Cogent Social Sciences

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/oass20

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To cite this article: Kevin Okoth Ouko, John Robert O Ogola, Charles Adino Ng'on'ga & Jane Ruheni Wairimu | (2022) Youth involvement in agripreneurship as Nexus for poverty reduction and rural employment in Kenya, Cogent Social Sciences, 8:1, 2078527, DOI: 10.1080/23311886.2022.2078527

To link to this article: https://doi.org/10.1080/23311886.2022.2078527

Published online: 26 May 2022.

Ouko et al., *Cogent Social Sciences* (2022), 8: 2078527
https://doi.org/10.1080/23311886.2022.2078527

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SOCIOLOGY | REVIEW ARTICLE

Youth involvement in agripreneurship as Nexus for poverty reduction and rural employment in Kenya

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Received: 31 August 2021
Accepted: 12 May 2022

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Abstract: Vicious cycles of poverty and unemployment among rural youth in Kenya have necessitated the search for an alternative sustainable solution. Whereas the youth population continues to surge, the majority of them are reluctant to venture into agricultural enterprises. This study reviewed the prospect of youth's venture in agripreneurship for poverty reduction and improvement of rural employment in Kenya. The review was based on a comprehensive literature review related to youth engagement in agripreneurship that was conducted from December 2020 to May 2021. Secondary data was gathered from databases such as Science Direct, Scopus, CAB abstracts, MDPI, Springer, Google Scholar, RefSeek, SAGE, John Wiley, and Taylor and Francis. Findings indicate that youth engagement in agripreneurship has the potential of increasing food production in Kenya. Consequently, this will resolve the challenges of increasing unemployment and poverty rates among the growing population in Kenya but also bolster food security. There is a need for entrepreneurial education and training of rural youths to increase the chances of uptake of agriculture as an enterprise. Further, modalities should be drawn by the

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PUBLIC INTEREST STATEMENT

Unemployment is a major issue among African youth, who make up the majority of the population but frequently feel excluded from the economic mainstream. Unemployment is believed to be one of the major causes of poverty. This poses a threat to the actualization of the Sustainable Development Goals (SDGs), especially SDG-1 on reducing extreme poverty by 2030 if urgent actions are not taken. Engagement of youth in agripreneurship in developing countries like Kenya may offer opportunities to curb underemployment, unemployment, the disillusionment of youth, and as well lift individuals and communities from poverty and hunger.

government to provide graduating students with start-up capital for agripreneurship ventures. Similarly, the government should establish a developmental fund to support the start-up process of agripreneurship to establish agricultural incubation centres. These will help in achieving the Sustainable Development Goals (SDGs) and Vision 2030 goals of transformation of smallholder agriculture from subsistence to an innovative, commercially oriented, and modern agricultural sector while eradicating poverty and providing employment opportunities to the youth.

Subjects: Anthropology; Anthropology - Soc Sci; Education - Social Sciences; Gender Studies - Soc Sci; Sociology & Social Policy; ICT; Development Communication; Gender & Development; Sustainable Development; Rural Development

Keywords: Youths; agripreneurship; poverty; unemployment; Kenya

1. Introduction

Agriculture is one of the most promising sectors in Sub-Saharan Africa (SSA), with the ability to employ young people and reduce poverty. Despite having 60% of the world's uncultivated arable land, SSA is a net importer of food. Africa's annual food imports are predicted to reach USD 110 billion in 2025 (Owings, 2020; Plaizier, 2016), while the continent's population is expected to reach 2 billion people by 2050, with agriculture playing a critical role in feeding all of these people. Globally, about 135 million people are currently hit by chronic food crises, and out of this; nearly 3.1 million are Kenyans (FSIN & GRFC, 2020). It is also estimated that 736 million people lived on less than $ 1.90 a day in 2015, of which, 80 per cent lived in rural areas globally (FAO, IFAD, WFP, WHO & UNICEF, 2018). Agriculture can therefore be seen as an essential driver of economic development and an area of great opportunity for young people. However, agriculture is not appealing to most young people (Babbie, 2016). About 20% of the world's rural youth live in Africa but Africa's share is projected to rise to 37% by 2050 (IFAD, 2019). As a result, Africa is expected to continue to develop at a far quicker rate than the rest of the globe, resulting in a significant increase in Africa's proportion of the world's rural youth over the next 30 years (Menashe-Oren & Stecklov, 2018). In the SSA countries, the population involved in agriculture is ageing by a mean of 55 years (Njeru, 2017). On the other hand, the youth unemployment rate stands at 75%, which is related to the high poverty levels. Those who are employed earn at most 1.25 USD per day which can sustain them for only one day which is termed a "hand to mouth" lifestyle (Njeru, 2017).

Kenya's population was enumerated at 47.6 million in 2019, out of which the youths accounted for 13.7 million (Nation Council for Population and Development, NCPD, 2020). Whereas Kenya has a youthful rural population of 75% aged below 35 years out of which 69.1% are in active labour (Baraza, 2020; Wandiri, 2020), youth unemployment is still prevalent, especially in the rural areas (Hall, 2017). According to (UNDP Report, 2013), Kenya has the greatest number of unemployed youths in East Africa. The economy is not generating sufficient jobs that can absorb the growing workforce population. To reduce food crises and high unemployment rates, a multifaceted approach including harnessing the youths' high labour force is needed. Although the service industry is ranked as the first largest industry in Kenya, agriculture is ranked the second with annual earnings of approximately 58 million dollars (Mutua, 2018). Agriculture is central to the Kenyan economy and is the largest source of income for both poor and non-poor households in rural areas where it contributes about 31.4% to poverty reduction (USAID, 2020; Wankuru et al., 2019). The sector provides 26% of the Gross Domestic Product (GDP) and engages over 40% of the total population and about 70% of rural people in employment (FAO, 2014). For agriculture to effectively contribute to the reduction of poverty and rural unemployment, it must transit from its largely subsistence status to an enterprise that is appealing to most young people (Uche, 2018). The future of humanity is dependent on the hands of the young generation hence the need to utilize them in the transformation process of most economic venture-agriculture. Tapping out of

rural youth resources through agricultural investment is therefore indispensable in improving food security, eradicating poverty and creating job opportunities.

