PERCEPTIONS, WILLINGNESS, OPPORTUNITIES, AND EFFECTS OF YOUTH PARTICIPATION IN AGRICULTURAL ENTERPRISES

by

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DEDICATION

To my late father Bandile Bernard Giwu, my family and friends.

DECLARATION1: PLAGIARISM

I, Ongama Giwu, hereby declare that this research, at the University of Kwa-Zulu Natal is my original work and has not previously been submitted at any educational institution, for a similar or any other degree.

All sources used or quoted have been properly indicated and acknowledged by means of complete references.

This work has been submitted with the purpose of obtaining a master's degree.

Ongama Giwu

Signature:

Date: 11/12/2023

As the candidate's supervisor, I, Dr L. Mdoda, agree to the submission of this thesis.

Signature: 

Date: 11/12/2023

DECLARATION 2: PUBLICATIONS

Publication 1– Chapter 3

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Publication 2 – Chapter 4

Giwu, O., Mdoda, L. and Samuel Ntlanga. Investigating the nature of youth perceptions and their influence on youth's aspiration in engaging in agricultural enterprises.

Publication 3 – Chapter 5

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Publication 4 – Chapter 6

Giwu, O., Mdoda, L. Determining factors influencing the willingness and interest of youth participation in agricultural enterprises. (Preparing to submit)

Publication 5 – Chapter 7

Giwu, O., Mdoda, L. and Samuel Ntlanga. Empowering Futures: Assessing the Socioeconomic Impact of Youth Engagement in Agricultural Enterprises for Employment Creation and Poverty Alleviation. (Preparing to submit)

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ABSTRACT

Agriculture is a pivotal driver of South Africa's economic growth and development, necessitating active participation from the youth to ensure sustainability. Notwithstanding, agricultural production is significantly impacted by adverse climatic conditions, a shortage of labor, and inadequate market access, posing a substantial threat to current and future food security. To mitigate these challenges, imperative enhancements are required within the smallholder farming sector. Addressing these issues will be pivotal for ensuring a resilient and sustainable agricultural system. The integration of youth into agricultural enterprises is very important for the sector's development and improvement due to qualities such as high energy level, ability to use innovative technology, openness to new developmental ideas, and fast thinking. Despite being a critical resource, most of the youth is losing interest, migrating to agriculture and the is low involvement of young people in agriculture which raises concerns about the industry's future. This has resulted in a loss of the most important segment for production and innovation adoption of agriculture which will affect the agricultural output and food security components. This research study seeks to investigate the perceptions, willingness, opportunities, and effects of youth participation in agricultural enterprise factors, focusing on the Umzimvubu Local Municipality in the Eastern Cape province. The study sought to achieve the following specific objectives: (i) profiling the characteristics and involvement of youth in agricultural enterprise, (ii) investigating the nature of youth perceptions and their influence on youth's aspiration to engage in agricultural enterprises, (iii) assessing challenges and opportunities for youth participating in agricultural enterprises, (iv) determination of factors influencing the willingness and interest of youth participation in agricultural enterprises, (v) determination of the contribution and effects of youth engaged in agricultural enterprise on employment creation and poverty alleviation. The research methodology that was used in the reasons for the phenomenon. The population of interest for this study was drawn from Umzimvubu Local Municipality in the Eastern Cape Province of South Africa. Judgemental sampling was employed to survey 210 youth aged 19-35 years using structured questionnaires, and various statistical analyses, including descriptive statistics, Perception and Aspiration Indices, Binary Logistic Regression, and Propensity Score Matching, were conducted.

The findings reveal that youth display moderate perceptions regarding agriculture's potential to improve living standards, resulting in generally low aspirations and poor overall perceptions of the industry. Challenges faced by youth in agriculture include poor markets, access to technical assistance, access to mentors, lack of financial support, lack of information on inputs,

pricing, water scarcity, and insufficient land. Empirical results revealed that household income, size, education, marital status, and perceptions were the main factors influencing youth participation in agricultural enterprises. Propensity Score Matching indicates a positive impact of youth participation on income, suggesting a potential to boost household income and alleviate poverty.

The study recommends that policymakers allocate resources strategically and adopt innovative approaches to enhance youth participation in agriculture. The government should prioritize skills development and capacity-building among youth, introducing them to profitable agricultural enterprises that promote decent work practices through trainings. Various strategies, including provision of free or subsidized inputs, market facilitation, technical assistance, and business knowledge, are proposed. Moreover, involving youth in policy and program planning is advocated for a holistic and inclusive approach to sustainable agricultural development.

Keywords: Agriculture, food security, participation, perceptions, willingness, youth

ACRONYMS/ABBREVIATIONS

AGRA	Alliance for a Green Revolution in Africa
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GFAR	The Global Forum for Agricultural Research
GPYE	Global Partnership of Youth Employment
IFAD	Iinternational Fund for Agricultural Development
IIED	International Institute for Environment and Development
MoAC	Ministry of Agriculture and Co-operative's
NDP	Nation Development Plan
NEPAD	New Partnership for Africa's development
NYDA	National Youth Development Agency
PSM	Propensity Score Matching
SDGs	Sustainable Development Goals
SSA	Sub-Saharan Africa
TIA	Technology and Innovation Agency
TPB	Theory of Planned Behavior
ULM	Umzimvubu Local Municipality

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CHAPTER 1

INTRODUCTION

1.1 Background of the study

The agricultural sector is measured as a leading employment investor in emerging markets and plays a fundamental part in the economic growth and poverty alleviation ambition of most developing countries (August, 2020). The agricultural sector is the only sector that ensures food security in the world, especially in low-income countries as they generate their livelihoods from agriculture (Mokgomo et al, 2022). To sustain agricultural development, an active population comprising youths must be encouraged and involved to participate effectively in agricultural activities (Etim and Udoh, 2020). Youths are essential resources for every nation (especially South Africa) specifically for sustaining agricultural productivity which is a vital sector for development (Kimaro, 2015), so their immense population needs to be handled appropriately. Youths have the potential to overcome some of the major constraints to expanding agricultural production in the country, because they are often more open to new ideas and practices than aged farmers (Barau, 2018). Regrettably, this category of people is effectively left out in policy and program considerations. As a result, there are several factors responsible for the low participation of youths in agriculture (such as lack of access to land, finance, markets, practical training, and incentives) yet limited research has been conducted.

Agriculture is a significant sector for the economic sustainability and social security of all developing countries across the globe (Mthi et al., 2021). This is a fact because agriculture is the leading source of employment in developing markets and plays an essential role in economic growth and poverty alleviation in most countries, especially sub-Saharan Africa. Henning et al. (2022) further specified that agriculture offers a source of livelihood to 60–80% of people worldwide and provides a major boost to national revenue and economic development as many people generate their livelihood from agriculture. Agriculture is one of the most promising sectors in Sub-Saharan Africa (SSA), with the ability to employ young people and reduce poverty. It is estimated that the agricultural sector contributes 35% of employment worldwide and 86.8% in the African continent as well as provides foreign exchange earnings, food, and nutrition security (Henning et al., 2022). These benefits call for investment in the agricultural sector as the key driver of economic growth (Karimou, 2018).

Ntshangase (2016) specified that agriculture is the only solution to many of the socio-economic challenges facing South Africa, particularly in the rural areas where farming is practiced.

Despite the significant contribution of agriculture to the economy of developing countries, especially sub-Saharan Africa (SSA), the sector is fraught with some serious constraints such as agricultural production efforts are still left in the hands of aged farmers who presently constitute the major farming population (Kwenye and Sichone, 2016). Youth involvement in agriculture has lessened over the years and this has negatively affected the agricultural sector badly (Som, 2018). The elderly's agricultural productivity level cannot meet the speedily growing population's food and fiber needs (Kwenye and Sichone, 2016). Young people's participation has been inadequate, irregular, and not insightful of the investment (both money and effort) made in the sector thus far (Magagula and Tsvakirai, 2020).

The growth generated by agriculture is more effective (than growth in other sectors) in reducing poverty and generating the greatest improvement for the poorest people particularly in poor agriculture-based economies (Sharma, 2020). But Adefalu et al (2009); Kwenye and Sichone (2016) argued that to sustain growth and prevent threats in the sector, the amount of agricultural production efforts should not be left in the hands of elderly farmers who are presently the major farming population. The average farmer age is increasing, so to ensure the sustainability of agriculture, more young labor must be involved in agriculture in the future. For instance, (Ntshangase, 2016), more than 66% of farmers are over 50 years old, and 48% of these farmers are over the age of 61 (Elahi et al, 2022). An aging population is linked with long-term chronic conditions, and physical and medical disability which reduces its productivity. This means that as the population ages, its agricultural output diminishes. Active youth involvement can lessen the challenges of food security and ageing farm populations (Yami et al, 2019). Therefore, this necessitates the need to attract the youth to rise and take on agriculture in rural agricultural societies (Fan, 2020)

There are factors leading to poor youth involvement in agriculture that includes lack of access to farm credit/loans, limited government support, and lack of information and communication technologies Yami et al, (2019). In addition, the youth are faced with a lack of readily available training programs and education to further develop and support their skills, poor technology, and costly and scarce agro-inputs (Banga et al, 2021). Other challenges causing less participation in agriculture include: i) the absence of a functional farmer organizations, ii) difficulties in accessing loans, iii) absence of the land policy, iv) absence of comprehensive

water resources development programme, v) low levels of knowledge and skills in agriculture, vi) general lack of basic skills in agri-business, vii) Ministry of Agriculture and Co-operative's (MoAC) structure not responsive to the country's needs for technical support, viii) agricultural research is not demand-driven, ix) too centralized, x) lack of appropriate policy, xi) inadequate capacity, and xii) ineffective delivery systems. Youth also face challenges like inefficient extension service of the MoAC, poor marketing structure, excessive costs of imported inputs and low prices of produce, and inadequate supply of breeding and feeder stock.

Youth perceive agriculture as a low-status, dirty and unattractive job (Nyakiema, 2021). To them (youth people), agriculture is a part-time job and not a profession or a livelihood strategy (Popescu et al, 2021). The youth prefer non-agricultural careers because they perceive them as more stable, providing relatively more income and requiring less physical labor White, (2012); Swarts and Aliber, (2013). According to (Qwabe, 2018) elders who are engaged in agriculture are not transparent about the profitability of their engagement in the sector, leading the youth to believe that agriculture is not profitable. Also, the perception that engaging in the agricultural sector is only through primary agriculture is worth considering as a limiting factor to youth engagement in the sector. This perception might be one of the reasons why there are high rates of migration of youth from rural areas to urban areas in search of "better" job opportunities (pull factor). However, this is putting pressure on urban areas that in turn are unable to provide jobs due to the increased number of youth migrants (Brookset al, 2018) and resulting in many urban dwellers being malnourished as the absorptive capacity in cities is low while there is labor deficit in the rural populace.

Youths are the ideal catalysts for agricultural transformation and developmental change given their greater ability and willingness to adopt innovations and technology which are critical to changing the agricultural sector (Kwenye and Sichone, 2016). It, therefore, becomes imperative that youths should be actively involved in agriculture. Som (2018) suggested that fostering youth involvement in agriculture is a worthwhile investment. Although, the participation of youths in agriculture is fundamental for economic development and poverty reduction World Bank, (2008), the factors influencing the willingness of youths to participate in agricultural activities include access to land, savings, and credit (Anyanwaokoro and Ogbu, 2017). According to (Morais et al., 2017) and (Cavicchioli et al., 2018) identified factors that influenced the willingness of youth participation, including internal factors (e.g., birth order,

gender and labor market conditions and external factors that influence the children's and their family's perceptions and beliefs.

Nataraju, (2015); Kimaro et al., (2015); Douglas et al. (2017); Giuliani et al., (2017) and Bahta et al., (2018) reflected a strong relationship between young people's aspirations and perceptions, access to livelihood assets, and the choices they make in relation to agricultural participation and did not specifically consider understanding the perceptions and willingness of youth towards agriculture as a means of livelihood and an employment opportunity. The lack of evidence on these important aspects limits the scope for a discussion on the livelihood improvement of young people through agricultural participation. Therefore, improving youth participation in agriculture can improve the sector, hence, should be a priority. Hence, this research study primarily intends to explore the perceptions and willingness of the youth toward the agricultural enterprise. It is important to address the challenges of poor youth participation in agriculture, investigate the factors that contribute to their poor involvement and explore the youth's interests and their willingness to engage in agriculture. This study hence sought to contribute by analyzing why there is poor youth engagement in agriculture to inform policy and practice.

1.2 Problem statement

Agriculture is recognized as a primary livelihood source for many rural people in Africa and the essential contributor to economic growth (Gardiner and Goedhuys, 2020). Previous research studies Bank, (2019), Castaneda, (2018), Brooks, (2013), Akinnifesi, (2013) and policies [New Partnership for Africa's Development (NEPAD), 2011 and African Union, (2011)] have highlighted the role of agriculture in employment creation, food, and nutrition security, and reducing societal inequality and poverty in Africa. The agricultural sector also presents opportunities for entrepreneurship, which would be ideal for employment creation, especially among youth [Alliance for a Green Revolution in Africa (AGRA), (2020)]. Youth participation in agriculture has become a focal point at the center of the government's strategic policies in developing countries, especially in South Africa which is included in the Nation Development Plan (NDP) for 2030 (Sinyolo and Mudhara, 2018). However, youth agricultural participation remains very low.

African countries are adversely affected by the rural-urban migration of the youth away from agriculture as they go to search for decent jobs, making labor increasingly scarce and is a major

constraint to expanding the scope of production by small-scale resource-poor farmers (Akrong and Kotu, 2022) and (Njena et al, 2016). However, this is putting pressure on urban areas that in turn are unable to provide jobs due to the increased number of youth migrants (Brooks and Kararach, 2016) and resulting in many urban dwellers being malnourished as the absorptive capacity in cities is low while there is labor deficit in the rural populace. In most African countries most of the youth perceive agriculture as unattractive and dirty work due to a lack of knowledge about agriculture (Njeru, 2017). Moreover, the youth perceive agriculture as strenuous with a poor return on investment and little room for career progression (Njena et al, 2016). Additionally, this leaves farming in the hands of aged people and children who barely have the strength to carry out the laborious task. (Etim and Udoh, 2018) added that the aged farmers cannot meet the food and fiber requirements of the rapidly increasing population as they are likely to phase out on account of age and resulting in productivity shortages. According to (Akrong and Kotu, 2020) noted that there is limited information on drivers of youth choices of different agripreneurship activities and their crop production decisions which contributes to low participation. The lack of access to finance, lack of information and lack of managerial expertise, legal knowledge, networking, and mentoring are constraints affecting youth participation, especially in agripreneurial development (Agripreneurs Conference, 2019).

Due to the lack of youth participation in agriculture activities, (Leavy and Hessian, 2017) noted that the agricultural sector is left with less educated or less skilled people, who do not have access to proper extension services, lack of credit, and innovative technology. Limited research has been done on youth aspirations and perceptions, which are very important in sustaining agriculture and therefore remain poorly understood Giuliani et al., (2017); Njeru, (2017). Even as the government introduces strategies that develop rural economies to be attractive for farming, the youth are not convinced in taking part in agriculture. (Cheteni 2016) argued that youth have low self-esteem which contributes to finding agriculture not attractive. The low self-esteem associated with youth increases the negative perception they have about agriculture, leading to non-participation (Cheteni, 2016). Perception and social status act as impediments to young people pursuing careers and getting involved in agriculture. These perceptions influence participation in agriculture, leading to some groups being underrepresented.

It is, therefore, becoming important that youths should be actively involved in agriculture and nurturing youth involvement in agriculture is a worthwhile investment. (Swart and Aliber,

2016) specified that the agricultural sector will need future farmers to continue with agricultural activities. The lack of evidence on these important aspects limits the scope for a discussion on the livelihood improvement of young people's participation in agriculture. To address the challenges of poor youth engagement in agriculture, it is important to investigate challenges, and factors that contribute to their poor engagement and explore the willingness and interest of youth participation in agriculture.

1.3 Aim and Objectives

1.3.1 Aim

The study aims to analyze the perceptions, willingness, opportunities, and effects of youth participation in agricultural enterprises in reducing poverty in Umzimvubu Municipality.

Objectives

1. To profile the characteristics and involvement of youth in agricultural enterprise in the study area
2. To investigate the nature of youth perceptions and their influence on youth's aspiration to engage in agricultural enterprises in the study area.
3. To examine and identify challenges and opportunities for youth in participating in agricultural enterprises in the study area.
4. To determine factors influencing the willingness and interest of youth participation in agricultural enterprises in the study area.
5. To assess the contribution and effects of youth engaged in agricultural enterprise on employment creation and poverty alleviation in the study area.

1.4 Research Questions

1. What is the profile of youth involvement in agricultural enterprise?
2. What is the nature of youth perceptions and their influence on youth's interest in engaging in agricultural enterprises?
3. What are the challenges and opportunities for youth in participating in agricultural enterprises?
4. What are the factors influencing the willingness and interest of youth participation in agricultural enterprises in the study area?

5. What contribution and effect does agricultural enterprise have on employment creation and poverty alleviation?

1.5 Justification of the study

There are limited studies conducted on youth involvement in agricultural enterprises in the Eastern Cape Province of South Africa. As a result, accurate data on the actual population of youth is lacking. There is also minimal research on youth perceptions and aspirations conducted in the Umzimvubu Local Municipality in the Eastern Cape Province. Therefore, it becomes difficult to create and implement strategies that will encourage youth into agriculture. There is also limited studies conducted on willingness and interest of youth to engage in agricultural enterprises in Umzimvubu Local Municipality. Therefore, this study will be useful to young people who are willing or want to start an agricultural business as it will provide information about the opportunities available in the sector. The involvement of youth will result in improvements in economic growth and development, which will result in employment creation and poverty alleviation. Therefore, food and the future of agriculture will be secure. There are also minimal studies conducted on challenges and opportunities of youth participation in agriculture in Umzimvubu Local Municipality. This study will provide information to youth, policymakers, and donors. Government and policymakers will be aware of the reasons why youth are not engaging in agricultural enterprises and be able to implement new innovations and strategies. The study will also be useful to the Department of Agriculture because it will help them determine how to best support agricultural youth. Donors may want to investigate why youth are not involved in agriculture and devise solutions.

1.6 Delimitation and Limitations

The study's limitation was that it was restricted to Umzimvubu Local Municipality. Its conclusion must be understood.in this context. The results may not be generalized for all the youth in world. This is because, even though youth share similar characteristics, their perceptions and aspirations are different. Also, the challenges they face in agriculture may differ. The investigation of all the areas in the Municipality were not attainable due to the distance of the villages. The study employed cross-sectional data due to lack of time and other resources. Delimitations are the boundaries that the researcher sets in a research study, deciding what to include and what to exclude. Delimitation in this study was that the investigation was carried out in uMzimvubu Local Municipality in the Eastern Cape Province and focused on 210 youth aged 18-35 both male and female.

1.7 Definition of terms

Agriculture: is considered as the process of producing crops (food, feed, fibre, and other products), livestock, fisheries, and forestry (FAO, 2014). The study considered agriculture as the act of producing crops, fish farming, flowers, growing forest, livestock keeping, and dealing with agro-business activities which the youth can engage in to improve the agricultural sector and their standard of living.

Agricultural enterprise: As used in this study, the term "agricultural enterprises" means those small business concerns engaged in the production of food and fibre, ranching, and raising of livestock, aquaculture, and all other farming and agricultural-related industries.

Food security: is defined as a situation where all the people in each area have economic, social, and physical access to adequate, safe, and nourishing food which meets their dietetic requirements and food choices to enable them to have a healthy and lively life.

Youth: is defines as the transition age between childhood and adulthood where a person becomes more economically and socially autonomous and sexually mature. According to this study age 18-35 of youth was used.

1.8 Outline of the study

This study consists of eight chapters. The second chapter is the literature review, which reviews information comprised in other studies on the level of efficiency of youth involvement in agriculture, perceptions, aspirations, challenges, and opportunities in agriculture. Chapter three addresses the first objective of the study which is profiling the characteristics and involvement of youth in agricultural enterprise along with its methodology, empirical results, and policy recommendations. The fourth chapter addresses the second objective of the study; the nature of youth perceptions and their influence on youth's aspiration in engaging in agricultural enterprises it includes the methodology, empirical results, and policy recommendations. The fifth chapter addresses the third objective of the study which is assessing challenges and opportunities for youth participating in agriculture, methodology and empirical results. The sixth chapter address the fourth objective of the study which is determining factors influencing willingness of youth to participate in agricultural enterprises, methodology, empirical results, and policy recommendation. The seventh chapter address the fifth objective of the study which is determining the contribution and effects of youth engaged in agricultural enterprise on

employment creation and poverty alleviation, methodology, empirical results, and policy recommendation. The eighth chapter contains the summary, conclusion, and policy recommendations of the study.

LIST OF REFERENCES

Adefalu, F.O., Adekunle, O.A., Oladipo, L.L., Adisa, R.S. and Fatoye, A.D. 2009. Constraints to youth involvement in agricultural production in Kwara state, Nigeria. Agricultural Extension 13 (1):102-108.

African union 2011. Diaspora as the 'Sixth Region of Africa': An assessment of the African Union initiative, 2002-2010. *Diaspora Studies*, *4*(1), p.59.

AGRA (Alliance for a Green Revolution in Africa), 2020, https://agra.org/AGRAOld/wp-content/uploads/2019/04/agra-progress-report-20172020.pdf

Agropreneur conference, 2019. *Agricultural Training Programmes for Youth Agripreneurship Performance and Empowerment)*.

Akinnifesi, F.K., 2013. Can South-South cooperation offer sustainable agriculture-led solutions to youth unemployment in Africa. *Nat Faune*, *28*, pp.18-25

Akrong, R. and Kotu, B.H., 2022. Economic analysis of youth participation in agripreneurship in Benin. *Heliyon*, *8*(1).

Anyanwaokoro, M. and Ogbu, E.G., 2017. Saudi Journal of Economics and Finance (SJEF).

August, M.M., 2020. *Youths' aspirations and perceptions towards agricultural participation: a case of two Free State regions* (Doctoral dissertation, University of the Free State).

Bahta, Y.T., Owusu-Sekyere, E. and Tlalang, B.E., 2018. Assessing participation in homestead food garden programmes, land ownership and their impact on productivity and net returns of smallholder maize producers in South Africa. *Agrekon*, *57*(1), pp.49-63.

Banga, K., Njambi-Szlapka, S. and Phiona, S., 2021. *Youth enterprise growth: evidence from Youth Forward in Uganda*. ODI Report.

Bank Muñoz, C., 2019. *Transnational tortillas: Race, gender, and shop-floor politics in Mexico and the United States*. Cornell University Press.

Barau, A.A. and Adesiji, G.B., 2018. Socioeconomic determinants influencing the willingness of agriculture undergraduates to participate in agripreneurship in Northwest Nigeria. *International Journal of Agricultural Management and Development*, *8*(1), pp.25-34.

Brooks, K., Amy, G., Goyal, A., & Zorya, S. 2018. Agriculture as a Sector of Opportunity for Young People in Africa (Policy research working papers). Washington, D.C.: The World Bank Farming First. (n.d.). Engaging Youth in Agriculture – The Key to a Food Secure

Brooks, K., Zorya, S., Gautam, A. and Goyal, A., 2013. Agriculture as a sector of opportunity for young people in Africa. *World Bank Policy Research Working Paper*, (6473).

Castañeda, A.; Doan, D.; Newhouse, D.; Nguyen, M.C.; Uematsu, H.; Azevedo, J.P.; World Bank Data for Goals Group. A new profile of the global poor. World Dev. 2018, 101, 250–267.

Cavicchioli, D., Bertoni, D. and Pretolani, R., 2018. Farm succession at a crossroads: The interaction among farm characteristics, labour market conditions, and gender and birth order effects. *Journal of Rural Studies*, *61*, pp.73-83.

Cheteni, P., 2016. Youth participation in agriculture in the Nkonkobe district municipality, South Africa. *Journal of human ecology*, *55*(3), pp.207-213.

Douglas, K., Singh, A.S. and Zvenyika, K.R., 2017. Perceptions of Swaziland's youth towards farming: A case of manzini region. *Forestry Research and Engineering International Journal*, *1*(3), pp.83-89.

Elahi, E., Khalid, Z. and Zhang, Z., 2022. Understanding farmers' intention and willingness to install renewable energy technology: A solution to reduce the environmental emissions of agriculture. *Applied Energy*, *309*, p.118459.

Etim, N.A. and Udoh, E.J., 2020. Adoption of organic waterleaf farming for sustainable food production in Akwa Ibom State, Nigeria. *International Journal of Development and Sustainability*, *9*(1), pp.1-13.

Etim, N.A.A. and Udoh, E.J., 2018. Willingness of youths to participate in agricultural activities: Implication for poverty reduction. *Am. J. Soc. Sci*, *6*, pp.1-5.

Fan, S., Yosef, S. and Pandya-Lorch, R., 2020. Linking agriculture to nutrition: The evolution of policy. *China Agricultural Economic Review*, *12*(4), pp.595-604.

Gardiner, D. and Goedhuys, M., 2020. *Youth aspirations and the future of work: a review of the literature and evidence* (No. 8). ILO Working Paper.

Giuliani, A., Mengel, S., Paisley, C., Perkins, N., Flink, I., Oliveros, O. and Wongtschowski, M., 2017. Realities, perceptions, challenges, and aspirations of rural youth in dryland agriculture in the Midelt Province, Morocco. *Sustainability*, *9*(6), p.871.

Henning, J.I., Matthews, N., August, M. and Madende, P., 2022. Youths' perceptions and aspiration towards participating in the agricultural sector: A South African case study. *Social Sciences*, *11*(5), p.215.

Karimou, S.M., 2018. Impact of agricultural output on economic growth in West Africa: Case of Benin.

Kimaro, P. J. 2015. Determinants of rural youth's participation in agricultural activities: the case of Kahe East Ward in Moshi Rural District, Tanzania. International Journal of Research and development, 3(2), 1–47

Kimaro, P. J. 2016. Determinants of rural youth's participation in agricultural activities. International Journal of Research and development, 3(2), 1–47.

Kimaro, P. J. Towo, N. N & Moshi, B. H. 2015. Determinants of rural youth's participation in agricultural activities. International Journal of Economics, Commerce and Management, 3(2), 23 – 33.

Kwenye, J.M. and Sichone, T., 2016. Rural youth participation in Agriculture: Exploring the significance and challenges in the control of agricultural sector in Zambian. *RUFORUM Working document series*, *14*(1), pp.473-477.

Leavy, J., & Hossain, N. 2017. Who Wants to Farm? Youth Aspirations, Opportunities and Rising Food Prices. IDS Working papers, 439, 1–44.

Magagula, B. and Tsvakirai, C.Z., 2020. Youth perceptions of agriculture: influence of cognitive processes on participation in agripreneurship. *Development in practice*, *30*(2), pp.234-243.

Mokgomo, M.N., Chagwiza, C. and Tshilowa, P.F., 2022. The impact of government agricultural development support on agricultural income, production, and food security of beneficiary small-scale farmers in South Africa. *Agriculture*, *12*(11), p.1760.

Morais, M., Binotto, E., and Borges, J.A.R., 2017. Identifying beliefs underlying successors' intention to take over the farm. *Land use policy*, *68*, pp.48-58.

Mthi, S., Yawa, M., Tokozwayo, S., Ikusika, O.O., Nyangiwe, N., Thubela, T., Tyasi, T.L., Washaya, S., Gxasheka, M., Mpisana, Z. and Nkohla, M.B., 2021. An assessment of youth involvement in agricultural activities in Eastern Cape province, South Africa. *Agricultural Sciences*, *12*(10), pp.1034-1047.

Nataraju, M.S., 2015. *A study on perception, aspiration, and participation of farm youth in agriculture* (Doctoral dissertation, University of Agricultural Sciences Gkvk).

NEPAD, 2011, "NEPAD's successes and contribution to Africa". Accessed from www.bizcommunity.com/article/410/423/17965.html

Njenga, P., Mugo, F., & Opiyo, R. (2016). Youth and Women Empowerment through Agriculture.

Njeru, L. K., Gichimu, B. M., Lopokoiyit, M. C., & Mwangi, J. G. (2016). Influence of Youth's Perception towards Agriculture and Necessary Interventions; a Review. Asian Journal of Agricultural Extension, Economics & Sociology, 5(1), 40-45. 68

Ntshangase, W.M., 2016. *The sustainability of emerging cane growers through youth involvement: a case study of the North Coast of KwaZulu-Natal in South Africa* (Doctoral dissertation, University of the Free State).

Nyakiema, I.O., 2021. *Factors influencing rural youths' aspirations towards agriculture in Rorya district, Tanzania* (Doctoral dissertation, Sokoine University of Agriculture).

