic capital in Zimbabwe dating back to as far as the period just after that attainment of the independence (Cousins & Scoones 2011)

Also, various cases of multiple land ownership, land grabbing and illegal land sales involving politically exposed individuals have been emerging in audits and newspaper headlines (The Zimbabwean 2019). As a result of this the land redistribution program has since appeared to be more political than economic and as a going concern, young people have been out of the picture in terms of ownership and/or access. This represents a fall out between blueprint and reality that is the National Youth Policy of Zimbabwe's main objective is to empower young people through improving access to land and credit facilities among other issues, but there is scarce evidence for this. The fact that land is allegedly politicized and mainly parceled to the financially well-up means a challenge in access to the land by the ordinary young people who are willing to work in agriculture. While there are various studies on youth perception in agriculture, amounting evidence shows that young people are not interested in working in agriculture (Unay-Gailhard *et al.*, 2019; Bezu & Holden 2014; White 2012). These studies help us get a better understanding of young people's turn away from farming pointing to limited access to land and finance among other factors. Therefore, it is within the scope of this study to explore the factors influencing youth engagement in agriculture with land access being the main theme.

1.1.3 Problem Statement

Zimbabwe's agricultural sector is underperforming with 33.3 million hectares of land available for agriculture (FAO 2020). Most of this land turned unproductive and/or subsistence following the land redistribution program whilst there is 700,000 hectares worth of unallocated land. On the other hand, large but idle commercial farms have been a resultant factor of multiple farm ownership (The Zimbabwean 2019). With the ailing agriculture sector food insecurity is a threat, opportunities for young people are shrinking and subsequently they are finding employment in alternative areas. Poor standards of living, unemployment and underemployment has led to low levels of youth participation in agriculture. It is an undeniable fact that the future of Zimbabwean agriculture solely depends on the ability of today's young people to practice sustainable agriculture. As such the low numbers of youths in agriculture pose a threat to food security and sustainable agricultural development in the future. Consequently, human development should be at the heart of future strategies.

1.1.4 Justification of the Study

While a lot of global research studies suggest that young people are uninterested in farming or rural futures, small scale agriculture is potentially a significant source of proper employment in Zimbabwe. Most of the available literature in Zimbabwe draws towards dichotomous conclusion such that young people express interest in farming but are constrained by structural factors such as inability to access land and capital; or that they have little interest in farming (Chipenda 2018, Chipato et al. 2020, Scoones et al. 2019). However, this study in detail acknowledges that land and capital access are not the only factors affecting youth participation in the agriculture. For example, Filloux et al. (2019) and Bednarikova et al. (2016) found that although most students would be able to access some of their parents' land in the future, most considered they did not have yet the necessary resources such as capital and farming skills and the ease of starting own business (access to markets, business networks) would encourage their involvement in farming. A comprehensive study of these various factors is then important to understand how related they are in the local context.

1.2 Literature review

1.2.1 Current definition of Youth

The definition and classification of the term 'youth' differs from country to country. The National Youth Policy of Zimbabwe (2000) defined youths as persons between the age of 15 and 35. This age range is stipulated in the constitution of Zimbabwe and is also congruent with the continental definition of youth as defined in the African Youth Charter (2006) as 15 to 35 years. The United Nations rather holds a different perspective as it defines youth as persons aged between 15 and 24 years. For this study the definition of youth will be the combination of the definitions by The African Youth charter, National Youth Policy of Zimbabwe, and the United Nations. Hence youth will be regarded as people between 15 and 35 years as Mangal (2009) established that this age group is regarded to be the most productive in any society since it contains people in their prime times of life, physically and mentally.

1.2.2 Zimbabwean Land Tenure: A brief overview

The land holding rights and obligations in Zimbabwe find their expression in the country's four main systems of land tenure. These include freehold (private) ownerships, occupancy rights to land in communal areas, leasehold (resettlement) systems and state land. Resettlement land is classified as, Old, A1 or A2 land. Old resettlement schemes came into existence following the government's early land redistribution program from 1982-1998. The government bought land from large scale commercial farming areas on willing buyer willing seller basis and resettled farmers from communal lands (ZIMSTAT 2019).

Land classified as A1 is allocated in villages and in small, self-contained parcels up to 5 hectares (USAID 2016, Zimbabwe Institute 2004). This type of land is allocated to small farmers and is inheritable but cannot be sold. On the other hand, A2 farms are intended for commercial farming and are allocated in parcels of 20 to 2,000 hectares. Such farms are allocated to individuals who demonstrate that they have the experience and access to resources necessary to farm successfully (Chimhowu & Woodhouse 2008).

However, land tenure insecurity remains extremely high in Zimbabwe. The State retains Powers of Eminent Domain over all land in Zimbabwe and holds allodial title to the land. Initially this was

done to enable the government to acquire land for public and agricultural purposes. In a turnaround, the amendment of the Land Acquisition act in 2000 then meant that the acquiring authority was no longer required to prove that the land acquired is suitable for agricultural purposes (Masiiwa 2003). Consequently, the government preserves the right to take possession of land immediately on serving notice to the occupant.

Table 1: Zimbabwe land distribution data.

Land Category	Average Individual farm size (2018)	Million Hectares (1980)	Million hectares (2018)
Large Scale commercial farms	2200ha	15.5	3.4
Small scale commercial farms	148ha	1.4	1.4
New Resettlement 1 (A1)	6ha (excluding grazing)	0	4.1
New Resettlement 2 (A2)	318ha	0	3.5
Old Resettlement	46ha (including grazing)	0	3.5
Communal Area	12ha (includes grazing and forest)	16.4	16.4
National Parks and Forests		5.1	5.1
State Farms		0.5	0.7
Urban land		0.2	0.3
Unallocated land		0	0.7
Total		**39.1**	**39.1**

Source: ZIMFACT (2018)

1.2.3 Ministry of Lands, Agriculture, Water and Rural Resettlement (MOA)

The Ministry of Lands, Agriculture and Rural Resettlement is a government ministry responsible for land reform in Zimbabwe. Its mandate is to provide technical, extension, advisory, regulatory, and administrative services to the agricultural sector to achieve food security and economic development (MOA 2017). Some of the important functions as denoted by on the Government of Zimbabwe (2020) are as follows:

- Acquire and transfer land.

- Develop, review, and monitor appropriate land tenure systems for rural agricultural land and other and enforce the implementation thereof.
- Allocate land to beneficiaries in a gender sensitive manner monthly.
- Resolve disputes on farms as well as relocate and rationalize improperly settled occupiers on state land on a regular basis.

1.2.4 Land Commission Act

The distribution of land in Zimbabwe is governed by the Land Commission Act (2017) of 2018. This act provides for:

- the acquisition of State land and the disposal of State land,
- the settlement of persons on, and the alienation of, agricultural land,
- the control of the subdivision and lease of land for farming or other purposes and,
- limiting of the number of pieces of land that may be owned by any person and the sizes of such land.

1.2.5 Land distribution procedure

According to the Agricultural Land Settlement Act (2014) the application for land in Zimbabwe is done at the Department of Lands and Rural Resettlement. All land applications are done at provincial levels and application forms are submitted to the provincial chief land officer. Qualifying applications should have attached to them 5-year cash-flow projections of the agricultural activities they are willing to carry out and the size of land an applicant is applying for. However, preference is given to candidates who satisfy the following criteria:

- Proof of training or experience in agriculture industry.
- Proof of ability to command funds in the form of cash and or movable assets to carry out the intended agricultural activity.

This acts as a screening criterion to ensure that agricultural land is not granted to unproductive occupants. Although most young people have little background knowledge and experience in

agriculture, formal experience and fund accessibility remains a problem as many are unemployed. The major challenge is that applicants should present proof of funds when applying for land whilst at the same time loan applications require collateral security and/or proof of salary (Agriculture Land Settlement Act 2014, Empower Bank 2020). Basically, these two factors are contingent to each other as one cannot do without the other.

In response to this the government of Zimbabwe launched the Innovation Hubs across state owned institutions, Vocational training centers and the Empower Bank in the years 2018 and 2019. The Empower Bank's main aim is to provide young people with the opportunity to access credit facilities so that they can actively participate in the economic development of the country. On the other hand, Innovation centers are dedicated to converting academic knowledge into adoptable products through research and development (Ministry of Youth 2018).

1.2.6 Youth and Agriculture: Government Policies and Initiatives

1.2.6.1 National Youth Policy of Zimbabwe

The National Youth Policy (NYP) developed in 2000 provides an enabling framework for the development and empowerment of youth in a comprehensive, coordinated, and multi-sectorial manner. The policy seeks to empower the young people by creating an enabling environment and marshalling the resources necessary for undertaking programs and projects to fully develop the youths' mental, moral, social, economic, political, cultural, spiritual, and physical potential to improve their quality of life (Ministry of Youth 2013). The top objectives of the NYP are as below:

- To empower youth to participate and contribute to the socio-economic development of the nation,
- To develop coordinated response and participation by all stakeholders in the development and empowerment of the young people,

However, the NYP has reported minimal progress over the years and did not fully meet its goals due to lack of resources (Maulani & Agwanda 2020). The authors further argue that these government youth programs are mainly affected by the performance of the economy and the government's capacity to empower young people remains very low. This also resulted from the

government's failure to lay out exactly how they intended to achieve the objectives of these programs particularly regarding sustainable funding.

1.2.6.2 The Youth and Financial Inclusion

Youth Development Fund

The Youth Development Fund (YDF) was established by the Government of Zimbabwe in 2006 as a $40 million revolving micro-loan facility to support youth entrepreneurship through security-free loans. The eligibility criteria only included presenting a feasible business plan and meeting the age requirement 18-35 years. These were payable over 36 months at 10 % interest rate. 53 % of the loans were distributed to the youths with agricultural business plans. The YDF was considered as a successful program as over 10 000 youths were recorded as beneficiaries by 2015.

However, there are contradictions to this success story as some commentators noted that there was political interference in the implementation process and subsequently the program benefits did not reach the deserving youths (Macheka & Masuku 2019). Instead, these benefits were aligned with political affiliation particularly the ruling party ZANU-PF (Gukurume 2018). This put the program on a pathway to failure as the beneficiaries failed to pay back the loans due to misappropriation (Khumalo 2016). Hence the key challenge today with YDF is non-performing loans and thus making the program unfunctional.

National Financial Inclusion Strategy (2016).

As the YDF faced operational challenges, many young people were still excluded in the developmental process due to lack of finance. In this regard, the government of Zimbabwe launched the National Financial Inclusion Strategy (NFIS) in 2016. The NFIS details a 5-year plan of coordinated actions that will be followed to achieve the country's financial inclusion objectives during the period 2016-2020. The primary objective of the program was to address barriers to financial inclusion, prioritize and address the needs of special target groups which are currently underserved, including the youth (Reserve Bank of Zimbabwe 2016).

The Reserve Bank of Zimbabwe also provides that the youth in Zimbabwe and in developing countries are generally disproportionately affected by high levels of unemployment largely explained by low levels of financial inclusion. Youth are excluded from formal financial services largely due to negative stereotypes, as they are considered high risk takers, cannot provide collateral, have limited business and life experience, -and lack a credit history. The RBZ also notes that access to financial services could help youth become economically active, start their own enterprises, finance education, and engage productively within their communities. These benefits to the youth also have a huge positive impact to society at large, as it results in poverty alleviation and economic growth.

Financial Inclusion Strategies.

The Reserve Bank of Zimbabwe (2016) listed the following strategies to achieve financial inclusion for the youth:

- Incorporation of financial literacy programs for the youth in the National Financial Literacy Strategy. This will entail incorporation of and making mandatory, financial literacy programs and courses in primary, secondary, and tertiary education levels
- Establishment of a youth empowerment window by all financial institutions that develop innovative products which address the special needs of youths
- The capacitation of vocational training centers across the country to ensure well trained graduates can apply their knowledge on start-ups
- Ensuring that regulatory frameworks and policies are youth friendly and protective of youth rights to increase youth financial inclusion and
- Banking institutions to develop appropriate collateral substitutes to address the challenge of security among youth borrowers.