Many youths view agriculture as outdated, unprofitable, and strenuous work hence majority are reluctant to take up the enterprise (Carr & Roulin, 2016). This, however, is not the case since agriculture is a multi-dimensional sector providing various entrepreneurial opportunities along the agribusiness value chain (Montepellier Panel, 2014). Similarly, increased urbanization has led to a decline in the rural population translating to a reduction in the labour force and high demand for food in urban areas. The UN World Health Organization predicts that "by 2030, 6 out of every 10 people will live in a city, and by 2050, this proportion will increase to 7 out of 10 people" suggesting that more youths than ever before are moving to cities and towns to seek jobs, leaving few behind to work in rural areas (FarmAfrica, 2013). Further, lack of access to finance, information, managerial expertise, legal knowledge, networking, and mentoring are constraints to agripreneurial development (Agripreneurs Conference, 2019). Smart agripreneurship, nutrient cycling, soil analysis, and greenhouse farming have all been linked to lower food costs in industrialized economies, according to previous research. However, there is a knowledge gap about the relationship between smart agripreneurship elements (hydroponics, geomapping, greenhouse farming, drone agriculture, nutrient cycling, and soil analysis) and food affordability in emerging nations (Omodanisi, 2020).

Moreover, smallholders and subsistent farmers in Kenya are currently the majority and most of them are poor (FAO, 2015; Thorlakson & Neufeldt, 2012). A paradigm shift from agriculture to agribusiness is required to revitalize the sector and appeal to a wider audience (Uche, 2018). To take advantage of the entrepreneurial opportunities that exist along the value chain, agriculture must diversify in terms of value-addition and as a knowledge-driven enterprise (Kahan, 2012). Youths stand a better chance to leverage this existing opportunity due to their intrinsic features. Youth agripreneurship is critical for driving marketing and commerce because the youth will be conversant with market demands and strive to produce with a goal in mind (FAO, CTA, & IFAD 2014; Mutegeki, 2020). Consequently, the youth and other farmers in the food system will be able to acquire entrepreneurial skills essential in running their farms as economical, productive, sustainable enterprises. The economy is likely to deteriorate further unless an urgent intervention is made due to a combination of an ageing generation of farmers, high rates of youth unemployment, and a rapidly growing population, all of which pose a significant threat to Kenya's agricultural sector and future food security (Ng'eno, 2020). As opined by (FAO, 2014), the incorporation of more youths into agriculture is vital in ensuring that the next generation embraces farming as an enterprise for sustainable food production.

While youth participation in agriculture is critical for economic growth and poverty reduction, the importance and constraints associated with rural youth participation in agriculture in most developing countries, particularly Kenya, are poorly recognized. In light of this, this study reviews the potential of agripreneurship as a linkage to poverty reduction and rural employment. Agripreneurship is the profitable combination of agriculture and business. It is a process in which a farmer is determined, creative, imaginative, prepared to take calculated risks, and constantly looking for methods to enhance and extend his or her farm business to make money (Nwibo et al., 2016). Agripreneurship may be an effective way out of poverty reduction because it enables farmers to produce surpluses for sale and can involve the whole value chain (SIANI, 2017). The agricultural sector has much potential to generate new job opportunities for the youth as a result of technological advances such as greenhouse farming, vertical indoor farming, seed improvements, agrochemicals, and agricultural machines. However, many youths cannot benefit from these opportunities, because they lack agripreneurial skills (Mutegeki, 2020). Albeit agripreneurship has been on the development agenda, it remains unexplored in academic research (Turolla, 2016) hence the need for this review.

Given the above circumstance, this review investigates the potential of youth's involvement in agripreneurship as a nexus for poverty reduction and rural development in Kenya. It begins by i)

exploring the overview of youth involvement in agripreneurship in Africa in general. Then the review (ii) examines the status of youth agripreneurship and poverty dynamics in Kenya, (iii) describes challenges facing youth agripreneurship, and lastly, (iv) addresses the opportunities of youth agripreneurship for employment creation in Kenya. Findings arising from this study will provide evidence that could inform practical policy on youth agripreneurship. Thus, this study contributes to the literature by filling these gaps.

2. Methodology

This work is based on secondary data collected from online databases including Science Direct, Scopus, CAB abstracts, MDPI, Springer, Google Scholar, RefSeek, SAGE, John Wiley, and Taylor and Francis. Recent literature on youth involvement in agripreneurship was reviewed using guidelines to search, collect and organize literature (Hart, 2001). The terms used to search for literature separately and in combination included rural youth, young men, young women, agripreneurship, agribusiness, agriculture, participation, inclusiveness, poverty, and unemployment. These keywords were then combined into a complete search term string, connected with the Boolean operators "OR" for synonyms of the same keyword and "AND" for different keywords. This string was then entered into selected databases to retrieve data. All papers were screened by reading the titles