Popescu, A., Tindeche, C., Marcuță, A., Marcuță, L., Honțuș, A. and Angelescu, C., 2021. Labor force in the European Union Agriculture-Traits and tendencies. *economic analysis*, *20*, p.27.

Qwabe, X., 2018. RE: Youth involvement in Agriculture, Project Manager: Agricultural Development Agency (ADA), South Africa.

Sharma, S., Zhang, M., Gao, J., Zhang, H., and Kota, S.H., 2020. Effect of restricted emissions during COVID-19 on air quality in India. *Science of the total environment*, *728*, p.138878.

Sinyolo, S. and Mudhara, M., 2018. The impact of social capital on entrepreneurship among smallholder farmers in rural South Africa. *Journal of Rural Development*, pp.519-538.

Swarts, M.B. and Aliber, M., 2013. The 'youth and agriculture'problem: implications for rangeland development. *African journal of range & forage science*, *30*(1-2), pp.23-27.

White, B., 2020. IFAD Research Series 48: Rural Youth, Today and Tomorrow. *Today and Tomorrow (April 3, 2020)*.

World Bank, 2007. *World development report 2008: Agriculture for development*. The World Bank.

Yami, M., Feleke, S., Abdoulaye, T., Alene, A.D., Bamba, Z. and Manyong, V., 2019. African rural youth engagement in agribusiness: Achievements, limitations, and lessons. *Sustainability*, *11*(1), p.185.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Agricultural sector is the only sector that ensures food security in the world; therefore, it is important to sustain agricultural development. To sustain this development, however, an active population of the youths ought to be encouraged to participate efficiently in agricultural activities since the sector is dominated mostly by elderly people. Youth is migrating to urban areas in search of white-collar jobs. However, this is putting strain on urban centres which are unable to provide employment leading to massive youth unemployment. This chapter first provides overview of youth participation in agriculture. The second section provide youth involvement in agriculture. The third section reviews the role of agriculture which is the opportunities available in agriculture, perceptions, and attitudes of youth in agriculture and constraints faced by youth in participating in agriculture. The last section will provide aspirations and interest in agriculture.

2.2 Overview of youth participation in agriculture

Youths are usually defined concerning their age brackets (15-36) Afande et al. (2015). African Union Commission uses the ages of 15–35 Lindsjö et al., (2020). According to Barau and Afrad, (2017), youth is one in transition from childhood to adulthood. This involves all the biological processes, social growth, and economic freedom. This, therefore, is an important stage in human development if actively utilized since the youths form the largest population in SSA countries. Zulu et al. (2021) noted that the youth population in SSA is expected to exceed 60% by 2050. Thus, countries should seek policies enhancing youth engagement in agriculture as a measure to contain the ensuing youth bulge, unemployment, and rural-urban migration. Youth unemployment is a major concern in many countries in SSA. It is therefore critical for youth to participate actively in agricultural activities to ensure their own economic independence, food security, and the future of agriculture. The agricultural sector is well-known for providing opportunities for youth and is the largest employer in SSA (Eissler and Brennan, 2015). The sector's ability to employ young people is widely acknowledged. Agriculture could be used to alleviate or reduce the rising levels of youth unemployment. Regardless of the opportunities available in the sector, young people's participation remains

low (Mibey, 2015), and it is the people in this demographic sector who are expected to play a leading role in agricultural revitalization due to their creative ability.

2.3 Youth involvement in agriculture

Youth involvement in agriculture across the different nations has lingered and is becoming stronger now, based on the current socio-economic hardship, aging farming population, and food insecurity in the country. The agricultural sector and future food security are under threat from an ageing generation of farmers, where more than 66 % of farmers are over 50 years old, and 48 % of these are over the age of 61 Ntshangase, (2016), which high rates of youth unemployment, and a rapidly increasing population. Youth involvement in agriculture is unquestionably important, but fundamental transformations in power dynamics and perceptions are required to ensure that the next generation embraces agriculture. For their own financial independence, food security, and the future of agriculture, young people must participate actively in agricultural enterprises. The agricultural industry is the largest employer in SSA and is widely known for providing chances for young people (Eissler and Brennan, 2015). The industry's ability to offer young people jobs is widely recognized. Agriculture could help alleviate or lower the levels of rising youth unemployment (Anyidoho et al., 2012). However, despite the potential in the industry, young people's involvement is still quite low (Mibey, 2015), even though they are expected to play a key role in the revival of agriculture because of their creative ability.

Many issues, such as an inadequate institutional framework for directing, mobilizing, and developing the unique aspirations, skills, and experiences of rural youth toward agricultural activities, contribute to the decline in youth participation in agriculture (Kasolo, 2016). The most significant elements discovered to explain the low young engagement in agriculture were economic "push factors," such as unemployment, a credit crunch, and rural poverty (Twumasi, 2019).

According to Giuliani et al, (2017), special attention must be paid to issues like the decline of farming activities, the government's disregard for subsistence agriculture and rural infrastructure, and the difficulties relating to land access to understand the reasons behind the low participation of young people in agriculture. Together with youth participation, the required resources and training must be provided (Yami et al, 2019). Making production equipment, agricultural supplies, and resources widely accessible and reasonable price is

another crucial factor that the government's agricultural agencies should consider in their attempts to encourage young people to become farmers (Mbeine, 2014). Young people can engage in numerous facets of agriculture and create a living through connected activities; therefore, they undoubtedly have a role to play in the agricultural industry. But it's crucial to provide the young people's passion with opportunities.

2.4 Role of agriculture in the economy:

Agriculture is important in developing countries' economies because it provides the foundation for food production as well as a source of income and employment development in rural communities (August, 2020). More than 70 percent of the rural population depends on agriculture for their livelihoods, and regional economic growth has been constrained by inferior performance in the agriculture sector. Agriculture accounts for 40 percent of the Gross Domestic Product and employs a higher absolute number than any other sector (Ruhl, 2021). Even though the agricultural sector contributes about 40 percent to the nation's GDP, the sector is still far away from attaining its potential because of the enormous land resource and need to feed more mouths with increasing population. Emeka (2020) reported that agriculture contributes between 30 and 42 percent to the Gross Domestic product (GDP) and employs 65 per cent of the labor force.

2.4.1 Opportunities available in agriculture

Young people have considerable employment opportunities in the agriculture sector, especially in the SSA region (Yeboah et al., 2020). Beyond primary agriculture, the sector provides a wide range of economic and employment prospects. These chances can be found in agriculture (entrepreneurship) and the value chain (which encompasses the initial stages of production, storage, agro-processing, and marketing, as well as the final stages of distribution to the final consumer). The young people may find that other parts of the agricultural value chain, excluding basic agriculture, are more suited to their skills, interests, or even abilities. Young people must be aware of the various business and job opportunities that exist in the value chain industry.

There will be profound advantages in food security, improvement in standards of living, economic and social development. However, to reap these advantages, there should be a widespread partnership, commitment, effective and coordinated implementation (Muthomi, 2017). Once well-thought-out methods are enforced, youth are going to be incorporated into

profitable agribusiness improvement. Leavy and Hossain (2017) argue that this effort should unfold well on the far side formal training, placement and comprehend the progression of comprehensive agribusiness methods and the development of trusty enterprises. This may result in the formation of an immense network of recent enterprises across the whole agricultural price chain. Moreover, there ought to be commitment at the community, native and national levels wherever shut collaboration is cultivated among the various stakeholders. This may produce an environment that might encourage financial institutions and therefore the private sector to have interaction and supply abundantly needed services. The bottom line, however, would be to create many agricultural programs to encourage the youth. Therefore, the youth should be at the center of all policies and programs (Kaneene 2016). IFAD (2015) noted that Africa has monumental untapped potential in agriculture which will be controlled to form direct and indirect employment. Youth participation in agriculture needs an appealing and dynamic agricultural sector as a requirement. This might build the youth to alter their negative opinion they have towards agriculture if the sector is remodeled to accommodate innovation and new practices. It is essential for the agricultural sector in most African countries needs to be modernized so it will be ready to produce more jobs for the youth and scale back the risks and uncertainties related to the sector as it is today (World Bank 2016). Haggblade et al, (2015) notes that regarding 80% of the acute poor and living in rural areas, modernization of agriculture to reinforce production will not solely produce employment however it will also scale back economic and improve food security.

2.4.2 Perception and attitude of youth in agriculture

Although youth perceive agriculture as a labor-intensive, unprofitable, and dirty sector that does not have the potential to be a livelihood strategy, agriculture is recognized as offering a potential solution to some economic challenges and joblessness among young people (Adekunle et al., 2009; Bahaman et al., 2010; Bezu and Holden, 2014). (Muller et al, 2019) added to the conversation by pointing out that some young people do not even consider a career in agriculture. They avoid agriculture because of this perception and their need for social approval, forgoing any potential economic gains that would result from their involvement (Nwaogwugwu and Obele, 2017).

Youth participation in agriculture has been cited as being hampered by capacity issues, a lack of incentives like high pay, job insecurity, climatic fluctuations, and unfavorable working conditions. These issues played a significant role in the youth's negative perception of

agriculture. In addition, (Zossou, 2017) notes that most agricultural activities in rural areas only serve to satisfy consumer needs rather than generate money, leaving young farm employees without a source of income. However, it is important to remember that young people are not all the same, therefore not all young people share this perception. Because if it is thought that all the youth share this perception, developing and implementing measures tailored specifically to rural youth engaged in agriculture will be delayed.

2.4.3 Constraints faced by youth in participating in agriculture.

There are various constraints which hinder youth engaging in agriculture which include access to capital, access to land, lack of information, access to markets, poor infrastructure, access to education and training, lack of mentors and lack of technical assistance. These constraints are discussed hereunder.

- **Access to capital**

One major issue that many young people have is access to financing for agriculture, which makes them dislike farming (Gichimu and Njeru, 2014). They rarely obtain capital since they lack assets to use as collateral to obtain finance from banking institutions (Afande et al., 2015). According to Juma (2017), having access to money makes it possible to rent land, pay farm laborers a living wage, and purchase agricultural inputs. Similarly, Saqib et al. (2018) suggested that having access to credit, loans, and enough savings increases the possibility that a person will have access to productive inputs and crucial resources for promoting agriculture. There is poor agricultural promotion which makes financial institutions not look up to agriculture as a sector that deserves financing (Muthomi, 2017). To encourage rural youth to get involved in agriculture, it is crucial to implement initiatives that would make it easier for them to get financing.

- **Access to land**

For young people looking for ways to make a living through agriculture in their native countries, access to land is crucial (August, 2020). The first step in starting agricultural activity is gaining access to land, which may give most households reliable access to wholesome, high-quality food while also generating income (Kidido et al., 2017). Agriculture requires access to productive land, but getting it can be quite difficult for youth, especially given the current land tenure systems in many African nations (Kidido et al., 2017). According to Conway, et al. (2020), youth have limited access to land since their parents typically control the title to the

land they use for agricultural production. Additionally, youth have access to small parcels of land that are unsuitable for extensive and profitable cultivation. Farming on small plots of land is typically not profitable, young people choose to look for substitute employment that is scarcely available, which raises the unemployment rate (Brooks et al., 2013). It is important that ways are established to make land accessible for youth who want to engage in agriculture.

- **Lack of information**

Since the lack of information is one of the major factors hindering smallholder farmers' ability to access competitive markets, information dissemination has always been difficult for smallholder farmers in remote areas (Harvey et al, 2018). In this situation, smallholder farmers are repeatedly cut off from the market chains that could provide them with long-term sources of income. They do not have access to information or know how to run their farms in a better, more productive way. Most smallholder farmers rely heavily on extension agents and other farmers for knowledge transmission (Baloyi, 2018). Therefore, while trying to attract rural youth, improvements in access to pertinent agricultural information are crucial. Another method for reaching young people with agricultural information is the development of digital platforms using ICTs and the incorporation of agricultural information on social media.

- **Access to markets**

For farmers, having access to the market includes having the means to purchase agricultural inputs and services as well as the means to convey their produce to consumers (Magesa, 2020). Markets give people the chance to make income, which helps to lessen hunger and poverty in developing countries. To meet customer demand in terms of quantity and quality, markets also drive production (Kuncoro and Surian, 2018). To ensure smallholders an increase in income and raise them out of poverty, sustainable market access is necessary.

According to Yami et al, (2019), rural youth are the agricultural industry's future, making it crucial for them to have access to markets to increase production, raise incomes, and combat hunger and poverty. However, young people have a variety of obstacles while attempting to access markets, going beyond the limitations faced by smallholder farmers, particularly in underdeveloped nations.

- **Poor infrastructure**

According to Pereira, (2017), Africa's rural areas have significantly less social and physical infrastructure than urban areas. As a result, people, primarily youth migrate to cities in quest

of better livelihoods and employment. The youth are aware of lifestyles in other parts of their nations and around the world. If metropolitan regions continue to offer more tempting options for young people to live their desired lifestyles, more young people would prefer them to rural places. According to Mugisha and Nkwasibwe (2014), the availability of reliable electricity, good roads, recreational facilities, affordable housing, internet, quality healthcare, water, and sanitation in rural areas will play a significant role in retaining youths and enabling them to engage in agriculture.

- **Access to Education and Training**

Negative perceptions towards agriculture held by the youth may be attributed to numerous factors, the most notable one being education (Magagula and Tsvakirai, 2020). In developing countries, rural communities frequently lack access to education, and this disparity can be shown as early as primary school. Children who live in rural areas of developing countries frequently lack the energy to attend school or to easily assimilate the knowledge being taught. Parents may feel forced to let their children participate in domestic and agricultural tasks rather than send them to school during seasonal peaks in the agricultural cycle due to labor shortages. Rural schools frequently have poor physical infrastructure, and occasionally there aren't enough supplies for the classroom. Rural children may have a tough time getting to school because it may be far away (FAO, 2015). The curriculum is often not relevant to the rural context, and in many schools in developing countries, agricultural curricula have disappeared or are outdated and inadequate. In most parts of the world, agriculture is seen as a less worthwhile subject or as a last resort for underachievers, and using agricultural activities as a punishment is widespread practice in schools and households in many parts of Africa (Aholi et al, 2017).

It must be emphasized that there is a need for consideration to be given to the provision of improved agricultural training and education and the provision of all the necessary information in all key institutions like schools, municipal offices, and libraries (FAO, 2014)

- **Lack of mentors**

It is important for youths to have access to role models like successful young farmers or gain some knowledge and experience of agriculture. Zainal (2018) shows that informal mentoring attracts more youths into agribusiness, and mentors are role models that guide and share experiences to help individuals develop themselves. Mentoring is a two-way process of knowledge transfer whereby youths learn from more experienced/senior workers who also

benefit from the new perspective of youths they mentor (Paisley, 2018). The process of mentoring is believed to help identify and improve professional areas that require development, provide guidance and continuous learning, and enhance productivity (Paisley, 2018)

2.5 Aspirations and interest in agriculture

Aspirations capture the personal desires of individuals (preferences and goals), their beliefs about the opportunities available to them in society (opportunities and pathways) and their expectations about what can be achieved through their own effort in an uncertain future (self-efficacy and agency) (Favara, 2017; Ross, 2016; Daltonet al, 2016). Aspirations influence life decisions and results, and in the end, these aspirations influence young people's decisions toward agriculture (August, 2020). There may be internal and external factors that influence the decision to use resources and pursue agriculture (Juma, 2017). Internal reasons, on the other hand, include perceptions, interests, and a willingness to engage in activities related to agriculture. External incentives can include family, friends, the media, or extension officials. According to Sergo (2015), the influence of a globalised world, developing communications, and media exposure has led to young people understanding rural-urban disparities and aspire to non-agricultural livelihoods. According to Mthi (2015), as they get older, young people's aspirations shift from farming to non-farming. Young people are increasingly dismissive of agriculture, believing it to be difficult, dull, and demeaning.

2.6 Chapter summary

The agricultural sector is crucial for sustainable growth and development in Sub-Saharan Africa, particularly in South Africa. However, the sector is dominated by elderly farmers, with over 66% of farmers over 50 years old and 48% over 61 years old. As the population ages, agricultural output diminishes, necessitating the need to attract youth to take on agriculture in rural societies. However, youth perceive agriculture as low-status, dirty, and unattractive jobs, preferring non-agricultural careers for stability, income, and less physical labor. Factors contributing to poor youth involvement in agriculture include lack of access to farm credit/loans, limited government support, and lack of information and communication technologies. Additionally, youth face challenges such as limited training programs, poor technology, and costly agro-inputs. Despite these challenges, young people have considerable employment opportunities in the agriculture sector, particularly in the SSA region. The sector offers a wide range of economic and employment prospects, including entrepreneurship in

agriculture and the value chain, which includes production, storage, agro-processing, marketing, and distribution to consumers.

LIST OF REFERENCES

Adekunle, O.A., Adefalu, L.L., Oladipo, F.O., Adisa, R.S. and Fatoye, A.D., 2009. Constraints to youths' involvement in agricultural production in Kwara State, Nigeria. *Journal of agricultural extension*, *13*(1).

Afande, F. O., & Uk, F. 2015. Youth Engagement in Agriculture: Challenges and Prospects. Journal of Culture, Society and Development, 7, 4–20

Afande, F. O., Maina, W. N., & Mathenge, P. M. (2015). Youth Engagement in Agriculture: Challenges and Prospects. Journal of Culture, Society and Development, 7, 4-19.

Agboola, A.F., Adekunle, I.A. and Ogunjimi, S.I., 2015. Assessment of youth participation in indigenous farm practices of vegetable production in Oyo State, Nigeria. *Journal of Agricultural Extension and Rural Development*, *7*(3), pp.73-79.

Aholi, S.S., Ochieng'Konyango, J.J. and Kibett, J.K., 2017. Influence of instructional resources in learning agriculture in secondary school on employment creation in Vihiga County, Kenya.

Anyidoho, N. A., Kayuni, H., Ndungu, J., Leavy, J., Sall, M., Tadele, G., & Sumberg, J. (2017). Young People and Policy Narratives in Africa. Future Agricultures Working Paper No. 032.

Aruah, D.E., Emeka, O.M., Eze, V.O., Okonkwo, U.U. and Agbo, G.C., 2020. Perspectives of college students on the causes and prevention of suicide in Nigerian universities. *Journal of Psychology in Africa*, *30*(6), pp.542-550.

August, M.M., 2020. *Youths' aspirations and perceptions towards agricultural participation: a case of two Free State regions* (Doctoral dissertation, University of the Free State).

Ayenimo, J.G., Yusuf, A.M., Adekunle, A.S. and Makinde, O.W., 2010. Heavy metal exposure from personal care products. *Bulletin of environmental contamination and toxicology*, *84*, pp.8-14.

Bahaman, A.S., Jeffrey, L.S., Hayrol, A. and Jegak, U., 2010. Acceptance, attitude, and knowledge towards agriculture economic activity between rural and urban youth: the case of contract farming. *Journal of Applied Sciences*, *10*(19), pp.2310-2315.

Baloyi, R.J., 2020. *Value chains in rain-fed agriculture and rural youth entrepreneurial development: the case of Umzinyathi and Amajuba districts, KwaZulu-Natal, South Africa* (Doctoral dissertation).

Barau, A.A. and Afrad, M.S.I., 2017. An overview of social media use in agricultural extension service delivery. *Journal of Agricultural Informatics*, *8*(3).

Bezu, S. and Holden, S., 2014. Rural-urban youth migration and informal self-employment in Ethiopia.

Bouichou, E.H., Abdoulaye, T., Allali, K., Bouayad, A. and Fadlaoui, A., 2021. Entrepreneurial intention among rural youth in Moroccan agricultural cooperatives: The future of rural entrepreneurship. *Sustainability*, *13*(16), p.9247.

Brooks, K.; Zorya, S.; Gautam, A.; Goyal, A. Agriculture as a Sector of Opportunity for Young People in Africa; The World Bank: Washington, DC, USA, 2013

Conway, S.F., Farrell, M., McDonagh, J. and Kinsella, A., 2020. Mobilising land mobility in the European Union: An under-researched phenomenon. *International Journal of Agricultural Management*, *9*(1029-2022-1253), pp.7-11.

Dalton, P.S., Ghosal, S. and Mani, A., 2016. Poverty and aspirations failure. *The Economic Journal*, *126*(590), pp.165-188.

Eissler, S. and Brennan, M., 2015. Review of research and practice for youth engagement in agricultural education and training systems. *Nairobi: Paulines Publications Africa*.

Emeka, O., 2020. Intra-African trade, macroeconomic conditions, and competitiveness in Africa. *Studies in Business and Economics*, *15*(1), pp.171-193.

FAO. (2014). Youth and agriculture: Key challenges and concrete solutions. Retrieved on October 8, 2019, from http://www.fao.org/3/a-i3947e.pdf

FAO. (2015). The State of Food and Agriculture 2010-2011: Women in Agriculture: Closing the Gender Gap for Development.

Favara, M., 2017. Do dreams come true? Aspirations and educational attainments of Ethiopian boys and girls. *Journal of African Economies*, *26*(5), pp.561-583.

Gichimu, B.M. and Njeru, L.K., 2014. Influence of access to land and finances on Kenyan Youth Participation in Agriculture: A Review.

Giuliani, A., Mengel, S., Paisley, C., Perkins, N., Flink, I., Oliveros, O. and Wongtschowski, M., 2017. Realities, perceptions, challenges, and aspirations of rural youth in dryland agriculture in the Midelt Province, Morocco. *Sustainability*, *9*(6), p.871.

Haggblade, S., Chapoto, A., Drame-Yayé , A., Hendriks, S. L., Kabwe, S., Minde, I., Mugisha, J., & Terblanche, S. (2015). Motivating and preparing youth for successful careers in agribusiness: Insights from agricultural role models. Journal of Agribusiness in Developing and Emerging Economies, 5(2), 170 – 189.

Harvey, C.A., Saborio-Rodríguez, M., Martinez-Rodríguez, M.R., Viguera, B., Chain-Guadarrama, A., Vignola, R. and Alpizar, F., 2018. Climate change impacts and adaptation among smallholder farmers in Central America. *Agriculture & Food Security*, *7*(1), pp.1-20.

IFAD (2015). Feeding future generations – Young rural people today, prosperous farmers tomorrow. Plenary panel discussion, 34th session of the Governing Council, Rome.

Juma, E.A.B., 2017. *Youth participation in vegetable production towards improvement of livelihoods in Kakamega town, Kenya* (Doctoral dissertation, Moi University).

Kaneene, J., Haggblade, S. and Tschirley, D. (2016). Africa's food system in transition. Journal of Agribusiness in Developing and Emerging Economies, 5(2), 94- 101.

Kasolo, W. (2016). A tracer survey of graduates from the Nyabyeya Forestry College, Uganda. Nairobi: African Network for Agriculture, Agroforestry and Natural Resource Education.

Kidido, J.K., Bugri, J.T. and Kasanga, R.K., 2017. Dynamics of youth access to agricultural land under the customary tenure regime in the Techiman traditional area of Ghana. *Land use policy*, *60*, pp.254-266.

Kuncoro, W., & Suriani, W. O. (2018). Achieving sustainable competitive advantage through product innovation and market driving. Asia Pacific Management Review, 23(3), 186–192.

Leavy, J., & Hossain, N. (2017). Who Wants to Farm? Youth Aspirations, Opportunities and Rising Food Prices. IDS Working papers, 439, 1–44.

Lindsjö, K., Djurfeldt, A.A., Isinika, A.C. and Msuya, E., 2020. Youths' participation in agricultural intesification in Tanzania. AIMS.

Magagula, B. and Tsvakirai, C.Z., 2020. Youth perceptions of agriculture: influence of cognitive processes on participation in agripreneurship. *Development in practice*, *30*(2), pp.234-243.

Magesa, M.M., Michael, K. and Ko, J., 2020. Access and use of agricultural market information by smallholder farmers: Measuring informational capabilities. *The Electronic Journal of Information Systems in Developing Countries*, *86*(6), p.e12134.

Mbeine, E., 2014. How can we attract the Ugandan Youth to Agriculture? *FIT Uganda Ltd*.

Mibey, M.C., 2015. *Factors influencing youth ivolvement in agribusiness projects in Bomet central sub-county, Kenya* (Doctoral dissertation, University of Nairobi).

Mthi, S., Yawa, M., Tokozwayo, S., Ikusika, O.O., Nyangiwe, N., Thubela, T., Tyasi, T.L., Washaya, S., Gxasheka, M., Mpisana, Z. and Nkohla, M.B., 2021. An assessment of youth involvement in agricultural activities in Eastern Cape province, South Africa. *Agricultural Sciences*, *12*(10), pp.1034-1047.

Mugisha, J. and Nkwasibwe, A., 2014. Capacity development for Modernizing African Food Systems (MAFS). *Tracer study of agricultural graduates in Uganda*.

Müller, A., Mora, V., Rojas, E., Díaz, J., Fuentes, O., Giron, E., Gaytan, A. and van Etten, J., 2019. Emergency drills for agricultural drought response: a case study in Guatemala. *Disasters*, *43*(2), pp.410-430.

Muthomi, E., 2017. Challenges and opportunities for youth engaged in agribusiness in Kenya.

Njeru, L. K., Gichimu, B. M., Lopokoiyit, M. C., & Mwangi, J. G. (2016). Influence of Youth's Perception towards Agriculture and Necessary Interventions; a Review. Asian Journal of Agricultural Extension, Economics & Sociology, 5(1), 40-45. 68

Ntshangase, W.M., 2016. *The sustainability of emerging cane growers through youth involvement: a case study of the North Coast of KwaZulu-Natal in South Africa* (Doctoral dissertation, University of the Free State).

Nwaogwugwu, O.N. and Obele, K.N., 2017. Factors limiting youth participation in agriculture-based livelihoods in Eleme local government area of the Niger Delta, Nigeria. *Journal of Scientia Agriculture*, *17*(3), pp.105-111.

Paisley, L.N., 2018. *The role of conversation in how educational services assistant superintendents lead change* (Doctoral dissertation, Brandman University).

Pereira, L., 2017. Climate change impacts on agriculture across Africa. *Oxford research encyclopedia of environmental science*.

Rasul, G., Nepal, A.K., Hussain, A., Maharjan, A., Joshi, S., Lama, A., Gurung, P., Ahmad, F., Mishra, A. and Sharma, E., 2021. Socio-economic implications of COVID-19 pandemic in South Asia: emerging risks and growing challenges. *Frontiers in sociology*, *6*, p.62969

Saqib, S.E., Kuwornu, J.K., Ahmad, M.M. and Panezai, S., 2018. Subsistence farmers' access to agricultural credit and its adequacy: Some empirical evidence from Pakistan. *International Journal of Social Economics*, *45*(4), pp.644-660.

Sergo, A., 2014. Aspirations of Rural Youth Towards Agriculture: The Case of Hulet Eju Enese woreda, East Gojjam Zone. *Addis Ababa, Ethiopia*.

Twumasi, M.A., Jiang, Y. and Acheampong, M.O., 2019. Determinants of agriculture participation among tertiary institution youths in Ghana. *Journal of Agricultural Extension and Rural Development*, *11*(3), pp.56-66.

World Bank. (2016). Africa fact sheet: The World Bank and Agriculture. World Bank.

Yami, M., Feleke, S., Abdoulaye, T., Alene, A.D., Bamba, Z. and Manyong, V., 2019. African rural youth engagement in agribusiness: Achievements, limitations, and lessons. *Sustainability*, *11*(1), p.185.

Yeboah, F.K. and Jayne, T.S., 2020. Africa's evolving employment trends. In *the Transformation of Rural Africa* (pp. 27-56). Routledge.

Zainal, M. and Hamzah, S.R.A., 2018. Urban agriculture: The role of knowledge among farmer in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, *7*(14), pp.77-85.

Zossou, E., Arouna, A., Diagne, A. and Agboh-Noameshie, R.A., 2020. Learning agriculture in rural areas: the drivers of knowledge acquisition and farming practices by rice farmers in West Africa. *The Journal of Agricultural Education and Extension*, *26*(3), pp.291-306.

Zulu, L.C., Djenontin, I.N. and Grabowski, P., 2021. From diagnosis to action: Understanding youth strengths and hurdles and using decision-making tools to foster youth-inclusive sustainable agriculture intensification. *Journal of Rural Studies*, *82*, pp.196-209

Zulu, L.C., Djenontin, I.N., Kamoto, J.F., Kampanje-Phiri, J.M. and Fischer, G., 2022. Do youth conceptualizations influence the inclusion of young people in sustainable agriculture intensification? Insights from Ghana and Malawi. *Environment, Development and Sustainability*, pp.1-27.

CHAPTER 3

PROFILING THE CHARACTERISTICS AND INVOLVEMENT OF YOUTH IN AGRICULTURAL ENTERPRIESE.