Despite all the pro-empowerment policies and programs by the government, the goal achievement remains very minimal (Gukurume 2019). The author also notes that many young people remain economically inactive because of difficulties in accessing land and credit facilities whilst for those with land, accessing loans is a problem. The reason why these policies and programs have been failing is excessive political interference (Macheka & Masuku 2019;

Gukurume 2018) and the absence of a legal instrument such as the National Youth Act (Chikova 2020). The Youth Act will be very important in empowering the Ministry of Youth to set out different youth boards that are responsible in spearheading youth concerns and issues and ensure that youth concerns are addressed. Policies alone are subject to changes but the Act together with instruments will ensure that legally binding principles are followed, implemented, and adhered to. However, the government of Zimbabwe believes otherwise as it noted in the NDS1 (2020:735) that most Zimbabwean youths have not embraced the culture of hard work and the principle that hard and honest work pays.

1.2.7 Theoretical Framework

1.2.7.1 Typology of Youth Participation and Empowerment (TYPE) Pyramid

The research borrows ideology from the TYPE pyramid model developed by Wong, Zimmerman and Parker (2010). This is an evidence-based model that extends previous participatory frameworks such as Hart's Ladder of Young People's Participation (1992) which is an informative framework for articulating youth participation types. As such the TYPE pyramid model bridges the gaps in the former and considers recent findings on youth-adult partnership research to distinguish among five types of participation, each representing different levels of youth-adult involvement. They characterize these five types i.e., vessel, symbolic, pluralistic, independent, and autonomous. Their model uses the pyramid shape with arrows to represent the degrees of empowerment and positive youth development potential for each participation type (Wong et al. 2010). An illustration is shown below.

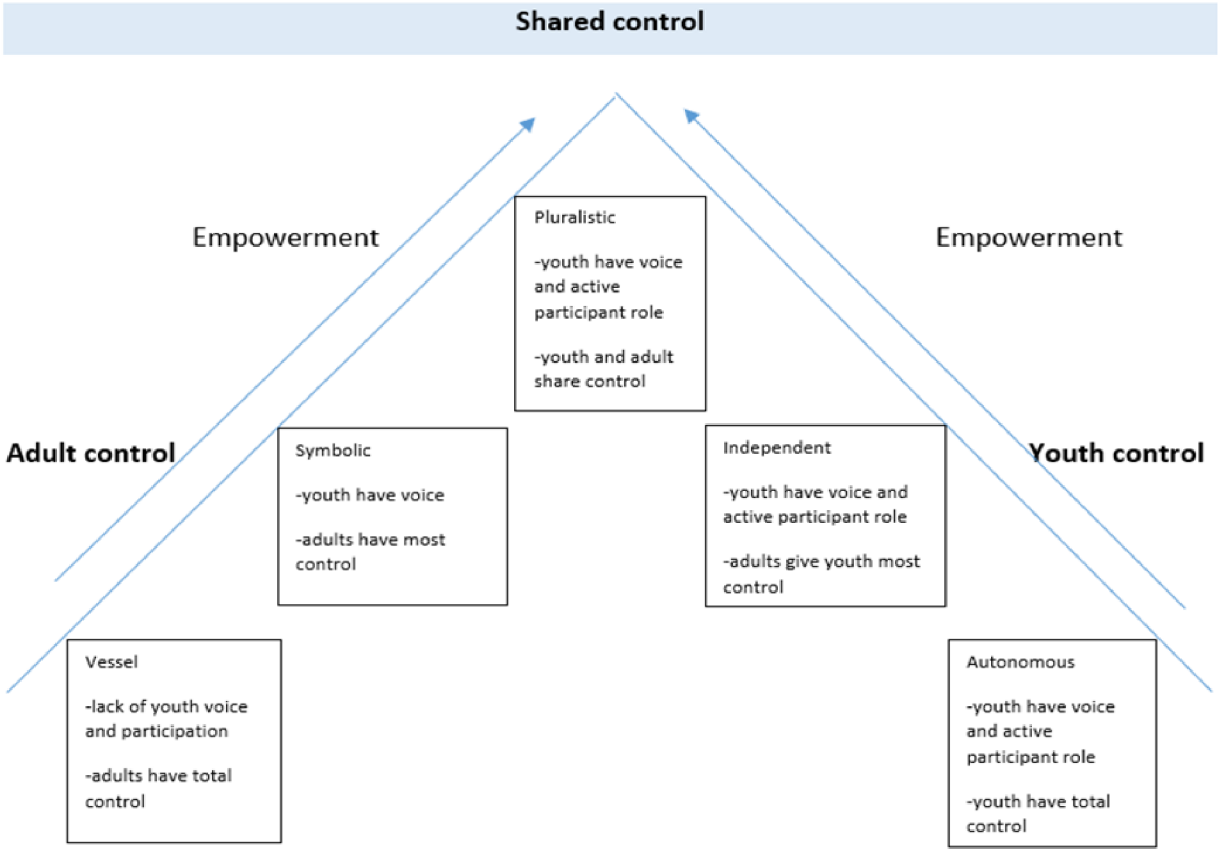

Figure 1: Typology of Youth Participation and Empowerment Pyramid.

The pluralistic approach applied in this context assumes that adults can serve as role models, sources of support and social capital and primary sources of positive reinforcement when they collaborate with the young people to share decision making and planning activities. Shared control occurs through a transactional process between adults and youths and is a key component in youth empowerment conceptual models (Wong 2010). This makes the approach very crucial in assessing the current involvement of young people in agriculture both at global and regional level as well as understanding the importance of adults in mentoring young people in respect of development, hence bridging the gap between theory and practice. By placing shared control at the top of the pyramid, the model recognizes the importance of the contribution that adult-involvement can lend youth and community development.

Camino (2005) evaluated the youth-adult partnership and found out that activity quality and positive development outcomes could be compromised if the adults are not involved. Similarly, Zeldin et al. (2017) explored the association between youth-adult partnership (youth voice in decision making; supportive adult relationship) and two key aspects of civic development (youth empowerment; community connections). Multi-level modelling, regression and profile analysis were used to compare patterns of association across 3 national samples (United States, Portugal, and Malaysia). The findings of this study indicate that youth are most likely to achieve positive outcomes when they experience freedom for decision making simultaneously with trust and power sharing from the adults. This means that, alone, young people might lack the necessary skills, experience, and expertise to successfully conduct an activity, which can result in frustration and unintended disempowering outcomes.

Although the TYPE pyramid model addresses some of the limitations of previous frameworks by focusing on the levels of empowerment and control experienced by youths or adults, it lacks the robust conceptualization of the terms 'control' and 'empowerment'. The model also does not account for the possible dynamics of participation that may exist within one project. Potentially young people may move from one mode of contribution to another multiple times within one occasion (Cahill & Dadvand 2018). For example, young people may be in a vessel mode as they listen to a keynote address at the program launch, then move to symbolic mode as they get a turn to contribute to decision making but later work in more independent ways as they engage collectively with peers in a project that they later report back on whilst adults become vessels to their input.

As far as this model is concerned, it is sad to note that there is very low youth representation within the country's decision-making process. Despite having various pro-youth empowerment policies and programs, young people in Zimbabwe continue to face socio-economic and political exclusion in national development issues. Currently the participation of young people in decision making and development processes stands at 3.3% (NDS1 2021). Accordingly, Chikova (2020) also noted less than 5 members of parliament (MPs) being younger than 35 years of age out of 210 MPs. These two statistics are closely related and show the young people in Zimbabwe are still in vessel mode in terms of participation.

1.2.8 Youth and Agriculture: Related research

Salvago et al. (2019) investigated the willingness of young people to farm under present and improved conditions in Thailand. This study analyzed both youth perception and resource availability to disentangle the extent to which young people's limited involvement in farming is due to the lack of interest or to the fact that they do not see the way to get round the obstacles to starting the kind of farming they want to practice. The authors interviewed 86 rural youths in Prachinburi Province concerning their plans to farm under prevailing conditions and their willingness to become farmers if there are improved conditions. The findings of the study presented a situation which shows that more than two-thirds of the respondents were not involved in farming although half of them had plans to do so in the next 10 years. On the other hand, the study also noted that the remaining one-third of the interviewees were willing to work full time in agriculture under improved conditions.

Within the same research framework Filloux et al. (2019) published a paper on Thai agricultural students' plans. The study investigated if and how the students plan to become farmers in Thailand. A total of 187 agriculture students taking vocational courses or working towards a university degree focused on training future farmers were interviewed. Among these students, 61 % planned to become full-time farmers at some point in the future and 32 % planned to farm part time as a secondary income-generating activity. Although most students had a farming family background and would be able to access some of their parents' land in the future, most considered that they did not have yet the necessary resources, such as capital and farming skills, to become farmers. As a result, many students planned to spend time, often up to 10 years and sometimes more, acquiring these resources before engaging in farming. Subsequently, the study recommended that public policies could provide support to shorten this period if graduates in agriculture are to be among the young people engaging in farming.

As migration of young people from rural areas has increased in all agricultural regions of Russia, aversion to working in agriculture and the aging of farmers have become a serious problem that raise a question about who is to work in agriculture in the future (Bednarikova et al. 2016). In their study paper, the authors investigated the factors that affect the decision of agricultural

students from Altai Krai to out-migrate or return to their rural parental municipalities after finishing their university studies. A questionnaire survey of students was conducted at the Altai State Agrarian University in Barnaul and their migration intentions were analyzed using logit regression model. The findings of the study show that the probability of leaving the parental municipality decreases if: i) the respondent's parents support the study of agriculture, ii) the respondent's family owns agricultural land, iii) the respondents intend to work in agriculture, and iv) the respondent believes that it is not difficult to establish one's own business in the parental municipality. This also means that the agricultural roots of the respondents stimulate the young university graduates to come back home and continue in the family tradition. Henceforth the authors also recommend that the recovery or enhancement of the relationship between agricultural schools and agricultural enterprises, access to credit for business establishment and the purchase of agricultural land, and better living conditions in rural municipalities could encourage agriculturally educated youth to remain in rural areas and work in agriculture.

In a similar study by Kvartiuk et al. (2020) concerning the brain drain in Russian Agriculture, the paper focused on migration sentiments among skilled Russian Rural Youth. The authors explored the individual decision making by skilled Russian rural youth with respect to migration, paying special attention to values and attitudes. Using qualitative and quantitative data the research identified major factors that may influence the decision to move abroad. Apart from income differentials, the study discovered that social ties, individual values, and attitudes are associated with migration intentions. Moreover, agricultural students unwilling to work in agriculture and who dislike rural lifestyle tend to be motivated to migrate abroad in search of alternative employment.

Andriamanalina et al (2014) investigated the access to land by rural youth in Madagascar. The authors noted that about 250,000 rural youth integrate the labor market and they could engage in agriculture that holds a huge potential, but to that end, they face many challenges, and above all, they need a secure land access. Based on qualitative and quantitative data from surveys of 1,800 households residing in 9 communes of Madagascar, the research analyzed the profile of rural youth, their perceptions on farmer job, their land access and the constraints which limit their integration in agriculture. It highlights that young households have small land areas with

respect to their elder (1.5 ha on average against 2.6 ha) because of more constrained access to land. They also noted that one-third of young people do not inherit land, more than half buy land and having access to cleared land is more and more difficult. Thus, they are calling for policies that support the development of their activities and access to land at local level.

On the other hand Foguesatto *et al.* (2020) investigated the factors influencing the process of farm succession in Brazil. The authors analyzed 150 responses to a farmer survey conducted in a region suffering a lack of young successors. The analysis, based on descriptive statistics and logistic regression models, highlighted the importance of income as a factor encouraging succession. Logistic regression models showed that the number of family members employed, the farm size, the farm's annual income and incentives for succession are main factors that influence expectation of a successor in the family farming process. Although the study concluded income to be the most encouraging factor, land size also appears as an influential factor.

Alternatively, Bezu and Holden (2014) examined the current land access and livelihood choices of rural youths in Southern parts of Ethiopia. Herein the study was based on a baseline of 615 households that were surveyed in 2007. Of the 615 households 580 were surveyed again in 2013 and a new sample of 40 households was added and descriptive statistics was used to analyze the data. The results show that the young people in rural south have limited access to agricultural land due to scarcity and land market restrictions, and that only 9 % of the rural youth plan to pursue agriculture as their livelihood. With respect to these findings the authors performed an econometric analysis and concluded that lack of access to land is forcing youths away from an agricultural livelihood.

While Chipato et al (2020) argued that the youth in Zimbabwe are engaged in struggles for land ownership, access, and control. In their research article "The politics of youth struggles for land in post-land reform in Zimbabwe" they investigated the struggles faced by youth from the grassroots to the national level. The authors identified that the struggles for land emanate from several factors among which are: elite alienation, the state's failure to exercise its constitutional mandate of a broad-based land reform, weak economic structure, the conflation of party and state politics, political opportunity calculations and social justice concerns. From this study the

authors alluded that the conflation of party and state politics has exacerbated the use of land for patronage purposes and led to further youth disenfranchisement and more parochialism, as demonstrated by the narrowing of the youth's national struggle for land to a party-political matter. Furthermore, their article notes that young people in the rural areas who are unable to access productive land embarked on informal occupation as they waited for unfulfilled promises from the government.