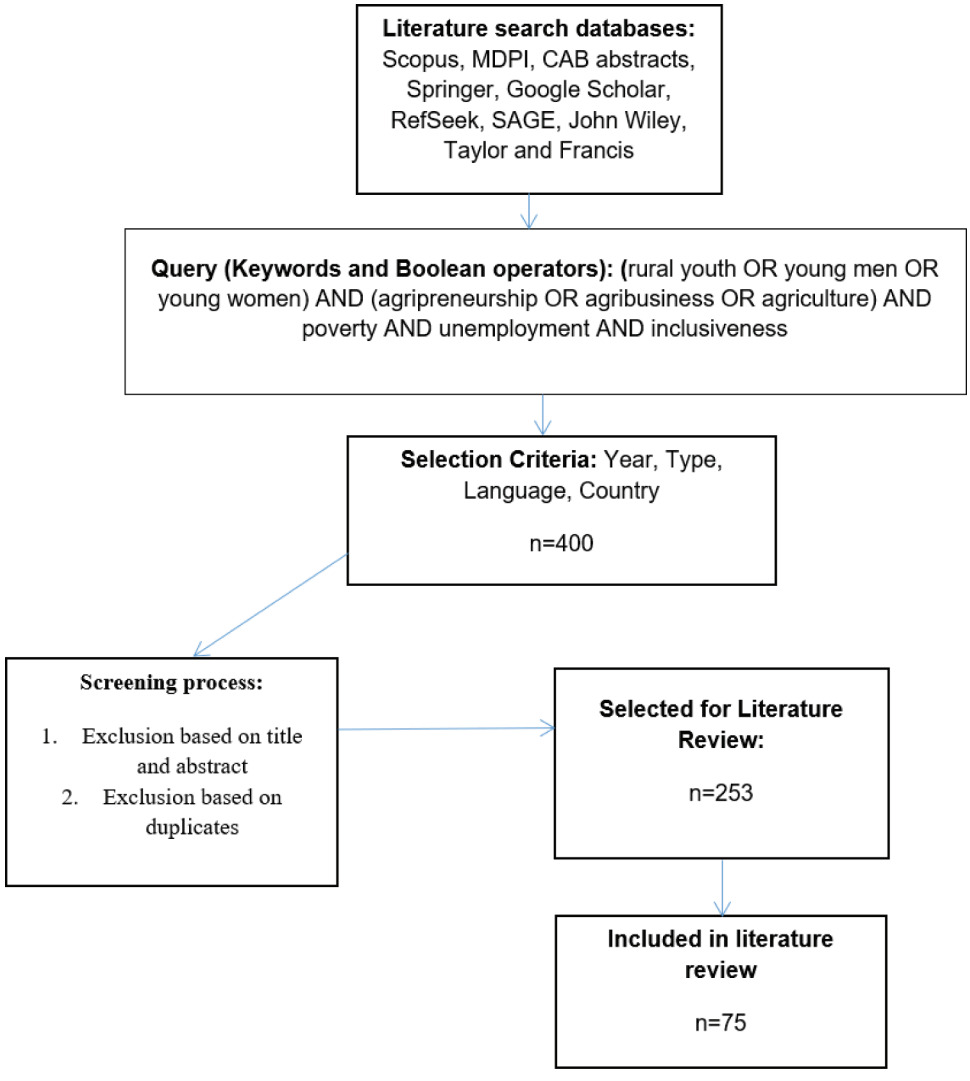

Figure 1. Preferred reporting items for systematic reviews and meta-analyses (PRISMA) flow diagram on literature review selection.

and abstracts. The criteria used for inclusion were (i) articles that directly relate to youth engagement in agripreneurship, (ii) articles in peer-reviewed journals, (iii) articles published in the last 10 years, and (iv) articles with a focus on Kenya and Africa at large, and lastly (v) articles written in the English language. If these criteria were determined to be relevant, the full paper was read. The references from a read paper were also screened to identify relevant papers that might have been missed by the initial search engine search. The initial screening resulted in more than 400 articles, from which the articles that met all the criteria were included in the review. Non-scientific articles such as policy papers, working papers, and reports were used to justify the argument of the paper. Information, facts, evidence, or key messages were extracted from these papers and included within the review. A total of 75 articles were included in this study for the literature review as in Figure 1. Thereafter, deductive coding was applied to extract key messages in a rigorous process (Bernard, 2006). Then a qualitative synthesis was used to investigate the relationship among the variables.

3. Results and discussion

3.1. Overview of youth involvement in agripreneurship in *Africa*

The term "Youth" has no universally accepted definition; however, the term typically applies to people under a certain age span. According to Afande et al. (2015), youths are usually defined concerning their age brackets; and there is little agreement as to what entails the upper and lower limits. The United Nations (UN) uses the ages from 15 to 24, while the African Union Commission uses the ages of 15–35 (Lindsjö et al., 2020). According to Barau and Afrad (2017), a 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 more so in Kenya. Zulu et al. (2021) note 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. In the recent, the call for youth involvement in agriculture across the different nations has lingered and is becoming stronger now, based on the current socio-economic hardship, ageing farming population, and food insecurity in the country. According to a recent International Labour Organization (ILO) assessment of trends in rural adolescent employment in SSA, youths working in agriculture are mostly self-employed or work as contributing family members without pay in tiny, unincorporated family companies (Elder, 2015). Table 1 summarizes major studies on youth involvement in agriculture in Africa and their findings. Africa's agricultural sector and future food security are under threat from an ageing generation of farmers, high rates of youth unemployment, and a rapidly increasing population. More youth involvement in agriculture is unquestionably important, but fundamental transformations in power dynamics and perceptions are required to ensure that Africa's next generation embraces agriculture as a business.

3.2. Status of youth agripreneurship and poverty dynamics in *Kenya*

According to KNBS (2019), the conventional population of youth aged 18 to 34 was 13.7 million, out of which 61% were working while 1.6 million were seeking work or indicated that there was no work available. This implies that youth unemployment stands at 39%. On the other hand, the 2020 Comprehensive Report by KNBS indicates that 15.9 million Kenyans are poor, which translates to one-third of Kenyans living below the poverty line. Out of this population, the youth accounts for 22 percent (Wafula, 2020). The key aspirations of Agenda 2063 include Growth and Sustainable Development which focuses on ending poverty, inequalities of income and opportunity; job creation, especially addressing youth unemployment; facing up to the challenges of rapid population growth and urbanization. To achieve this growth and development through job creation and poverty reduction, youth agripreneurship is vital. Whereas poverty depletes the household resources, agripreneurship builds sustainable resources that foster development(Carr & Roulin, 2016). Facilitating the youth agripreneurship could be a potential driver of rural poverty reduction