Abstract

Youth is the most effective segment of the population of a country. They are stakeholders in the development process especially in view of their great resilience, resourcefulness, and perseverance. Therefore, involvement of youth in agriculture is essential especially for sustaining agricultural productivity which is a vital sector for economic growth and development. However, agricultural sector faces some serious constraints such as agricultural production efforts are still left in the hands of aged farmers who presently constitute the major farming population. Youth have negative interest in and unwilling to participate in agriculture. Thus, this study seeks to identify the characteristics of youth and their involvement in agriculture. The study used judgemental sampling to select the respondents, and cross-sectional primary data were collected from 210 youths. The descriptive results revealed that majority of youth were participating in agriculture (64%) and non-participants (36%). The study results also reveal that there are various constraints face by young people participating in agriculture which include lack of funding, access to land, access to extension services, poor infrastructure, poor markets, and lack of information. The study recommends the government and policymakers should implement strategies that integrate capacity development, financial support for start-ups, and continuous mentorship on the technical and financial aspects of youth-run agribusiness projects proved successful in enhancing youth engagement in agribusiness.

Keyword: Youth, Agriculture, Involvement.

3.1 Introduction

Agriculture is recognized as a main source of income for many rural Africans and an important contribution to economic growth (Geza et al, 2021). Previous research studies have highlighted the role of agriculture in employment creation, food security, and reducing societal inequality and poverty in Africa (Bank, 2019; Castañeda, 2018; Brooks, 2013; Akinnifesi, 2013). The agricultural sector also presents opportunities for entrepreneurship, which would be ideal for employment creation, especially among youth (Global Partnership of Youth Employment (GPYE), 2014). South Africa is currently dealing with a crisis of youth unemployment (Henning et al, 2022). However, regardless of the opportunities available in the sector, the participation of young people remains minimal Mibey (2015), and it is the people in this demographic sector who are expected to take a leading role in the revitalisation of agriculture because of their creative ability (August, 2020). Some studies suggested that even though agricultural sector is considered to have a potential in creating job opportunities, youth are unwilling to engage and not interested in participating in agricultural enterprise (Elias et al. 2018; Ouko et al. 2022; Sumberg et al. 2017; Yeboah et al. 2017). Contrarily, few studies revealed that some young people are interested in participating in agriculture and evidence suggested that youth do find farming interesting (Metelerkamp et al. 2019; Glover and Sumberg, 2020). Therefore, it is important that agriculture becomes intellectually stimulating and economically rewarding to attract youth and those who demonstrate an interest in and willingness to participate in the agricultural sector should be given priority (Adeyanju et al. 2021; Glover and Sumberg, 2020).

Young people are now a major focus of many programs and policies in the recent years (Turolla et al. 2022). Investment in agriculture is being used to combat youth unemployment, but efforts to support youth employment and entrepreneurship have not resulted in significant improvements in their livelihoods (Henning et al, 2022). Policymakers' visions for youth do not match their projected future, indicating that these efforts are not producing the desired results (Magagula & Tsvakirai 2020). Authorities should actively pursue the goal of attracting youth to entrepreneurship and agricultural involvement, as well as providing individuals with resources and knowledge (Henning et al, 2022). That is still the case, as evidenced by the findings of Adeyanju et al. (2021), which show how the government and other stakeholders must fund training or educational initiatives to empower youth through agripreneurship. Further, Yeboah et al. (2017) suggested that more reflection is needed, which should provide different and more enhanced policy options. There are several opportunities that exist for youth

in agripreneurship. However, youth face both external and internal factors (Ouko et al. 2022). Negative perceptions and lack of resources such as land, credit, infrastructure, hinder entrepreneurs' success. The sustainable livelihoods framework (SLF) can help understand the people as the element of entrepreneurship, highlighting the importance of psychological, human, natural, financial, and physical capital in fostering entrepreneurial spirit (Henning et al, 2022).

Entrepreneurial and management skills are essential for starting and growing a business (Dossou et al. 2021). These skills will help young people to achieve long-term growth in business. However, these skills are scarce in developing countries, particularly in Africa. For instance, South Africa, which has the lowest total of entrepreneurship activities among developing countries, is in a precarious position due to a lower level of opportunity-driven entrepreneurship activity among unemployed youth (Dhahri and Omri, 2018). According to Magagula and Tsvakirai (2020) the government's attempts to get young people interested in agriculture have failed because there has not been enough funding or awareness of socioeconomic issues. Negative experiences for young people and their incapacity to take advantage of opportunities in rural areas are contributing factors (Chipfupa and Tagwi, 2021). Therefore, understanding youth livelihoods and entrepreneurial situations is essential to improve entrepreneurial competencies and traits. Also, it is important to support youth involvement in agriculture as a viable survival and livelihood strategy (Henning et al, 2022).

Factors such as a lack of finance, management, technical skills, access to infrastructure and markets restrict youth entrepreneurial development (Ariffin, 2020). Additionally, lack of assets, credit history, and work experience hinder the participation of young people in agriprenuership (Etim and Udoh, 2018). Further, some studies revealed that exogenous factors such as age, education, gender, marital status, land, and credit lack of access to market have a negative impact on agricultural participation (Nwibo et al, 2016; Ogunmodede et al. 2020; Ng'atigwa et al. 2020; and Wale et al. 2021), while other studies found that endogenous factors such as household size, household income, extension services have a positive impact (Magagula & Tsvakirai 2020, Ng'atigwa et al. 2020; and Nwibo et al. 2016). Therefore, there is a dire need to understand the circumstances that lead to youth choosing to improve their livelihoods or make decisions. Thus, this research aims to explore socio-economic characteristics of youth, sustainable livelihood assets, and youth participation in the agricultural sector.

3.2 Methodology

3.2.1 Study area

The study was conducted in Umzimvubu Local Municipality. Umzimvubu Municipality is under Alfred Nzo District and this district has four local municipalities which are situated in the eastern part of the Eastern Cape Province of South Africa. Umzimvubu consists of two towns which are Mount Frere (KwaBhaca) and Mount Ayliff (EmaXesibeni). The Municipal area comprises an area of 2506 km2. Stats SA (2023) indicated that the province has a population of 7.2 million and is ranked fourth in South Africa about population size. Demographically, most of the residents in this province are black people 85%, followed by coloured 7.6%, white 5.6% and Indian/Asian comprises less than half a percentage of the population in the province. The province accounts for 9.7% of South Africa's agricultural production (Sihlobo, 2019). It has the third largest share of the country's commercial agricultural land 37.1% (Stats SA, 2020)

The respective study areas were selected based on certain criteria:

1. Rainfall, soil quality and the availability of water resources make Umzimvubu suitable for agricultural production.
2. Dry land farming is subsistence nature, and there are large tracts of uncultivated arable land. There is exceptionally good potential for maize, sorghum, wheat, sunflower, hemp, beans, vegetables (cabbages, potatoes, butternut, green pepper, and spinach), and deciduous fruits (peaches & apples). The farms north of Umzimvubu are particularly suited to large-scale fruit and vegetable production.
3. Adequate good-quality grazing makes the area suitable for livestock farming and animal husbandry.
4. High unemployment rate among youth

Umzimvubu has a subtropical ecology with grassland, thicket, and forest margin biomes. Three quarters of the Umzimvubu land area is unimproved grassland, of which around 44% is degraded. Climatic conditions are favorable for agricultural production. About 12% of land is being cultivated, overwhelmingly semi-commercial or subsistence. Soils are generally good for cropping but there are high levels of erosion and thin topsoil (Umzimvubu Local Municipality, 2020). The weather ranges from very pleasant warm summers to mild winters.

Umzimvubu is characterized by warm summers and cool winters because it lies in a subtropical climatic zone. Rainfall is 550-1,000mm per year during the summer months of October to April. The average temperature in summer ranges from 18ºC to 25ºC and in winter 7ºC to 10 ºC (SDF, 2016). The temperature range shows high rainfall levels and good soils that can give good agricultural produce in Umzimvubu. The general living conditions in the area are not satisfactory in terms of infrastructure because the roads are poor, and approximately 75% of the population does not have access to electricity (IDP, 2015/2016). Poverty is widespread, with 81.1% of the population relying on social grants and being unemployed (IDP, 2020). The youth population of age between 15-35 years is around 80,467(Statistics SA, 2016). Umzimvubu had about 37% unemployment (66% for youth) in 2017 (Umzimvubu LM, 2021).

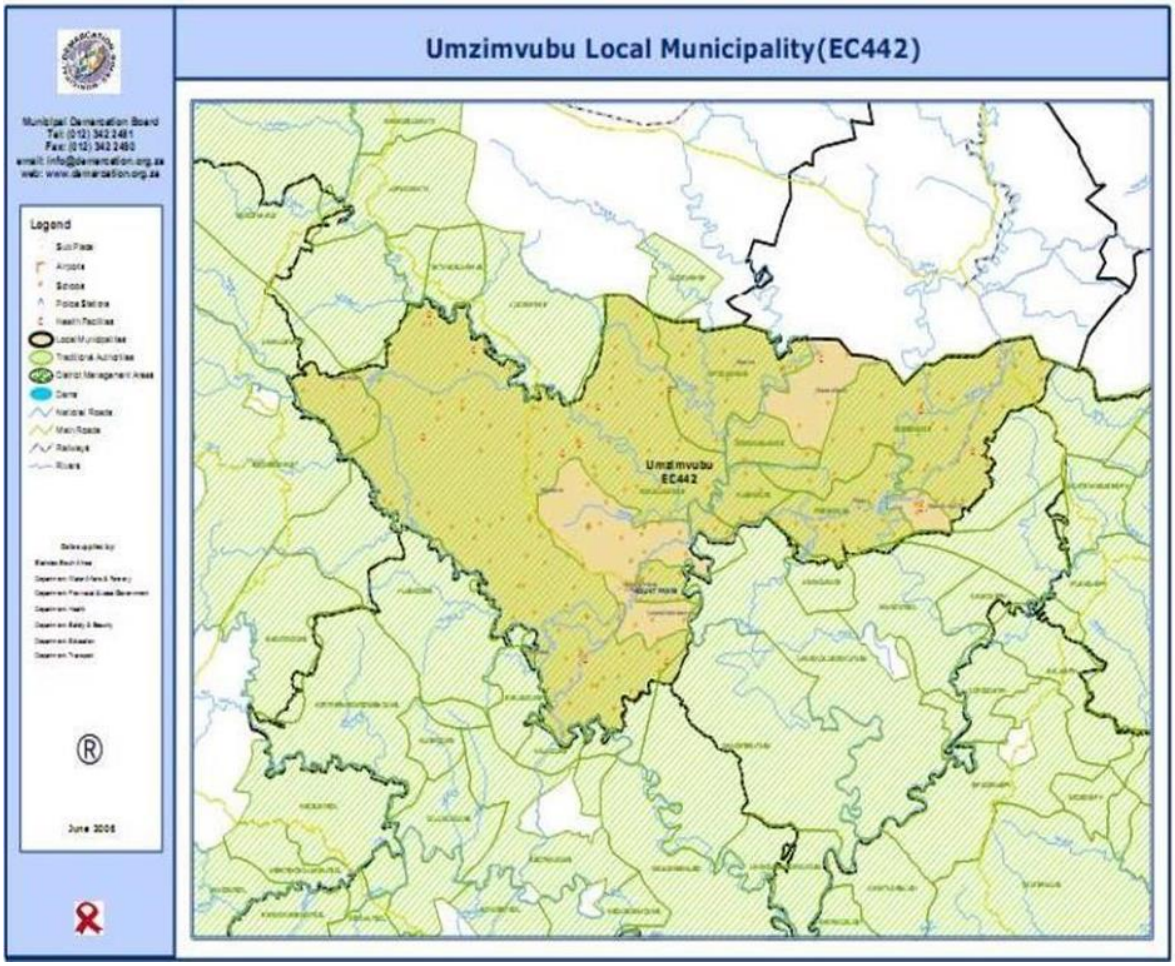

Figure 3.1: Map of Umzimvubu Local Municipality
Source: Umzimvubu local municipality (IDP, 2014/2015)

3.2.3 Research design

Research design is a structure of the investigation which is put together in such a way as to attain answers to study questions. There are two types of research design, namely cross sectional, and longitudinal research designs (Mdoda, 2017). The study employed exploratory cross-sectional research design. This design was selected because it enabled the researcher to make comparisons at a single point in time. According to Institute for Work and Health (2015), the benefit of a cross-sectional study design is that it allows researchers to compare different components of variables at the same time. This agrees with the nature of the study since it was identifying socio-economic characteristics variables in relation to participation. Quantitative data was collected on the socio-economic characteristics of youth and their involvement in agriculture. The study was carried out through a pilot study, thereafter, a questionnaire was used during June and August of 2023. This study utilizes descriptive analytical techniques for robust findings.

3.2.4 Sampling procedure

Judgemental sampling technique is a non-probability sampling method which units are chosen depending on the researcher's professional judgement or knowledge (Oosthuizen, 2021; Berndt, 2020; Hammarberg et al., 2016). The researcher chooses respondents based on distinctive characteristics that are relevant to the study and would best address the primary research question. (Taherdoost, 2018). This study adopted judgemental sampling technique since it only focused on youth between age of 18 and 35. The study selected a sample size of 210 of youth in Umzimvubu Local Municipality in the Eastern Cape province. This approach was most suitable since there was no knowledge of the exact location or specific names from which the sample could be drawn. The sample selection process focused on areas where the density of youth was high.

3.2.5 Sample size

To calculate the sample size of the study, the population of the youth in the local municipality (80,467) was selected for sampling purposes. With the selected population, the youth population (44257) participating in agricultural enterprises was drawn from the youth population as shown from table 1.

Table 3.1 Number of households (youth) from the Umzimvubu local municipality.

Local municipality	Umzimvubu
Youth Population	80467
Youth participation	44257

Source: Author's compilation

The formula below was employed to calculate the sample size of the study:

$$n = \frac{Z^2 \times \hat{P}(1-\hat{P})}{\varepsilon^2} = 384 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Kothari (2004) discovered that, Where; n = desired sample size, z = value of standard deviation at 95% confidence level (in this case 1.96), 3 = desired level of precision (±5%), p = sample proportion in target population, q = 1 – p and N = size of the population. Therefore, the sample size of the study was 210. The sampling was calculated per each number households (participating youth) over a total number of the population of the youth of the local municipality. After this, the observed value was multiplied by the sample size obtained using equation one above respectively.

3.2.6 Data collection

Primary data was collected using structured questionnaires. 38 young people in the study area were used to pre-test the questionnaire. Pretesting helped determine if respondents understand the questions and whether they can perform the tasks or have the information required by them. For most items, pre-tests also provided the most direct evidence for the validity of the questionnaire data. The questionnaire was translated into IsiXhosa (the native language in the study area) for effective communication with the respondents and to elicit relevant, credible, and reliable information from them.

3.2.7 Data analysis

Characteristics of youth and their involvement in agricultural enterprise were analysed using descriptive statistics. Following studies like Josephert *et al.* (2019) and Masesi (2019); Henriksson *et al.* (2021), used the descriptive analysis when analysing the involvement and characteristics of youths in agricultural enterprise. Descriptive analysis is the use of descriptive

statistics which is defined as a set of brief descriptive coefficients that summarizes a given set of raw collected data, which can either be an illustration of the entire population or a sample. Descriptive statistics, therefore, enables a researcher to present the data in a more meaningful way for easy interpretation of the data. Meaning descriptive statistics showed what youths are currently involved and their characteristics. This went beyond that and showed how youths acquire agriculture information and what farming enterprises that they are involved in. These were displayed using, means, minimum and maximum values, frequencies, percentages, and standard deviations. However, descriptive statistics was applied before other models for some of the variables that were used for achieving all the specific objectives.

3.3 Results and discussion

3.3.1 Descriptive statistics

This section presents the sample statistics of the 210 respondents that were selected from the study area. Table 3.2 below presents the socio-economic characteristics of the sampled youths from the Umzimvubu Local Municipality. The socio-economic characteristics of the respondents considered in this study were age, marital status, gender, educational level, employment status and household size.

Table 3.2: Socio- economic characteristics of youth in Umzimvubu Local Municipality.

Characteristics	Frequency (n=210)	Percentage (%)
Age		
18-25	75	35.71
26-35	135	64.29
Mean age	26.31	
Marital status		
Single	179	85.24
Married	22	10.48
Divorced	6	2.86
Widowed	3	1.43
Gender		
Male	122	58.10
Female	88	41.90

Educational levels		
Tertiary level	30	14.29
Secondary level	105	50
Primary level	57	27.14
No education	18	8.57
Employment status		
Fulltime famer	11	5.24
Part-time farmer	37	17.62
Formally employed.	64	30.38
Unemployed	98	46.67
Household size		
I to 3	46	21.90
4 to 6	110	52.38
7 to 9	37	17.62
10 to 12	17	8.10
Mean	6	
Types of youths		
Participants	135	64.29
Non-participants	75	35.71

The age distribution reveals that most (64.29%) of the sampled respondents were within the age group of 26-35 years. The mean age was 26 years, implying that the youths are in their active and productive stage of life and are likely to engage in agriculture and job hunting for their employment and generating income. This agreed with the with the findings of August, (2020) that youth in their active age possess required energy to participate in community development project if given chance and encouraged. Furthermore, (85.24%) of the respondents were single while others were married (10.48%), divorced (2.86%), and widowed (1.43%). This agreed with the findings of Elijah et al; (2019) that rural youth were fully participating in agriculture without hindrance that may occur because of marriage. Also, (58.10%) of the respondents were male while (41.90%) were female. This shows the active involvement of the male in agriculture in the study area. This agreed with findings of Douglas, et al., (2017) and Cheteni, (2016) that men are actively involved in agriculture than women on agricultural. In addition, the majority (50%) of the sampled respondents had secondary education, (27.14%) had primary education, and (14.29%) had tertiary education while (8.57%) had no formal education. This implies that most sampled respondents can either read or write, which can enhance their understanding to participate in agriculture. This agreed with findings of Cheteni, (2016) that most of the rural youth have educational backgrounds and an elevated

level of education would be a solution to the problems facing agricultural activities. The results also revealed that unemployed constituted (46.67%), formally employed constituted (30.38), part-time farmer constituted (17.62), while full-time farmer constituted (5.24). This implies that unemployed youth is likely to engage in agriculture. Similarly, to a previous study (Cheteni, 2016) found that most of the rural youth participating in agriculture are not formally employed. Lastly, the results revealed that the mean household size was 6 people. The implication of this is that the greater the number of people in the household, the better it is to enhance easy access of labor for agricultural production.

3.3.2 Various agricultural enterprise engaged in by the youths.

Table 3.2 Various agricultural enterprise practiced by the youths in the study area.

Agricultural enterprises	Frequency (n=135)	Percentage (%)
Horticulture	55	40.74
Poultry	35	25.93
Livestock	21	15.56
Harvesting	12	8.89
Processing	7	5.19
Agro dealership	5	3.70

The results showed that (40.74%) of the respondents engaged in horticulture. The findings are like observations by Tsitsi (2019), who asserted that youth in agriculture are engaged in primary production food crops. Rural youth involved in agricultural activities cultivate maize, vegetables, and beans for consumption (Kimaro et al, 2015). Also, respondent (25.93%) engaged in poultry. Poultry is less labour intensive and the market for poultry products is growing in South Africa, therefore, favoured by the youths. Further, it was found that there is a program launched by an NGO (Non-Governmental Organisations) which is promoting poultry rearing among the youths (Mukwedeya, 2018). This implies that interventions in smallholder farming play a significant role in holding and stimulating interest among youths towards smallholder farming. From the finding, respondents (15.56%) engaged in livestock. Livestock production is a long-term investment. Youth engagement on harvesting, processing and agro dealership would, therefore, be more ideal for youth income diversification.

3.3.3 Benefits/ reasons from participating in agricultural enterprises.

The table shows the benefits/reason from participating in agricultural enterprises.

Table 3.3 Benefits of participating in agricultural enterprises.

Benefits	Frequency (n=135)	Percentage (%)
Provides Income	36	26.67
Provide healthy food.	7	6.67
Reduce poverty and hunger.	27	20
Provide jobs.	13	9.63
Reduce consumption expenditures	50	37.04

The above table shows that most of the responses (37.04%) that came from respondents were that farming reduces food consumption expenditures. In rural areas employment opportunities are scarce. Most of the rural community members rely on social grants for income (Zamxaka, 2015). Their income is therefore too small to cover all their basic needs effectively. A reduction in food consumption expenditure means that more income can be allocated to other basic needs such as health and education. Therefore, the majority perceives farming as an aid in reducing their food consumption expenditures. With scarce opportunities of employment in rural areas, agriculture can be a valuable tool of proving income for a household. As a result, the second highest response (26%) was that farming provides income. Additionally, respondents (20%) showed that it also reduces poverty and hunger.

3.3.4 Source of funding

Table 3.4 Source of funding

Funding's	Frequency (n=135)	Percentage (%)
National Youth Development Agency (NYDA)	12	8.87
The Department of Agriculture, Land Reform and Rural Development (DALRD)	18	13.33
Siqalo funding (EC Premier)	8	5.93
Self-funded	97	71.85

According to the survey, majority of youth were self-funded (71.85%), while few young people (13.33) are funded by DALRD. Additionally, at least (8.87 %) got their financial assistance from NYDA, and very few young people (5.93%) are funded by Siqalo funding. This implies that young people are not financial assisted by government department and agencies. This agreed with the findings of Balana and Oyeyemi, (2022) who argued that lack of financial assistance is a major limiting factor to rural smallholder agricultural development. Also, Twumasi and Jiang (2019) noted that savings from parents serves as source of funding for more young people in agriculture.

3.3.5 Constraints affecting youth participation.

The major problems faced by the respondents from participating in agriculture are shown in Table 3.5.

Table 3.5 Constraints of youth participation in agriculture

Constraints	Frequency	Percentage (%)
Access to land	53	58.9
Inadequate transportation	84	93.3
High cost of inputs	66	75.4
Access to credit facilities	73	81.1
Lack of information	79	84.51
Poor markets	81	89.66
Poor infrastructure	77	83.72
Inadequate of extension services	70	79.65
Seasonality of farm produce		
Lack of government support	57	63.3
	60	70.66

Note: Percentages base on the number of youths taking part in smallholder farming, n= 135.

The youth perceived that inadequate transportation, high cost of inputs, Access to credit facilities, ack of information, poor markets, poor infrastructure, inadequate of extension services, seasonality of farm produce and lack of government support are the most challenging. These constraints were also noted by Elijah et al, (2019) that they limit participation of young people in smallholder farming. Also, Kwenye and Sichone, (2016) revealed that rural youth face challenges in agriculture such as lack of access to capital, poor storage facilities, poor access to agriculture insurance and lack of technical assistance.

3.4 Conclusion and recommendations

This study showed that although youth participate in agricultural activities in the study area, they are still faced with some constraint that limit their participation in agriculture. These included institutional problems such as inadequate transportation, lack of access to land, access to credit, poor infrastructure, poor markets. Others are lack of access to extension services, lack of funding and incentives, inadequate information, and government support. The study, therefore, recommend that government and policymaker should implement strategies that integrate capacity development, financial support for start-ups, and continuous mentorship on the technical and financial aspects of youth-run agribusiness projects proved successful in enhancing youth engagement in agribusiness. In addition, government should consider instituting an agricultural youth fund targeting rural youth as beneficiaries, championed by the youth themselves as partners; with the aim of enhancing access to financial credit and loans to enable rural youth acquire land and other production resources for meaningful commercial farming.

LIST OF REFERENCES.

Adeyanju, D., Mburu, J. and Mignouna, D., 2021. Youth agricultural entrepreneurship: Assessing the impact of agricultural training programmes on performance. *Sustainability*, *13*(4), p.1697.

Akinnifesi, F.K. Can South-South Cooperation offer sustainable agriculture-led solutions to youth unemployment in Africa? Nat. Faune 2013, 28, 19.

Ariffin, F.N. and Ng, T.F., 2020. Understanding and opinion on sustainable development among youths in higher educational institutions in Penang, Malaysia. *Social Indicators Research*, *147*, pp.421-437.

August, M.M., 2020. *Youths' aspirations and perceptions towards agricultural participation: a case of two Free State regions* (Doctoral dissertation, University of the Free State).

Balana, B.B. and Oyeyemi, M.A., 2022. Agricultural credit constraints in smallholder farming in developing countries: Evidence from Nigeria. *World Development Sustainability*, *1*, p.100012.

Bank Muñoz, C., 2019. *Transnational tortillas: Race, gender, and shop-floor politics in Mexico and the United States*. Cornell University Press.

Bank, A.D. African Economic Outlook Chapter 2: Jobs, Growth and Firm Dynamism. 2019. Available online: https://www.icafrica.org/fileadmin/documents/Publications/AEO_2019-EN.pdf (accessed on 17 January 2020).

Berndt, A.E. 2020. Sampling Methods. Journal of Human Lactation, 36(2):224–226.

Brooks, K., Zorya, S., Gautam, A. and Goyal, A., 2013. Agriculture as a sector of opportunity for young people in Africa. *World Bank Policy Research Working Paper*, (6473).

Brooks, K.; Zorya, S.; Gautam, A.; Goyal, A. Agriculture as a Sector of Opportunity for Young People in Africa; The World Bank: Washington, DC, USA, 2013.

Castañeda, A.; Doan, D.; Newhouse, D.; Nguyen, M.C.; Uematsu, H.; Azevedo, J.P.; World Bank Data for Goals Group. A new profile of the global poor. World Dev. 2018, 101, 250–267.

Cheteni, P., 2016. Youth participation in agriculture in the Nkonkobe district municipality, South Africa. *Journal of human ecology*, *55*(3), pp.207-213.

Chipfupa, U. and Tagwi, A., 2021. Youth's participation in agriculture: A fallacy or achievable possibility? Evidence from rural South Africa. *South African Journal of Economic and Management Sciences*, *24*(1), pp.1-12.

Dhahri, S. and Omri, A., 2018. Entrepreneurship contribution to the three pillars of sustainable development: What does the evidence really say? *World Development*, *106*, pp.64-77.

Dossou, S.A., Aoudji, A.K., Vissoh, P., Zannou, A. and Honfoga, B.G., 2023. Effect of Social Networks and Performance of Agribusinesses Owned by Young Women in a Developing Country: The Moderating Effect of Business Environment. *Journal of African Business*, pp.1-23.

Douglas, K., Singh, A.S. and Zvenyika, K.R., 2017. Perceptions of Swaziland's youth towards farming: A case of manzini region. *Forestry Research and Engineering International Journal*, *1*(3), pp.83-89.

Elias, M., Mudege, N.N., Lopez, D.E., Najjar, D., Kandiwa, V., Luis, J.S., Yila, J., Tegbaru, A., Ibrahim, G., Badstue, L.B. and Njuguna-Mungai, E., 2018. Gendered aspirations and occupations among rural youth, in agriculture and beyond: A cross-regional perspective. *Journal of Gender, Agriculture and Food Security*.

Elijah, V.T. and Odiyo, J.O., 2019. Perception of environmental spillovers across scale in climate change adaptation planning: The case of small-scale farmers' irrigation strategies, Kenya. *Climate*, *8*(1), p.3.

Etim, N.A.A. and Udoh, E.J., 2018. Willingness of youths to participate in agricultural activities: Implication for poverty reduction. *Am. J. Soc. Sci*, *6*, pp.1-5.

Geza, W., Ngidi, M., Ojo, T., Adetoro, A.A., Slotow, R. and Mabhaudhi, T., 2021. Youth participation in agriculture: a scoping review. *Sustainability*, *13*(16), p.9120.

Glover, D. and Sumberg, J., 2020. Youth and food systems transformation. *Frontiers in Sustainable Food Systems*, *4*, p.101.

Haggblade, S., Chapoto, A., Drame-Yayé , A., Hendriks, S. L., Kabwe, S., Minde, I., Mugisha, J., & Terblanche, S. (2015). Motivating and preparing youth for successful careers in agribusiness: Insights from agricultural role models. Journal of Agribusiness in Developing and Emerging Economies, 5(2), 170 – 189.

Hammarberg, K., Kirkman, M. & De Lacey, S. 2016. Qualitative research methods: when to use them and how to judge them. Human Reproduction, 31(3), 498–501.

Henning, J.I., Jammer, B.D. and Jordaan, H., 2022. Youth participation in agriculture, accounting for entrepreneurial dimensions. *Southern African Journal of Entrepreneurship and Small Business Management*, *14*(1), pp.1-14.

Henriksson, R., Vincent, K., Archer, E. and Jewitt, G., 2021. Understanding gender differences in availability, accessibility, and use of climate information among smallholder farmers in Malawi. *Climate and Development*, *13*(6), pp.503-514.