Chipenda (2018) also investigated the socio-economic being of young people after the land reform program in Goromonzi South, Zimbabwe. The author explored the reconfiguration of rural relations and social structures after the Fast-Track Land Reform Program and showed that there are young people who are increasingly demanding their share of social and economic benefits which they feel entitled to by the virtue of their citizenship. The study employed a qualitative approach and multiple data gathering instruments which included in-depth interview, focus group discussions, observation and secondary data and the research was held at Dunstan Farm, Xanadu Farm, Glen Avon farm, Rusike communal lands and Seke communal lands. The results of which revealed that the youth in the study areas expressed the desire to own land, be it agricultural or residential purposes (as they also noted the desire to have access to finance if they are to make a difference). Herein the youth also indicated that the talk on land audit was overdue and that it was very important for them to keep pressure on the government to avail land and economic opportunities to the youth.

Other authors like Scoones et al. (2019) also focused their study on the livelihood challenges and opportunities for young people after land reform. The paper explored these themes in two smallholder A1 resettlement sites in Zimbabwe that is Hariana farm (Mvurwi) and Wondedzo area (Wares and Extension farms) in Masvingo district. The results showed across both sites how opportunities for young people are severely constrained following land reform. Among the recurrent themes concluded from the research, lack of land and capital as well as poor productivity of dryland farming were important factors. Therefore, the study concluded that many are limited to opportunities with very small-scale irrigated farming seemingly by far being the best option.

1.2.9 Gap in Literature

Most local studies dedicated much focus on the effects of land reform program on young people in Zimbabwe. On the other hand, other studies solely focused on the accessibility of finance in the empowerment of young people. Related global research led to the identification of several factors that affect the intention of young people to work in agriculture. It is evident from these studies that such factors as land and credit access, access to information and markets among other factors, do affect the engagement levels of young people in agriculture. As such it is also necessary to expand the study focus on the Zimbabwean context and not only limit it to land and credit factors. Apparently, land has been a disputed issue for over the past 2 decades hence making it the main theme of the study but, including other factors in the study even helps to understand how each of the factors affect the engagement of young people in agriculture.

1.3 Theoretical background

Figure 2 shows a summary of the factors affecting youth participation in agriculture. These factors were derived from studies that were conducted on the similar subject but in different areas and/or countries. For this study, these factors were then treated as predictors in the regression model. Also shown in the figure is the theory for youth empowerment necessary to evaluate the status quo of Zimbabwe in terms of youth development and empowerment.

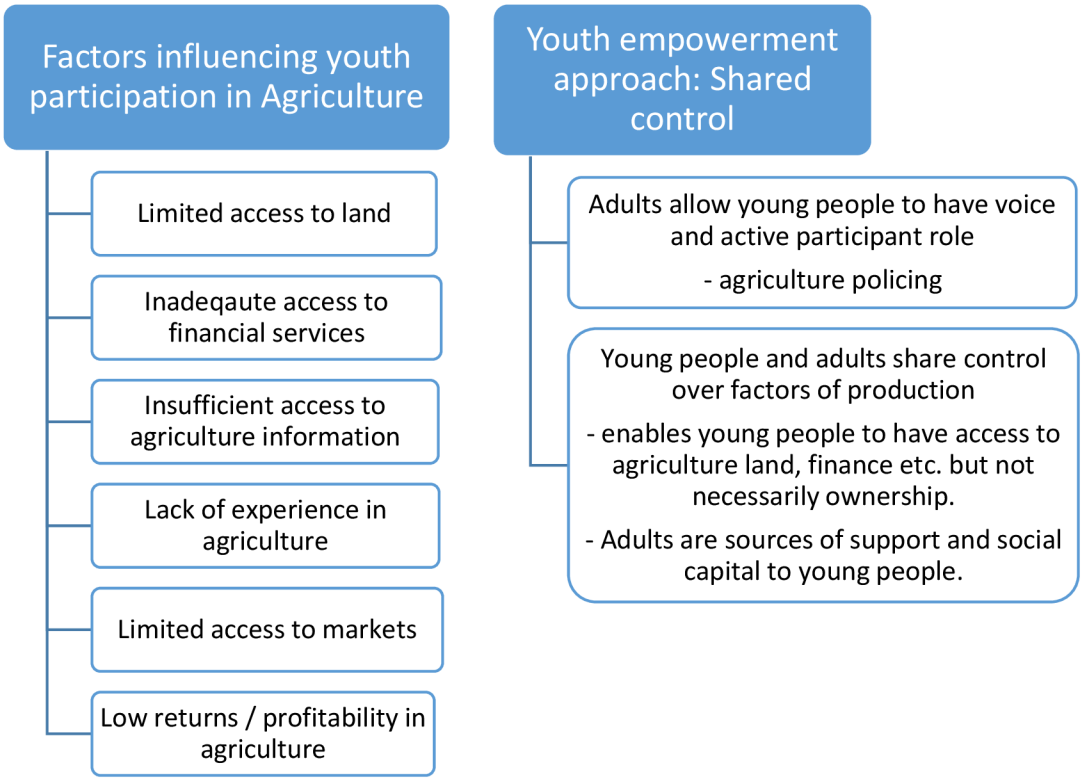

Figure 2: Summarized theoretical findings

2 RESEARCH OBJECTIVES

2.1 Main Objective

The main objective of this thesis was to explore factors that affect youth participation in agriculture, in Zimbabwe.

2.1.1 Specific objectives

A set of more specific objectives was developed:

1. Investigation of the intention of young people to work in agriculture.
2. Assessing the role of land access on youth employment choices
3. Evaluation of the constraints that young people are facing in actively participating in agriculture.

2.2 Hypothesis

H_0: Students whose parents are working in agriculture are more likely to work in agriculture in the future.

H_1: Access to land guarantees an increase in youth engagement in agriculture.

H_2: Adequate access to credit facilities guarantees improvement in youth engagement levels in agriculture.

3 METHODOLOGY

3.1 Introduction

According to Jankowicz (2013), research methodology is an analysis and rationale for the method(s) used in a particular study and in other studies of that type in general. A cross sectional study design with semi-structured questionnaire and interviews was used to collect data with the youth being the targeted respondents. One enumerator was employed to administer the questionnaires to the respondents. The mixed methodology approach was considered for the purpose of this research because it ensured that triangulation was achieved whereby data was combined to ascertain if the findings from the questionnaire mutually validate the findings from the interviews (Sudhakar & Summers 2008). Below is the research process.

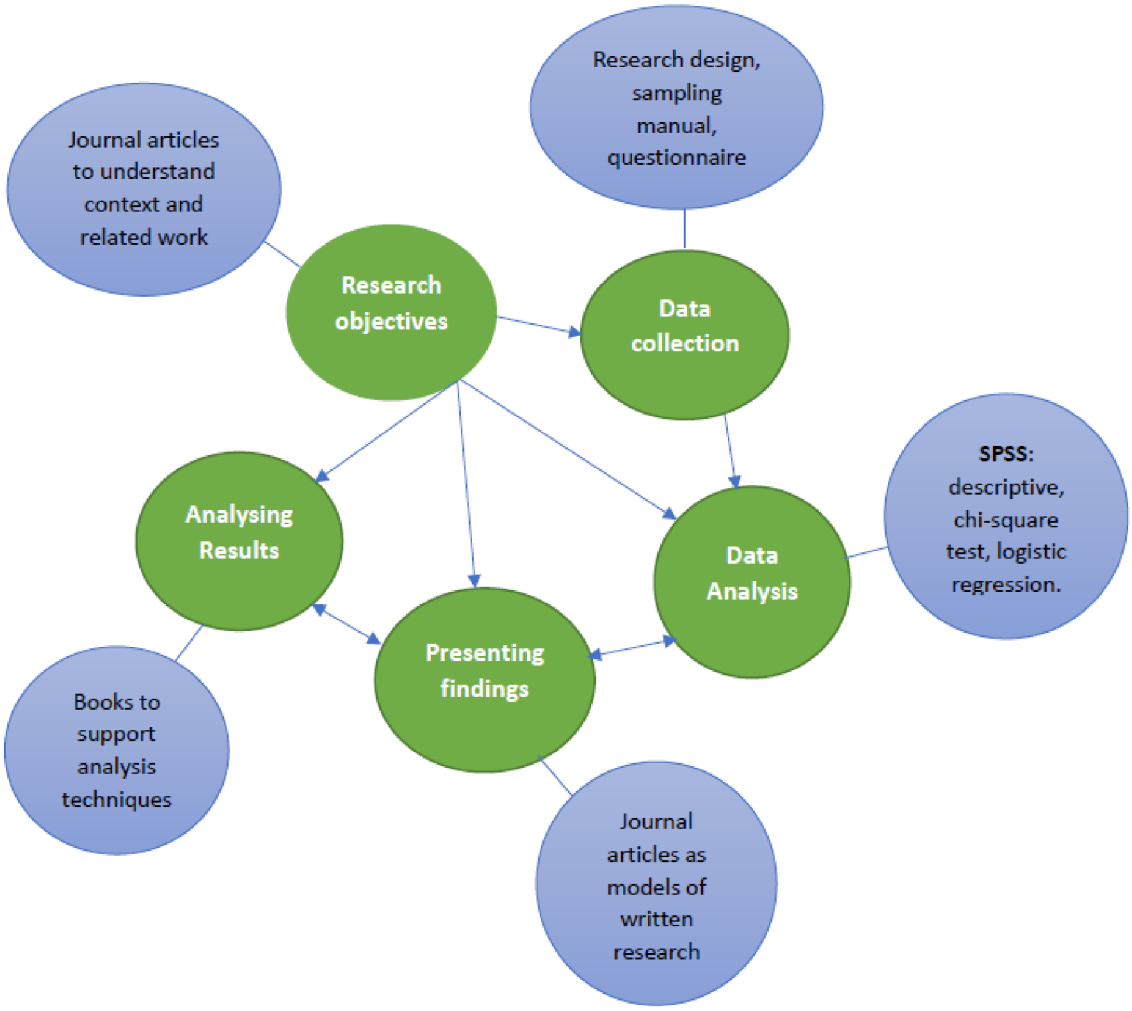

Figure 3: Research process

3.2 Data Collection

3.2.1 Secondary Data

Secondary data was mainly acquired through an extensive literature review. The sources of this information included academic data bases as well as institutional websites and the most important publications were retrieved from Web of Science and Science Direct databases. These academic databases banked many topic-related publications concerning young people and agriculture. Moreover, databases from the World Bank, FAO, ZIMSTAT and ILO served in providing useful background information to address the theme from a global perspective.

3.2.2 Primary data

The primary data element of the thesis consisted of a face-to-face, pen-and-paper survey using semi-structured questionnaire and interviews, which were developed in accordance with the study objectives and findings of the secondary data. The questionnaire served as the primary tool for acquiring the much-needed responses from the respondents in English language. To better understand the background, perceptions, and the status quo of young people in relation to economic circumstances, the questionnaire was divided into 3 sections with 25 main questions of various nature (Likert scale, dichotomous, continuous etc.). The following divisions were made:

> ***Section A: Personal and family background –*** *gender, age, study level, ethnicity, occupation of parents, farming experience in the past 2 years.*
>
> ***Section B: Occupation and interest –*** *land availability, motive for studying agriculture, interest to work in agriculture, current involvement in farming, areas of interest in agriculture, occupation, and income factors.*
>
> ***Section C: Land, credit, and other factors of influence –*** *land accessibility, information access, credit access, experience in agriculture, perceptions on government interventions.*

3.2.3 Respondents' selection

As the target group were young people between age 15 and 35, the researcher collected data from full time undergraduate students at Gary Magadzire School of Agriculture, Great Zimbabwe University. Convenience sampling was employed to easily collect data from the available pool of

respondents due to Covid19 restrictions. The Survey System online was used to calculate the sample size at 95 % and 5 % confidence level and interval respectively resulting in a sample of 127 students. The total number of agriculture students registered at the time of research was 189 which represented 1.3 % of the total students (15,008) registered at the university.