Table 1. Summary of studies on youth involvement in agriculture in Africa

Region	Subject	Key Findings	References
Ondo State, Nigeria	Determinants of Participation in Youth in Agriculture Programme (YIAP)	• Farm size and years of participation mostly contributed to participation in YIAP.Youths had a favourable attitude towards the YIAP programme and inadequate training facilities were the most severe constraint	Adesina & Favour, 2016
Kajiado North Sub-County, Kenya	Influence of youth access to finances on their participation in agricultural value chain development	• Youth with easy and better financial access engaged more in agricultural-related activities such as acquiring farm inputs, equipment, and farm services as well as effective marketing. Financial access to the agricultural value chain motivated the youth to increase their farm products, which enabled them to benefit from economies of scale as a result of a higher bargaining power	Njeru, 2017
Southern Ethiopia	Land access and livelihood choices of rural youth in Southern Ethiopia	• Lack of land access was an important driver that pushes youth out of the traditional agricultural livelihood.	Bezu & Holden, 2014
Eastern Uganda	Career interests and aspirations of the Young Farmers Club (YFC) members and factors influencing their decisions about career choices.	• YFCs had little influence on their career aspirations. Most of the club members were interested in careers related to human medicine/nursing/pharmacist, agricultural engineering, veterinary medicine, or other science-based careers	Mukembo et al., 2014
Ghana	Factors influencing rural youth farmers' credit constraints status and the effect of credit constraints on the intensity of participation of these farmers	• Youth farmers' education, age, savings, and parent's occupation reduced the probability of the rural youth farmer being credit constrained but cumbersome loan application procedure and loan disbursement time positively affected credit constraint. Access to credit had a positive impact on the intensity of participation in agriculture activities.	Twumasi et al., 2019
Tanzania and Malawi	Dynamics of youth employment in and out of agriculture and the agri-food system	• probability of engaging in farming (or the agri-food system) is highest for individuals who were engaged in farming (or in the agri-food system) in the previous period, confirming a high degree of stability in youth and young adult engagement in farmingFindings suggest that youth are much more likely than young adults to move towards single-occupation farming as opposed to another income-generating sector.	Kafle et al., 2019

(*Continued*)

Region	Subject	Key Findings	References
Ogun State, Nigeria	Involvement of youth in agriculture	• Many of the youth agripreneurs had negative perceptions of agriculture that had changed positively over the years. Some challenges facing the youth agripreneurs included inadequate training on specific agribusinesses, inadequate infrastructure, and unavailability of land, among others.	Alabi et al., 2019
Nigeria	Impact of Agricultural Training Programmes on Performance of youth agricultural entrepreneurship	• Participation in Agricultural Training Programmes was significantly influenced by age, years of formal education, marital status, current residence, employment type, and perception of training.The findings highlight the significance of training in improving the performance of young agripreneurs.	Adeyanju et al., 2021
South Africa	Youth perspectives on contemporary attitudes, experiences, and expectations of work in the agricultural sector	• Attitudes towards careers in agriculture varied greatly. Only one-third of the 573 youth respondents expressed a clear interest in and passion for agriculture	Metelerkamp et al., 2019
Nkonkobe, South Africa	Youth Participation in Agriculture	• Youth have a negative perception of agriculture and are not interested in farming.The was a significant effect between youth participation in agricultural activities and youth programmes and resources	Cheteni, 2016
Benin	Determinants of entrepreneurial intentions of undergraduate students in agriculture to start self-employed agribusiness after graduation	• The majority of students were willing to start their agribusiness venture as self-employment after graduation with a preference for agro-processing enterprises and crop production enterprisesUndergraduate agricultural students' willingness to enter into agribusiness as a self-employment venture after graduation was associated with age, students' major, type of university attended, experience in agribusiness, friend role model, and overall perception of the agribusiness environment.	Kaki et al., (2019)

(*Continued*)

Table1. (*Continued*)

Region	Subject	Key Findings	References
Uganda	Challenges and Prospects of Youth Engagement in Agriculture:	• Youth engagement in agriculture was declining amidst rising youth unemploymentThe lower number of youth farmers used improved inputs on farmsYouths with secondary education and above and those with a large share of adults were less likely to engage in agricultureYouth were disenfranchised in the ownership and management of critical assets in agricultural production, especially land	Ahaibwe et al., (2013)
Mozambique	Interests and Perceptions of Agriculture among Rural Youth	Both young men and young women showed positive attitudes towards farming.Youth in rural Mozambique see themselves as farmers for the rest of their lives. There was a lack of alternative employment and economic opportunities outside agriculture in rural areas; therefore, youth found agriculture to be their only option	Adam & Quinhentos, (2018)
Zambia	Rural youth participation in agriculture and the constraints they face, to identify ways of enhancing rural youth involvement in agriculture	• Results showed that rural youth involvement in agriculture serves as a source of income generation and provides the much-needed labour force in critical farming activities among others.Rural youth involvement in agriculture was characterized by constraints that include lack of access to capital, poor storage facilities, poor road networks, poor access to agriculture insurance for farm produce, and lack of technical assistance	Trevor & Kwenye, 2018
Rwanda and Uganda	Options to include youth in private Sector extension and Advisory Services	• The study found seven models to engage youth in EAS as providers or recipients of the services: (1) training youth to become agripreneurs; (2) village agents; (3) youth-led and other fee-based EAS providers; (4) paraprofessional EAS workers; (5) EAS internships; (6) credit and financial services; and (7) youth agripreneurship awards	Franzel et al., 2020
Tanzania	The extent of youth participation and factors influencing youth involvement in horticulture agribusiness	• Male youths were dominated in horticultural agribusiness (59.6%) compared to female youths.Factors that positively and significantly influenced youth involvement in horticulture agribusiness are primary school education, Form IV and above, management innovation, access to credit, good perception of horticulture for agribusiness, and improved packaging materials.	Ng'atigwa et al., 2020

(*Continued*)