IDP (Integrated Development Plan), 2014/2015. Umzimvubu local municipality, Alfred ndzo district

IDP (Integrated Development Plan), 2020. Umzimvubu local municipality, Alfred ndzo district

Josephert, A.A., Wilberforce, C., Caroline, M. and Ong'anyi, P.O., 2019. Access and use of seasonal climate forecasts information on maize crop production in Vihiga County, Kenya. *International Journal of Research and Innovation in Social Science*, *3*(3), pp.328-338.

Kimaro, P.J., Towo, N.N., and Moshi, B.H. (2015). Determinants of Rural Youth's Participation in Agricultural Activities. Economics, Commerce and Management, 3 (2), 1-47.

Kwenye, J. M and Sichone, T (2016). Rural youth participation in Agriculture: Exploring the significance and challenges in the control of agricultural sector in Zambian. RUFORUM Working document Series.

Magagula, B. and Tsvakirai, C.Z., 2020. Youth perceptions of agriculture: influence of cognitive processes on participation in agripreneurship. *Development in practice*, *30*(2), pp.234-243.

Masesi, G.K., 2019. *Access and Utilization of Seasonal Climate Forecast Among Small Holder Farmers in Masinga Sub-County, Machakos County, Kenya* (Doctoral dissertation, Chuka University).

Mdoda, L., 2017. Market participation and value chain integration among smallholder homestead and irrigated Crop farmers in the Eastern Cape Province of South Africa.

Metelerkamp, L., Drimie, S. and Biggs, R., 2019. We're ready, the system's not–youth perspectives on agricultural careers in South Africa. *Agrekon*, *58*(2), pp.154-179.

Mibey, M.C., 2015. *Factors influencing youth involvement in agribusiness projects in Bomet central sub-county, Kenya* (Doctoral dissertation, University of Nairobi).

Mukwedeya, B.T., 2018. The role of rural youth in the smallholder farming sector: challenges and opportunities in Okhahlamba Local Municipality, South Africa.

Ng'atigwa, A.A., Hepelwa, A., Yami, M. and Manyong, V., 2020. Assessment of factors influencing youth involvement in horticulture agribusiness in Tanzania: A case study of Njombe Region. *Agriculture*, *10*(7), p.287.

Nwibo, S.U., Mbam, B.N. and Biam, C.K., 2016. Determinants of agripreneurship among the rural households of Ishielu local government area of Ebonyi state. *Journal of Biology, Agriculture and Healthcare*, *6*(13), pp.3-10.

Ogunmodede, A.M., Ogunsanwo, M.O. and Manyong, V., 2020. Unlocking the potential of agribusiness in Africa through youth participation: An impact evaluation of N-power Agro Empowerment Program in Nigeria. *Sustainability*, *12*(14), p.5737.

Oosthuizen, E.J., 2021. *Investigating the agricultural sector as a provider of youth employment in the Northwest Province* (Doctoral dissertation, North-West University (South Africa)).

Ouko, K.O., Ogola, J.R.O., Ng'on'ga, C.A. and Wairimu, J.R., 2022. Youth involvement in agripreneurship as Nexus for poverty reduction and rural employment in Kenya. *Cogent Social Sciences*, *8*(1), p.2078527.

SDF (Spatial Development Framework), 2016. Umzimvubu local municipality, Alfre ndzo district

Sihlobo, W., 2019. Climate change disrupts agriculture. *The Dairy Mail*, *26*(8), pp.80-81.

Stats SA, 2020, Economy slips into recession, viewed, from http://www.statssa.gov.za/?p=13049. Stats SA, 2020, GDP falls by 2.0%, viewed, from http://www. statssa.gov.za/?p=13401.

Stats SA, 2020, Gross domestic product. Second quarter 2020, viewed, from http://www.statssa.gov.za/publications/P0441/P04412ndQuarter 2020.pdf

Stats SA, 2020, Steep slump in GDP as COVID-19 takes its toll on the economy, from http://www.statssa.gov.za/?p=13601.

Sumberg, J., Anyidoho, N.A., Chasukwa, M., Chinsinga, B., Leavy, J., Tadele, G., Whitfield, S. and Yaro, J., 2015. Young people, agriculture, and employment in rural Africa. In *African youth and the persistence of marginalization* (pp. 111-132). Routledge.

Taherdoost, H. 2018. Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. SSRN Electronic Journal. DOI: 10.2139/ssrn.3205035

Tsitsi, A.D., 2019. *Influence of selected factors on participation of rural youth in agriculture in, Malawi Balaka district* (Doctoral dissertation, Egerton University).

Turolla, M., Swedlund, H.J., Schut, M. and Muchunguzi, P., 2022. "Stop calling me a youth!": Understanding and analysing heterogeneity among Ugandan youth Agripreneurs. *Africa Spectrum*, *57*(2), pp.178-203.

Twumasi, M.A., Jiang, Y. and Acheampong, M.O., 2019. Determinants of agriculture participation among tertiary institution youths in Ghana. *Journal of Agricultural Extension and Rural Development*, *11*(3), pp.56-66.

Umzimvubu Integrated Development Plan (2022). Umzimvubu Local Municipality. Mount Ayliff

Umzimvubu Local Municipality Integrated Development Plan (2021). Umzimvubu Local Municipality. Mount Frere

Wale, E. and Chipfupa, U., 2021. Entrepreneurship concepts/theories and smallholder agriculture: insights from the literature with empirical evidence from KwaZulu-Natal, South Africa. *Transactions of the Royal Society of South Africa*, *76*(1), pp.67-79.

Yeboah, F.K. and Jayne, T.S., 2020. Africa's evolving employment trends. In *the Transformation of Rural Africa* (pp. 27-56). Routledge.

Zamxaka, X., 2015. Factors affecting participation rates in farming in the rural areas of South Africa: case of Amathole District Municipality.

CHAPTER 4

YOUTH PERCEPTIONS AND ASPIRATIONS TOWARDS THE AGRICULTURAL SECTOR: INFLUENCE OF COGNITIVE PROCESS ON PARTICITION IN AGRICULTURAL ENTERPRISES

Abstract

Agriculture is an important sector in South Africa's Economy. The agriculture sector ensures food security in the world, and the solution to youth unemployment and poverty. However, the agricultural sector is still left in the hands of aging farmers. Therefore, an active involvement of youth in agriculture is necessary to sustain agricultural systems. The youth do not appear to be interested in the agricultural sector due to several reasons such as their perceptions and aspirations towards the agricultural sector. This study investigated perceptions and aspirations of youth in the agricultural sector in Umzimvubu Local Municipality. This study employed a judgemental sampling method to collect data from 210 youth, through a structured questionnaire. Principal component analysis was used to determine youths' perceptions and aspiration towards agriculture while Probit used to investigate the socio-economic factors. Descriptive results revealed that majority of youth were participating in agriculture and male youths were mostly engaged in agriculture. They also showed that youth have secondary education with household size of 6. The results showed that perceptions and aspirations towards agriculture do not affect their decision making. The study discovered that young people do participate in smallholder farming and other agricultural-related activities. However, youth in general have poor perception towards agriculture, therefore, the image of agriculture needs to be improved and agricultural inputs, markets and credit should be easily assessable.

Keywords: Youth, perception, aspiration, agriculture

4.1 Introduction (background and problem statement)

Agriculture has long been the foundation of poverty alleviation and economic progress around the world Baloyi, (2020). The majority of Sub-Saharan Africa (SSA) countries rely heavily on agriculture for both jobs and food security. Approximately 80% of all SSA laborers are employed in this sector alone, which employs more than half of the country's workforce (Food and Agriculture Organization, 2016). However, the contribution of agriculture as a source of income and food security depends on the active participation of people in agriculture. According to Leavy and Hossain (2017) income growth in agriculture is easier than in other sectors, as the agricultural sector has a greater potential to reduce poverty than non-agricultural activities. Due to its potentiality, agriculture employs over one billion people globally (Sergo, 2015). Agriculture remains a key sector where the surplus unemployed youth labour force can be employed (NSYIA, 2016/2021).

However, most of African farmers are over 50, suggesting that the country's farming population is aging as young people are typically not drawn to the field. Rather, they are involved in small-scale commerce and unofficial enterprises Kimaro et al., (2015). Simultaneously, it is asserted that young people are more receptive to novel concepts and methods, and they possess greater capacity than mature farmers to surmount certain significant obstacles in the advancement of agriculture Trevor and Kwenye, (2018). Their employment in agriculture is essential to the growth of the sector in rural economies (URT, 2016) and to the increase of their earnings, which could lead to a decrease in the number of young people living without jobs.

Youth have the largest population in the entire world Muthomi, (2017). According to UNDP (2014), youths are people aged between15 to 24 years old. Globally, the youth population of this age is more than one billion and estimated to be 85% of the population in developing countries World Youth Report, (2020). About 70% of young people reside in rural areas and are mostly affected by extreme poverty, lack of employment and poor health Sumberg et al., (2017). In South Africa, youths are people aged between 15 to 35 years old (URT, 2016). They constitute about 67% of the SA population, with an unemployment rate of 51,52% URT-PHC, for 2014. International Institute for Environment and Development (IIED) in its report noted that the migration of the youth from rural areas to urban areas implies that there will be fewer labour to take up small scale farming in future. This is expected to have implications for farming in general. The average age of farmers is increasing and therefore to ensure

sustainability of agriculture, more young labour needs to be attracted to agriculture in the future.

The youth are expected to increase their input in agricultural activities for the world to increase its food production and become food secure Yami et al, (2019). Similarly, youth labour is required to enhance the income that rural farmers received from agriculture and to enhance economic development in the rural communities. Youth are characterized by great physical strength, risk taking attitude, openness to change and creativity which are critical in advancing innovative technology in agriculture Fonte and Cucco, (2017). Clercq (2018), observes that the agricultural sector offers massive opportunities for employment.

Youth are not involved in agricultural activities because selection of agriculture as a career is hampered with misunderstandings and a lack of awareness and information. Factors contributing to this include inadequate information of careers available in the agricultural sector, poor wages in the agriculture compared to other sectors, and the manual aspects of work in the sector Kuznetsova, (2018). Globalization and the demographic trends are adversely affecting the agriculture sector making the youth to be susceptible to food insecurity.

The challenges of youth unemployment can be addressed by enhancing the image of agriculture in the eyes of the young people. Moreover, integrating many young people in agriculture would not only deal with unemployment but would also food security. The Global Forum for Agricultural Research (GFAR) observes that having new forms of agricultural enterprises and incorporating technology in agriculture can motivate the young people to engage in agriculture and thereby increasing agricultural production. Integrating the young people in agriculture can also inject innovation, innovative technologies, and new thinking to enhance agricultural incomes and thereby enhancing the lives of the rural farmers as well as the rural communities. Increased access to education and new forms of agriculture-based enterprise mean that young people can be a vital force for innovation in family farming, increasing incomes and well-being for both farmers and local communities.

However, smallholder agriculture is still practiced by elderly people till this day (Sihlobo, 2015). This may lead to succession gap in agriculture and a decrease in production and in turn food insecurity (Leakey, 2018). Further, low involvement of youth in agriculture speaks volume during increasing population (Chibanda, 2021). On the other hand, efforts have been made to attract young people in agriculture, but there is a dearth of evidence on what works

and what does not (Dolma, 2020). Also, the lack of understanding on the factors that influence the youth's decision-making make it difficult to design effective and you inclusive policies. Further, Mdluli (2019) highlighted that factor such as land tenure, lack of infrastructure and equipment impede youth from participating in agriculture. Additionally, some studies stated that non-competitive salaries, the physical nature of the work and lack of information on the diverse jobs within the agriculture sectors are also the limiting factors that hinder participating in agriculture (Kidido et al., 2017; Giuliani et al., 2017; Cheteni, 2016), but the youth's ambitions and preferences remain under-researched. further, little is known about the youth's perceptions, and aspirations. The lack of evidence on these issues is belittling the role of agriculture on rural youth's livelihood. Therefore, this study seeks to understand how the youth perceive and aspire the participation in agriculture.

4.2 Methodology

4.2.1 Conceptual framework: The entrepreneurial cognition approach

The entrepreneurial cognitive approach was used in this study to explain the relationship between young people's perceptions, socioeconomic traits, and entrepreneurial inclinations. The intersection of sociopsychology and organizational management resulted in this method Magagula, (2020). It assumes mental processes including attitudes, perceptions, personality traits, and socioeconomic circumstances all impact how people behave. This method has been used to construct several theories, one of which is the Social Learning Theory of Career Decision-Making Mitchell and Krumboltz Citation (1990), which explains the process people go through when selecting a career. The theory asserts that behavior is learned from the environment through observation of others. It explains the interactions of behaviors formed from leaned attitudes, and perceptions (individual perceptions, perceptions of economic opportunities, and socio-cultural perceptions) to decision making. The theory posits that each of these influencing factors plays a part in all career decisions made, but different combinations of interactions produce many different career choices. Culture for instance has been found to influence entrepreneurship both through social legitimation and through promoting positive attitudes in youth Liñán et al, (2011). Similarly, knowledge gained from previous entrepreneurial experiences (tacit knowledge) often increases the likelihood of becoming an entrepreneur and allows entrepreneurs to avoid costly mistakes, giving them an advantage in better exploitation of business opportunities Abdullah and Sulaiman, (2015). Perceptions are important in shaping young people's agricultural interests. Individuals decide to start an

entrepreneurial activity if it is perceived to be more desirable and feasible than other alternatives, according to Liñán et al, (2011). Because the entrepreneurial environment is frequently characterized by imperfect markets and incomplete information, analysts have discovered that this subjective interpretation of reality (perception) plays a critical role. Particularly when career guidance is limited or difficult to obtain, an individual's opinions or perceptions may become the most influential factor in decision making. Therefore, it is important that government enhance its investment in agriculture to make the sector able to create employment and make those who engage in farming to have reasonable returns and wages. This would encourage the young people to pursue careers in agriculture and food production and thereby enhancing food security and their economic well-being.

4.2.2 Sampling procedure and sample size

The study examined a sample size of 210 youth respondents and has employed a judgemental sampling method to choose a sample. This method allowed the researcher to choose participants based on study-specific characteristics that would best answer the primary research topic. The study focused on youth between the ages of 18-35 comprised males and females who were participating in agriculture and related activities as well as those who were not participating in agriculture or related activities. The two types of youth (Participating and nonparticipating) were important in this study to determine the existing differences in terms of sustainable livelihood resources between those who are participating and those who are not participating in agriculture and related activities.

3.1.3 Data collection

The study used primary data, which was collected using structured questionnaires. This questionnaire was pre-tested to increase its reliability. To be able to get the best response from farmers, face-to-face interviews were conducted using the home language, IsiXhosa, to counteract any confusion that may occur due to language barriers.

3.1.4 Data analysis

The analysis of the study was done using Likert-type. Principal Component Analysis was used to test perceptions and aspiration indices and Binary Regression was also used. The models are explained below:

Likert scale

The purpose of the Likert-type question was to measure the youths' perception and aspirations of agriculture. Several statements on the perception of agricultural enterprises among youth were identified and the respondents were requested to show the degree to which they agree. The study applied a five-point Likert scale that range from: a scale of 1 to 5 where 1= N/A (Not Applicable), 2= Strongly Disagree, 3= Disagree, 4= Agree, and 5 = Strongly Agree. The preference for a 5-point Likert scale was encouraged by the fact that it is practical to use and offers rationally strong correlation coefficients by reducing limiting data distortions August, (2020). The perception questions included, (i) I am seriously considering a career in agriculture, (ii) I am seriously considering starting a business in agriculture, (iii) Agriculture is a decent employer of youth in the South African economy, (iv) Agriculture is a lucrative sector in the South African economy, (v) African youth should be actively involved in agriculture, (vi) Agriculture is an important sector in South Africa's economy, (vii) I consider venturing into agriculture as 'cool', (viii) Agriculture should be taught more in all our education levels in South Africa, (ix) Agriculture is important to South Africa's food security (xii) Agriculture is a solution to employment creation and reducing poverty.

Aspiration questions include: (i) I aspire to be involved in rain fed farming, (ii) I aspire to increase my agricultural production at a later stage, (iii) I aspire to acquire agricultural training and education, (iv) I aspire to an occupation beyond farming, especially primary agriculture, (v) I aspire to become a commercial farmer one day, (vi) I aspire to be a successful farmer

Principal component analysis

Perceptions and aspiration index of youth in agriculture was utilized to build dimensions using principal component analysis (PCA). Without losing crucial information, the PCA can reduce several variables into smaller, more manageable dimensions (Phakathi 2016). In the regression model, the dimensions served as explanatory variables. PCA generates orthogonal components, each of which is a linear combination of the initial variables, within a specified set of correlated variables. The components are arranged so that, for example, the second component measures the second-biggest variance while the first principal component catches the largest variation within the original variables. The Kaiser criteria were previously employed by researchers to determine how many PCs to preserve because the PCA creates numerous components (Gujarati and Porter, 2009). A general guideline for this criterion was to keep components with

eigenvalues larger than one and discard those with eigenvalues less than one. A Kaiser-Meyer-Olkin (KMO) test was also necessary when using PCA because it confirmed the accuracy of the PCA. The specified variables do not require PCA if the KMO value is less than 0.5, but the opposite is true.

Perception index

The perception index was created with the use of 10 statements to determine the youths' perceptions towards agriculture. To create the index, a factor analysis was done by using the component matrix, Min-Max Normalisation, and PCA, as required. Min-Max Normalisation was used which normalises all the perception question to value between 0 and 1. The values were categorised into 5 classes (0.0-0.2)- extremely positive perception; (0.3-0.4)-positive perception; (0.5-0.6)-neutral; (0.7-0.8)-negative perception; (0.9-1.0)-extremely negative perception. Min-max normalization is a simple technique that rescales the data values to a range between 0 and 1, using the minimum and maximum values of the original data. This technique preserved the relative order and distance of the data points, but it also reduced the variance and magnifies the effect of outliers. Min-max normalization was useful when the data has a fixed range, such as percentages,

Aspiration index

The aspiration index was created with the use of 6 statements to determine the youths' aspiration towards agriculture. To create the index, a factor analysis was done by using the component matrix, Min-Max Normalisation, and PCA, as required. Min-Max Normalisation was used which normalises all the aspiration questions to value between 0 and 1. The values were categorised into 5 classes (0.0-0.2)- extremely positive aspiration; (0.3-0.4)-positive aspiration; (0.5-0.6)-neutral; (0.7-0.8)-negative aspiration; (0.9-1.0)-extremely negative aspiration.

Binary logit model

The Binary logit model was used to analyze youth perceptions and aspirations that influence youth in engaging in agricultural enterprises. A binary model is best suited for use when the dependent variable takes only two options as a response August, (2020). This model was therefore used when the dependent variable is not continuous, but only has the outcome of either 1 or 0. Youths have choices between engaging in agricultural enterprise and not engaging

in agricultural enterprise. This was characterized by binary choices. Used binary logit model to analyze the data associated with these choices. The binary logit model was expressed as follows following XXXX (2022):

$Yi = \beta xi + \varepsilon i$…… (1)

where Yi is the dependent variable which takes a value of 1 if the youth is engaging in agricultural enterprise and 0 if the youth is not engaging in agricultural enterprise; xi is the covariate of regressors (youths' perceptions towards agricultural enterprise); β is the parameter estimates; εi the error term which is assumed to be (independently and identically distributed) with mean 0 and variance = δ2.

4.3 Findings and Discussions.

4.3.1 Descriptive results

- **Age**

Table 4.1 provides insight on the age distribution as far as agricultural participation is concerned. Data was collected from 210 respondents.

Table 4.1 Age of respondents

Age	Frequency	Percentage
15-25	75	**35.71**
26-35	135	**64.29**

The results showed that age 26-35 of youth are more likely to engage in agriculture. This urged with study of August (2020) who noted that most young people who participate in agriculture are likely to be in the age range between 23 and 25. This could be attributed to the assumption that this is the age when they are more active and are likely to engage in agriculture and job hunting for their employment and generating income.

- **Gender**

Table 4.2 provides insight on the gender distribution as far as agricultural participation is concerned. Data was collected from 210 respondents.

Table 4.2 Gender of respondents

Gender	Frequency	Percentage
Male	122	58.10
Female	88	41.90

The results showed that most of the sampled households were males (63.37%) with females constituting (36.63%.) Similarly, to previous studies Douglas, et al., (2017); Cheteni, (2016), male youths (63.7%) engaged more in agriculture compared to female youths (36.3%). Also, August (2020); Mbah et al. (2016) noted that male youth are more likely to engage due to physical nature of agricultural sector.

- **Marital status**

Table 4.3 provides insight on the marital status distribution as far as agricultural participation is concerned. Data was collected from 210 respondents.

Table 4.3 Marital status of respondents

Marital status	Frequency	Percentage
Single	179	85.19
Married	22	11.11
Divorced	6	2.22
Widowed	3	1.48

The results also revealed that majority of the respondents are single (85.19%), married (11.11%) divorced (2.22%), and widow (1.48%). The results agreed with the study of August (2020) also noted that 89 % of the respondents were single, while 11 % fell into the category of married, divorced, or widowed, shown there as “otherwise”.

- **Employment status**

Table 4.4 provides insight on the employment status distribution as far as agricultural participation is concerned. Data was collected from 210 respondents.

Table 4.4 Employment status of respondents

Employment status	Frequency	Percentage
Fulltime	11	8.15
Part-time	64	36.30
Formally employed	37	22.22
Unemployed	98	33.33

The results showed that only (8.15%) of the respondents were farming full-time, (22.22) % were part-time farmer, (36.30%) were formally employed, (33.33%) were unemployed. The study results also agreed with August (2020) noted that most of the youth are unemployed and self-employed.

- **Educational level**

The education levels of the respondents are important for gaining an understanding of the level of education of the youth in Umzimvubu Local Municipality. Data was collected from 210 respondents.

Table 4.5 Education level of respondents

Educational level	Frequency	Percentage
Tertiary	30	14.29
Secondary	105	52.38
Primary	57	27.14
No education	18	6.18

The results showed that youth with no education constitute sample of (6.18%). Those who had attained primary level constituted (27.14%). Those who had attained secondary level constitute (52.38%), while those with tertiary education constitute (14.29%). The results agreed with Cheteni (2016) who noted that most of the youth can write and read.

- **Type of youth**

The study used a total sample size of 210 respondents in Umzimvubu Local Municipality, comprised of youth between the ages of 18 and 35. The data regarding the participation status of the youth was collected and analysed. Table 3.1 presents the distribution of youth participation status in frequency and percentages.

Table 4.6 Type of youth

Type of youth	Frequency	Percentage
Participants	135	64.29
Non-participants	75	35.71

Table 3.1 shows that 64 % of the respondents were participating in agriculture, while 36% of the youth were not participating in agriculture. From the table above, it was concluded that majority of the young people in Umzimvubu Local Municipality were participating in agricultural activities.

4.3.2 Perception of youth towards agriculture

Figure 4.1 shows the perceptions of youth towards agriculture. Several statements on perception of agriculture were identified and the respondents were requested to show the degree to which they agreed. The study applied a five-point Likert scale that ranged from: a scale of 1 to 5 where, 1= Strongly agree, 2= Agree, 3= Neutral, 4=Disagree and 5 = Strongly Disagree.

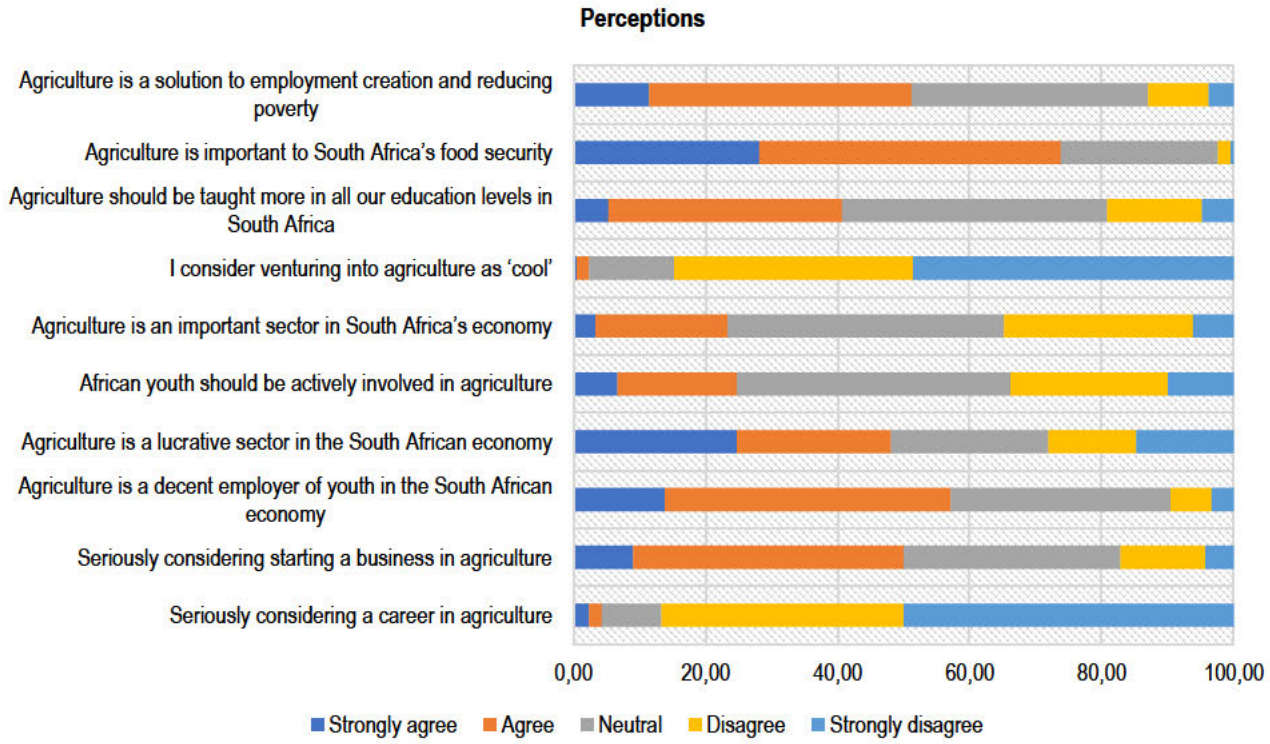

Figure 4.1: Perceptions of youth towards agriculture

The results showed that agriculture was also regarded as a solution to employment creation and reducing poverty' and significant sector to South Africa's food security. Given the status of youth unemployment in South Africa, agriculture plays a vital role in creating employment opportunities. These findings were consistent with recent research by Macall et al. (2020) which suggested that in rural areas youths perceive agriculture as a decent employer. Agriculture was likewise viewed as a lucrative industry by the youth. Reduction in poverty and employment creation give agriculture a significant economic advantage to the benefits of rural households who normally use family labour and have limited financial resources to purchase inputs. The observed positive perceptions are, therefore, logical for this subsector. These findings mirror conclusions by Tsatsaki et al. (2017) which indicated that agriculture is a lucrative sector in the economy and makes farming much easier. The study's findings revealed

that most young people were seriously considering launching an agricultural business. The fact that agribusiness is associated with high risks, youths are rationally expected to perceive starting a business in agriculture. Similarly, Symth, (2017) also noted that the participating in agriculture enterprise increases the potential yield losses and pesticide application costs. On the other hand, youth disagreed considering a career in agriculture and venturing into agriculture as cool. The results from the study area seemed to suggest that most of the respondents are strongly disagree (49%). These findings align with the conclusions of Jones et al. (2018) which states that youths in Africa are not aware of the benefits of agriculture in the economy.

4.3.3 Perception index

Table 3.21 shows the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity, both derived from PCA, and showed that the KMO is 0.661, which is greater than 0.5. This is in accordance with the required rule for data adequacy. The PCA was significant, and the Bartlett's Test of Sphericity was significant, at 0.000, indicating that the data was appropriate for factor analysis.

Table 4.7: Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity on perceptions

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**.661**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	**575.331**
	Df	**116**
	Sig	**.000**

- **Component matrix**

The table shows that all the perception statements were included as the commonality rating was greater than 0.5. These statements were formulated to understand perception of youth towards agriculture.

Table 4.8: Component Matrix for the Statements Measuring perception towards Agricultural Participation

Statements	Component
	perception towards agricultural participation
I am seriously considering a career in agriculture	**.686**
I am seriously considering starting a business in agriculture	**.776**
Agriculture is a decent employer of youth in the South African economy	**.844**
Agriculture is a lucrative sector in the South African economy	**.714**
African youth should be actively involved in agriculture	**850**
Agriculture is an important sector in South Africa's economy	**.871**
I consider venturing into agriculture as 'cool'	**.687**
Agriculture should be taught more in all our education levels in South Africa	**.776**
Agriculture is important to South Africa's food security	**.821**
Agriculture is a solution to employment creation and reducing poverty	**.832**
Eigen value	**3.131**
Cumulative percentage	**73.687**
Cronbach's alpha	**0,788**

The Cronbach's alpha for the Aspiration Index was calculated for the component and was 0.788 and complies with the acceptable requirement, as it is greater than 0.7. This Cronbach's alpha for the index showed an acceptable, strong level of internal consistency and implies that the statements were all reliable to measure youth's perceptions towards agriculture. Figure 4.2 shows the overall perception questions categorized into 5 classes.