3.2.4 Data collection procedures

Step 1: Distribution of questionnaires

The first target group was second year students because they were on campus between 20 November and 18 December 2020. Assistance was obtained from 1 student enumerator in distributing the questionnaire as well as collecting them. The reason for using enumerator's service was the inability to meet the students due to national lockdowns. On December 7th, digital questionnaires were then shared online with other student groups through google forms application. To avoid repeated responses, the link to the online questionnaire was shared through emails and responses were limited to 1 from each email. However, most students had problems in accessing the online questionnaire due to network problems and expensive data packages. Consequently, a fillable word document was created such that it was shared directly administered to students on WhatsApp platforms and responses were sent back on the same platform.

Step 2: Farm visits and interviews

Five students who are currently studying and practicing farming were selected for the purpose of interviews. These were identified with the help of the faculty administrator and included 3 male and 2 female students. Upon arrival in Zimbabwe, the researcher put more focus on visiting farm places where the selected students practiced farming. As it was during the festive season, only farm visits were possible. The first visit was conducted on the 26th of December in Nemamwa under Masvingo province. The second two visits were conducted on the 28th of December in Harare province at Nyabira and Berea farms. The last 2 visits were finally conducted on the 30th of December in the Midlands province at Lingfield and Shurugwi farms.

Step 3: Interviews with non-practicing students

The target group was 5 random students (2 male and 3 female students). As the researcher was not able to meet the students in person due to suspended school opening dates, online interview calls were conducted separately for each participant. This was done on the 2nd of February with each interview lasting maximum 10 mins.

3.3 Study area description

3.3.1 General Characteristics

Zimbabwe is a land locked country in Southern Africa and has a total population of 14.65 million people and a total land area of 390,757 km² (World Bank 2020). The country consists of various ethnic groups and has 16 official languages including English (Zimbabwe Constitution 2013). The Great Zimbabwe University is in Masvingo province. This is the oldest province located in the southeast of Zimbabwe and has a total land area of 56,566km².

Great Zimbabwe University is an institution of higher learning with various campuses across the Masvingo province. Formerly known as Masvingo State University, the institution was established in 1995 after Masvingo Teachers College was turned into Masvingo Degree program. In 2007 Masvingo State University was renamed to Great Zimbabwe University after the rich heritage site Great Zimbabwe Monuments. Thus, the main curricular of the institution is based on arts, culture, and heritage. Today the university is home to an average of approximately 18,000 students (GZU 2020). The study area was chosen the researcher was looking to work with agriculture students. The university having a special farm for students as well as innovation hub for agriculture made it more attractive to the researcher's wants.

Figure 4 below illustrates the geographical location of Great Zimbabwe University in Masvingo Province, Zimbabwe.

Figure 4: Map of Zimbabwe showing the geographical location of Great Zimbabwe University.

3.4 Time frame

The research process was broadly divided into 5 stages which are briefly described below.

Stage 1: Initial stage involved the selection of an appropriate topic of interest. This was made possible by reading around the existing literature and relating it to the status quo of the study country. This helped in identifying the gap in literature, formulating objectives and hypothesis. Discussions with the thesis supervisor enabled further development of the topic, objectives and hypothesis.

Stage 2: The main goal was planning on data collection procedures, tools and techniques to be used during field research. This included logistical planning and communication with the host

university. The questionnaire used was developed based on the secondary data research conducted in stage 1.

Stage 3: The third stage was primarily focused data collection. It was done through personal farm visits, hiring enumarator services and digital data collection. The questionnaire served as a primary tool for data collection whilst interview discussions were necessary for indepth understanding and data validation.

Stage 4: At this point, the responses were all converted into a dataset in MS-Excel. In addition, the data was appropriately coded into SPSS and cleaned before statistical analysis. The study objectives mainly served as the basis for data analysis.

Stage 5: The final stage of the study mainly consisted of the interpratation of the results. This included the discussion of findings, limitations, recommendations and the conclusion statement. This was then followed by formatting, grammar and spelling checks, as well as reference checking.

Task	Time frame	Status
Literature review, objectives and hypothesis	January 2020 - April 2020	Completed
Methodology, questionnaire formulation & pilot survey	June 2020 - September 2020	Completed
Data collection and practical training	December 2020 - February 2021	Completed
Data analysis	March 2021 - May 2021	Completed
Discussion, conclusion and thesis finalisation.	June 2021 - August 2021	Completed

Figure 5: Research timeline.

3.5 Data Analysis methods and selection of variables

Data analysis was performed using statistical software SPSS version 26 and Microsoft excel 2016. The sample characteristics and responses were analyzed using descriptive statistics. In addition, the socio-economic circumstances as well as the perceived challenges faced by young people were analysed using descriptive statistics and independent samples t-test. The qualitative data was coded in excel and grouped into themes for easier analyses.

3.5.1 Linear Regression Model

The most important element in data analysis process was the application of the Linear Logistic Regression model. In this case, the interest to work in agriculture was used as dependent variables whilst the factors derived from literature review were used as predictors to estimate the possible outcomes. This model was important mainly for 2 reasons derived from Statistics Solutions (2021):

- to identify the strength of the effect that the independent variables have on the dependent variable. In this case, the question was to ask if there was insignificant, minor, moderate, major, or severe effect on the dependent variable.
- Secondly, the regression model could be used to forecast the impacts of changes. That is, how much the dependent variable will change and/or jump to the next category when the dependent variable changes.

Table 2: Specification of dependent and independent variables.

Variables	Type & label
Dependent variable	
Current involvement in agriculture	Dichotomous (1=yes, 2=no)
Interest to work in agriculture	Ordinal (1 no interest – 5 highly interested)
Independent variables	
Institutional variables	
Access to land	Dichotomous (1=yes, 2=no)
Access to finance	Dichotomous (1=yes, 2=no)
Experience in agriculture	Dichotomous (1=yes, 2=no)
Farm size (hectares)	Continuous
Causal variables	
Lack of access to land	Ordinal (1 insignificant – 5 severe)
Lack of access to finance	Ordinal (1 insignificant – 5 severe)
Lack of access to agriculture information	Ordinal (1 insignificant – 5 severe)
Lack of agriculture experience	Ordinal (1 insignificant – 5 severe)
Lack of access to markets	Ordinal (1 insignificant – 5 severe)
Low agriculture profitability	Ordinal (1 insignificant – 5 severe)
Socio-demographic variables	
Age	Continuous
Year of study	Ordinal (1=first, 2=second, 3=third, 4=fourth)
Gender	Dichotomous (1=male, 2=female)
Ethnicity	Nominal (1=ndebele, 2=shona, 3=other)
Marital status	Nominal (1=single, 2=married, 3=divorced, 4=widowed)
Residential place	Dichotomous (1=rural, 2=urban)
Occupation (Father)	Dichotomous (1=agriculture, 2=other)
Occupation (Mother)	Dichotomous (1=agriculture, 2=other)
Income range	Ordinal (below USD100–above USD1,000)

3.6 Research ethics

During the questionnaire survey I ensured that the personal information (name, address, and sensitive information) provided by the respondent were kept confidential and the questionnaire completely anonymous. Participants were also aware that they had the right to withdraw their information at any time during the survey and participation in research was voluntary. Language of a questionnaire was appropriate to the vocabulary of studied target group. Questions will match the social background of respondents', their age, educational level, and social class. During the interviews with local experts any recorded contribution, in written form, on tape or in notes taken from the interview will be used in accordance with the wishes of the interviewee.

4 PRESENTATION OF RESULTS.

4.1 Description of sample

The respondents' demographic characteristics were presented in Table 3 below. Most respondents were male with a share of 58.1 % and the mean for age was 24 years (with a minimum value of 18 and maximum of 35 years). On the other hand, the number of student responses from each study year were rather equally distributed which allowed the researcher to obtain diverse responses from students with different exposures. The Shona participants constituted 65.2 % whilst the Ndebele were 23.2 %. This related to the fact that Shona people constitute over 70% of the population in Zimbabwe (World Population Review 2021).

71.6 % of the respondents were unmarried and 25.2 % were married while 25.2 % percent of the respondents had children. This was important to understand the commitments of participants to farming as social responsibilities can cause some to participate in agriculture on a parttime basis. Most respondents (65.2 %) resided in urban areas whilst 34.8 % resided in rural areas where land is abundant and allegedly easily accessible. 42.6 % of the respondents earned below USD100 which indicate that these students do not work or work very limited. Other 42.6 % earn between USD101-USD500, showing that probably those students work part-time or in less paid professions as this is below the income per capita of the country which stood at USD1183.10 as of 2019 (Trading Economics 2019).

Table 3: Descriptive statistics of variables

Variable	Description	%	Mean	SD	Min	Max
Demographic characteristics (N=155)						
Gender	Male	58.1				
	Female	41.9				
Study year	First	16.8				
	Second	34.2				
	Third	23.2				
	Fourth	25.8				
Ethnicity	Ndebele	23.2				
	Shona	65.2				
	Other	11.6				
Marital status	Single	71.6				
	Married	25.2				
	Divorced	3.2				
Has children	Yes	25.2				
	No	74.8				
Residential area	Rural	34.8				
	Urban	65.2				
Farming experience (2+ years)	Yes	74.2				
	No	25.8				
Current involved in farming	Yes	68.4				
	No	31.6				
Income	Up to USD100	42.6				
	USD101-USD500	42.6				
	USD501-USD1000	11.6				
	Above1000	3.2				
Age	Years		24.23	3.91	18	35
Farm characteristics						
Family land size (n=111)	Hectares		31.73	73.33	0	500
Respondent's land size (n=61)	Hectares		14	47.50	0	400

4.2 Factors that affect youth participation in agriculture

The main objective of this thesis was to explore the factors that affect youth participation in agriculture. The analysis of which mainly included six independent variables that have the potential to influence the employment levels of young people in agriculture. Figure 6 below shows the responses obtained from the students.

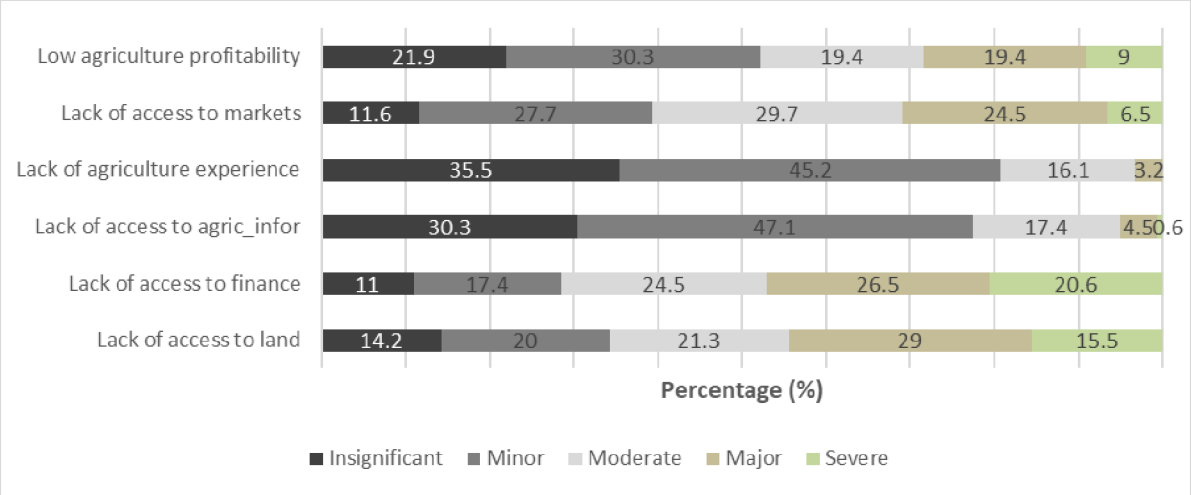

Figure 6: Factors affecting respondents' engagement levels in agriculture.

Consequently, the results summary shows lack of access to land and finance as top factors with severe impacts on most students (15.5 % and 20.6 %, respectively). On the same note, approximately 29 % of the respondents ranked land inaccessibility as having a significant impact on their participation in agriculture, whilst 26.5 % pointed to inadequate access to credit facilities. It is important to note how closely related are the responses between these two factors since access to finance is just as important as access to land (Njeru & Gichimu 2014). About 21.3 % and 24.5 % had indifferent opinions on land and credit issues, respectively. On the other hand, 20 % and 14.2 % of the participants perceived lack of land as having a minor or insignificant influence on their participation in agriculture. In the context of access to finance, approximately 28.4 % of the students believed that this had either minor or insignificant influence on their engagement levels in agriculture.