Region	Subject	Key Findings	References
Kenya	Impact of Information and Communication Usage on the income of Youth Pineapple Agripreneurs in Kenya (Television)	• The most viewed television programmes were NTV—Seeds of Gold (17%), Utugi TV—Kilimo na Faida (10%), Inooro TV—Mugambo was Murimi (9%), QTv—Mkulima ni Ujuzi (8.7%) and Citizen TV—Shamba Shape Up (8.2%).There was the emergence of several new TV stations, which were also disseminating agricultural information to youthful agripreneurs. These included Utugi TV—Kilimo na Faida, QTv—Mkulima ni Ujuzi, Signet Farmer, and Njata TV—UrimiICT users had higher gross margins from the sale of pineapples relative to ICT non-users. This means the use of ICT tools helps youth agripreneurs to increase their business income.	Dianga et al., 2020
Benin	The predictors of agribusiness entrepreneurial intentions among undergraduate students	• The significant factors that influenced agricultural students' entrepreneurial intention in agribusiness were age, their major field of study, type of university attended, previous experience in agribusiness, a role model as a friend, and perception of the agribusiness environment.	Kaki et al.,(2022)

among youths and adults alike, particularly in developing countries such as Kenya. Poverty dynamics within the country are directly influencing Kenya's agricultural sector. Massive population increase has triggered the decrease in land parcel sizes in areas of high agricultural potential, which in turn is affecting food production (WorldBank, 2016). Further, poverty, unemployment, and lack of quality education have spiraled rural-urban migration exacerbating the poverty situation in the country (WorldBank, 2016).

Challenges of absorbing the youth into satisfactory and sustainable employment are increasingly debated on the global agenda and agriculture is perceived to play a key role in that respect (Sumberg & Okali, 2013; WorldBank, 2016). Encouraging the youth who are highly dynamic and flexible could lead to agricultural development and consequently food security (Njeru, 2017). However, there has been a negative perception of agriculture among the youth in Kenya and this has progressed over the years with technical institutions and universities recording a decline in students' enrollment in agricultural-related courses (GoK, 2017a).

According to Alao et al. (2015), the youths have little passion for agriculture as they perceive it to be old-fashioned, hard labour, and a high risks activity. They look at agriculture as a profession for the old, illiterate, and the poor. As observed in Kenya Youth Agribusiness Strategy 2017–2021, most youths in Kenya do not have an interest in agriculture and the majority view agriculture as dirty or as a last-minute resort. This is because the majority of farmers use conventional methods poorly rewarded; thus, they end up living indecent lives that discourage the youths. Despite their potential, the majority of youths in Kenya grapple with unemployment, underemployment, inadequate skills, and inaccessible capital. Whereas it is estimated that by 2030, Kenya will have about

28 million youths (15–34), the current youth unemployment rate is higher than the overall national unemployment (Munjua, 2020). In Kenya, the agricultural sector offers the most opportunities in general befitting the youth in particular. The farmers' mean age in production is above 60 years yet the majority of the country's population are youths (Government of Kenya, GoK, 2017a). High rural-urban migration combined with unemployment in the urban areas have escalated poverty and worsened food insecurity and malnutrition in the urban centres leading to crimes and uproar among youths. The youths should be on the frontline of agricultural transformation since they are energetic and productive (Magagula & Tsvakirai, 2020). The country now grapples with different multi-stakeholder approaches focusing on youth access to education and training (Kempe Ronald Hope, 2012) that have also not borne fruits though promising. Entrepreneurs are often successful in their projects when access to funding is enabled by technological experience and industry contacts, business networks, and consistently mentored (Owings, 2020). This success has a knock-on effect that encourages governments and donor bodies to invest further in agri-businesses.

3.2.1. Policy contexts relevant to youth agripreneurship in *Kenya*

There are several policy frameworks aimed at promoting youth agripreneurship to address the challenges of increasing poverty levels and rural youth unemployment in Kenya. These policy frameworks include:

(1) **Kenya Youth Agribusiness Strategy 2017–2021**: This aims to provide youth with easy access to financial services for agricultural entrepreneurship, increase market access, promote climate-smart agricultural technologies, and address cross-cutting issues such as gender inequities, cultural obstacles, alcohol and substance misuse, and HIV/AIDS (Government of Kenya, GoK, 2017a).

(2) **The Agricultural Sector Transformation and Growth Strategy (ASTGS) 2017–2022**: This prioritizes youth, with a goal of 3 000 youth-led, technologically empowered extension agents by 2020 (GoK, 2019a).

(3) **Agricultural Sector Development Support Programme II (ASDSP) 2017–2022**: Output 1.2 on supporting value chain innovations foresees the establishment of grants supporting value

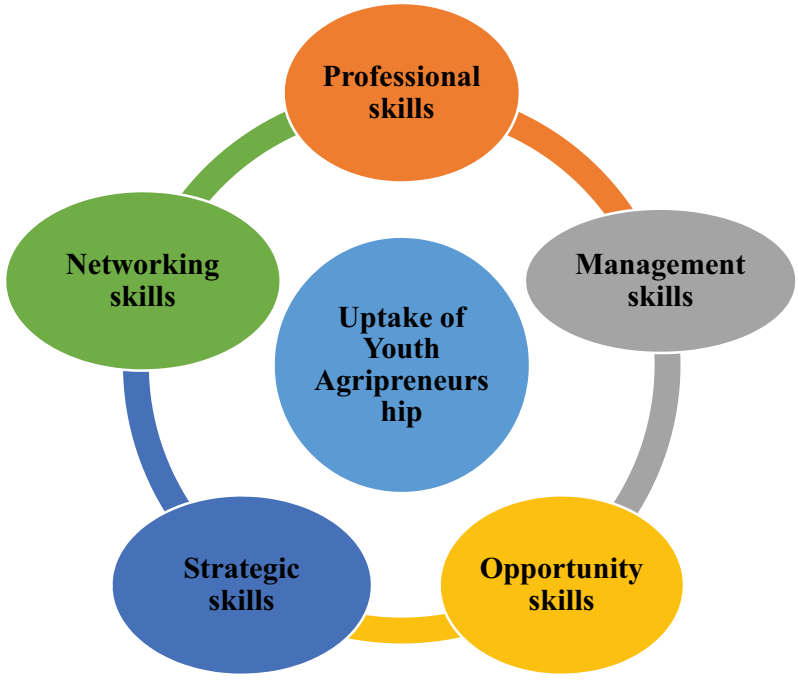

Figure 2. ***Agripreneurship Five sets of skills groups*** **(Rudmann, 2008).**

chain innovation with high prospects for women and youth empowerment (where an important measure of economic empowerment will be job creation either as an employer or an employee at any stage of the value chain). Outcome 2 is on enhanced entrepreneurship of priority value chain actors (GoK 2019b).