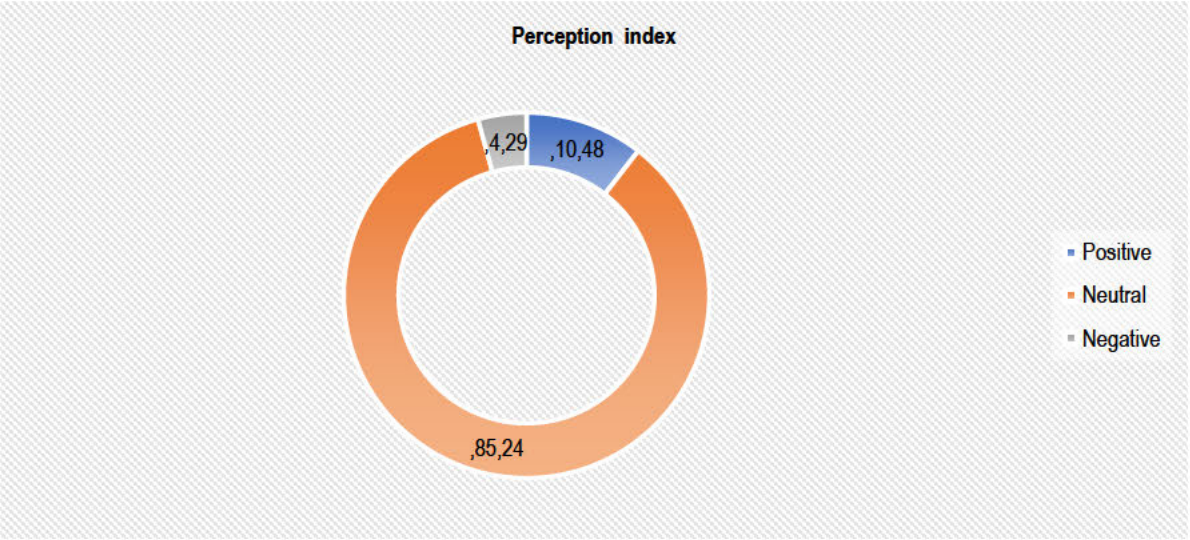

Figure 4.2: Perception index

The results showed overall, 85.24% of youth had neutral perceptions towards agriculture, while 10.48% had a positive perception while 4.29% had a negative perception. Similarly, previous study Muthomi, (2017) agreed with the perception statements. The youth also had positive perception of agriculture as they were actively involved in agriculture.

4.3.4 Aspiration of youth towards agriculture

Figure 4.3 shows the aspiration of youth towards agriculture. Several statements on aspiration of agriculture were identified and the respondents were requested to show the degree to which they agreed. The study applied a five-point Likert scale that ranged from: a scale of 1 to 5 where, 1= Strongly agree, 2= Agree, 3= Neutral, 4=Disagree and 5 = Strongly Disagree.

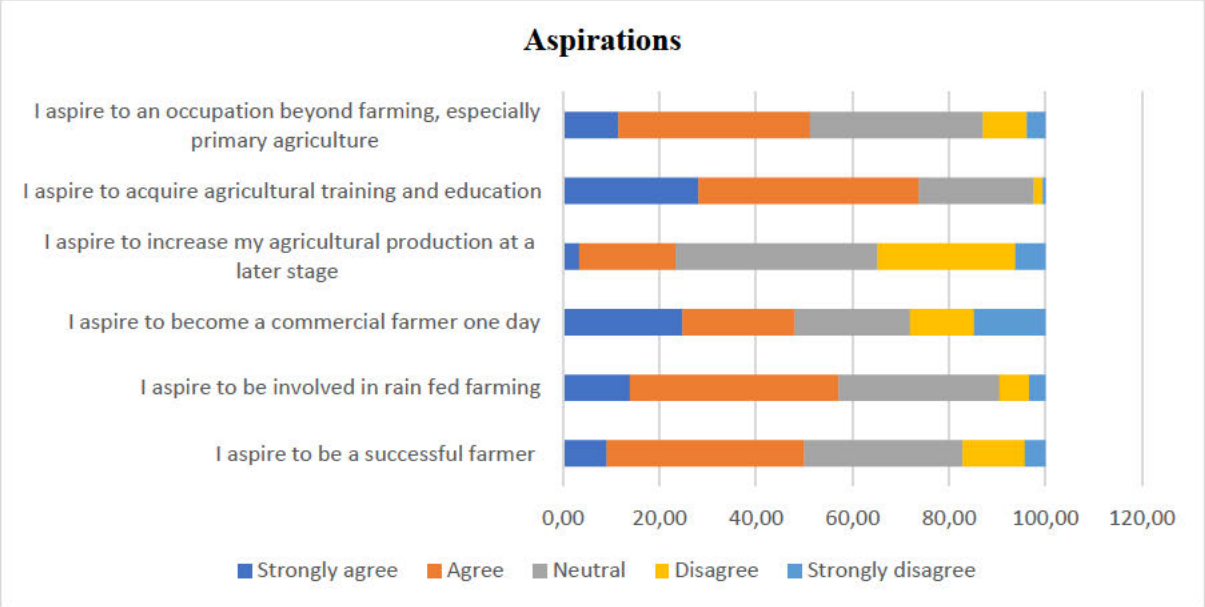

Figure 4.3: Aspiration of towards agriculture

Majority of youth agreed (43.33%) that they aspire to be involved in rain fed farming. (40%) of youth also agreed they aspire to be a successful farmer. I aspire to become a commercial farmer one day. Youth strongly agree (25%), agree (23%) and neutral (24%) that they aspire to become a commercial farmer one day. Youth have neutral aspiration to increase agricultural production at a later stage. Youth agreed that they aspire to acquire agricultural training and education. Youth agree that they aspire to an occupation beyond farming, especially primary agriculture.

4.3.5 Aspiration index

Table 4.2 shows the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity, both derived from PCA, and shows that the KMO is 0.810, which is greater than 0.5. This is in accordance with the required rule for data adequacy. The PCA was significant, and the Bartlett's Test of Sphericity was significant, at 0.000, indicating that the data is appropriate for factor analysis.

Table 4.9: KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity on Aspirations

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		810
Bartlett's Test of Sphericity	Approx. Chi-Square	443.544
	Df	10
	Sig.	.000

- **Component matrix**

The table shows that all the aspiration statements were included as the commonality rating was greater than 0.5. These statements were formulated to understand aspiration of youth towards agriculture**.**

Table 4.10: Component Matrix for the Statements Measuring Aspirations towards Agricultural Participation

Statements	Component
	Aspiration towards agricultural participation
I aspire to be involved in rain fed farming,	**.666**
I aspire to increase my agricultural production at a later stage	**.976**
I aspire to acquire agricultural training and education	**.865**
I aspire to an occupation beyond farming, especially primary agriculture	**.754**
I aspire to become a commercial farmer one day	**844**
I aspire to be a successful farmer	**.801**
Eigen value	**4.466**
Cumulative percentage	**75.634**
Cronbach's alpha	**0,953**

The Cronbach's alpha for the Aspiration Index was calculated for the component and was 0.953 and complies with the acceptable requirement, as it is greater than 0.7. This Cronbach's alpha for the index shows an acceptable, strong level of internal consistency and implies that the statements were all reliable to measure youth's aspiration towards agriculture. The overall of all aspiration questions categorized into 5 classes.

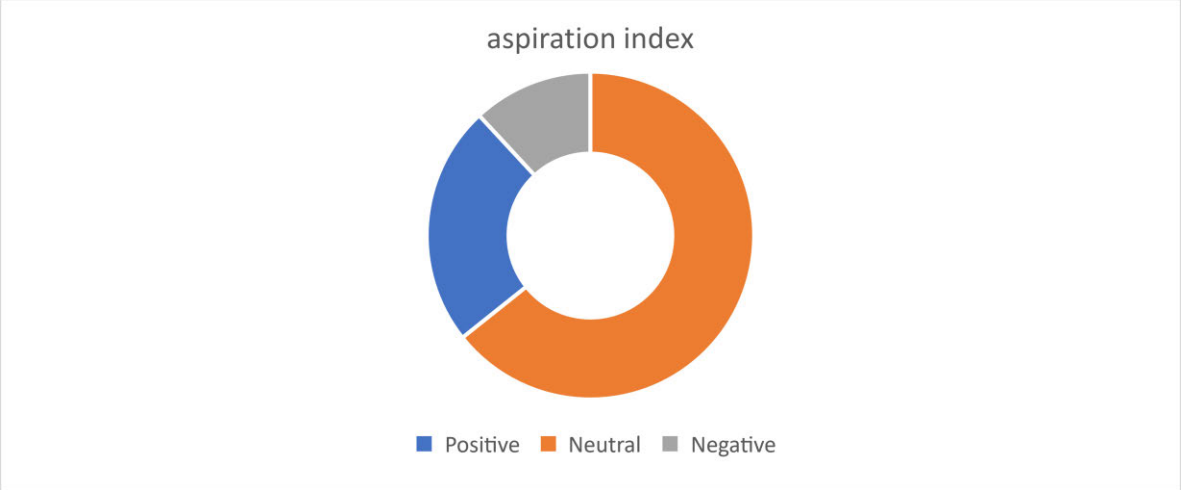

Figure 4.4: Aspiration index
Source: Field Survey (2023)

The results showed overall, 64.27% of youth had neutral perceptions towards agriculture, while 23.81% had a positive perception while 11.90% had a negative perception.

4.3.6 Factors influencing youth perceptions and aspirations in engaging in agricultural enterprises.

The Binary logit model was used to analyze factors influencing youth perceptions and aspirations in engaging in agricultural enterprise. Dependent variable in this study refer to participation status of youth which can be 1= participant or 0= non-participants. The independent variables were socio-economic factors influencing youths' perceptions and aspirations towards agriculture. The independent variables were included to test their influence towards the depend on variables.

Table 4.11: Binary logit results of factors on perceptions and aspirations

Perceptive variable	***Odds ratio***	***Std Err***	***z***	$P > \|z\|$
Age	0.766	0.631	-1.12	0.002***
Employment status	1.432	0.254	2.03	0.001**
Farming experience	0.761	0.091	-2.28	0.031**
Markets	0.830	0.123	-1.26	0.009***
Extension services	0.821	0.142	-1.14	0.004***
Land	1.624	0.316	2.40	0.003***
Constant	2.198	3.998	0.43	0.665
Summary statistics				
Number of observations =210				
LR ch2 (9) = 139,67				
Pr > Chi-square =0.000				
Log likelihood =-217.52				
Pseudo R^2	0.77			

Sig at ***1%, **5% and *10%

According to the study results, age was found to be negatively correlated to agricultural participation and was significant at 1%. This Implies that as induvial become older, they were less likely to participate in agriculture. This agreed with Kafle et al, (2019) that adults are less likely to engage in agriculture. Employment status had a positive effect on participation of youth in agriculture and was significant at 1% level. This implies that youth with employment were more likely to engage in agriculture than those who are not employed. This agreed with

Agwu et al (2021) who noted that youths' employment more likely to engage in agriculture as they can buy agriculture inputs.

The years of experience in farming was found to have a positive effect on participation of youth and was significant at 5% level. This implies that youth with experience in farming were more likely to participate in agriculture. This agreed with the study of August (2020) who noted that as as a youth's farming experience increases, the more likely it is for that youth to participate in agriculture. Market access was significant and negatively related to participation. If a person has no access to the market, the results suggested that those youth with no market access were less likely to participate in agriculture. Market access is a principal factor influencing participation in remunerative agricultural activities (Khapayi and Celliers, 2015). Extension contact was also negatively significant at 10%, to participation of youth. This result implies that youth who do not have contact with an extension officer were less likely to participate in agriculture. The results were consistent with the findings of Bahta et al. (2018) and Juma (2017), who emphasised the importance of having access to extension contact and support for enhancing agricultural participation.

Land access was negatively significant, at 1% for agricultural participation. This implies that youth without land were less likely to participate in agriculture. This agreed with the study of August (2020) who also noted that youth lack access to land less likely to participate in agriculture. Market was significant and negative related to participation. The results suggested that those youth with no market access are less likely to participate in agriculture, as opposed to those who have market access.

4.4 Conclusion and recommendation

The goal of the study was to investigate young people's aspirations and perceptions of agriculture. Based on the findings and outcomes, the study concluded that access to significant livelihood assets and positive aspirations and perceptions are essentials for agricultural participation. Agriculture can create jobs, be a significant source of income and a means of subsistence and improve food security. The younger generation has the energy and potential to transform the agricultural industry, so encouraging them to get involved in it should be the main priority. Governmental agricultural agencies need to consider their efforts to attract more youth to farming and agriculture related businesses. It should also be made abundantly evident that agriculture can help households live better lives and contribute to both food security and

the fight against poverty. Given that they may engage in agriculture at diverse levels and make a living from it, young people undoubtedly have a place in the agricultural industry. But to make sure that the government's and other institutions' efforts and resources are used effectively, it is crucial that the youths' passion be matched with opportunity. Support programs should also take the receivers' goals, interests, and expectations into account when figuring out how to get around resource constraints.

LIST OF REFERENCES

Agwu, A.E., Anugwa, I.Q. and Ifeonu, C.F., 2021. Stemming rural-urban migration through agricultural development: Can Nigeria apply the lessons from the COVID-19 pandemic? *Agro-Science*, *20*(4), pp.36-45.

August, M.M., 2020. *Youths' aspirations and perceptions towards agricultural participation: a case of two Free State regions* (Doctoral dissertation, University of the Free State).

Bahta, Y.T., Owusu-Sekyere, E. and Tlalang, B.E., 2018. Assessing participation in homestead food garden programmes, land ownership and their impact on productivity and net returns of smallholder maize producers in South Africa. *Agrekon*, *57*(1), pp.49-63.

Baloyi, R.J., 2020. *Value chains in rain-fed agriculture and rural youth entrepreneurial development: the case of Umzinyathi and Amajuba districts, KwaZulu-Natal, South Africa* (Doctoral dissertation).

Baloyi, R.J., 2020. *Value chains in rain-fed agriculture and rural youth entrepreneurial development: the case of Umzinyathi and Amajuba districts, KwaZulu-Natal, South Africa* (Doctoral dissertation).

Cheteni, P., 2016. Youth participation in agriculture in the Nkonkobe district municipality, South Africa. Journal of human ecology, 55(3), pp.207-213.

Chibanda, N.F., 2021. Program Design Features Attracting Youth in Diepsloot to Urban Agriculture: Exploring Rhiza Babuyile's Tiny Farm Agri-Program.

De Clercq, M., Vats, A. and Biel, A., 2018. Agriculture 4.0: The future of farming technology. *Proceedings of the world government summit, Dubai, UAE*, pp.11-13.

Dolma, M.C., 2020. Factors Affecting Youth Participation in Agribusiness.

Douglas, K., Singh, A.S. and Zvenyika, K.R., 2017. Perceptions of Swaziland's youth towards farming: A case of manzini region. *Forestry Research and Engineering International Journal*, *1*(3), pp.83-89.

Fonte, M. and Cucco, I., 2017. Cooperatives and alternative food networks in Italy. The long road towards a social economy in agriculture. *Journal of rural studies*, *53*, pp.291-302.

Giuliani, A., Mengel, S., Paisley, C., Perkins, N., Flink, I., Oliveros, O. and Wongtschowski, M., 2017. Realities, perceptions, challenges, and aspirations of rural youth in dryland agriculture in the Midelt Province, Morocco. *Sustainability*, *9*(6), p.871.

Giuliani, A., Mengel, S., Paisley, C., Perkins, N., Flink, I., Oliveros, O. and Wongtschowski, M., 2017. Realities, perceptions, challenges, and aspirations of rural youth in dryland agriculture in the Midelt Province, Morocco. *Sustainability*, *9*(6), p.871.

Gujarati, D.N. and Porter, D.C., 2009. *Basic econometrics*. McGraw-hill.

Gujarati, D.N. and Porter, D.C., 2009. *Basic econometrics*. McGraw-hill.

Ifenkwe, G. E. (2015) Mobilizing and Empowering Youths for Sustainable Community and Rural Development. International Journal of Academic Research in Progressive Education and Development, 1(2), 144-152.

International Fund for Agricultural Development (IFAD) (2014). Youth and Agriculture: Key Challenges and Concrete Solutions. Rome: IFAD.

Juma, E.A.B., 2017. *Youth participation in vegetable production towards improvement of livelihoods in Kakamega town, Kenya* (Doctoral dissertation, Moi University).

Kafle, K., Shriwastav, C.P. and Marasini, M., 2019. Influence of integrated nutrient management practices on soil properties and yield of potato (Solanum tuberosum. L) in an inceptisol of Khajura, Banke. *International Journal of Applied Sciences and Biotechnology*, *7*(3), pp.365-369.

Kaneene, J., Haggblade, S. and Tschirley, D. (2016). Africa's food system in transition. Journal of Agribusiness in Developing and Emerging Economies, 5(2), 94- 101.

Khapayi, M. and Celliers, P.R., 2015. Issues and constraints for emerging farmers in the Eastern Cape Province, South Africa. *African Journal of Agricultural Research*, *10*(41), pp.3860-3869.

Kidido, J.K., Bugri, J.T. and Kasanga, R.K., 2017. Dynamics of youth access to agricultural land under the customary tenure regime in the Techiman traditional area of Ghana. *Land use policy*, *60*, pp.254-266.

Kimaro, P. J. Towo, N. N & Moshi, B. H. (2015). Determinants of rural youth's participation in agricultural activities. International Journal of Economics, Commerce and Management, 3(2), 23 – 33.

Kuznetsova, A., Lankasova, R., Dvorakova, Z., Akhmetiyanova, A. and Omarkhanova, Z., 2018. Migration processes and their impact on the labor market of Poland. In *ICoM 2018 8th INTERNATIONAL CONFERENCE ON MANAGEMENT* (p. 406).

Kuznetsova, A., Zagirova, Z. and Omarhanova, Z., 2018. Problems of poverty and motivation of workers to labour in the field of agriculture as effects of stagnant economy.

Leakey, R.R., 2018. Converting 'trade-offs' to 'trade-ons' for greatly enhanced food security in Africa: multiple environmental, economic, and social benefits from 'socially modified crops. *Food Security*, *10*(3), pp.505-524.

Leavy, J., & Hossain, N. (2017). Who Wants to Farm? Youth Aspirations, Opportunities and Rising Food Prices. IDS Working papers, 439, 1–44.

Liñán, F., Santos, F.J. and Fernández, J., 2011. The influence of perceptions on potential entrepreneurs. *International Entrepreneurship and Management Journal*, *7*, pp.373-390.

Macall, D.M., Madrigal-Pana, J., Smyth, S.J. and Arias, A.G., 2023. Costa Rican consumer perceptions of gene-editing. *Heliyon*, *9*(8).

Magagula, B. and Tsvakirai, C.Z., 2020. Youth perceptions of agriculture: influence of cognitive processes on participation in agripreneurship. *Development in practice*, *30*(2), pp.234-243.

Mbah, E.N., Ezeano, C.J. and Agado, M.O., 2016. Effects of rural-urban youth migration on farm families in Benue state, Nigeria. *International Journal of Agricultural Research, Innovation and Technology (IJARIT)*, *6*(2355-2020-1599), pp.14-20.

Mdluli, S.F.S., 2019. *The factors influencing youth participation in agricultural co-operatives: evidence from the semi-rural areas of eThekwini, KwaZulu-Natal* (Doctoral dissertation).

Mitchell, L.K., & Krumboltz, J.D. (1990). Social learning approach to career Decision Making: Krumottz‟s theory. In Brown, D. Brooks, L., and Associates. Career choice and development: Applying contemporary theories to practice (2nd Ed.). San Francisco, C.A: Jossey-Bass Publishers.

Muthomi, E., 2017. Challenges and opportunities for youth engaged in agribusiness in Kenya.

Phakathi, S., 2016. *Small-scale irrigation water uses productivity and its role in diversifying rural livelihood options: case studies from Ndumo B and Makhathini irrigation schemes, KwaZulu-Natal, South Africa* (Doctoral dissertation).

Sergo, A., 2014. Aspirations of Rural Youth Towards Agriculture: The Case of Hulet Eju Enese woreda, East Gojjam Zone. *Addis Ababa, Ethiopia*.

Sihlobo, W., 2019. Climate change disrupts agriculture. *The Dairy Mail*, *26*(8), pp.80-81.

Smyth, J., 2017. Youth insecurity in schools: what's going on with class? *International Studies in Sociology of Education*, *26*(2), pp.211-227.

Sumberg, J., Yeboah, T., Flynn, J. and Anyidoho, N.A., 2017. Young people's perspectives on farming in Ghana: a Q study. *Food security*, *9*(1), pp.151-161.

Trevor, S. and Kwenye, J.M., 2018. Rural youth participation in agriculture in Zambia. *Journal of Agricultural Extension*, *22*(2).

Undp, A., 2014. *TAistlseessing the socio-economic impacts of Ebola Virus Disease in Guinea, Liberia, and Sierra Leone the Road to Recovery* (No. 267621). United Nations Development Programme (UNDP).

United Republic of Tanzania [URT]. National Five-year Development Plan 2016/17—2020/. Dar es Salaam: Ministry of Finance and Planning,

Yami, M., Feleke, S., Abdoulaye, T., Alene, A.D., Bamba, Z. and Manyong, V., 2019. African rural youth engagement in agribusiness: Achievements, limitations, and lessons. *Sustainability*, *11*(1), p.185.

CHAPTER 5

ASSESSING CHALLENGES AND OPPORTUNITIES FOR YOUTH PARTICIPATING IN AGRICULTURAL ENTERPRISES: EVIDENCE FROM UMZIMVUBU LOCAL MUNICIPALITY

Abstract

Youth unemployment, food insecurity, and poverty are among the key issues confronting governments worldwide, and South Africa is no different. Active involvement of youth in agriculture is necessary. However, youth perceive agriculture as a low-status, dirty and unattractive job. To them (youth people), agriculture is a part-time job and not a profession or a livelihood strategy. The study discussed the challenges and opportunities for youth participating in agricultural enterprises and recommends strategies to maintain and enhance young people's interest in farming. Quantitative data was collected using judgmental sampling from youths living in Umzimvubu Local Municipality through structured questionnaire. The data were analyzed using descriptive analysis and Tobit regression model. The results showed that major challenges faced by youth engaging in agriculture include poor markets, insufficient water, shortage in initial funding and lack of information, lack of access to technical assistance and access to mentors. The results also revealed that youth find interest in poultry (broilers and layers) and horticulture. The study recommends that policymakers, government (National Department of Agriculture, Land Reform, and Agrarian) must maximize investment in endorsing start up agribusiness projects as they give hope in bettering livelihood for young people.

Keyword: Youth, agriculture, youth unemployment

5.1 Introduction

The global population is projected to increase by 2.5 billion by 2050 The United Nations. Most of this population increase will be witnessed in the developing countries. Moreover, youth will form a substantial proportion of this population with around 50% of the population by that time being youth (Muthomi, 2017). The increase in population will trigger food supply, availability and accessibility for the ever-growing world population have been contentious and have featured in several national and international debates by stakeholders. Agriculture is the bedrock of the production of food and allied products on which human existence depends. However, the lack of skilled farmers and the lack of adoption of technology are the major challenges facing the world as most farmers are aging and illiterate.

Agriculture is a significant sector for the economic sustainability and social welfare of developing countries, such as sub-Saharan Africa (SSA). Agriculture contributes a substantial share to the SSA economy, and most population depends on this sector as their primary source of livelihood (Rasul, 2021). According to the Food and Agriculture Organization, more than half (57%) of the SSA population relies directly on agriculture. In South Africa, --8agriculture is a sector that serves as the backbone of the country's economy (DAFF, 2018). This highlights the importance of the agricultural sector as an important dimension in creating employment, food security, and sustaining household livelihoods. Agriculture can thus be seen as an essential driver of economic development and an area of great opportunity for young people. However, agriculture is widely practiced by aging farmers with an average age of 55 years and a high unemployment rate, where most of the unemployed are youth. According to Geza et al. (2021), the high youth unemployment is due to slow economic growth in agriculture because of the unskilled workforce and aging producers. Agriculture is found to be not attractive to most young people (Ouko et al., 2022).

The South African government recognizes the need for a complex approach connecting increasing food production, employment creation, and improving access to food. The country's government has established several policies aimed at addressing youth unemployment and involvement in agriculture. In South Africa, youth participation in agriculture has been a key focus area of important policies such as the National Development Plan (Sinyolo and Mudhara, 2018). As a result, the South African government made efforts to develop a New Growth Path to emphasize the expansion and commercialization of smallholder agriculture by setting a target of founding 300,000 additional market-oriented smallholder producers by 2020. Even,

went a step further to establish the National Youth Development Agency (NYDA) with the purpose of assisting South African youths to start businesses and finance existing businesses (Magagula and Tsvakirai, 2020). Further, recruited Department of Science and Technology through the establishment of the Technology and Innovation Agency (TIA) to support youth participation in agriculture through technological innovation and training. However, the government's efforts were not met with the desired buy-in from the youth as the challenge still exists at a higher rate.

Youths are the ideal drivers for agricultural transformation and developmental change given their greater ability and willingness to adopt innovations and technology which are critical to changing the agricultural sector Kwenye and Sichone, (2016). It, therefore, becomes imperative that youths should be actively involved in agriculture. Som (2018) suggested that fostering youth involvement in agriculture is a worthwhile investment. Although, the participation of youths in agriculture is fundamental for economic development and poverty reduction World Bank, (2013).

Despite the significant contribution of agriculture to the economy of developing countries, especially sub-Saharan Africa, especially South Africa, the sector is faced with several challenges such as climate change, lack of youth participation, inadequate input supply, lack of credit, lack of infrastructure and agricultural production efforts still left in the hands of aged farmers who presently constitute the major farming population (Kwenye and Sichone, 2016). According to Akrong and Kotu (2022) and IFAD (2019), the lack of youth participation in agriculture is due to negative perceptions about agriculture being less lucrative, labor, and capital-intensive, and activity with low self-esteem makes agriculture unattractive to the youth, hence their low participation in agriculture. Additionally, the low interest of youngsters in agriculture is credited to the poor status of agricultural output in Africa's rural areas (especially in South Africa) due to a lack of government support (Mthi et al., 2021). Baloyi (2020) specified that the lack of youth entrants in agriculture can also be due to limited water and land access, lack of market access and market information, lack of financial support, low returns on investments, and poor access to adequate information. Given these encounters and seeing the negative perceptions that youth have towards principal agriculture, it is anticipated that the sector is experiencing a poor succession plan and food systems will be hampered.

International Institute for Environment and Development (IIED) in its report noted that the migration of the youth from rural areas to urban areas implies that there will be fewer labour

to take up small scale farming in future. Youth are not largely involved in agricultural activities since selection of agriculture as a career is hampered with misunderstandings and a lack of awareness and information. Factors contributing to this include inadequate information of careers available in the agricultural sector, poor wages in the agriculture compared to other sectors, and the manual aspects of work in the sector (Twumasi et al, 2020).

The challenges of youth unemployment can be addressed by enhancing the image of agriculture in the eyes of the young people. Moreover, integrating many young people in agriculture would not only deal with unemployment but would also food security. The Global Forum for Agricultural Research (GFAR) observes that having new forms of agricultural enterprises and incorporating technology in agriculture can motivate the young people to engage in agriculture and thereby increasing agricultural production. Integrating the young people in agriculture can also inject innovation, innovative technologies, and new thinking to enhance agricultural incomes and thereby enhancing the lives of the rural farmers as well as the rural communities. Increased access to education and new forms of agriculture-based enterprise mean that young people can be a vital force for innovation in family farming, increasing incomes and well-being for both farmers and local communities.

5.2 Material and methods

5.2.1 Description of the study area

The research was carried out in Umzimvubu Municipality. Umzimvubu Municipality is part of the Alfred Nzo District, which has four local municipalities in the eastern part of South Africa's Eastern Cape Province. Umzimvubu is made up of two towns: Mount Frere (KwaBhaca) and Mount Ayliff (EmaXesibeni). Poverty is widespread, with 81.1% of the population relying on social grants and being unemployed (IDP, 2020). The youth population of age between 15-35 years is around 80,467(Statistics SA, 2016). Umzimvubu had about 37% unemployment (66% for youth) in 2017 (Umzimvubu LM, 2021).