The concerns of market accessibility and profitability in farming were also proven to significantly effect youth engagement levels in agriculture. 31 % of the responses noted that difficulties in

accessing markets either had major or severe influence. On the contrary, an approximate total of 39.3 % of the respondents believed that markets were available and accessible; hence, they either believed this had minor or insignificant influence on them. In-between the contrast, 29.7 % had indifferent perceptions. On the other hand, 28.4 % believed there are low returns in agriculture, and this had either major or severe influence on their participation levels in agriculture. Alternatively, 52.2 % of the participants believed there were high returns in agriculture therefore the aspect of low profitability either had minor or insignificant influence concerning their levels of participation in agriculture whilst 19.4 % held a moderate view regarding profitability in agriculture.

As part of basic questions, the students were also asked if they had applied for agricultural land or loans before as shown in Figure 7 below. Approximately 41.3 % agreed to have applied for land at the Ministry of Lands while 58.7 % had not done so before. However, out of the students that applied for land only 9.4 % of them indicated they had successful applications whilst 12.3 % were granted less hectares than what they had applied for. On the other hand, 33.5 % of the respondents agreed to have applied for agricultural loans before and out of this total, approximately 29 % realized successful loan application.

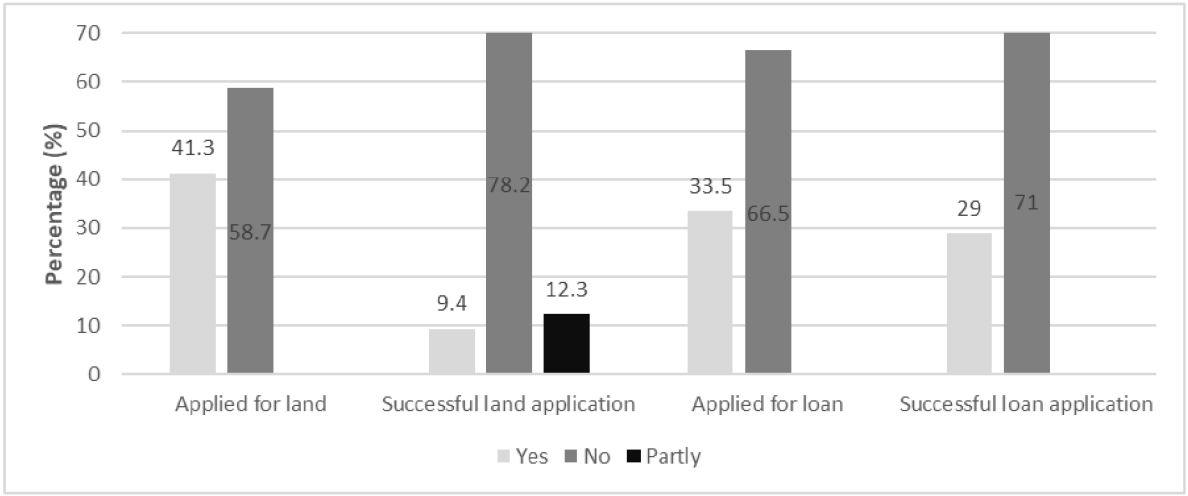

Figure 7: Respondents' land and loan applications.

4.3 Intention to work in agriculture

To understand the respondents' intention to work in agriculture, firstly the author asked for the occupations of the student's parents. This was inspired by literature findings that parents had significant influence over the career choices that their children make (Nawabi et al. 2019). Alternatively, this was important to test the hypothesis that students whose parents work in agriculture are more likely to work in agriculture. As shown in Figure 8, 43.2 % of the male parents were employed in agriculture whilst 19.4 % of their counterparts were employed in the same category. In the same context, 56.8 % and 80.6 % of both male and female parents respectively were employed in other jobs outside agriculture.

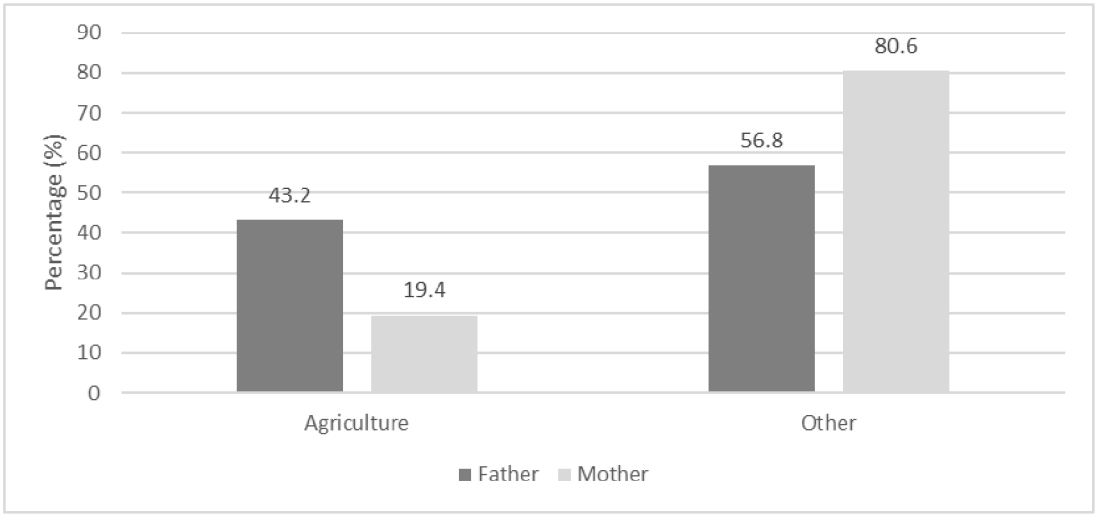

Figure 8: Occupation of respondent's parents.

Additionally, students were asked why they chose to pursue studies in agriculture and their responses were presented in Figure 9 below. Significantly, 66.5 % of the respondents pointed out they want to work in agriculture, thus acquiring advanced knowledge and skills. Approximately 14.2 % of the students mentioned it was their parents' choice to study agriculture whilst 18.1 % expressed that it was the only option available for them.

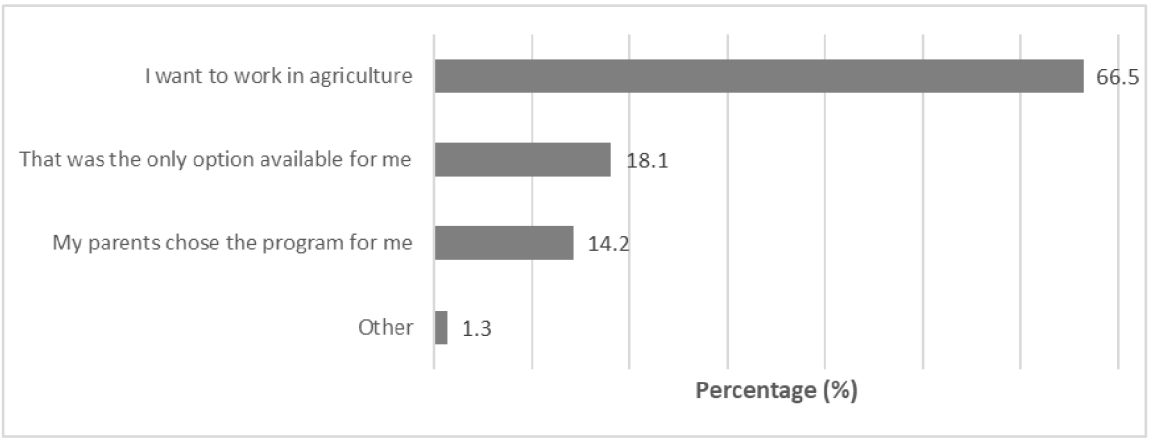

Figure 9: Respondents' reasons for studying agriculture.

Even though for only 66.5% of respondents the reason to study agriculture was they wanted to work in agriculture, it was interesting to note that over 70 % of the sample expressed interest to work in agriculture (Figure 10). 30.3 % of the students showed high interest to work in agriculture whilst 41.1 % expressed mere interest for agricultural employment. 21.9 % had indifferent thoughts about their future interest in agriculture whilst only less than 6 % were either less interested or had no interest at all to work in agriculture after graduation.

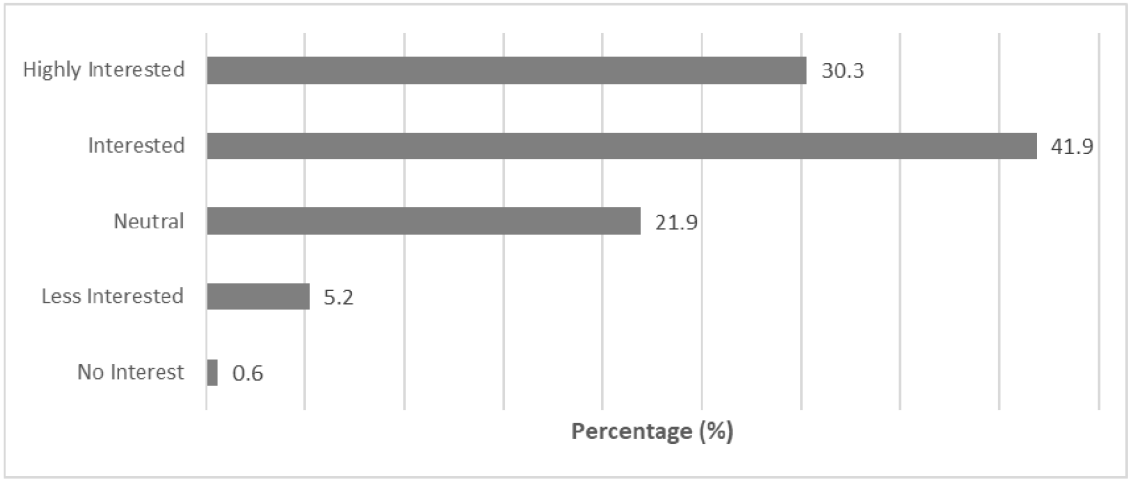

Figure 10: Respondents' interest to work in agriculture.

To further explain the students' response levels to work in agriculture, it was essential to figure out if they already had their areas of interest in agriculture. As such, the author asked the students to indicate the jobs they would like to work in and their specific areas of interest in farming. As presented in Figure 11, 56.1 % of the participants indicated an interest in farming

whilst 22.6 % were interested in administrative work. On the other hand, approximately 10.3 % of the respondents opted for other occupations such as soil scientists, geologists etc. The additional 8.4 % were interested in extension work.

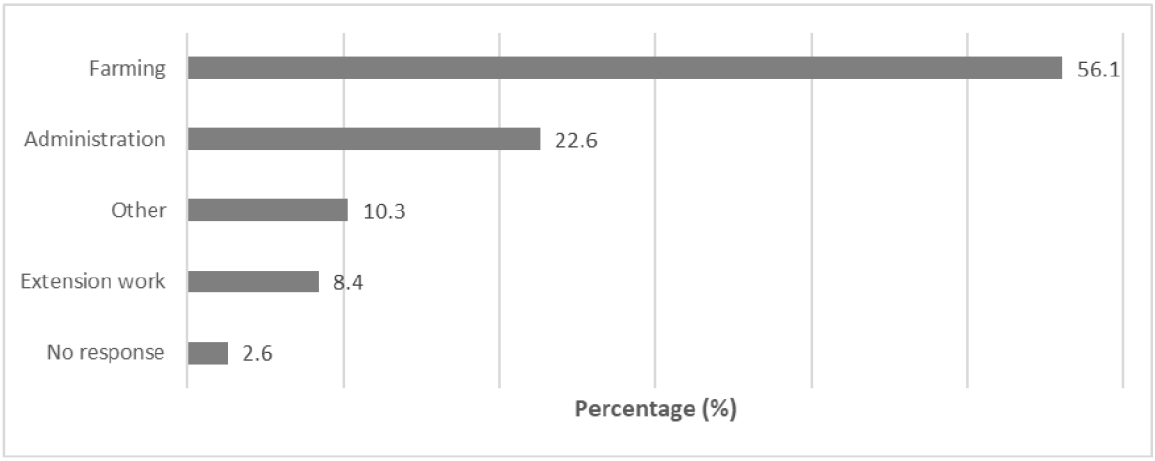

Figure 11: Job preferences of respondents

Asking the respondents about the farming practices in which they are interested, Figure 12 shows many students (29.7 %) were interested in mixed production followed by 24.5 % who were interested in livestock production. Approximately 20.6 % of the participants were interested in crop production whilst 17.4 % were attracted to horticulture.