(4) **The Kenya Climate-Smart Agriculture Strategy (KCSAP) 2017–2026**: This aims to improve women's, youth's, and vulnerable groups' ability to participate in climate-smart agriculture (CSA) activities. (Government of Kenya, GoK, 2017b).

(5) **The Third Medium Term Plan (MTP) 2018–2022**: Green employment creation, the expansion of the manufacturing sector to boost its contribution to GDP from 9.2% in 2017 to 15%, and agro-processing to at least 50% of total agricultural production are all prioritized efforts in this respect. According to the MTP III document, gender equality, empowerment of women, youth, and persons living with disability and other vulnerable groups, as well as the full realization of human rights, will continue to be a priority (Government of Kenya. GoK, 2018).

3.3. Challenges facing youth agripreneurship

Even though several opportunities exist in youth agripreneurship, internal and external barriers hinder its success among the youths. These include; negative perception of agricultural activities, lack or inadequate skills, limited access to infrastructure, lack of access to land, finance, and information, networking and mentoring, insufficient market information, negative effects of climate change, low levels of value-addition, inadequate policies supporting youth agripreneurship, and poor markets (Government of Kenya, GoK, 2017a).

According to Afande et al. (2015), most farmers find it difficult to obtain financing from financial institutions because they lack the collateral that financial lending organizations require. Lack of collateral may account for a substantial part of the rural youth's difficulty to acquire financing, limiting their capacity to invest in agriculture (FAO, 2014). Therefore, the youth rely on expensive informal funding sources (family, friends, clubs, and support groups) for saving and loaning or on contractors' loans as supplies of agricultural inputs or insurance (Demirguc-Kunt et al., 2015).

A negative perception of agricultural activities is another major challenge in promoting youth agripreneurship. One of the most difficult challenges in Kenya, according to Noorani (2015), is changing the youth's attitude towards agriculture. According to Okello (2014), in most parts of SSA countries; schools use agricultural activities as punishment and therefore contributing to their negative perception. For example, in Uganda, agricultural-related activities remained unattractive among the youth partly because schools administer agricultural-related activities as punishment for in-discipline and errant behaviour in students (Mugisha & Nkwasibwe, 2014). Agriculture as a punishment for wrongdoing shapes the perceptions of the youth towards agripreneurship and can reduce their enthusiasm.

Inadequate policies supporting youth agripreneurship hinder their participation. The agricultural policy formulation process in the SSA (UN, 2018) excludes the opinion of young rural women and men resulting in poor implementation. Similarly, due to the lack of expertise and negotiation power, youths frequently miss participation in policy forums. The laxity and failure to involve the youth have been regarded as a disincentive to making agriculture appealing (WorldBank, 2016). Geza et al. (2022) also found that a lack of inclusivity in policy formulation and implementation, limits youth's involvement in agriculture and rural development initiatives.

Furthermore, the lack of respect for farmers and the lack of role models among young farmers contribute to their lack of interest in agriculture. Besides, the media promotes a western and urban lifestyle that negates rural youth's agricultural goals (Noorani, 2015).

Another cause of disinterest, the land tenure system, continues to bedevil most youths in Africa. For instance, the majority of Kenyan youths have no land access because of the existing land

tenure systems. According to Njeru & Gichimu (2014) land is an important resource in agriculture, where accessibility to this resource motivates one to engage in agriculture. Justine et al. (2012) posit that youth access to land is usually limited as it is the parents who hold the title to land for agricultural production. Still, youths may also have access to small parcels of land not viable for large-scale and commercial agriculture. Therefore, policymakers urgently need to develop approaches supporting and facilitating youth's access to land.

Inadequate skills have also been noted as a challenge in promoting youth agripreneurship. It is worth noting that agriculture as a subject in Kenya's primary and secondary schools is included as an elective taught without passion. Noorani (2015) suggests that the inclusion of agriculture education in school curricula as a compulsory subject and the provision of adequate teachers and resources would go a long way in motivating the youth towards having a positive attitude and skills in agricultural-related activities. Further, Gitau (2011) opined that since most youths are open to new ideas and can experiment the new practices, thus, overcoming most of the challenges facing agricultural production. They can use their ideas to inform genetic improvement, pest control, and the adoption of new technologies to promote agricultural production. Addo (2018) asserts that the involvement of the youths in the agro-food system should be more inclusive after finding out that those involved in agriculture are rural and less-educated youths. Theoretical and empirical work on agripreneurship by Rudmann (Rudmann, 2008) are pertinent to this study because they specify the necessary competencies for an agripreneur. As shown in Figure 2, agripreneurship is viewed as a learning process with five skill groupings.

These five-set skills groups include; i) technical and production skills are examples of professional skills; ii) management abilities, including financial and administrative abilities iii) business opportunity abilities, such as recognizing and exploiting business possibilities; iv) strategic capabilities, such as continuous monitoring and evaluation of business growth, and lastly (v) networking and outreach abilities to other businesses to gain support and collaboration. Previous studies (Lachaud et al., 2018; Maïga et al., 2020) indicate that youth programmes have always been used to target youth and train them in either specific skills (agricultural skills, ICT skills, and so on) or broad skills (decision-making skills, business skills and so on) to enhance their employability. Thus, the skills of the youth agripreneur might be improved through conducting effective capacity-building programmes relating to the sector where they lack the required expertise.