The municipality climatic conditions are favourable for agricultural production. Rainfall, soil quality and the availability of water resources make Umzimvubu suitable for agricultural production. Dry land farming is of a subsistence nature, and there are large tracts of uncultivated arable land. There is exceptionally good potential for maize, sorghum, wheat, sunflower, hemp, beans, vegetables (cabbages, potatoes, butternut, green pepper, and spinach), and deciduous fruits (peaches & apples). The farms north of Umzimvubu are particularly

suited to largescale fruit and vegetable production. Adequate good-quality grazing makes the area suitable to livestock farming and animal husbandry.

5.2.2 Research design

The study employed exploratory cross-sectional research design to analyze socio-economic characteristics of youth and their involvement in agricultural enterprises. A cross-sectional study can capture information based on data gathered for a specific point in time. This design was suited for this study because it was inexpensive and did not require too much time. To represent the populace, a portion of youth in each municipality area were selected. Quantitative data were collected on the socio-economic characteristics of youth and their involvement in agriculture. The study was carried out through a pilot study, thereafter, a questionnaire was used during June and August of 2023. This study utilized descriptive analytical techniques for robust findings.

5.2.2 Sampling procedure and sample size

The study examined a sample size of 210 youth respondents and has employed a judgemental sampling method to choose a sample. This method allowed the researcher to choose volunteers based on some distinctive characteristics that are relevant to the study and that would best address the main research question. The study focused on youth between the ages of 18-35, comprised males and females who were participating in agriculture and related activities as well as those who were not participating in agriculture or related activities. The two types of youth (Participating and nonparticipating) were important in this study to determine the existing differences in terms of sustainable livelihood resources between those who are participating and those who are not participating in agriculture and related activities.

5.2.3 Data analysis

The quantitative data was represented using descriptive statistics. Likert scale was used to measure challenges and opportunities of youth venturing in agribusiness. A four-point Likert scale was provided ranging from: a scale of 1 to 4 where 1= No challenge 2= least challenging, 3= challenging, 4 = most challenging. The results were analysed inform, means, frequency and percentages.

- **Tobit regression model**

The Tobit Regression Model with an upper and lower bound was used to analyse challenges of youth participation in agricultural enterprises. Liu and Zhan (2019) stated that Tobit regression is a censored regression model because it was designed to evaluate linear relationships between variables when left of right censoring them. One of the prime advantages of the Tobit regression model is the suitability of the strict default settings in which the dependent variable is at one of the extremes. It presents a positive mass of observations at that extreme and is unbounded otherwise (Shuai and Fan, 2020). If a threshold, for example, 0 and 1 where variables are bound, it cannot take values greater or less than that threshold. Several studies give evidence to researchers' wide use of the Tobit model to measure factors. Adelekan and Omotayo (2017), You (2016), Dube and Guveya (2016) further stated that preference is on the Tobit model rather than probit and logit because it is focused on the latter while probit and logit deal with the former problem. However, all these regression models relate to estimating relationships involving dependent variables that are either nanometric or possess a lower limit.

The Tobit model depicts that the dependent variable Y_I is equivalent to the latent variable $Y_i *$ when is positive and to zero when Y_i* is less than equal to zero. The model was described as follows:

$$Y *_{ij} = \beta_0 + \sum_{\rho}^{\rho} \beta\rho \, X_{pij} \, {}_{+}\varepsilon_{ij}$$

$$Y_{ij} = \begin{cases} Y *_{ij} \, if & Y *_{IJ} > 0 \\ 0 \quad if & Y *_{IJ} \leq 0 \end{cases}$$

5.2.4 Ethical consideration

For the study, ethical clearance was obtained from the University of KwaZulu-Natal's Ethical Committee (HSSREC/00005088/2022). During data collection, the participants signed a consent form before an interview, which clearly stated the purpose, aims and duration of the study. Confidentiality among participants was assured and respondents participated voluntarily in the research.

5.3 Results and discussion

The study's findings are discussed in relation to the socioeconomic profile of the youth, the opportunities in agriculture, and the challenges faced by the youth in agriculture.

5.3.1 Socio economic characteristics of youth

- **Gender**

Most of the sampled households were males (63.37%) with females constituting (36.63%.) Similarly, to previous studies Douglas, et al., (2017); Cheteni, (2016), male youths (63.7%) engaged more in agriculture compared to female youths (36.3%).

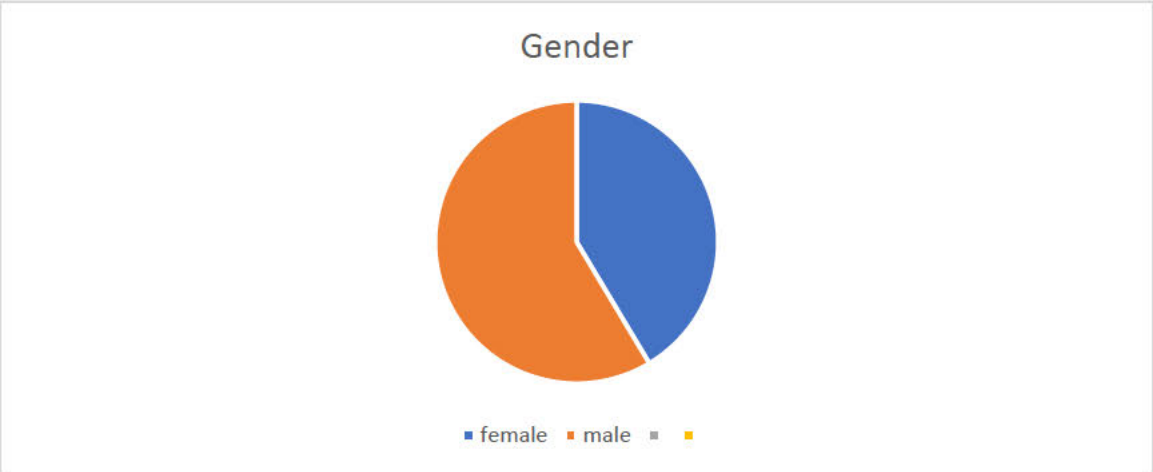

Figure 5.1: Gender
Source: Field Survey (2023)

- **Marital status**

The results also revealed that most of the respondents are single (85.19%), married (11.11%) divorced (2.22%), and widow (1.48%).

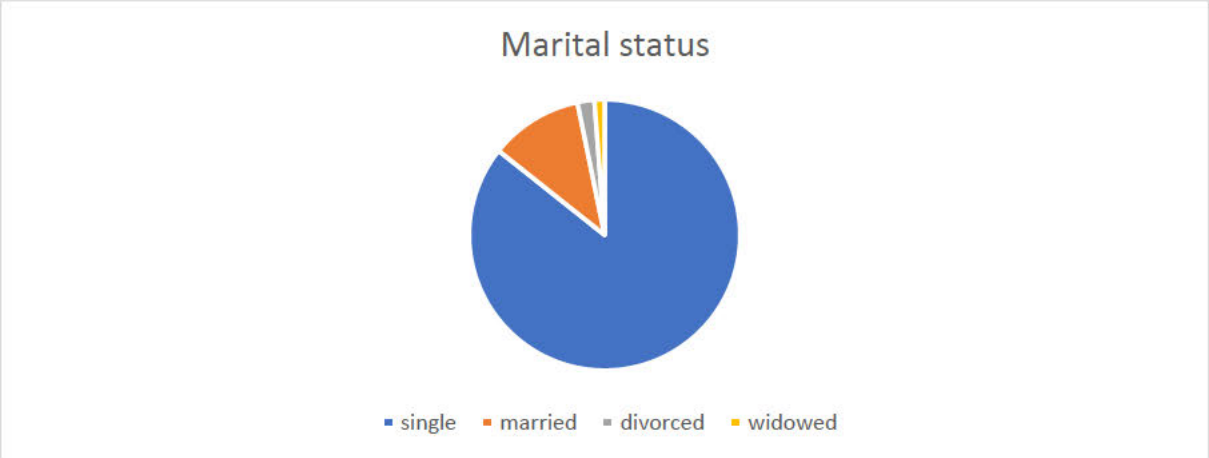

Figure 5.2: Marital status
Source: Field Survey (2023)

- **Employment status**

The results showed that only (8.15%) of the respondents were farming full-time, (22.22) % were part-time farmer, (36.30%) were formally employed, (33.33%) were unemployed.

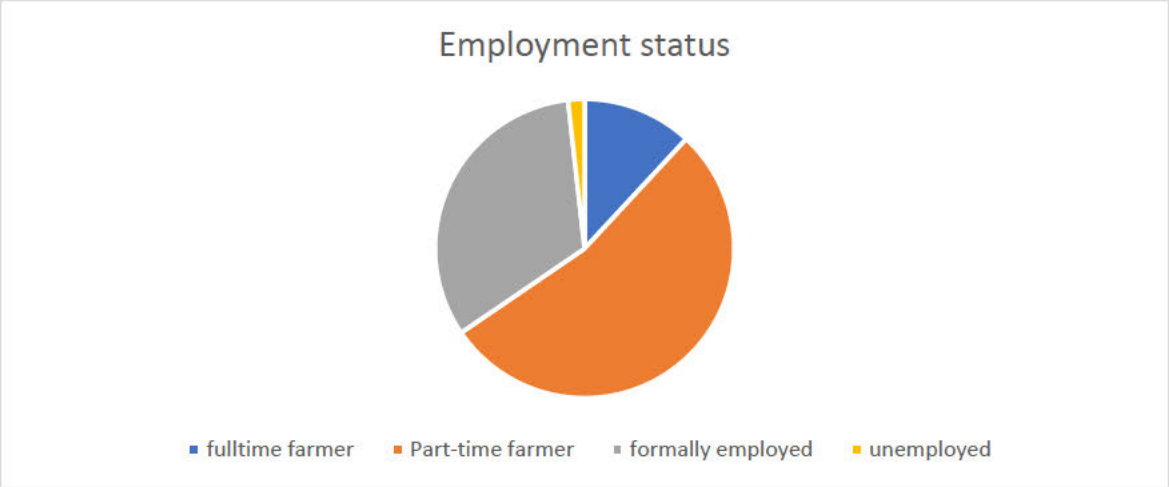

Figure 5.3: Employment status
Source: Field Survey (2023)

- **Educational level**

The results showed that youth with no education constitute sample of (6.18%). Those who had attained primary level constituted (27.14%). Those who had attained secondary level constitute (52.38%), while those with tertiary education constitute (14.29%).

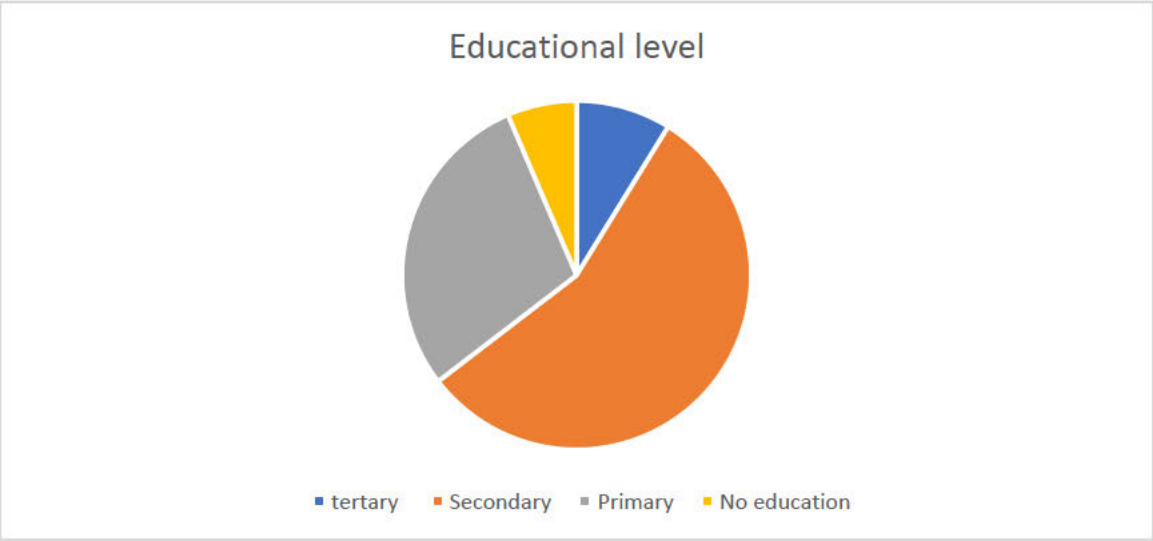

Figure 5.4: Educational level
Source: Field Survey (2023)

5.3.2 Challenges youth challenges faced by in agricultural sector.

This table shows the challenges faced by youth participating in agriculture.

Table 5.1: Challenges youth challenges faced by in agricultural sector.

Challenges	Frequency	Percentage	Rank
Lack of information	84	91.53	1
Poor markets	80	84.76	2
Poor infrastructure	74	78.48	3
Shortage in initial funding	70	71.14	4
Insufficient water	66	69.43	5
Insufficient water	61	67.93	6
Lack of skills	58	61.05	7
Lack of inputs	55	60.81	8
Lack of family support to start enterprise	54	60.43	9

Figure 5.2 shows the challenges faced by youth in engaging in agriculture. Poor information (91.53%) Poor markets (84.76%), lack of infrastructure (78.48%) and shortage in initial funding (71.14%), were major challenges faced by youth, respectively. The minor challenges were Insufficient water. Insufficient water, lack of skill, lack of inputs and lack of family support to start enterprise. This agreed with Muthomi (2017) who also highlighted that challenges faced by youth in agriculture include inadequate information, poor markets, lack of credit, poor infrastructure, and high cost of agricultural inputs.

5.3.3 Opportunities available in agricultural sector

Table 5.2: Opportunities available in agricultural sector.

Activity	Median	Rank
Poultry keeping (broilers, layers)	1	1
Horticulture	2.5	2
Livestock rearing (pig, cattle, sheep)	3	3
Selling farm produce	4	4
Value addition (packaging, packaging, drying)	5	5
Driver (transporting inputs and produce to markets)	6.5	6
Agro-dealership (selling fertilizers, pesticides, seeds, spares)	7.5	7
Selling labor to other farmers	8	8

Working in the fields (planting, weeding, harvesting)	9	9

Results revealed that youths from the study area participate in poultry keeping (broilers, layers). Poultry keeping is less labour intensive and the market for poultry products is growing in South Africa, therefore, favoured by the youths (Mukwedeya, 2018). Youth interested on taking part in horticultural production. This is because it is less labour-intensive and generates money quick compared to field. Livestock rearing (cattle, pigs, sheep) (ranked 3) even though is long-term investment and requires lot of resources. Value addition (packaging, labelling, drying etc), Driver (transporting inputs and produce to markets), Agro-dealership (selling fertilizers, pesticides, seeds, spares) and selling labour to the other farmers were ranked least. Kambanje et al. (2020) also noted almost comparable results for poultry keeping from OR Tambo district in the Eastern Cape Province; poultry keeping (55%), horticulture (37%), selling farm produce (33%) and selling labour to other farmers (3%). Chimonyo et al. (2020) stated that low youth's involvement in agricultural enterprise could be due to farmers utilizing sufficient knowledge and resources that are available.

5.3.4 Determinants of youth participation in agriculture

The table below shows the determinants of youth participation in agriculture. The Tobit model was suitable for the analysis of determinants. The adjusted R2 of the regression was 0.66, which means that 66% of the variation in the dependent variable can be explained by the regressors present in the model. This implies that the higher the R2 value, the more explanatory the model is better to fit its sample. The study results showed that the age of the households positively and significantly influenced the participation of youth at 1% probability level. This implies that adults were most likely to engage in agriculture. These finding also conformed with Rabbi et al, (2019) who noted that elderly people are more involved in agriculture than youth people.

Table 5.3: Tobit logit model

	β	$Std.Err$	t	$P > \|t\|$
Age	0.682	0.271	-2.51	0.003*
Gender	0.239	0.272	-0.88	0.031**
Educational	0.635	0.554	-1.15	0.028**
Household size	0.471	0.408	-1.15	0.040**
Extension services	0.521	0.422	-0.34	0.000***
Constant	10.763	0.247	43.58	0.000***
Sigma	1.899	0.096		
Summary statistics				
Chi-square	9.95			
Pseudo R^2	0.66			

Sig at *10%, **5%, *1%

Gender positively affected the participation of youth and was significantly at a 5% level. This implies that male households were more likely to engage in agriculture than female. This agreed with studies of Douglas, et al., (2017); Cheteni, (2016) who noted that male engage more in smallholder farming than females. Also, Mbah et al (2016) highlighted that because of the physical nature of agriculture, males participate more than females.

Education was found to be significant at 5% and had a positive effect on participation of youth in agriculture. This implies that household with high education were likely to engage in agriculture. Contrarily, this was not expected because youth with high education are more likely to engage to sectors outside agriculture. This agreed with the study of Adeyanju (2021) that youth with high education tend to look for alternative employment outside agricultural sector.

Extension services positively affected the participation of youth in agriculture and was significant at 1%. This implies that youth with access to extension services were more likely to participate in agriculture. Sibanda et al (2016) noted that farmers who have access to agricultural extension services were more likely to receive extension support and training.

Household size had a positive effect on participation of youth in agriculture and was significant at 5% level. This implies that as the household size increases, households were more likely to engage in agriculture.

5.4 Implications of the Findings for Policy

The findings of this study have several implications for policy: The introduction of mentorship programmes to guide youths in the sector is imperative. Sustainable youth engagement with agriculture will give rise to positive results that are not limited to food security. It will also have positive impacts on unemployment, economic development, rural-urban migration, peace, and national security for African countries. The youth can be motivated to engage in agriculture and agribusiness when the government and policymaker put in place; provision of agribusiness management training; provision of agricultural infrastructure; value addition; and positive perception towards agriculture and agribusiness; improved access to land; increased access to capital. Youths in agriculture usually feel they do not have any support/guidance and become demotivated.

5.5 Conclusion

The study emphasizes the significance of maintaining and promoting youth interest in farming for future agricultural and rural development. It reveals that youth disinterest and apathy are related to smallholder farming challenges such as a lack of implements, youth groups, and financial resources. However, smallholder farming's future success is dependent on youth literacy and technological advancement, which can help address food insecurity, poverty, and unemployment.

LIST OF REFERENCES

Adelekan, Y.A. and Omotayo, A.O., 2017. Linkage between rural non-farm income and agricultural productivity in Nigeria: A Tobit-two-stage least square regression approach. *The Journal of Developing Areas*, *51*(3), pp.317-333.

Adeyanju, D., Mburu, J. and Mignouna, D., 2021. Youth agricultural entrepreneurship: Assessing the impact of agricultural training programmes on performance. *Sustainability*, *13*(4), p.1697.

Akrong, R. and Kotu, B.H., 2022. Economic analysis of youth participation in agripreneurship in Benin. *Heliyon*, *8*(1).

Ankrah Twumasi, M., Jiang, Y. and Owusu Acheampong, M., 2020. Capital and credit constraints in the engagement of youth in Ghanaian agriculture. *Agricultural Finance Review*, *80*(1), pp.22-37.

Baloyi, R.J., 2020. *Value chains in rain-fed agriculture and rural youth entrepreneurial development: the case of Umzinyathi and Amajuba districts, KwaZulu-Natal, South Africa* (Doctoral dissertation).

Cheteni, P., 2016. Youth participation in agriculture in the Nkonkobe district municipality, South Africa. Journal of human ecology, 55(3), pp.207-213.

Chimonyo, V.G.P., Mutengwa, C.S., Chiduza, C. and Tandzi, L.N., 2020. Characteristics of maize growing farmers, varietal use, and constraints to increase productivity in selected villages in the Eastern Cape province of South Africa. *South African Journal of Agricultural Extension*, *48*(2), pp.64-82.

Douglas, K., Singh, A.S. and Zvenyika, K.R., 2017. Perceptions of Swaziland's youth towards farming: A case of manzini region. *Forestry Research and Engineering International Journal*, *1*(3), pp.83-89.

Dube, L. and Guveya, E., 2016. Factors influencing smallholder crop diversification: A case study of Manicaland and Masvingo Provinces in Zimbabwe. *International Journal of Regional Development*, *3*(2), pp.1-25.

Geza, W., Ngidi, M., Ojo, T., Adetoro, A.A., Slotow, R. and Mabhaudhi, T., 2021. Youth participation in agriculture: a scoping review. *Sustainability*, *13*(16), p.9120.

Kambanje, A., Taruvinga, A., Mushunje, A., Mutengwa, C. and Ngarava, S., 2020. Determinants of food security status amongst smallholder farmers utilizing different maize varieties in or Tambo District, South Africa. *The Journal of Social Sciences Research*, *6*(2), pp.133-139.

Kwenye, J.M. and Sichone, T., 2016. Rural youth participation in Agriculture: Exploring the significance and challenges in the control of agricultural sector in Zambian. *RUFORUM Working document series*, *14*(1), pp.473-477.

Liu, L. and Zhan, X., 2019. Analysis of financing efficiency of Chinese agricultural listed companies based on machine learning. *Complexity*, *2019*.

Magagula, B. and Tsvakirai, C.Z., 2020. Youth perceptions of agriculture: influence of cognitive processes on participation in agripreneurship. *Development in practice*, *30*(2), pp.234-243.

Mbah, E.N., Ezeano, C.J. and Agado, M.O., 2016. Effects of rural-urban youth migration on farm families in Benue state, Nigeria. *International Journal of Agricultural Research, Innovation and Technology (IJARIT)*, *6*(2355-2020-1599), pp.14-20.

Mthi, S., Yawa, M., Tokozwayo, S., Ikusika, O.O., Nyangiwe, N., Thubela, T., Tyasi, T.L., Washaya, S., Gxasheka, M., Mpisana, Z. and Nkohla, M.B., 2021. An assessment of youth involvement in agricultural activities in Eastern Cape province, South Africa. *Agricultural Sciences*, *12*(10), pp.1034-1047.

Mukwedeya, B.T., 2018. The role of rural youth in the smallholder farming sector: challenges and opportunities in Okhahlamba Local Municipality, South Africa.

Muthomi, E., 2017. Challenges and opportunities for youth engaged in agribusiness in Kenya.

Ouko, K.O., Ogola, J.R.O., Ng'on'ga, C.A. and Wairimu, J.R., 2022. Youth involvement in agripreneurship as Nexus for poverty reduction and rural employment in Kenya. *Cogent Social Sciences*, *8*(1), p.2078527.

Rabbi, F., Ahamad, R., Ali, S., Chandio, A.A., Ahmad, W., Ilyas, A. and Din, I.U., 2019. Determinants of commercialization and its impact on the welfare of smallholder rice farmers by using Heckman's two-stage approach. *Journal of the Saudi Society of Agricultural Sciences*, *18*(2), pp.224-233.

Rasul, G., Nepal, A.K., Hussain, A., Maharjan, A., Joshi, S., Lama, A., Gurung, P., Ahmad, F., Mishra, A. and Sharma, E., 2021. Socio-economic implications of COVID-19 pandemic in South Asia: emerging risks and growing challenges. *Frontiers in sociology*, *6*, p.629693

Shuai, S. and Fan, Z., 2020. Modeling the role of environmental regulations in regional green economy efficiency of China: Empirical evidence from super efficiency DEA-Tobit model. *Journal of environmental management*, *261*, p.110227.

Sinyolo, S. and Mudhara, M., 2018. Collective action and rural poverty reduction: Empirical evidence from KwaZulu-Natal, South Africa. *Agrekon*, *57*(1), pp.78-90.

Som, S., Burman, R.R., Sharma, J.P., Padaria, R.N., Paul, S., and Singh, A.K., 2018. Attracting and retaining youth in agriculture: challenges and prospects. *Journal of Community Mobilization and Sustainable Development*, *13*(3), pp.385-395.

Twumasi, M.A., Jiang, Y. and Acheampong, M.O., 2019. Determinants of agriculture participation among tertiary institution youths in Ghana. *Journal of Agricultural Extension and Rural Development*, *11*(3), pp.56-66.

Umzimvubu Local Municipality Integrated Development Plan (2021). Umzimvubu Local Municipality. Mount Frere

World Bank, 2013. *The world bank annual report 2013*. The World Bank.

You, Y., 2016, November. Analysis on Technical Efficiency of Regional Listed Agricultural Companies of Economic Nature in China Based on DEA-Tobit Two-Step Method. In *2016 1st International Symposium on Business Cooperation and Development* (pp. 1-4). Atlantis Press.

CHAPTER 6

DETERMING FACTORS INFLUENCING THE WILLINGNESS AND INTEREST OF YOUTH PARTICIPATION IN AGRICULTURAL ENTERPRISES: IMPLICATION FOR FOOD SECURITY AND AGRIBUSINESS

Abstract

Agriculture plays a significant role in growth and development of the economy. Thus, it is critical to maintain this development; nonetheless, young people should be actively encouraged to engage in agricultural activities as part of an active population. There are numerous reasons behind young people's low involvement in agriculture. An empirical study was therefore conducted to determine the factors influencing the willingness and interest of youth participation in agricultural enterprise in Umzimvubu Local Municipality. Primary data was obtained from 210 youths using judgemental sampling procedure. Data was collected using structured questionnaire. Data was analysed using descriptive statistics and the univariate Probit regression model. Descriptive results show that male youth were mostly engaged in agriculture and youth have educational background. The results also revealed that single youth were mostly engaged in agriculture than married youth and household size mean. The Probit regression model results revealed that age, gender, educational level, and household size were positively significant implying that youths were more likely and willing to participate in agricultural activities and programs. Household income negatively influence the willingness of youth to participate in agricultural activities. Therefore, increasing the number of young people who qualify for loans from commercial banks and other government agencies is necessary to improve access to financing. A comprehensive policy package involving all stakeholders in the country is required to encourage more youth to participate in agriculture. Youth traits and environmental challenges must be highlighted in such policy frameworks.

Keywords: Agriculture, youth, willingness, Probit model**.**

6.1 introduction

Youths are very crucial resources for every country, particularly in sustaining agricultural productivity and they need to be included in policy formulation. However, they are often neglected in policy and program consideration (Etim and Udoh, 2018). Previously, youths were employed in agricultural production, but engaging young people in agriculture has become a prominent issue among policymakers and development stakeholders as there is expanding concern about young people's disenchantment in agriculture. (Nhapi, 2022). Agriculture contributes between 30 and 42 percent to the Gross Domestic product (GDP) and provides means of livelihood for an estimated 60-70 percent of the country's population (Emeka, 2020). Further, Gass (2021) reported that agriculture remains an important source of national income for most developing countries and there has been increased interest in agriculture by various stakeholders as a key driver of development, poverty reduction and food security. Additionally, Gouda (2018) noted that growth and development generated by agriculture is highly effective than growth in other sectors in poverty alleviation and generating sustainable livelihoods for less developed countries. However, Ruhl (2021) reported that despite the contribution of agriculture, the sector is still far away from attaining its potential because of the enormous land resources and need to feed more mouths with increasing population. Also, Kwenye and Sichone (2016) argued that in order sustain growth, development and threats in the sector, the agricultural production should not be left in the hands of elderly people as they are presently the major farming population.

Rural-urban migration and young people's departure from agriculture are increasing labor scarcity and is a major constraint hindering small-scale farmers' production (Etim and Udoh, 2018). Also, rapid urbanization has reduced rural populations where labor is concentrated. Further, Kundu and Das (2022) found that many urban dwellers are malnourished due to low absorptive capacity in cities while there is labor deficit in rural population. This has resulted on farming to be done by aged farmers and their children who do not have enough strength to carry out laborious tasks. Maja and Ayano (2021) noted that the productivity level of aged farmers cannot meet the food requirement of the rapidly increasing population. Therefore, Nicolétis et al (2019) noted that involvement of young people is necessary for sustaining agricultural productivity and ensure food security,

Youths are the ideal drivers for agricultural transformation and developmental change given their greater ability and willingness to adopt innovations and technology which are critical to

changing the agricultural sector (Kwenye and Sichone, 2016). Therefore, it has become imperative that youths should be actively involved in agriculture (Etim and Udoh, 2018). Som (2018) suggested that fostering youth involvement in agriculture is a worthwhile investment. Although, the participation of youths in agriculture is fundamental for economic development and poverty reduction (World Bank, 2008). The factors influencing the willingness of youths to participate in agricultural activities include access to land, savings, and credit (Chisasa and Makina, 2017). According to Morais et al., (2017) and Cavicchioli et al., (2018) age, gender and labor market conditions are factors influencing the willingness of youth participation. More research is still needed to investigate other factors that influence the willingness of young people to participate in agriculture. To stimulate the youth to view agriculture as a potential livelihood strategy, a general intervention must be targeted towards those within and outside agriculture by enticing and sensitizing them. Another view that plays a big role in young people's decision of what field to engage is the people or role models in his or her life. These role models can include a parent, teacher, or a recent employer Fizer, (2018).