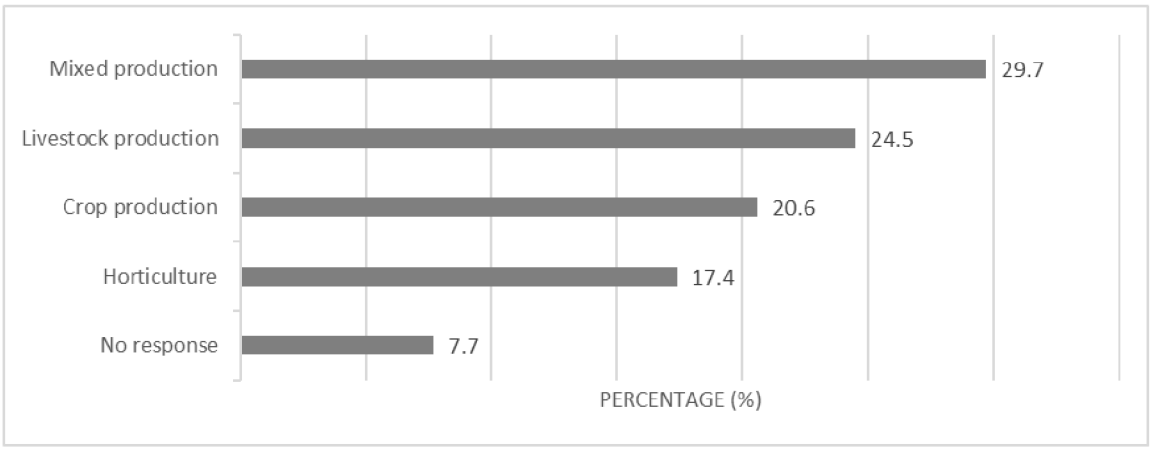

Figure 12: Respondents' interest areas in farming.

Moreover, 41.3 % of the students also expressed that they would like to have their own farms and produce on a commercial basis whilst 9 % opted for subsistence farming. On the other hand,

16.8 % had interest in managing large farm plantations. Further interview discussions also revealed that some respondents intended to work part time in farming whilst generating income from other occupations citing reasons such as farming alone cannot help sustaining their living standards. The responses are presented graphically in Figure 13.

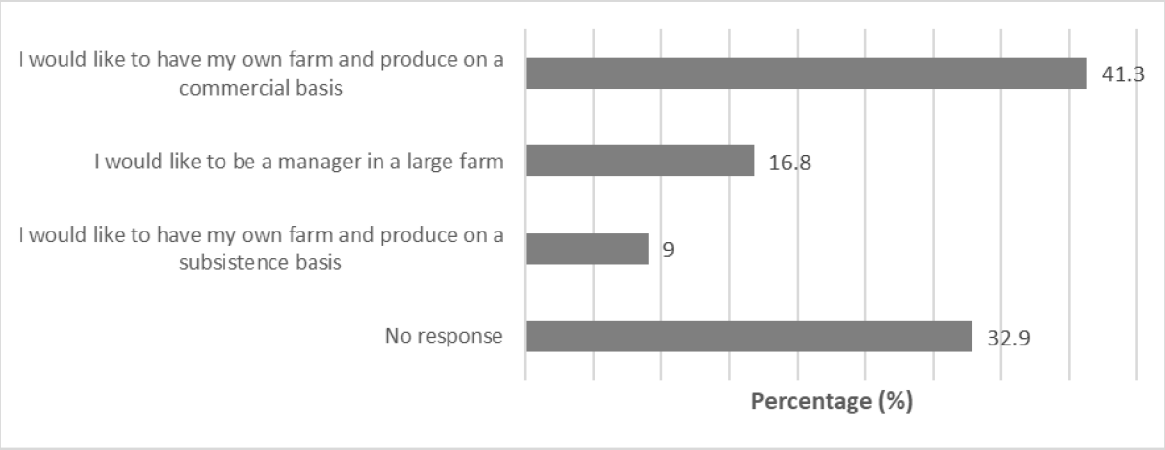

Figure 13: Choice of respondents in farm occupation.

4.4 Role of land access in youth employment choices

Table 4 shows the availability of agriculture land to respondents such that they were able to practice farming at the time of the study and/or in the future. Interestingly, the data shows that more than 71 % of the students came from families that owned a land for agricultural purposes. Approximately 39.4 % of the students had their own pieces of land whilst the 60.6 % owned no land. As shown in Table 3 above, the average size of the land owned by respondents' families was 31.73 hectares and the average size of land owned by the students was 14 hectares.

Table 4: Land availability to respondents.

Variable	Description	%
Family owns land	Yes	71.6
	No	28.4
Respondent owns land	Yes	39.4
	No	60.6

Figure 14 shows that 32.3 % of the students who were engaged in farming at the time of the research were involved in household farming whilst 14.2 % were under farm employment on either full time or part time basis. Approximately 18.7 % of the respondents practiced agriculture

entirely on their own pieces of land. Of the students involved in either household farming or independent farming, 34.4 % cited problems related to limited land space whilst 42.6 % faced challenges in accessing credit facilities or finance (see Appendix 1).

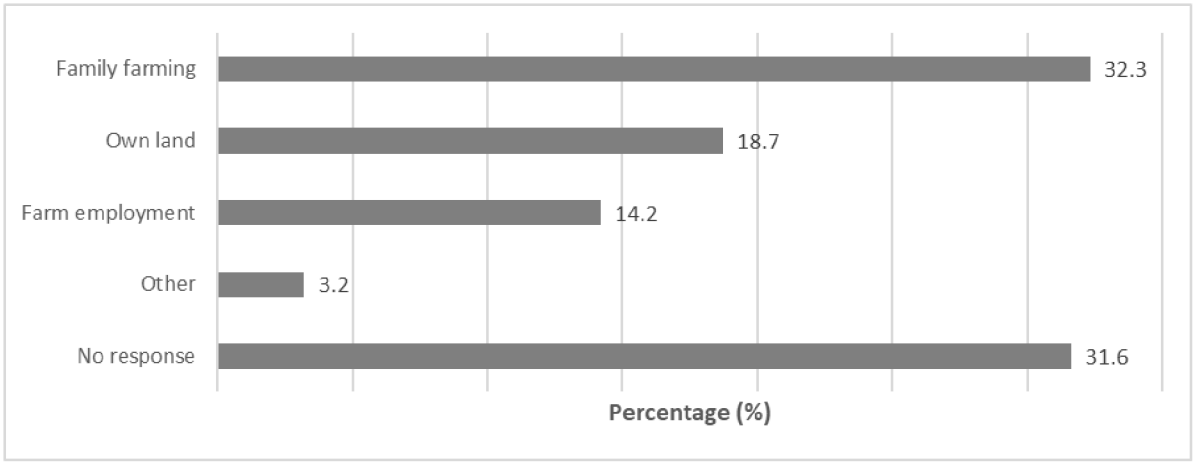

Figure 14: Respondents' current involvement in farming.

Among the 39.4 % who owned land as shown in Table 4, 25.8 % acquired it through inheritance, 7.7 % through purchase and only 5.5 % through application at Ministry of Lands. There is an interesting difference between the distribution of students who own land and the number of students who are practicing farming on their own pieces of land. That is, 39.4 % of the sample own land but only 18.7 % of the respondents do practice farming on their own land. This discrepancy, although not entirely, indicates that some students might own land but have challenges in accessing finance hence they fail to practice farming (Njeru and Gichimu 2014).

Primarily, the most important question in this aspect was to understand how respondents' job preferences were affected by availability of land to them. 34.19 % of the respondents indicated that access to land had either insignificant or minor impact on their employment choices whilst 21.3 % were indifferent within their opinions. Approximately over 44.5 % of the total participants indicated that access to land had either major or severe influence on their engagement levels hence it greatly affects their employment choices. This is congruent with the job preference distribution shown in Figure 11 where collectively 41.3 % of respondents preferred jobs outside farming yet over 50 % wanted to have their own agriculture land as shown in Figure 13. Figure 15 below presents the perceived influence of land access on youth employment choices.

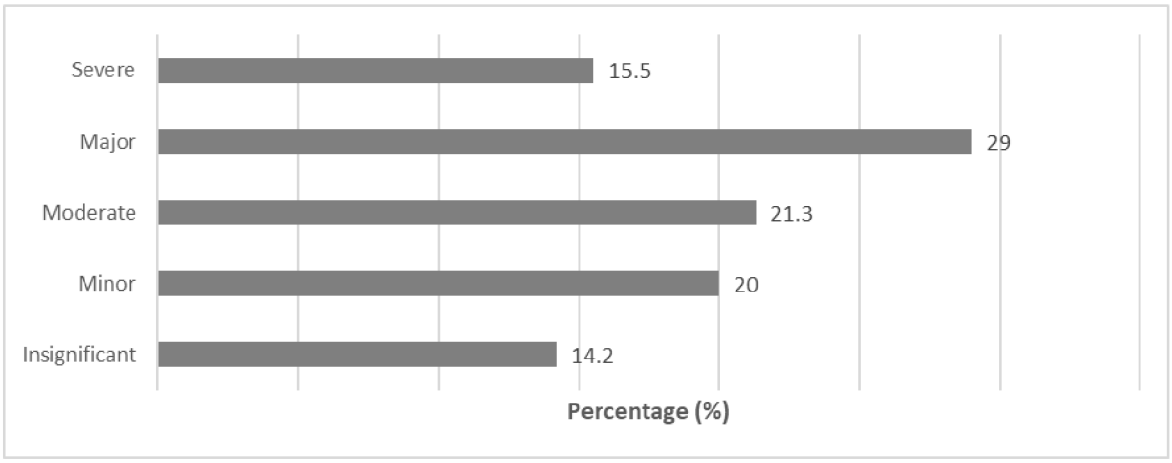

Figure 15: Influence of land access on youth employment in agriculture.

4.4.1 Youth perception on land accessibility

The respondents were asked to rate how they perceive their chances to be, of acquiring land from the Ministry of Lands if they applied for it. A total of 45.8 % of the students were of the view that they either had very low or low chances of acquiring agricultural land if they had applied for it whilst 40.6 % had a decent perception about the effectiveness of the application process. On the other hand, 13.6 % were rather confident that they had either high or very high chances of being granted land had they applied for it.

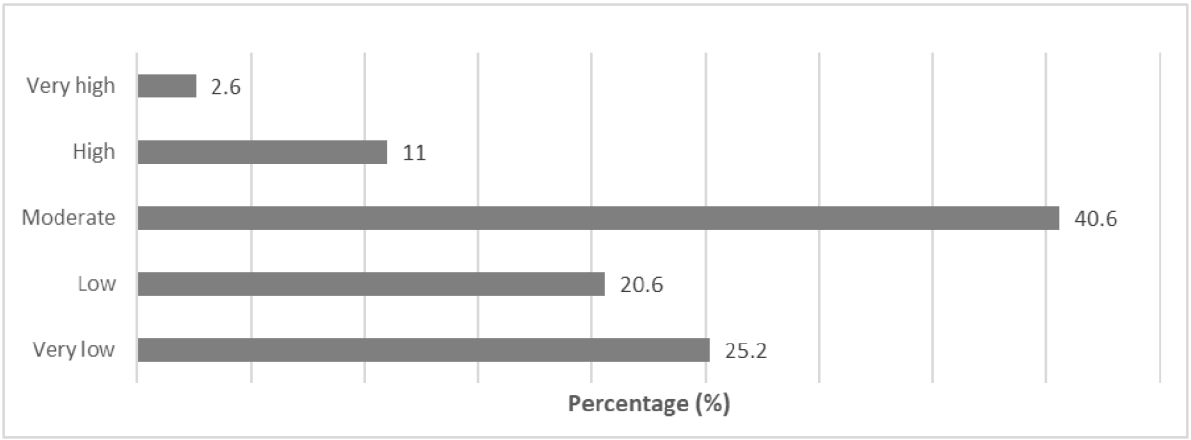

Figure 16: Respondents' perception on acquiring land from the Ministry of Lands.

5 INTERPRETATION AND DISCUSSION OF RESULTS

5.1 **Constraints for young people to engage in agriculture**

An independent samples t-test examined the statistical differences of the explanatory variables between the respondents involved in agriculture compared to those not involved. Age was higher for those involved in agriculture at 24.71 years compared to 23.18 years for those not involved. The mean of the study level was higher for those involved in agriculture at 2.75 than 2.2 for those not involved. The students in the later years of their studies were more involved in agriculture than those in their early years of study.