Consequently, for agripreneurs to continue enjoying the benefits of farming, they must be resilient to cope with the turbulent environment and capture opportunities that may arise to achieve improved enterprise performance (Shadbolt & Olubode-Awosola, 2013).

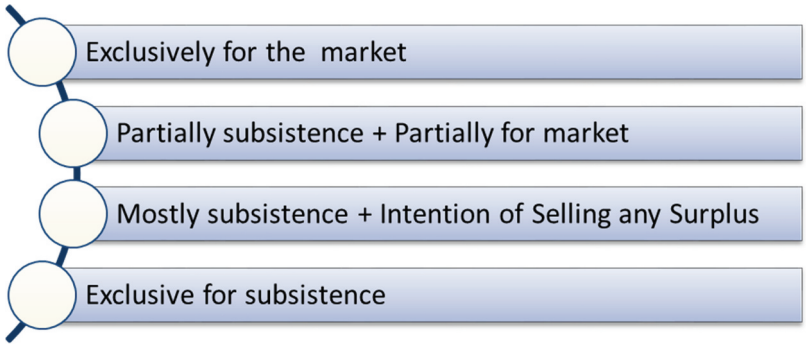

Figure 3. *Ladder of intention and reasons for farming* (**Kahan, 2012**).

3.4. Opportunities for the youths in agribusiness in *Kenya*

Agripreneurship is the process of establishing agribusiness in the agricultural and related areas. Agripreneurship includes activities such as dairying, sericulture, floriculture, apiculture, poultry, nursery farming, and farm-tourism, according to (Radha & Renjini, 2019). Other developing areas include integrated farming, organic farm goods, and farm machinery servicing, supply, and maintenance. According to Uneze (2013), the need for agripreneurship stems from rising demand for organic and high-quality food, low-cost production technologies providing competitive advantages for many primary agricultural activities, private sector willingness to enter agribusiness at all levels of operation, the need to reduce malnutrition in women and children, and the need to ensure household and national food security. As noted by Chikezie et al. (2012), youth unemployment presents both opportunities and threats. The youth's unutilized labour capacity is an opportunity as they can be employed in productive agricultural activities. However, idle youth can be a source of insecurity and instability. The youth in Kenya are a critical component of the productive population and their input can be harnessed to enhance economic development through their participation in agricultural activities (Kising'u, 2016). Since the youths are conscious of consumer expectations and are committed to achieving their goals, agripreneurship is crucial to marketing and trading with demand-driven minds. It is important to incorporate formal vocational training to convert young people and farmers in the food system into professional entrepreneurs, who can operate their farms or enterprises as commercial, profitable, and sustainable thus unlocking their potential. Once agriculture has become a vocation, its human capital ensures long-term growth and development in the agriculture industry (Mutegeki, 2020).

Unemployment causes a slew of social evils, and youths are particularly prone to its negative consequences, which include a lack of skills, low self-esteem, marginalization, poverty, and the squandering of vast human resources (Obayelu, 2019). These issues of unemployment can be addressed by empowering and training youngsters through agricultural development programs, allowing them to become self-employed or employers in agriculture and create revenue on their own (Agu, 2013). The problem of unemployment, disguised employment, and underemployment has created a gap between the "haves" and "have nots" among the citizens. This calls for the need to breach the gap, which can be achieved through entrepreneurship in agriculture (Nwibo et al., 2016). Agricultural activities involve a bountiful of business opportunities. However, the unwillingness of the youths to participate in agricultural activities has hindered them from investing in the various value chains. This can help them to solve the challenge of unemployment as well as food security and nutrition. There has been a transition in agriculture where it is taken as an enterprise, involving agriculture and entrepreneurship resulting in agripreneurship (Uche, 2018). The transformation of the agricultural sector will help in changing the poor image created through modernization. This will help in solving the unemployment concern which has been a burden for the majority of the nations (Ripoll et al., 2017).

Agriculture offers various opportunities in which youths can get engaged in agri-preneurial activities. With the continuous increase in world population more so in the SSA countries, increasing agricultural production is of critical importance for food security. However, the majority of the farmers are ageing. Therefore engaging the youths in the agricultural activities will help in resolving the unemployment challenge as well as boosting the technological and digital revolution in the agricultural food sector. Compared to the ageing farmers, the youths are energetic and can adopt easily agricultural innovation to the changing trend important in addressing the issues arising from the changes in consumption patterns and food demand. This can be achieved through the promotion of Agripreneurship skills for the youths (Addo, 2018).

There are a variety of creative ways to provide youths with finances for agricultural investment, such as using youth saving groups as a springboard to formal financial inclusion These can assist young people in starting to finance their projects. Warehouse receipts, grants, start-up subsidies, and loan guarantees to Financial Service Providers (FSPs) to de-risk transactions with youth-owned enterprises are some more ways to improve access to finance (OECD, 2015). Entrepreneurs are

generally successful in their projects when they have access to capital, technical expertise, and connections to markets, business networks, and ongoing mentorship. This achievement has a cascading effect, encouraging governments and donor organizations to keep investing in agri-business. Youth in agriculture are unaware of the available financial resources and processes. There is limited information on how to obtain funding, how it works, who is eligible and its duration ICTs should ensure that all actors in the value chain are mindful of market and pricing dynamics. In Kenya, for example, farmers' suppliers and buyers are linked through agri-business apps like Mfarm and Mkulima Young (Irungu et al., 2015). ICT training is an important aspect of attracting and retaining youth in the agricultural sector. ICT offers a method of delivering training to a large number of farmers, which could enhance the performance of the youth already in agriculture and attract new youth to the sector (Hudson et al., 2017)

According to Kahan's theoretical framework, all farmers fit into a ladder of intention and reason for farming (Kahan, 2012). This can provide various opportunities for the youth within the four stages of farming practice to alleviate poverty and eradicate unemployment as in Figure 3.