6.2 Methodology

6.2.1 Theoretical framework: Role Model Theory

The Role Model Theory emphasizes the influence of role models on youths' decisions (Hornbeck & Salamon, 1991). It is important for youths to have access to role models like successful young farmers or gain some knowledge and experience of agriculture. This is also the case for aspiring towards entrepreneurship, and numerous studies have shown that family influence, the positive effect of role models, and individual experiences about entrepreneurship contributes to higher inclination towards entrepreneurship (see for example, Deakins & Glancey et al., 2005; Van Auken et al., 2014; Kirkwood, 2017). A mentoring program is another way that can provide young people with positive experiences of farming and agribusiness. Zainal and Lata (2018) showed that informal mentoring attracts more youths into agribusiness, and mentors are role models that guide and share experiences to help individuals develop themselves. Mentoring is a two-way process of knowledge transfer whereby youths learn from more experienced/senior workers who also benefit from the new perspective of youths they mentor (Paisley, 2018). The process of mentoring is believed to help identify and improve professional areas that require development, provide guidance and continuous learning, and enhance productivity (Paisley, 2018). For instance, the YPARD mentoring program for young professionals aims to attract and retain young people in agriculture and

research and development (Paisley, 2018). It focuses on young professionals already involved and interested in careers in agriculture and agricultural research. Mentoring inspires young people to be involved in agriculture and provides them with skills, confidence, and a platform to explore and make use of their talents and capabilities. Role models can also influence young people's behavior through mass media such as radio and television soap operas.

6.2.2 Data collection methods and sampling techniques

Judgemental sampling procedure was employed. The sample of 210 respondents was selected. The sample focused on youth aged 18-35. Primary data were used for this study and intensive survey provided the basic cross-sectional data from 210 youths in the study area. Data were collected from youths for a period of 2 months using structured questionnaire. Primary data included data from household income, demographic, socio-economic and farm specific variables.

6.2.3 Empirical Model Specification

A univariate Probit regression model was used to identify critical factors most likely to affect the willingness of youths to participate in farming activities. Identification of key factors reported by youths to affect their decision to participate in a new farming activity would be useful for product development, adoption, and commercialization. This model had been empirically used in literature (Falusi, 1975; Rahm and Huffman, 1984; Hailu 1990; Etim and Benson, 2016). The empirical model for willingness to participate in a new agricultural activity is specified as:

$$\boldsymbol{Yi} *= \boldsymbol{P}(\boldsymbol{Y_I} = \mathbf{1}) = \boldsymbol{\beta xi} + \boldsymbol{\varepsilon i}$$

Where Yi is the "willingness to participate (WTP) in a new agricultural activity; Yi* is the estimated value of Yi (Yi* =1) if Yi> 0, and εi is the error term which follows a normal distribution (mean μ = 0, variance σ =1). P is the probability function, β is the vector of parameters to be estimated. Xi is the matrix of explanatory variables that affects the ith youth's decision to be willing to participate in a new agricultural activity. The dependent variable Yi or WTP takes a value of 1 for farmers who are willing to participate in a new farming activity and 0 otherwise.

Table 6.1 Description of Variables used in the Analysis of the Willingness of youths to Participate in Agricultural Activities.

Variable	Variable description	Type of measurement	Expected sign
AGE	Age of household head	Number in years	+/-
GEN	Gender of household head	0 = Male, 1 = Female	+
EDULVL	Number of years in school	Actual number in years	+
HHSZE	Number of household members	Actual number in years	+/-
MARSTA	Marital status	0 = Single; 1 = Married; 2 = Divorced; 3 = Widowed	+/-
HHINC	Household income	Actual number in Rands	+/-
LOWSHIP	Land ownership	1= Own land; 0=Otherwise	+
FRMSIZ	Total land owned by farmer	Actual number of hectares	+/-
DISTMKT	Distance to the market	Distance in Km	+
ACCCRE	Access to credit	1= Yes; 0=No	+
ACCEXT	Access to extension services	1= Yes; 0=No	+
GRPMEM	Group membership	1=Yes; 0=No	+
FRMEXPE	Farming experience	Actual number in years	+

6.3 Results and discussion

The major findings of the study are discussed in this section. A description of the factors that influence willingness and interest of youth in agriculture is presented. The findings from the Probit model estimation were presented here along with the discussion.

6.3.1 Socio economic factors of youth

The table below represents the results of socioeconomic characteristics of youth participation in agriculture.

Table 6.2 Socioeconomic characteristics of youth.

Variables	Mean
Age	0.27
Gender (male)	0.58
Marital status(single)	0.85
Education(secondary)	0.50
Household size	6.00
Markets	0.30
Credit	0.19
Extension services	0.42

The study results revealed that most of the sampled households were males. Similarly, to previous studies Douglas, et al., (2017); Cheteni, (2016) noted that male youths engaged more in agriculture compared to female youths. The results also revealed that most respondents are single than married, divorced, and widowed. The results showed that most of the youth were part-time farmers. Also, most of the youth had attained secondary level constitute. Therefore, young people have educational background (Cheteni, 2016). Household is 6. The results reveal that most of the youth lack access to markets, credit, and extension services.

6.3.2 Enterprise interest by youth

The table below show agricultural enterprises youth willing and interested to participate.

Table 6.3 Agricultural enterprises youth willing to engage in.

Agricultural enterprise	Mean
Poultry keeping (broilers and layers)	0.85
Animal production (such as pig and sheep)	0.60
Crop production (maize, cabbage, potatoes, and spinach)	0.72

The study revealed that majority of youth were willing to participate more on poultry. Poultry farming does not require a large investment to get started. To begin producing poultry, you just need a little amount of cash. Furthermore, most poultry species, such as chickens and hens, are inexpensive to begin keeping. Further, youth were willing to participate on crop production. Tsitsi (2019), noted that youth in agriculture are engaged in primary production food crops. Also, youth were willing to engage on livestock even though it requires lot of resources.

6.3.3 Reasons for willing to participate in agricultural enterprise.

The table below show the reason of youth willing to participate into agriculture.

Table 6.4 Reason of youth willing to engage in agriculture.

Reasons	Mean
Generate income	0.85
Reduce poverty and hunger	0.63
Reduce food consumption expenditure	0.77

The study showed the reason of youth willing to engage in agriculture. The results showed that most of the youth want to generate income. With scarce job opportunities in rural areas, agriculture can be a valuable tool to use to provide income (Zamxaka, 2015). Also, youth were willing to participate in agriculture to reduce food consumption expenditure as they are unemployed.

6.3.4 Challenges faced by youths.

The table below show challenges faced by youth willing and interested to participle in agriculture enterprises.

Table 6.5 Challenges faced by youth who are willing to participate in agriculture.

Challenges	Mean
Limited access to agricultural input (such as seeds, planting material, tools, and capital)	0.78
Lack of finance	0.91
Lack of knowledge, information, and advisory devices	0.66
Insufficient land	0.60

This study showed that although rural youth are willing and interest to participate in agricultural activities in the study area, they are still faced with some problems that limit their willingness in agriculture. These challenges included limited access to agricultural input (such as seeds, planting material, tools, and capital), lack of finance, lack of knowledge, information, and advisory devices and Insufficient land. These results agreed with Chisasa and Makina, (2017) who also noted that factors influencing the willingness of youths to participate in agricultural activities include access to land, savings, lack of information, and credit.

6.3.1 Factors influencing willingness and interest of youth in agriculture.

The study used Probit model to analyse factors influencing the willingness and interest of youth to participate in agricultural enterprises. Probit was used to model binary outcomes variables.

Table 6.6: Probit model estimates the factors influencing willingness and interest of youth.

Variables	Coefficient	SE	P>z
Age	0.078	0.005	0.016**
Education	0.0085	0.098	0.011*
Household size	0.088	0.087	0.086*
Household income	0.043	0.008	0.093*
Membership in social groups	0.090	0.022	0.014**
n	**210**		
LR_{X^2} ($p> X^2$)	**35.61(0.00)**		
Pseudo- R^2	**0.45**		
Log- likelihood	**-18. 02**		

The results revealed that age was positively signed and significantly ($P < 0.05$) impact the willingness in agriculture. Education had a coefficient of 0.0085 and significant ($P<0.10$). This implies that youths who have acquired some forms of education were more likely to adopt and participate in new farming activities earlier and faster than the uneducated ones. This is in argument with Mehrotra and Parida (2019) noted that youth with education tends to look for employment in other sectors.

The variable household was positively significant ($P<0.01$). This implies that youths in families with higher incomes were likely to adopt new ideas and willing to be involved in new agricultural activities. Similar, findings were obtained in a recent and empirical study by Etim

and Benson (2016) in their study of vegetable farmers willingness to pay for organic fertilizer in the humid tropic. The coefficient of household size was negative and significant (P<0.05) signalling that youths in larger sized families were less likely to adopt innovative ideas and participate in new agricultural activities. This is in argument with the findings of Ntshangase et al (2018) noted that household with enormous size are more likely to engage in agriculture.

Household income was positively significant (P<0.01). This implies that youths in families with higher incomes were likely to adopt innovative ideas and willing to be involved in new agricultural activities. This agreed with the study of Etim and Udoh (2018) who noted that household with higher income are likely to participate in agriculture.

Lastly, the results revealed that membership in social groups is positive and significant (P<0.05). This implies that youths who are in membership in social groups were more likely to engage in agriculture. The findings are supported by Greenhow and Lewin (2019) who noted that membership group can be able to help youth to learn and adopt modern technologies.

6.4 Conclusion and recommendations

The study looked at the factors that influence youths' willingness to participate in new agricultural activities. Biased and consistent estimates were obtained using the probit model analysis. Age, household income, household size, and membership in social groups were found to be the most principal factors influencing youths' willingness to participate in agricultural activities. According to the findings, younger youths will be more willing to participate in new farming activities than older youths. Furthermore, youths with higher incomes were more likely to engage in new agricultural activities than those with lower incomes. Policy decisions should be pursued to increase the incomes of youths, particularly the poorest of the poor.

LIST OF REFERENCES.

Akrong, R. and Kotu, B.H., 2022. Economic analysis of youth participation in agripreneurship in Benin. Heliyon, 8(1), p. e08738.

Bagson, E. and Kuuder, C.J.W., 2013. Assessment of a small-scale irrigation scheme on household food security and leisure in Kokoligu; Ghana.

Bahta, Y.T., Owusu-Sekyere, E. and Tlalang, B.E., 2018. Assessing participation in homestead food garden programmes, land ownership and their impact on productivity and net returns of smallholder maize producers in South Africa. *Agrekon*, *57*(1), pp.49-63.

Bouichou, E.H., Abdoulaye, T., Allali, K., Bouayad, A. and Fadlaoui, A., 2021. Entrepreneurial intention among rural youth in Moroccan Agricultural Cooperatives: the future of rural entrepreneurship. Sustainability, 13(16), p.9247.

Cavicchioli, D., Bertoni, D. and Pretolani, R., 2018. Farm succession at a crossroads: The interaction among farm characteristics, labour market conditions, and gender and birth order effects. *Journal of Rural Studies*, *61*, pp.73-83.

Cavicchioli, D., Bertoni, D. and Pretolani, R., 2018. Farm succession at a crossroads: The interaction among farm characteristics, labour market conditions, and gender and birth order effects. Journal of Rural Studies, 61, pp.73-83.

Cheteni, P., 2016. Youth participation in agriculture in the Nkonkobe district municipality, South Africa. Journal of human ecology, 55(3), pp.207-213.

Chisasa, J. & Makina, D. 2014. A diagnosis of rural agricultural credit markets in South Africa: empirical evidence from Northwest and Mpumalanga provinces, 9(2), pp.100-111.

Deakins, D., Glancey, K., Menter, I. and Wyper, J., 2005. Enterprise education: The role of head teachers. *The International Entrepreneurship and Management Journal*, *1*, pp.241-263.

Douglas, K., Singh, A.S. and Zvenyika, K.R., 2017. Perceptions of Swaziland's youth towards farming: A case of manzini region. *Forestry Research and Engineering International Journal*, *1*(3), pp.83-89.

Emeka, O., 2020. Intra-African trade, macroeconomic conditions, and competitiveness in Africa. *Studies in Business and Economics*, *15*(1), pp.171-193.

Etim, N.A. and Benson, D., 2016. Willingness to pay for organic fertilizer by resource poor vegetable farmers in the Humid Tropic. *Journal of Agriculture and Ecology Research International*, *6*(2), pp.1-11.

Etim, N.A.A. and Udoh, E.J., 2018. Willingness of youths to participate in agricultural activities: Implication for poverty reduction. *Am. J. Soc. Sci*, *6*, pp.1-5.

Etim, N.A.A. and Udoh, E.J., 2018. Willingness of youths to participate in agricultural activities: Implication for poverty reduction. Am. J. Soc. Sci, 6, pp.1-5.

Falusi, A. O., (1975) Application of multivariate probit to fertilizer use decision: sample survey of farmers in three states in Nigeria. J. Rural Econ. Development, 9(1), 49-66

Gass, M., Hardy, C., Norton, C. and Priest, S., 2022. Involuntary youth transport (IYT) to treatment programs: best practices, research, ethics, and future directions. *Child and Adolescent Social Work Journal*, *39*(3), pp.291-302.

Gouda, S., Kerry, R.G., Das, G., Paramithiotis, S., Shin, H.S. and Patra, J.K., 2018. Revitalization of plant growth promoting rhizobacteria for sustainable development in agriculture. *Microbiological research*, *206*, pp.131-140.

Gray, B., Kirkwood, J., Monahan, E. and Etemaddar, M., 2019. Internal factors influencing effective opportunity identification in a Tongan social enterprise. *Journal of Small Business & Entrepreneurship*, *31*(4), pp.323-347.

Hailu, Z., (1990) The adoption of modern farm practices in African agriculture: Empirical evidence about the impact of household characteristics and input supply systems in the northern region of Ghana. Nyankpala Agricultural Research Report, 7

Hornbeck, D.W. and Salamon, L.M., 1991. Human capital and America's future: An economic strategy for the'90s. *(No Title)*.

Kirkwood, T.B., 2017. The disposable soma theory. *The evolution of senescence in the tree of life*, pp.23-39.

Kundu, A. and Das, S., 2022. Occupational diversification as livelihood strategy among the agricultural labour households of West Bengal, India. *Management and Labour Studies*, *47*(1), pp.40-58.

Kwenye, J.M. and Sichone, T., 2016. Rural youth participation in Agriculture: Exploring the significance and challenges in the control of agricultural sector in Zambian. *RUFORUM Working document series*, *14*(1), pp.473-477.

Maja, M.M. and Ayano, S.F., 2021. The impact of population growth on natural resources and farmers' capacity to adapt to climate change in low-income countries. *Earth Systems and Environment*, *5*, pp.271-283.

Mehrotra, S. and Parida, J.K., 2019. India's employment crisis: Rising education levels and falling non-agricultural job growth.

Morais, M., Binotto, E., and Borges, J.A.R., 2017. Identifying beliefs underlying successors' intention to take over the farm. *Land use policy*, *68*, pp.48-58.

Nhapi, T.G., 2022. Rural Youth Migration and Development in Zimbabwe. In *Youth Exclusion and Empowerment in the Contemporary Global Order: Existentialities in Migrations, Identity, and the Digital Space* (pp. 65-83). Emerald Publishing Limited.

Nicolétis, É., Caron, P., El Solh, M., Cole, M., Fresco, L.O., Godoy-Faúndez, A., Kadleciková, M., Kennedy, E., Khan, M., Li, X. and Mapfumo, P., 2019. Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition. A report by the High-Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security.

Ntshangase, N.L., Muroyiwa, B. and Sibanda, M., 2018. Farmers' perceptions and factors influencing the adoption of no-till conservation agriculture by small-scale farmers in Zashuke, KwaZulu-Natal Province. *Sustainability*, *10*(2), p.555.

Paisley, L.N., 2018. *The role of conversation in how educational services assistant superintendents lead change* (Doctoral dissertation, Brandman University).

Rahm, M.R. and Huffman, W.E., 1984. The adoption of reduced tillage: the role of human capital and other variables. *American journal of agricultural economics*, *66*(4), pp.405-413.

Ruhl, J., 2021. *Wild edible plants in Nova Scotia: Food tourism environmental scan* (Doctoral dissertation, Mount Saint Vincent University).

Som, S., Burman, R.R., Sharma, J.P., Padaria, R.N., Paul, S., and Singh, A.K., 2018. Attracting and retaining youth in agriculture: challenges and prospects. *Journal of Community Mobilization and Sustainable Development*, *13*(3), pp.385-395.

Tsitsi, A.D., 2019. *Influence of selected factors on participation of rural youth in agriculture in, Malawi Balaka district* (Doctoral dissertation, Egerton University).

Van Auken, H., Fry, F.L. and Stephens, P., 2006. The influence of role models on entrepreneurial intentions. Journal of Developmental Entrepreneurship, 11(02), pp.157-167.

World Bank (2008). World development report 2008: Agriculture for development. Washington D. C., World Bank

Zainal, S.R.M. and Lata, L., 2021. Enhancing innovative work behaviour: the role of servant leadership and creative self-efficacy. *On the Horizon: The International Journal of Learning Futures*, *29*(2), pp.33-51.

Zamxaka, X., 2015. Factors affecting participation rates in farming in the rural areas of South Africa: case of Amathole District Municipality.

CHAPTER 7

ASSESSING SOCIO-ECONOMIC IMPACT OF YOUTH ENGAGEMENT IN AGRICULTURAL ENTERPRISE FOR EMPLOYMENT CREATION AND POVERTY ALLEVIATION IN UMZIMVUBU LOCAL MUNICIPALITY.

Abstract

In South Africa, unemployment has been comparatively high and is still rising, especially for young people and those living in rural areas. This has resulted in socio-economic problems such as food insecurity and poverty. Despite unemployment policies and strategies, the government has promoted entrepreneurship as a solution to youth unemployment. Rural youth are exposed to agriculture, which provides an excellent opportunity for self-employment. However, youth are uninterested in agriculture because they perceive it to be low-status and dirty, with little potential for luxurious lifestyles. Therefore, this study assessed the socio-economic impact of youth engagement in agricultural enterprises for employment creation and poverty alleviation in Umzimvubu Local Municipality. Primary data for this study were collected through a well-structured questionnaire from youth aged 18-35. Judgemental sampling techniques were used to draw an appropriate sample of 210 of youth for this study. Propensity score matching was used to analyse data. The PSM results reveal that youth participation in agriculture positively affects income. Hence, youth participation in agriculture can help generate an increase in household income and reduce poverty.

Keywords: Youth, poverty, propensity score matching, agriculture

7.1 Introduction

In developing countries, youth unemployment is a challenge and has received the increasing attention in policy formation (Bello, 2022). Africa faces constraints to increase rural economic growth which has the potential to create job opportunities. Also, Osabohien et al (2021) noted that Africa has highest proportion of people living in extreme poverty, comprising about 413.3 million. The high population growth rate, poor economic growth and an ill-functioning education system has resulted in an increased level of unemployment, especially among the youth (Mama, 2020). Elias,et al, (2018) suggested that youth unemployment is a significant driver of poverty. The unemployment rate among the youth is higher irrespective of education level (Aun, 2020). For instance, youth unemployment remains a major issue in South Africa, with the unemployment rate of 51.1% (Stats SA, 2018). If suitable human capital investment initiatives are implemented, high youth population should be viewed as an asset for the country's development (Lincaru e al, 2018). Involvement of young people in agriculture is thus a must, with several direct and indirect benefits (Zulu et al, 2021). It will provide job opportunities and income to unemployed young people, which will enhance agricultural productivity and alleviate poverty (Afande, 2015). Indirectly, it will significantly lower the criminal and unlawful activities that teenagers may engage in because of a lack of productive job (Apel and Diller 2017). Therefore, afande (2015) noted that due to high unemployment rate, urgent policy and programs have become imperative, especially in the agricultural sector. As a result, government has made several efforts to encourage youth into agricultural production. Additionally, there have been various agricultural development programs to stimulate rural livelihoods, generate employment and ensure food security. Also, Bello (2022) noted that Youth-in-Agribusiness program was created to assist youth people in agricultural industries such as crop, animal production and agro-processing.

Empirical studies have focused on investigating impacts of youth participation agriculture which means there is still knowledge gaps regarding socio-economic impact of youth participating in agriculture on employment creation and poverty. For instance, fawole et al (2019) found that young people were willing and interested to participate in agriculture when favourable and enabling environment agriculture is provided. Additionally, Muthomi (2017) revealed that the absence of suitable incentives, poor agricultural skills and training, limited access to funds, and poor agricultural prospects discouraged young people from getting involved in farming.

There are factors that influence the youth participation in farming which include attitude, acceptance, and knowledge (Magagula and Tsvakirai, 2020). Additionally, demographic characteristics, access to rural credit facilities, access to land, and un-availability of alternative employment opportunities as well as youth perceptions are influencing youth participation in farming (Prosper et al, 2015). Affordable loans from the government and other supporters, subsidized farming inputs, market for agricultural produce and availability of agricultural information and resource centres also influence the youth into agriculture (Onyiriuba et al, 2020). This has resulted to decline in the contribution of local agriculture to rural economy. Further, little is known about the social status of rural young people. Therefore, this study seeks to have an in-depth understanding of the socio-economic impact of agriculture on youth' s employment creation and income generation.

7.2 Materials and Methods

7.2.1. Sampling procedure and data collection

A sample of 210 respondents was selected using a judgemental sampling technique. Using this technique, the researcher was able to select volunteers based on the study-specific characteristics that would best answer the main research question. The young people ranged in age from 18 to 35. Primary data was collected using structured questionnaires. 38 young people in the study area were used to pre-test the questionnaire. Pretesting helped determine if respondents understand the questions and whether they can perform the tasks or have the information required by them. For most items, pre-tests also provided the most direct evidence for the validity of the questionnaire data. The questionnaire was translated into IsiXhosa (the native language in the study area) for effective communication with the respondents and to elicit relevant, credible, and reliable information from them.

7.2.2 Analytic framework

Propensity score matching (PSM) was used to analyze the effects of youth participating in agriculture. PSM matches two groups of individuals that participated in an event with those that did not participate in an event but having similar propensity scores Austin et al, (2021). The above author noted that PSM also involves the removal of all the values of individuals who did not participate and have no similar propensity scores with any of the participated individuals. According to Lobut (2017) and Mdoda et al, (2019) specified that one of the benefits of this method, unlike other methods, highlights which variable affects the likelihood

of participation in a certain event. In this study, the method was used to estimate the effects of youth participation in agriculture on income and poverty.

This means the method matched the two groups of youths participating in agriculture and those who do not. In doing so, the method involved six steps: selection of variables, performing propensity scores, selection of a matching method, creation of matches, evaluation of the quality of the match, and estimation of the effect of the intervention.

For the first step, the variables to be selected were independent variables that can influence both participation and the livelihood outcome and must have been used in the previous research related to the treatment and outcomes measured (Pan, 2014). After the selection of variables, the logit regression model was used for calculating propensity scores. The model was the most applied among the different techniques used to calculate propensity scores such as discriminant analysis and Mahalanobis distance (Austin, 2011). The above author emphasized that the choice of the logit regression model is because it is among the best models at describing data and explaining the relationship between two or more variables. This model had a dependent variable (Willingness to participate) that has two possible outcomes. Youths were assigned a value of 1 if the youth is participating (treatment) and 0 if the youth is not (control) giving a set of selected independent variables in the first step. The model is statistically expressed as in equation 1.

$$PR(T_i|X_i = \beta_0 + \beta_1 + \beta_2 + \varepsilon_i \ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Where (X_i) is a youth, (T_i) is a dependent variable (participating in agriculture) equals 1 if the youth is participating in agriculture and 0 otherwise, β_0, $\beta_1 and\ \beta_2$are coefficients of the observed youth's income and poverty respectively and $\varepsilon_i$is the error term.

After calculating the propensity score, it was easy to match the two groups based on the scores (Stuart & Rubin, 2008). Before matching the score, the right method for matching youths who are participating in agriculture to those who are not participating was selected. Among the five matching methods available Nearest-neighbour matching (NN) with replacement was used, which allows a single treatment unit to be matched to multiple units in the control group. This matching technique minimizes the propensity score distance between the treatment unit and the nearest units in the control group, thereby reducing bias (Dehejia & Sadek, 2002). After the matching is done the next step was to evaluate the match's quality to ensure the control group has a distribution of propensity scores like the treatment group. To evaluate the quality of match

the study will use Rubin's B and Rubin's R. Rubin's B shows the standardized difference of the means of the propensity score in the unmatched and matched groups and the value should be lower than 0.25. In contrast, Rubin's R is the ratio of the treated to control variances of the propensity scores and should be anywhere between 0.5 and 2 (Rubin, 2001). After balancing the quality of the match, the estimation of outcomes will take place using the average treatment effect on the treated (ATT) and is statistically expressed as:

$$ATT = [E\{Y_{1i} - Y_{0i}T = 1, p(X_1)\}] = [E\{Y_{1i}T = 1, p(X_i)\} - E\{Y_{0i}T = 0, p(X_i)\}|T = 1 \ldots (2)$$

Where ATT is the Average Treatment Effect on the Treated, Y_i is the mean outcome of a target variable, e.g., output and T is a dummy variable, T=1 for participants (participate in agriculture) and T=0 otherwise. Equation (2) shows that the average outcomes on non-participating youths who are like participating individuals based on similar propensity scores, p(X), are a substitute for the counterfactual mean.

7.3 Results and discussion

The major findings of the study are discussed in this section. A description of the socio-factors that contribute the impact of youth participation in agriculture for employment creation is presented. The findings from the Propensity Score Matching (PSM) estimation were presented here along with the discussion for each econometric finding.

7.3.1 Socio economic characteristics of young people in agriculture.

The sampled 210 of youth revealed that 135 youth had participated in agriculture and 75 of the youth did not participate. Table 7.1 shows the socio-economic characteristics of the youth participants and non-youth participants. The socio-economic characteristics include age, gender, education level, access to extension services, household size, farm size, farming experience.

Table 7.1: Socio- economic characteristics of youth in Umzimvubu Local Municipality youth participants and non- participants

Characteristics	Youth participants (n= 135)	Non- youth participants (n= 75)	Overall (n= 210)
	Mean	Mean	Mean
Age	0.25	0.30	0.27
Gender (male)	0.68	0.58	0.67
Educational level (secondary level)	0.62	0.38	0.68
Employment(unemployed)	0.48	0.56	0.12
household size	5.00	8.00	10.00
Extension services	0.48	0.41	0.55
Farm size (Ha)	0.52	0.58	0.55
Farming experiences (year)	10.44	2.36	7.42

Source: Field Survey (2023)

The results showed that most young people who participate in agriculture were likely to be in the average age of 27. This was attributed to the assumption that this is the age when they are more active and are likely to engage in agriculture and job hunting for their employment and generating income (Douglas, et al., 2017). The results showed that most of the sampled households were males (68.10%). Similarly, to previous studies Douglas, et al., (2017); Cheteni, (2016), male youths (63.7%) engaged more in smallholder farming compared to female youths (36.3%). The results showed that (46.67%) were unemployed. The findings are congruent with those of Douglas et al. (2017), who discovered that most of the rural youth are unemployed. Many young people from rural areas struggle to break into the workforce due to a lack of resources and networks for job searches. The results showed that youth had secondary education. Similarly, to a previous study Cheteni, (2016) found that most of the rural youth have educational backgrounds. The average household size was 6 people per household and was completely reliant on family labour and hire externally. The results agreed with Mdoda and Obi, (2022) that the average family size is 6 people per household and do not have the financial might to hire contract workers. From the results, 48% of youth had access to extension and advisory services. Adequate access to extension services equips farmers with necessary skill. These results correspond with Kassem et al., (2021) who found that having access to

extension services was a principal factor in the production and marketing by imparting relevant input knowledge through trainings aided though information and demonstration strategies. Results show that youth have average 10 years of experience in agriculture. There, this kind of experience suggested that the youth are aware of the industry, able to take informed decision with regards to the farming enterprise and made good relations in the market.

7.3.2 Propensity score matching estimation of the factors influencing the participation of youth in agriculture.

The study made use of the Propensity Score Matching (PSM) methods to match the variable that affect treatment (Zang et al., 2020). The leading role of the PSM was not necessarily to accurately predict selection but to strike balanced in the observed distribution of the covariates across participants and non- participants (Grose et al., 2020; Ye et al., 2020). The first step entails generating propensity scores for the youth participating in agriculture by employing a logit model, with a binary dependant variable equal to 1= participants and 0 non-participants.