The students who were residents in urban areas had a higher mean value of 1.82 for those not engaged in agriculture. The respondents in urban areas were more likely not to be involved in agriculture, unlike those in rural areas. This is because rural settlements occupy more agricultural land than urban settlements, and most rural populations survive from agriculture (FAO 2020).

The mean value for father's occupation was lower for the respondents involved in agriculture at 1.49 compared to 1.73 for those not involved. In addition, the mean value for respondents with mother's occupation in agriculture was lower for those involved in agriculture than those not involved in agriculture.

Land access was lower for those involved in agriculture at 1.18 but higher at 1.51 for those not involved. This means that individuals who were not involved in agriculture had access to land than those involved in agriculture. This is because of lack of capital or access to finance, as explained in Figure 6 had a major effect on their ability to command agricultural funds. Appendix 4 also shows the problems the youth face in accessing finance. Therefore, this represents and explains a situation where young people can access land but lack capital to venture into agriculture projects.

Table 5: Mean differences of students involved in agriculture and those not involved.

Variable	Involved (n=106)	Non-involved (n=49)	
	Mean (SD)		P-Value
Socio-Demographic Variables			
Gender	1.42 (±0.497)	1.41 (±0.0497)	0.849
Age	24.71 (±3.99)	23.18 (±3.56)	**0.024** **
Year of study	2.75 (±0.99)	2.2 (±1.08)	**0.002** ***
Ethnicity	1.92 (±0.62)	1.82 (±0.49)	0.326
Residence	1.58 (±0.50)	1.82 (±0.39)	**0.003** ***
Occupation_ father	1.49 (±0.50)	1.73 (±0.45)	**0.004** ***
Occupation_mother	1.76 (±0.43)	1.89 (±0.31)	**0.050** **
Institutional variables			
Access to land	1.18 (±0.39)	1.51 (±0.51)	**0.000** ***
Causal variables			
Lack of access to finance	3.29 (±1.23)	3.27 (±1.40)	0.903
Lack of access to agric_infor.	1.99 (±0.87)	1.96 (±0.82)	0.831
Lack of access to markets	2.97 (±1.1)	2.63 (±1.11)	**0.077** *

Note: ***significant at 1 % level, **significant at 5 % level, *significant at 10 % level.

5.2 Results of Linear Regression Model

A linear regression model was used to examine the factors influencing the interest to work in agriculture. The model predicted our variables with R-Square (19.1 %) and the model fit was significant at 0.002.

Table 6: Results of the Linear Regression Model

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Dependent Variable					
Interest to work in agriculture					
Independent Variables					
Institutional Variables					
Farming experience (2+ years)	-0.265	0.165	-0.131	-1.603	0.111
Causal Variables					
Lack of access to land	-0.124	0.064	-0.180	-1.938	**0.055***
Lack of access to finance	0.158	0.063	0.228	2.533	**0.012****
Lack of access to agric_infor.	-0.165	0.090	-0.157	-1.819	**0.071***
Lack of access to markets	0.022	0.065	0.027	0.335	0.738
Socio-Demographic Variables					
Age	-0.023	0.021	-0.100	-1.087	0.279
Year of study	0.026	0.077	0.030	0.333	0.739
Gender	0.103	0.143	0.057	0.719	0.474
Ethnicity	0.266	0.118	0.174	2.260	**0.025****
Residence	0.123	0.156	0.066	0.788	0.432
Occupation_father	-0.489	0.166	-0.273	-2.947	**0.004*****
Occupation_mother	-0.034	0.188	-0.015	-0.181	0.857

Note: ***significant at 1 % level, **significant at 5 % level, *significant at 10 % level.

5.2.1 Lack of access to land

The study showed that lack of access to land has little effect on the respondents' interest to work in agriculture from the model results. Interest to work in agriculture was likely to increase by 0.124 times despite any increase in lack of access to land from insignificant to severe levels. This is because even though only 39.4 % owned agricultural land, 72.2 % of the respondents still expressed interest to work in agriculture (Figure 10) whilst 66.5 % reported they are pursuing agricultural studies because they want to work in agriculture (Figure 9). This shows that despite the challenges in accessing land, most of the respondents are still interested in agriculture.

The finding also shows that along with the interest, the respondents had ambitions to have access to large farms. This is evidenced by 41.3 % (Figure 13) of the research participants who expressed that they would like to own large farms, while 34.4 % of the 61 students who owned land cited limited land space as a challenge they are facing (see Appendix 1). In this regard, Bezu and Holden (2014) reported that although young people have access to land through their parents' however, the problem arises in allocating parents' land among children as this also reduces land size.

The lack of access to land as a resultant factor of competition by applicants to gain access to more hectares is defined as incapacity to increase current hectarage by both rural and urban youth. In agreement, Foguesatto et al. (2020), concluded that land size, not only access, appears more as an influential factor in farm succession. Scoones et al (2019) also concluded that many young people are limited to opportunities, with very small-scale irrigated farming seemingly by far being the best option. Hence the increasing lack of access to land is also driven by a competition to acquire larger sizes and this challenge is faced at line ministry as explained below.

Land allocation from authorities.

A total of 41.3 % of the students in the sample reported to have applied for individual access to farmland through the Ministry of Lands. However, only 9.4 % of the applicants obtained land from the land administrative authority whilst the other 12.3 % got less hectares than what they applied for (Figure 7). Figure 16 shows that 45.8 % of the students had negative perceptions about acquiring agriculture land from the land authority whilst 40.6 % were not sure about the prospects of the land application process. Asked to provide the reasons, Appendix 5 shows that 32.6 % of the respondents reported that corruption was a major challenge. This included such issues as unfair distribution of land based on political affiliations and bribery to land officers. This shows that land access from the government no longer serves as safety net for young Zimbabweans. Similar, Bezu and Holden (2014) in Ethiopia who found that in their sample of 95 rural youth that applied for farmland through land administrative authorities, only 6 successfully obtained land.

In the sample, 28.39 % reported that high competition was a setback in acquiring land through administrative authorities (see Appendix 5). The respondents cited high requirements such as financial track record and proof of funds as factors that grant the well-up a competitive advantage to acquire more land. It is essential to note that only 28.18 % (latest value from 2017) of Zimbabweans have access to bank accounts (Global Economic 2021). This means that most young people cannot produce such requirements like financial track records and proof of funds to acquire land.

As it is difficult and expensive for the young generation to acquire land through the administrative authorities, inheritance and donation is the primary alternative for land access to young Zimbabweans. This is evidenced by the fact that 65.6 % of the students who own land acquired it through inheritance (see Appendix 2), whilst 71.6 % had access to land through family-owned land (Table 4). Similarly, Scoones et al. (2019) found that 57 % of their sample only had access to family land as they stayed home, unemployed and helping parents to farm or doing it on their own, but on family land in Mvurwi and Wondedzo (Zimbabwe). However, Fernando (2016) concluded land inheritance is likely to reduce productivity in the long run as sharing land among siblings may deprive productive farmers of enough land for farming.

A report by FAO (2010) revealed that inheritance is the most common way of obtaining land in many developing countries. On the other hand, Cotulla (2011) observed that life expectancy is increasing across all regions. Zimbabwe in the past 2 decades realized a significant increase in life expectancy from 45.03 years in 2001 to 61.63 in 2021 (Macrotrends 2021). Consequently, many young people might have to wait many years before inheriting their share of the family hand. As noted above by Bezu and Holden (2014) that the land is more likely to reduce in size when it is shared among children. This means that inheritance is not a sustainable solution to land access, but it is a sign of bigger land problems ahead. Thus, in future will be a problem of both lack of access to land as well as land size.

Contrary, Bezu and Holden (2014) concluded that because of lack of access to land, only 9 % of the youths planned agriculture employment whilst the rest planned non-agricultural occupation. This means 91 % of young people in the sample lost interest in agriculture due to land issues in

Ethiopia. In this study, the researcher found that despite the difficulties in acquiring land through administrative authorities, young people were still interested in agriculture and chose other agricultural occupations such as extension and administrative work as an alternative to farming.

Nevertheless, it is important to note that lack of access to land has little or insignificant effect on the youth's interest in agriculture. Despite the challenges in acquiring more land, 72.2 % of the sample remain interested in agriculture (Figure 10). But on the other hand, it is also noteworthy to understand that lack of access to land has major to severe impacts on the participation levels of young people in agriculture. Failure to access land from the Ministry of Lands hinders the professional growth of young farmers as they will keep operating at subsistence levels. As shown in Figure 6, 44.5 % of the respondents reported that lack of access to land affected their engagement levels in agriculture.

5.2.2 Lack of access to finance

Table 6 showed that lack of access to finance has a negative influence on the youth's interest to work in agriculture. An increase in lack of access to finance, reduced the interest to work in agriculture. This is because most young people in Zimbabwe are unemployed, unbanked and lack collateral security. As a result, they are unable to command funds into agriculture projects therefore eventually losing interest. Scoones et al. (2019) cited lack of capital as one of the important limiting factors that constrain the youth in agriculture. One responded noted that:

"Land is available and abundant, but if you want it you need to have money in your bank account so that you can prove to the administrative authority that you are able to utilize the land you are applying for. Unfortunately, many of us are unemployed and we cannot afford that, instead we are looking for ways around the system to make things happen."

Njeru and Gichimu (2014) noted that access to finance is just as important as access to land since, in some regions, youths have access to land but lack the finance to invest in the land. Interviews with students who own land revealed that finance was a major problem hindering their growth and because of this, they could not fully utilize the agricultural land they had. Speaking in an interview, one respondent with a 40-hectare land alluded that:

"Currently I do have enough land for me to do the projects that I want, but the problem is mechanization. I do not have farm equipment hence I operate manually with the help of my 2 employees, and we only utilize a small piece of land, probably less than 10 hectares. If I could get money for proper equipment, I would be doing much better and even requiring more land"

Banda (2021) also cited that young people with land in Zimbabwe are failing to access loans due to lack of collateral security. This is because the land in Zimbabwe is unbankable since the state retains more powers and rights over it as provided in section 72 of the Zimbabwe constitution (Zimbabwe Constitution 2013). The status quo poses a threat to the young farmers who own land because they cannot secure agriculture loans against their land.

Proceedings from YALESI (2016), a youth agribusiness conference held in Senegal reported that banks often turn away potential farmers because they do not think that farming is a viable business, or that land is a sufficient source of collateral. This adds to the perception that farming is not an attractive enterprise hence young people lose interest. As noted by Global Economy (2017), more than 60 % of the population do not have banks accounts and thus do not use bank products. This is due to inaccessibility, inefficiencies, and lack of trust in government and financial institutions (Chrirewa 2020). Having a bank account is a pre-requisite to apply for a bank loan (Empower Bank 2021), hence such financial setbacks have a major impact of turning young people away from agriculture.

Similarly, proceedings from the African regional conference for youth employment in agriculture held in Senegal reported that lack of access to credit was one of the leading reasons why they are demotivated and leaving farming (FAO 2018). Consequently, the image of agriculture in Africa has been more about subsistence such that you produce just enough for you to eat, and not seen as a business (AgroCrafty 2018). This validates the above reason by YALESI (2016) that banks often turn away young and small potential farmers because they do not recognize farming as a viable business.

According to Legg (2018), money is an example of extrinsic motivation. This means that failure by young farmers to access finance will lead to demotivation and loss of interest in agriculture, today and in the future. With reference to Figure 6, it is apparent that 47.1 % of the sample

reported that lack of access to finance either has major or severe impacts in their participation in agriculture. As a result, lack of access to finance has major impacts on both interest in agriculture as well as participation.

5.2.3 Lack of access to agriculture information

The study also showed that lack of access to agriculture information had a minor or insignificant effect on youth interest in agriculture. The model observed that as the lack of access to agriculture information shifted from insignificant to severe levels, the respondents' interest in agriculture would nevertheless likely increase. The results are validated in Figure 6, where 77.4 % of the total respondents reported that lack of access to agriculture information had a minor or insignificant effect on their participation in agriculture.

This is quite in contrary to other studies that indicated lack of access to agriculture information as one of the leading reasons why rural youths are demotivated and leaving agriculture (FAO 2018). The difference in results emanates from the differences in sample characteristics. The conference proceedings reported this fact merely focusing on 'rural youth', whilst in this study, the respondents were 'students' from both urban and rural areas. This means there is informal exchange of agriculture information among these students. Apart from that, there are 11 universities, 13 colleges and at least 11 training centers established for agricultural training at various levels in Zimbabwe (Jiri et al 2013). These establishments act effectively as information hubs for young agriculture students.

5.2.4 Ethnicity

The Shona people are more likely to work in agriculture as compared to the Ndebele group. This is because the Shona tribe has more access to social and economic benefits because they constitute majority control in the central government. Gatsheni (2008) notes that the government has continued to marginalize the Ndebele tribe through its economic policies that provide more opportunities for Shona people. In other words, there is unequal political representation of the Ndebele tribe, and this has led to the creation of a break away community called "United Mthwakazi Republic" with its own complete flag (Gatsheni 2008). The Minority

Rights Group (2018) noted that there is high Ndebele unemployment in Matabeleland as civil servants continue to be disproportionately Shona.

5.2.5 Parent occupation

As the father's occupation moves from agriculture to non-agriculture, students are less likely to get involved in agriculture. This finding concurs with the notion by Nawabi et al. (2019) that parents had significant influence over career choices made by their children. Responses from interviews showed that those students whose parents owned land were more likely to start farming on their parents' land. Speaking in an interview one student who inherited land from her farmer parents noted that:

"It is easy for me to practice farming while studying because I have 7 hectares worth of land available at my disposal. I would consider engaging full time in farming given that I am able to access more land as well as financial support from the government, but that seems far from reality"

On the other hand, one responded who was not practicing farming at the time of the study added that:

"I would like to have my own land for agricultural purposes, but I do not have any plans to work full time as a farmer like my mother. Rather, I prefer to work at the Ministry of Agriculture"

5.3 Young people recommendations for the future

To determine possible ways forward, it was important to first understand solutions from the respondents' point of view. As such, the students were asked to briefly state what could be done by the government to encourage the youth engagement in agriculture. 67.74 % of the sample emphasized more on the government providing access to resources and support to young Zimbabweans. Among the most mentioned issues was the access to finance as most respondents recommended the government to provide loans to young people without collateral as was the case under the Youth Development Fund (2006). In addition, other respondents also opted for the government to provide agriculture inputs or make loans accessible to young people at low interest rates as the cost of borrowing was high. They also reported that the central government addresses the bureaucracy faced by applicants at the Ministry of Lands. On the other hand, 15.48

% of the students recommended the government to enact extra measures to fight corruption especially when it comes to applying for land through the administrative authority. Zimbabwe is currently ranked 157 out of 180 countries with a score of 24/100 on the Corruption Perception Index (Transparency International 2020). This means that the government need to commit itself to fighting this delinquency.

6 CONCLUSION

6.1 General Remarks

From the findings, the study concluded that lack of access to land has insignificant effect on the interest of the students to work in agriculture. However, the land access plays a significant role in the occupational decisions made by young potential farmers and greatly affects their engagement levels in agriculture (Bezu & Holden 2014). In this regard, the ongoing land disputes and rigidity of the land application process in Zimbabwe will either keep young farmers operating at subsistence levels or force them to migrate from farming into other occupations after school. At the same time, land inheritance is not a sustainable solution to land access for young agriculturists mainly for two reasons that is:

i. The increase in life expectancy in Zimbabwe means young people might have to wait for a long time before they inherit land from their parents. Consequently, they might find occupation in other areas and leave farming.
ii. The sharing of land among siblings reduces the size of land distributable per individual. As a result, productive young farmers will be suppressed on a small piece of land, and this will hinder their growth.

The study also concluded that access to finance is just as equally important as access to land. This proved to be the major problem that affects both youth interest and participation in agriculture. Unemployment and lack of collateral security are the major reasons why the young people are incapable of accessing loans. On the other hand, the abundance of agriculture institutions in Zimbabwe increases the availability of agriculture information to students and they also learn from their peers.

6.2 Recommendations

Based on the outcomes, the following recommendations can be given:

- The government of Zimbabwe should review the land application process to accommodate the average citizen and eliminate bottlenecks. In this regard, there is need to upscale the fight against corruption to ease the access to land for young people.

- The government of Zimbabwe should reintroduce the Youth Development Fund so that young farmers can be able to access collateral free loans backed by the central government. This should be accompanied by strict control system such as frequent audits to prevent corruption and misuse of agriculture loans.

6.3 Limitations

- Due to covid-19 and travel restrictions, the sample could not be extended to other agricultural institutions in Zimbabwe. As a result, the study only focused on one institution instead of two as initially planned.
- Due to distant learning and technical delays to gather statistical data relating to student enrolment, random sampling was not possible. Hence, convenience sampling was used as the second-best alternative.

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Appendices.

Appendix 1: Challenges faced by farmers students who own land

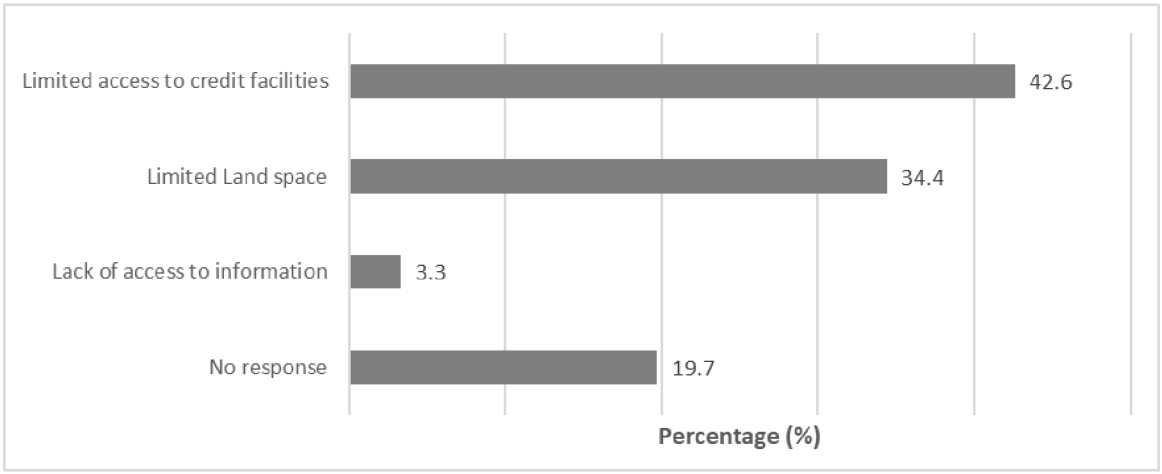
Appendix 2: Ways through which respondents acquired their land

Appendix 3: Provinces in which respondents would like to access land

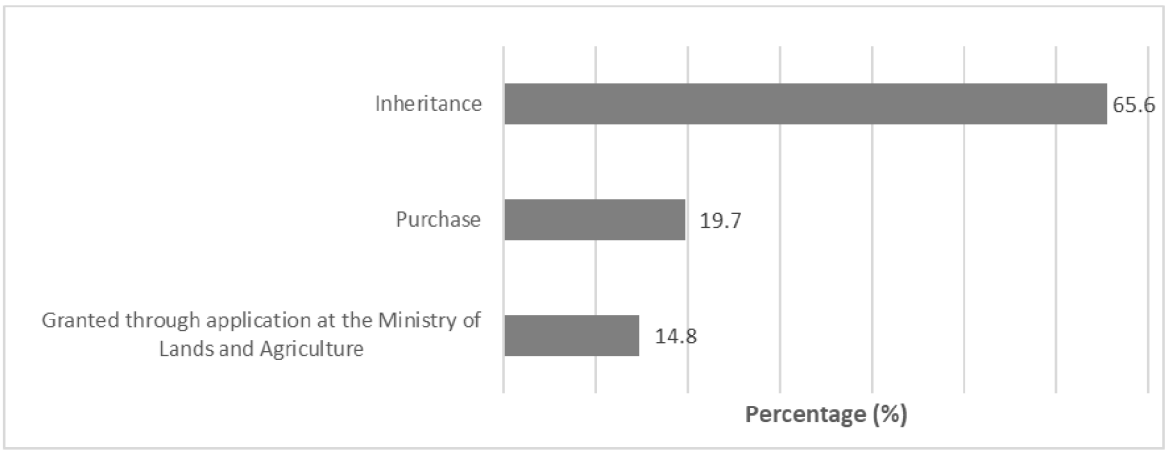
Appendix 4: Challenges faced by young farmers in accessing credit facilities

Appendix 5: Challenges faced when applying for agriculture land at Ministry of Lands

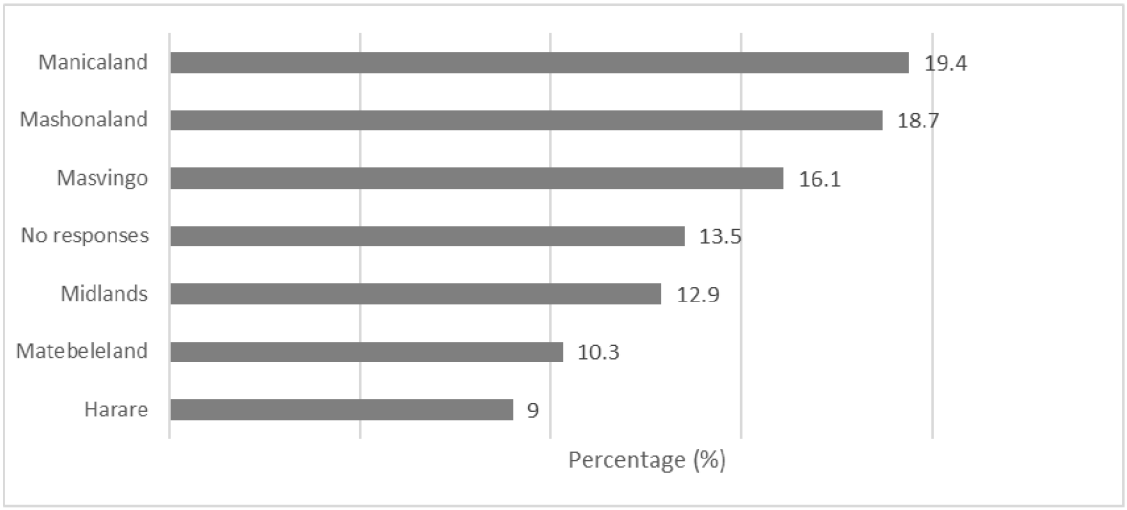
Appendix 1: Challenges faced by farmer students who own land (n=61).



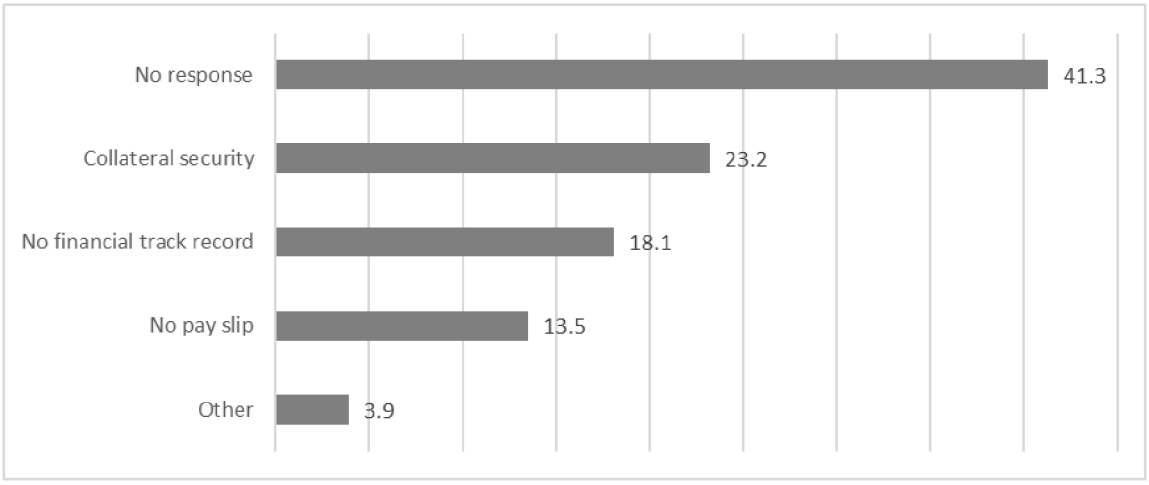
Appendix 2: Ways through which respondents acquired their land (n=61).



Appendix 3: Provinces in which respondents would like to access land.



Appendix 4: Challenges faced by young farmers in accessing credit facilities.



Appendix 5: Challenges faced when applying for agriculture land at Ministry of Lands.

Problem/Challenge	**Percentage (%)**
Corruption	32.26
Competition	28.39
Beureacracy	5.81
Inconsistent Administration	1.29
Prefer Not To Say	32.26