The four stages are discussed as follows:

(1) Exclusive for subsistence with rarely any surpluses: This group refers to farmers who mainly farm for subsistence and rarely have subsistence for the produce market. According to (Mahmoud, 2018), this group cannot get into agripreneurship even if they have the spirit to start. Findings by Ahaibwe et al. (2013) suggest that youth's constraint to subsistence farming as a result of low productivity is attributed to the poor rate of adoption of appropriate farming inputs.

(2) Mostly for subsistence with intention of selling any surplus: This is the second group on the ladder and includes farmers who produce for their household consumption and they are often left with surplus to sell in the market. These groups of farmers have access to limited opportunities such as land and other resources which can be expanded through training or agricultural extension programs. They are often seen as good potential agripreneurs; however, they lack the orientation and maybe some business skills. Findings by Auta et al. (2010) show that about 33.8% engaged in agricultural activities as a means of subsistence, while 38.3% were involved because it was a family tradition while 29.8% were engaged in agriculture because it gave them attractive financial returns.

(3) Partially for subsistence and partially for the market: the third group, and is very close to being agripreneurs but they lack the financial ability to make this transition. Those farmers value markets and wish to produce exclusively commercial agriculture. For this group to become agripreneur, they need market information, expanding labour and financial capacity

(4) Exclusively for the market: The fourth group is market-oriented producers and they have no interest to produce for household consumption. They are market-driven and produce purely for profit. They have already what it takes to be agripreneur but it would be beneficial to include them in agriculture extension programs that support their managerial skills and discuss business innovation.

In summary, Kahan (2012) posited that what blocks agripreneurs from starting and growing profitable farm businesses is basic infrastructure. These infrastructures include poor roads leading to markets, inadequate storage and market facilities, and even irregular supplies of electricity create very real and practical barriers to developing farm businesses. Therefore, providing the necessary infrastructure is likely to be an opportunity for the youths to engage in agripreneurship.

4. Conclusion and policy implication

The objective of this study was to identify the opportunities and challenges of youth engagement in agripreneurship towards the reduction of unemployment and poverty eradication. To this end, a comprehensive literature review related to youth engagement in agripreneurship was conducted

between December 2020 and May 2021. In reviewing the literature, a deductive coding approach was applied using themes such as aspirations of youth, youth training, youth in agribusiness, youth in agriculture, and youth in agribusiness. The results suggest that the youth in Kenya face numerous socio-economic challenges that hinder them from participating in agripreneurship such as negative perception of agricultural activities, lack or inadequate skills, limited access to infrastructure, lack of access to land, finance and information, networking and mentoring, insufficient market information, negative effects of climate change, low levels of value-addition, inadequate policies supporting youth agripreneurship, and poor markets as well as value-addition. On the other hand, the youth's unutilized labour capacity is an opportunity as they can be employed in productive agricultural activities. These include sectors such as dairying, sericulture, aquaculture, floriculture, apiculture, poultry, nursery farming, and farm tourism among others

Consequently, agriculture has the potential solution to solve the challenge of increasing unemployment among the growing population in Kenya and Sub-Saharan Africa. Sustainable youth engagement in agripreneurship will not only result in poverty reduction and rural employment but also bolster food security. Identifying important and specific areas of agripreneurship development across the stages of the agricultural value chain and designing appropriate strategies for promotion are equally needful. It is therefore imperative to provide entrepreneurial education and training to the potential rural youths. Universities can be involved in educating young entrepreneurs in agriculture, and thus promote youth agripreneurship. Universities and colleges need to work with other actors in the public and private sector, researching and advocating for reforms in technical and vocational-based education to address the current needs of the sector which involves reviewing the curriculum, improving facilities, and training instructors to respond to the emerging agricultural opportunities. As a strategy to promote youth agripreneurship, there is a need to provide area-specific training programmes to develop the required technical competency among potential youth entrepreneurs. Modalities should be drawn by the government to provide graduating students with start-up capital for agripreneurship ventures of their desire to ease off the various socio-economic hardships faced by intending entrepreneurs at the inception of their careers. The government can establish developmental funds to support the start-up process of agripreneurship to establish agricultural incubation centres. Additionally, young farmers who are mostly resource-poor should be encouraged to form youth farming groups and be educated on the importance of collective action. This will help them to create a pool of resources, credit facilities, and farm inputs on time, hence enabling them to scale up agripreneurship. Policymakers also urgently need to develop approaches that support and facilitate youth's access to land to promote farming as a business venture. These strategies will help in achieving the United Nations SDGs on ending extreme poverty and zero hunger as well as achieving the economic pillar of Vision 2030 goals of transformation of smallholder agriculture from subsistence to an innovative, commercially oriented, and modern agricultural sector. In addition, it will help in achieving anchor three of the ASTGS on boosting household resilience in the Arid and Semi-Arid Lands (ASALs) and modernization can be achieved through youth involvement in agriculture and Kenya's Big Four agenda on improving the availability of food for all.

5. Limitations of the study

To our knowledge, this is the first study to review the role of youth agripreneurship in poverty reduction and rural job creation for long-term economic growth in Kenya. Despite its importance, the study was not without flaws. The data presented are from papers relevant to the study's objectives. Besides, the articles retrieved during the search mainly researched youth in rural areas. Consequently, the results presented in this study are biased towards youth in rural areas versus youth in peri-urban and urban areas. For future studies, there is a need to broaden the scope of the research to ensure the inclusion of the youth in both rural, peri-urban, and urban areas and as well consider the tradeoffs in the locations. Such future studies should consider the distance from urban and peri-urban areas in which inhabitants of rural areas live.

Funding
The authors received no direct funding for this research.

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Disclosure statement
No potential conflict of interest was reported by the author(s).

Citation information
Cite this article as: Youth involvement in agripreneurship as Nexus for poverty reduction and rural employment in Kenya, Kevin Okoth Ouko, John Robert O Ogola, Charles Adino Ng'on'ga & Jane Ruheni Wairimu, *Cogent Social Sciences* (2022), 8: 2078527.

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