Table 7.2 Logit estimation of propensity scores

Variables	Coefficient	SE	P>z
Age	0.078	0.08	0.002***
Gender	0.434	0.92	0. 004***
Employment status	-0.04	0.08	-0.037**
Educational level	0.0.90	0.33	0.014**
Household size	0.14	0.08	0.008***
Markets	0.58	0.50	0.015**
Land	1.59	0.78	0.013**
Extension services	0.79	0.44	0.019**
Constant	0.047	0.082	1.976
n	**210**		
LRX^2 (p> X^2)	**55.61(0.00)**		
Pseudo- R^2	**0.55**		
Log- likelihood	**-21. 02**		

Note: SE= Standard Error, *, **, * represent significance at 10%, 5% and 1%**

The logit regression analysis revealed significant socio-economic factors influencing young people's participation in agriculture. Age was a positive factor, youths have the potential to overcome some of the major constraints to expanding agricultural production in the country,

because they are often more open to innovative ideas and practices than aged farmers Barau and Adesiji (2018). Gender plays a positive role, with an increase in male participants increasing the production of agriculture. According to Douglas, et al., (2017); Cheteni, (2016), male youths engaged more in smallholder farming compared to female youths. This could be because of the physical nature of agriculture related activities (Mbah et al. 2016).

Education had a negative relationship with participation of youth, with a unit increase in education reducing the likelihood of participation. However, an increase in household size also positively influenced the participation of youth, as it saves on casual labor and consolidates a farmer's decision to participate. This result of this study was in line with Mdoda and Obi, (2019) who noted that, an increase in household size means an increase in labour.

Extension services had a positive coefficient at 5%, suggesting that a unit increase in extension and advisory services will increase participation of youth in farming. The availability of resources such as land and markets had a positive coefficient at 1%, meaning that the more resources are safeguarded from extinction, the more likely young people will be to participate in agriculture.

7.3.3 The effect of youth participation on income productivity.

The study employed the nearest neighbour, Radius, Kernel, and stratified matching to assess the effects of youth participation on income productivity. Table 7.3 illustrates the outcomes from the Propensity Score Matching model that was measured for observances with the action magnitude model results.

Table 7.3 PSM to measure the effects of youth participation on income productivity.

Matching method	*ATT*	*Std Err.*	*t*	*bias*
Nearest neighbor	61.76	351.76	0.176	-30.72
Radius	-192.17	522.50	-0.368	16.40
Kernel	-158.58	512.35	-0.310	-462.74
Stratified	-166.36	269.67	-0.617	22.88

The corresponding outcomes suggested that participation of youth in agriculture has profitable return result on income productivity. The matching from the nearest neighbour and Kernel matching methods point to the fact that participation of young people had a positive effect on income revenue. These findings were consistent with Nyang'au et al., (2020), who established that youth participation in agriculture increases when they discover an incline in the income revenues. Matches specify that participation of youth had a positive effect in their livelihood through increases in production that result to higher returns. The results showed that an increase in the production of farming by youth, increases farm revenues and at most, improves standard of living and alleviate poverty.

7.3.4 Distribution of the propensity score for the treated and the control group after five-to-one nearest-neighbour matching

Figure 7.1 shows that the results obtained were reliable as there was matching between youth who participate and do not participate in agriculture.

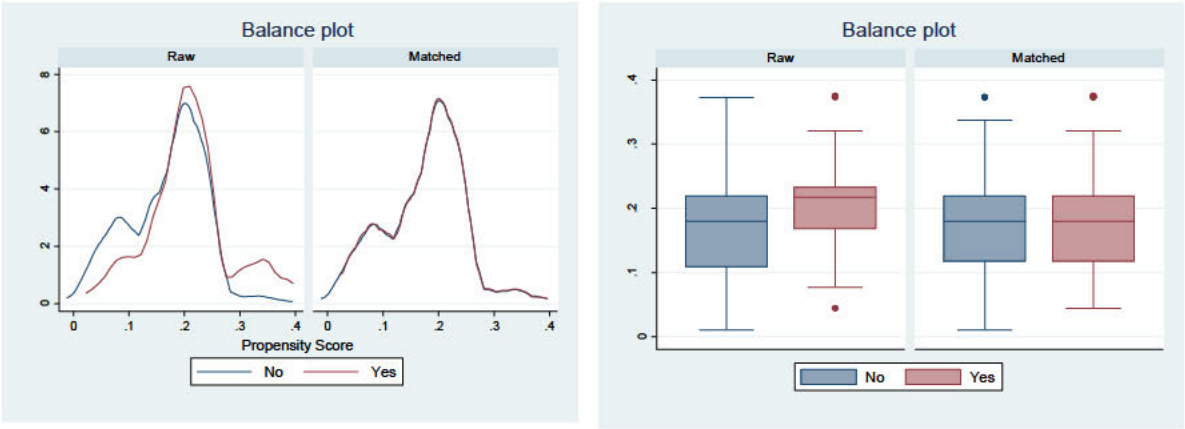

Figure 7.1: (a) Kernel density plot; (b) Box plot

Figure 7.1 present the density distribution of the propensity score for participants and non-participants. The left box plot shows the propensity score distribution for the participants while the right box plot shows the propensity score distribution for the non-participants. The kernel-based matching and box plot were employed to estimate the impact. According to the PSM findings, young participation in agriculture had a beneficial impact on income. As a result, youth participation in agriculture can assist boost household income and alleviate poverty. Although non-farm income was positive but not statistically significant, it may indicate the need to encourage young participation in various secondary activities to supplement home income, particularly during the off-season.

7.3 Conclusion and recommendations

The study aimed at assessing socio-economic impact of youth participation in agriculture for employment creation and poverty alleviation. The study concluded that, young participation in agriculture has a beneficial impact on income. Outcomes reveal that youth participation in agriculture increase agricultural production revenues which will boost household income and alleviate income. The study recommends that policymakers; government (National Department of Agriculture, Land Reform, and Agrarian) must maximize investment in endorsing start up on agricultural projects as they give hope in bettering livelihood for youth participating in agriculture. The study suggests that civil extension agents must commit themselves with the task of mastering educational campaigns that will train youth about inputs, marketing strategies, technological advancements that will assist youth in increasing output and agricultural revenue. The is a huge gap that private sector can fill to take initiative that will improve Agro businesses.

LIST OF REFERENCES

Afande, F.O., 2015. The factors that affect accessibility to credit services by small scale sugarcane farmers in Kenya: a case of Bungoma County, Kenya. *Developing Country Studies*, *5*(5), pp.99-114.

Apel, A.B. and Diller, J.W., 2017. Prison as punishment: A behavior-analytic evaluation of incarceration. *The Behavior Analyst*, *40*, pp.243-256.

Aun, L.H., 2020. Unemployment among Malaysia's youth: Structural trends and current challenges.

Austin, P.C., 2011. An introduction to propensity score methods for reducing the effects of confounding in observational studies. *Multivariate behavioral research*, *46*(3), pp.399-424.

Austin, P.C., Rubin, D.B. and Thomas, N., 2021. Estimating adjusted risk differences by multiply imputing missing control binary potential outcomes following propensity score-matching. *Statistics in Medicine*, *40*(25), pp.5565-5586.

Barau, A.A. and Adesiji, G.B., 2018. Socioeconomic determinants influencing the willingness of agriculture undergraduates to participate in agripreneurship in Northwest Nigeria. *International Journal of Agricultural Management and Development*, *8*(1), pp.25-34.

Bello, L.O., Baiyegunhi, L.J., Danso-Abbeam, G., Ogunniyi, A.I., Olagunju, K., Abdoulaye, T., Manyong, V., Bamba, Z. and Awotide, B.A., 2022. Assessing the impact of Youth-in-Agribusiness Program on poverty and vulnerability to poverty in Nigeria. *Agriculture*, *12*(5), p.735.

Cheteni, P., 2016. Youth participation in agriculture in the Nkonkobe district municipality, South Africa. Journal of human ecology, 55(3), pp.207-213.

Douglas, K., Singh, A.S. and Zvenyika, K.R., 2017. Perceptions of Swaziland's youth towards farming: A case of manzini region. *Forestry Research and Engineering International Journal*, *1*(3), pp.83-89.

Elias, M., Mudege, N.N., Lopez, D.E., Najjar, D., Kandiwa, V., Luis, J.S., Yila, J., Tegbaru, A., Ibrahim, G., Badstue, L.B. and Njuguna-Mungai, E., 2018. Gendered aspirations and occupations among rural youth, in agriculture and beyond: A cross-regional perspective. *Journal of Gender, Agriculture and Food Security*.

Fawole, W.O. and Ozkan, B., 2019. Examining the willingness of youths to participate in agriculture to halt the rising rate of unemployment in Southwestern Nigeria. *Journal of Economic Studies*, *46*(3), pp.578-590.

Grose, E., Wilson, S., Barkun, J., Bertens, K., Martel, G., Balaa, F. and Abou Khalil, J., 2020. Use of propensity score methodology in contemporary high-impact surgical literature. *Journal of the American College of Surgeons*, *230*(1), pp.101-112.

Kassem, M.A., Hosny, K.M., Damaševičius, R. and Eltoukhy, M.M., 2021. Machine learning and deep learning methods for skin lesion classification and diagnosis: a systematic review. *Diagnostics*, *11*(8), p.1390.

Lincaru, C., Pirciog, S., Grigorescu, A. and Tudose, G., 2018. Low-Low (LL) high human capital clusters in public administration employment-predictor for digital infrastructure public investment priority-Romania case study. *Entrepreneurship and Sustainability Issues*, *6*(2), p.729.

Lobut, C. and FOUGÈRE, D., 2017. *Evaluation of the impact of computer-aided instruction on student performance* (Doctoral dissertation).

Magagula, B. and Tsvakirai, C.Z., 2020. Youth perceptions of agriculture: influence of cognitive processes on participation in agripreneurship. *Development in practice*, *30*(2), pp.234-243.

Mama, M.L., 2020. *Promoting agriculture amongst the black youth of South Africa: the role the sector must play in creating employment, alleviating poverty, and achieving equitable economic growth* (Doctoral dissertation, Stellenbosch: Stellenbosch University).

Mbah, E.N., Ezeano, C.J. and Agado, M.O., 2016. Effects of rural-urban youth migration on farm families in Benue state, Nigeria. *International Journal of Agricultural Research, Innovation and Technology (IJARIT)*, *6*(2355-2020-1599), pp.14-20.

Mdoda, L. and Obi, A., 2019. Analysis of profitability of smallholder irrigated food plots in the Eastern Cape province of South Africa. *Journal of Agribusiness and Rural Development*, *53*(3), pp.225-232.

Mdoda, L., Obi, A., Ncoyini-Manciya, Z., Christian, M. and Mayekiso, A., 2022. Assessment of profit efficiency for spinach production under small-scale irrigated agriculture in the Eastern Cape Province, South Africa. *Sustainability*, *14*(5), p.2991.

Muthomi, E., 2017. Challenges and opportunities for youth engaged in agribusiness in Kenya.

Nyang'au, Martha K., Washington A. Ochola, Evans A. Basweti, Albert M. Getabu, & Samson N. Maobe. 2020. Influence of Participation of School Youth in Decision Making During Showcasing Success Stories by Young Agripreneurs on Implementation of Agricultural Programmes. International Journal of Research in Social Science and Humanities (IJRSS) Volume 1, No. 4., pp. 53– 60.

Onyiriuba, L., Okoro, E.O. and Ibe, G.I., 2020. Strategic government policies on agricultural financing in African emerging markets. *Agricultural Finance Review*, *80*(4), pp.563-588.

Osabohien, R., Wiredu, A.N., Nguezet, P.M.D., Mignouna, D.B., Abdoulaye, T., Manyong, V., Bamba, Z. and Awotide, B.A., 2021. Youth participation in agriculture and poverty reduction in Nigeria. *Sustainability*, *13*(14), p.7795.

Pan, D., 2014. The impact of agricultural extension on farmer nutrient management behavior in chinese rice production: A household-level analysis. *Sustainability*, *6*(10), pp.6644-6665.

Prosper, J.K., Nathaniel, N.T and Benson, H.M. (2015). Determinants of rural youth's participation in agricultural activities. International Journal of Economics, Commerce and Management, vol. 3(2), pp. 2348 -2386.

Stuart, E.A. and Rubin, D.B., 2008. Best practices in quasi-experimental designs. *Best practices in quantitative methods*, pp.155-176.

Ye, F., Yu, P., Li, N., Yang, A., Xie, X., Tang, H. and Liu, P., 2020. Prognosis of invasive micropapillary carcinoma compared with invasive ductal carcinoma in breast: A meta-analysis of PSM studies. *The Breast*, *51*, pp.11-20.

Zang, H., Zhou, J., Marshall, M.R., Chadwick, D.R., Wen, Y., and Jones, D.L., 2020. Microplastics in the agroecosystem: are they an emerging threat to the plant-soil system? *Soil Biology and Biochemistry*, *148*, p.107926.

Zulu, L.C., Djenontin, I.N. and Grabowski, P., 2021. From diagnosis to action: Understanding youth strengths and hurdles and using decision-making tools to foster youth-inclusive sustainable agriculture intensification. *Journal of Rural Studies*, *82*, pp.196-209.

CHAPTER 8

SUMMARY, CONCLUSION AND POLICY RECOMMENDATIONS

8.1 Introduction

The study is summarized in this chapter, along with the conclusions. This chapter also analysed appropriate policy solutions that may encourage youth to engage in agricultural enterprise in ULM. The summary, results and policy recommendations are all provided in this chapter.

8.2 Summary

The agricultural sector is measured as a leading employment investor in emerging markets and plays a fundamental part in the economic growth and poverty alleviation ambition of most developing countries. The agricultural sector is the only sector that ensures food security in the world, especially in low-income countries as they generate their livelihoods from agriculture. To sustain agricultural development, an active population comprising youths must be encouraged and involved to participate effectively in agricultural activities. However, youth are said to be not attracted to agriculture and have negative perception towards agriculture. There are several factors responsible for the low participation of youths in agriculture (such as lack of access to land, finance, markets, practical training, and incentives). To address these issues the study poses the question: What is the profile of youth involvement in agricultural enterprise? What is the nature of youth perceptions and their influence on youth's interest in engaging in agricultural enterprises? What are the challenges and opportunities for youth in participating in agricultural enterprises? What are the factors influencing the willingness and interest of youth participation in agricultural enterprises in the study area? What contribution and effect does agricultural enterprise have on employment creation and poverty alleviation? The conduction of this study is beneficial as there has been limited study conducted on perceptions, aspirations, willingness to participate in agricultural enterprises.

Literature reviewed that agriculture plays a significant role in the country's economy. Agriculture has the potential to create employment opportunities, reduce poverty and secure food security. Therefore, it is important to sustain the agricultural sector by involving young people to participate in agriculture as the sector is dominated by old farmers. The literature reviewed that youth had negative perception towards agriculture. Youth view agriculture as not cool and not able to meet their livelihoods. They prefered white collar jobs in urban areas.

There are factors that contribute to negative perception of which include access to land, access to finance, poor market, access to agricultural inputs and lack of infrastructure.

The third chapter aimed at answering the question of what factors are determining youth involvement in agriculture in Umzimvubu Local Municipality. Primary data for this study were collected through a well-structured questionnaire from youth aged 18-35. Judgmental sampling technique was used to draw an appropriate sample of 210 youth. Characteristics of youth and their involvement in agricultural enterprise were analyzed using descriptive and inferential statistics. The results showed that most youth were not currently involved in agricultural enterprise. The results also showed that male youth more likely to engage in agriculture that female. Youth currently involved in agriculture had tertiary qualifications. Most of the youth not currently involved in agriculture had high school (78.99%), primary education (75.41%) and tertiary education (70.59%). Hence, this study recommends that there is a need of special efforts to attract, train and retain the rural youth in agriculture by developing more favorable attitude towards agriculture by transforming and making it more agribusiness oriented, scientifically attractive, and economically profitable.

The fourth chapter aimed at answering the question perceptions and aspirations of youth in agricultural sector in Umzimvubu Local Municipality. This study employed a judgemental sampling method to collect data from 210, through a structured questionnaire. Principal component analysis was used to determine youths' perceptions and aspiration towards agriculture while Probit used to investigate the socio-economic factors. The results showed that youth had neutral perceptions and aspiration towards agriculture and aspiration does not affect their decision making. The study discovered that young people do participate in smallholder farming and other agricultural-related activities. However, youth in general have poor perception towards agriculture, therefore, the image of agriculture needs to be improved and agricultural inputs, markets and credit should be easily assessable.

The fifth chapter aimed at answering the question what challenges and opportunities of youth participation in agricultural enterprises in Umzimvubu Local Municipality. Quantitative data was collected from youth through structured questionnaire. The data were analyzed using descriptive analysis and Tobit regression model. The results showed that major challenges faced by youth engaging in agriculture include poor markets, insufficient water, shortage in initial funding and lack of information, lack of access to technical assistance and access to mentors. The results also revealed that youth find interest in poultry (broilers and layers) and

horticulture. The study recommends that policymakers, government (National Department of Agriculture, Land Reform, and Agrarian) must maximize investment in endorsing start up agribusiness projects as they give hope in bettering livelihood for young people.

The sixth chapter aimed at answering the question what the factors are influencing the willingness and interest of youth participation in agricultural enterprises in Umzimvubu Local Municipality, Eastern Cape, South Africa. Primary data for this study were collected through a well-structured questionnaire from youth aged 18-35. Data was analysed using descriptive statistics and the univariate Probit regression model. The results revealed that age, gender, educational level, and household size were positively significant implying that youths were more likely and willing to participate in agricultural activities and programs. Household income negatively influenced the willingness of youth to participate in agricultural activities. Therefore, increasing the number of young people who qualify for loans from commercial banks and other government agencies is necessary to improve access to financing. A comprehensive policy package involving all stakeholders in the country is required to encourage more youth to participate in agriculture. Youth traits and environmental challenges must be highlighted in such policy frameworks.

The seventh question aimed at answering the question what the what socio-economic impact of youth are participating in agriculture on employment creation and poverty alleviation in Umzimvubu Local Municipality, Eastern Cape, South Africa. Primary data for this study were collected through a well-structured questionnaire from youth aged 18-35. Judgemental sampling technique was used to draw an appropriate sample of 210 of youth for this study. Propensity score Propensity score matching was used to analyse data. The PSM results revealed that youth participation in agriculture positively affects income. Hence, youth participation in agriculture can help generate an increase in household income and reduce poverty.

8.3 Conclusions

The study concluded that youth have neutral perceptions towards agriculture. They consider venturing into agriculture and viewed agriculture as decent employer and has the potential to reduce poverty. The study concluded that youth encounter challenges in agriculture which are poor markets, lack of information (market information, inputs, pricing), insufficient water and shortage of initial funding. The study also concluded that youth are willing and interested in engaging in agriculture. However, there are significant factors influencing their willingness to participate in agriculture which include household size, household income, educational level,

marital status, and perceptions. The study concluded that results revealed that youth participation in agriculture positively affected income. Hence, youth participation in agriculture can help generate an increase in household income and reduce poverty.

6.4 Policy Recommendation

- this study recommends that there is a need of special efforts to attract, train and retain the rural youth in agriculture by developing more favourable attitude towards agriculture by transforming and making it more agribusiness oriented, scientifically attractive, and economically profitable.
- The image of agriculture needs to be improved and agricultural inputs, markets and credit should be easily assessable.
- The youth can be motivated to engage in agriculture and agribusiness when the following are in place; provision of agribusiness management training; provision of agricultural infrastructure; value addition; and positive perception towards agriculture and agribusiness; improved access to land; increased access to capital.
- policy that focuses on engaging the unemployed youth in agriculture should also ensure their access to farmland, especially where access to land through inheritance is lacking, as well as also promote their engagement in other non-farm activities to supplement their income.

8.5 Future Research

The study focused on Umzimvubu Local Municipality. Future studies can investigate the perception, willingness, challenges, and effects of youth participation in agricultural enterprises in reducing poverty in the whole province of the Eastern Cape.

APPENDIX A: QUESTIONNAIRE

School of Agricultural, Earth and Environmental Sciences

College of Agricultural, Engineering, and Science

Discipline

Perceptions, willingness, opportunities, and effects of youth participation in agricultural enterprise in reducing poverty in Umzivumbu Municipality in the Eastern Cape.

Dear respondent,

My name is Ongama Giwu, I am a master's student in College of Agricultural, Engineering and Science Discipline at the University of KwaZulu Natal and currently carrying out a study aimed to assess the perception, willingness, opportunities, and effects of youth participation in agricultural enterprise in reducing poverty. I would like you to assist in filling out the questionnaire by giving your honest answers. Your participation in the research is voluntary, and you can choose to stop the interview anytime when you feel like you no longer want to carry on. Also, the information or answers you provide will only be used for academic purposes. Thank you.

Date of interview	
GPS coordinates	

Respondent number	

SECTION A: DEMOGRAPHICS

Fill in the relevant information and where mark with an X.

1. Age of the respondent: …….

2. Gender

0.Male		1.Female	

3. What is your marital status?

0. Single		1.Married		Divorced		Widow		

4. What is your educational level? ...

5. Number of household members? .....

6. What is your monthly income? ……..

7. Do you have an agricultural related tertiary qualification? 1=Yes 0= No

8. Type of youth:

1=actively involved in agricultural activities

2= actively involved in primary agriculture

3= Not currently engaged in any agriculture-related activity.

8. Family structure:

1= stays with his/her own family at own house

2= stays with his family (under mother and father roof)

3= stays alone. Independently.

9. Farm size

Farm size			
Garden		Field	

10. Land tenure

Land tenure

Garden			Field		
Own	Rent	Communal	Own	Rent	Communal

11. Do you receive any agricultural training?

Training Yes or No	If yes, who provided that	Did you learn and understood them

Who provided training: 1= Extension officer 2 = Fellow farmers 3 = Private company 4 = NGO 5 = Parents/relative knowledge 6 = other (please specify)

SECTION B:

YOUTH PERCEPTIONS AND ASPIRATIONS TOWARDS AGRICULTURE

8. Do you aspire to participate in agricultural enterprise?

0. No		1. Yes	

9. If no, why…….

10. Rank the following perceptions on a scale of 1-5 where 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree

Perception on participating in agricultural enterprise	1	2	3	4	5
I am seriously considering a career in agriculture.					
I am seriously considering starting a business in agriculture.					
Agriculture is a decent employer of youth in the South African economy.					
Agriculture is a lucrative sector in the South African economy.					
African youth should be actively involved in agriculture.					
Agriculture is an important sector in South Africa's economy					
I consider venturing into agriculture as 'cool'					
Agriculture should be taught more in all our education levels in South Africa					

Agriculture is important to South Africa's food security					
Agriculture is a solution to employment creation and reducing poverty.					

11. Rank the following perceptions on a scale of 1-5 where 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree

Aspirations	1	2	3	4	5
I aspire to be involved in rain fed farming					
I aspire to increase my agricultural production at a later stage					
I aspire to acquire agricultural training and education					
I aspire to an occupation beyond farming, especially primary agriculture					
I aspire to become a commercial farmer one day					
I aspire to be a successful farmer					

SECTION C:

CHALLENGES AND OPPORTUNITIES

12. Do you participate in agribusiness?

0. No		1. Yes	

13. If yes, for how long have you been into agribusiness.....? Years

14. What motivated you to participate agriculture?

……..

15. Indicate from the following, which areas of agribusiness are you participating in? Tick (x) below

Area of agribusiness	**Tick (x)**
Horticulture farming	
Livestock rearing (cattle, pigs, sheep)	
Poultry keeping (broilers, layers)	
Value addition (packaging, packaging, drying)	
Agro dealership (selling fertilizers, pesticides, seeds, spares)	
Driver (transporting inputs and produce to markets)	

Selling farm produce	
Selling labor to other farmers	

16. Apart from opportunities mentioned above, what other opportunities available in agribusiness?.....
.....

15. For the youths participating in agricultural enterprise, which challenges are you facing in your agribusiness. Please indicate in the table below.

Challenges	**Minor challenge**	**Major challenge**
Lack of information (market information, inputs, pricing)		
Poor markets		
Poor infrastructure		
Lack of access to input		
Lack of skills		
Shortage in initial funding		
Insufficient water		
Insufficient land		
Lack of family support to start enterprise		
High cost of labor		
Fear of credit taking process		
Seasonality of agricultural incomes		

Prevalence of risk and uncertainty		
Problem of getting the right group members		
Fear of high-interest rate		
Cultural influence		
Assume agriculture as low profession business		

15. Apart the from challenges mentioned above, what other challenges do you face in your agribusiness?.....
.....

16. How do you suggest these challenges can be addressed?.....
.....

17. What do you recommend the government to do to address the challenges?.....

.....

18. Why do you not run the grouped enterprises?

Tick on the box bellow

Challenges	Tick
1. Group disagreement	
2. Division of credit individually	
3. Due to payment of the loan	
4. Expensiveness of inputs	

5. lack of awareness and knowledge	

SECTION D:

FACTORS INFLUENCING THE WILLINGNESS AND INTEREST OF YOUTH PARTICIPATION

18. Are you willing participate in agribusiness?

0. No		1. Yes	

19. If the answer is No, why……

20. Are you interested in participating in agribusiness?

0. No		1. Yes	

21. If No, why…….

22. Do you have access to land?

0. No		1. Yes	

23. How secure is your land?

0.Communally owned		1. Private property		2. Leasing	

24. How big is your land? ……ha

25. Do you have access to market for your produce?

0. No		1. Yes	

26. If yes, which type of marketing channel do you use when selling your products?

Formal markets		Informal markets		Both formal and informal markets		Not selling	

27. Do you have any contractual agreements or guaranteed market (formal or informal) with any agribusiness outlet?

0. No		1. Yes	

28. Do you have access to transport?

0. No		1. Yes	

29. How many kilometres do you travel to the market? .....km

30. Are you a member of any organization?

0. No		1. Yes	

31. Do you have access to credit?

0. No		1. Yes	

32. If yes, from where do you acquire the loan?

Commercial banks		Agricultural cooperatives		Other (Specify)	

33. Do you have access to extension services?

0. No		1. Yes	

34 If yes, how do you rate services provided by extension officers in your area with respect to beekeeping?

Never available		Available sometimes		Always available	

35. Do you receive any training for agribusiness?

0. No		1. Yes	

36 Rank the following interest on a scale of 1-5 where 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree

Statement	Response
I have interest to be involved in rain fed farming	
I have interest to be a successful farmer	

I am willing to become a commercial farmer one day	
I have interest to increase my agricultural production at a later	
I have interest to acquire agricultural training and education	
I have interest to an occupation beyond farming, especially primary agriculture	

SECTION E:

CONTRIBUTION AND EFFECT OF YOUTH ENGAGED IN AGRICULTURAL ENTERPRISE ON EMPLOYMENT CREATION AND POVERTY ALLEVIATION

36. What year did you start farming?.....

37. What are or the type of farming activities practised?

1. Crop production		2. Livestock/ poultry		3. Both		4. Other (specify).	

38. Do you receive any formal training in Agricultural Extension?

Yes		No	

39. . What is the purpose of smallholder farming to your family?

1. Consumption		2. Selling purpose		3. Both		4. Other (specify)	

40. What is your employment status?

0.Fulltime farmer		1.Part-time farmer		2.Formally employed		3.Unemployed	

41. What contribution does agriculture activities have?

Tick the box below

1. Alleviate Poverty.	
2. Fulfil the government priorities and better life for all.	
3. Render services that could have a measurable impact to the poor.	
4. Create job opportunities and ensuring income security	

42. Total income received from selling your agricultural products?
(Monthly)……

43. Number and value of selected assets owned by youth from participating in agribusiness. Please identify assets purchased with the money you get from agribusiness.

Asset type	**Number owned from agribusiness**	**Market value**
Livestock		

1. Cattle		
2. Sheep		
3. Goats		
4. Poultry		
Transportation		
1. Cars/bakkie		
2. Motorcycles		
3. Bicycles		
4. Other vehicles (taxi, truck, carts)		
Appliances and electronics		
1. Televisions		
2. Refrigerators/Freezer		
3. Electric or gas cookers		
4. Sewing machine		
5. Radios		
6. Cell phone		
Furniture		
1. Bedroom Suite		
2. Lounge Suite		
3. Other		

APPENDIX B: ETHICAL CLEARANCE

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

11 May 2023

Ongama Giwu (222130370)
School Of Agri Earth & Env Sc
Pietermaritzburg Campus

Dear O Giwu,

Protocol reference number: HSSREC/00005088/2022
Project title: Perceptions, willingness, opportunities and effects of youth participation in agricultural enterprises
Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 24 November 2022 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 11 May 2024.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Health Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd