

Youth Co-operatives Participation Gap: Limited Factors of Production, Innovative Strategies or Both? Evidence from Tanzania

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Abstract: Youth engagement in agriculture and co-operative ventures in Sub-Saharan Africa (SSA) remains low, despite the sector's potential for economic and community development. This study investigates whether low youth participation is attributable to insufficient factors of production or a lack of innovative strategies, or a combination of both, within coffee-based co-operative supporting organisations in the Kilimanjaro region of Tanzania. A multiple case study design was employed, involving four cases. Data were collected qualitatively using key informant interviews, focus group discussions, and observations, guided by the principle of descriptive saturation. Thematic analysis was utilised to identify and interpret recurring themes through the review of transcripts, generation of initial codes from transcripts and literature, and visualisation of patterns. Themes were reviewed for commonalities, clearly defined, and labelled. Interpretations and implications were drawn in accordance with the study's theoretical framework and research questions. The findings affirm that limited youth participation in agricultural co-operatives stems from restricted access to land and financial capital, compounded by a lack of innovative engagement strategies from supporting organisations. The absence of youth-targeted programmes and comprehensive support structures,

including mentorship and entrepreneurship training, was also identified. It is concluded that limited youth participation results from both restricted access to essential factors of production and a lack of innovative strategies tailored to engage and motivate youth. Coffee-based co-operative support organisations should develop collaborative initiatives to facilitate youth access to land and establish specialised training hubs and clubs to provide education, innovations, mentorship, and support within the coffee farming value chain and co-operative practices.

Keywords: Factors of production, participation gap, co-operative supporting organisations, innovative strategies, youth.

1. Introduction

Harnessing the potential of youth is crucial for advancing agricultural progress and innovation. Youth represent a vital resource for innovation and sustainability, poised to infuse the sector with fresh ideas and enduring vitality. There is no universal definition of youth, as it varies depending on context, socio-cultural factors, demographics, and economic circumstances. For instance, the United Nations defines youth as individuals aged between 15 and 24 years (UN, 2011), whereas the African Union (AU) defines youth as individuals aged between 15 and 35 years (AU, 2006). Simultaneously, the UN Secretariat employs the terms youth and young people interchangeably to denote the age range of 15 to 24 years, acknowledging that member states and other entities may utilise differing definitions (UN, 1981). In Tanzania, the youth population, defined in this study as individuals aged between 15 and 35 years (in accordance with the AU definition), represents a significant opportunity. The entrepreneurial and innovative potential of this demographic can revitalise the agricultural sector and foster economic growth at the local level (Msangi et al., 2024; Verick, 2009). This is

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particularly relevant in Tanzania and across Africa, where approximately 60-70% of the population is under 30 years of age (Holden & Tilahun, 2018).

Lowder et al. (2016) noted that there are over 570 million small and family-run farms worldwide, producing about 80% of the food consumed in Asia and Sub-Saharan Africa. Despite this fact, the agriculture sector is predominantly characterised by older producers, with limited participation from young entrants. Scholars have emphasised the necessity for inter-generational succession in African agriculture, given the ageing demographic structure of farmers (Msangi et al., 2024; Guo et al., 2015). Nonetheless, the limited interest of youth in agriculture poses a potential threat to its future on the continent, where the population is markedly youthful (Holden & Tilahun, 2018). This situation raises significant concerns about the lack of generational renewal within the agricultural sector, particularly among smallholder farmers.

The aforementioned scenario illustrates a growing demand for labour in the agricultural sector, primarily attributed to the reluctance of youth to actively engage in agricultural activities. A substantial proportion of the rural population in Africa consists of young individuals, many of whom face challenges related to unemployment or underemployment (Holden & Tilahun, 2018). This predicament largely stems from the perception among rural youth that agriculture is an unattractive and unrewarding profession.

The ILO (2020) has indicated that youth unemployment rates consistently exceed those of adults, with an estimated 71 million young people unemployed globally. This global issue is particularly pronounced in Africa, which has the largest youth population worldwide, exceeding 200 million individuals aged between 15 and 24 years (African Development Bank, 2021). It is anticipated that the agricultural sector possesses significant potential to alleviate the unemployment crisis, both globally and within Africa. This can be realised by motivating and empowering youth to participate in agriculture through targeted investments, with a particular emphasis on Agricultural Cooperatives (ACs).

ACs, defined as collective organisations owned and operated by members, often smallholder farmers, come together to achieve common objectives, such as access to land, credit, the supply of agricultural inputs, crop production, marketing, and more, all aimed at improving their economic and social well-being. ACs have demonstrated efficacy as mechanisms for engaging young individuals in agriculture while enhancing youth employment opportunities (Ouko et al., 2022) through both on-farm and off-farm activities. ACs can provide youth with access to essential natural resources, including land and water, agricultural inputs, markets, credit, as well as information and knowledge. Additionally, ACs facilitate the development of self-confidence, entrepreneurial skills, collective action, and social capital among youth. Moreover, ACs serve as crucial platforms for young people to enhance their participation in policy dialogue, thereby ensuring the design and implementation of youth-sensitive policies (ICA, 2011).

In Tanzania, particularly in the Kilimanjaro region, coffee represents one of the principal cash crops and plays a significant role in the livelihoods of many smallholder farmers. It also serves as a strategic contributor to budgetary and foreign exchange earnings. The region benefits from rich volcanic soil and favourable climatic conditions conducive to coffee cultivation. Consequently, coffee ranks among the largest traditional export commodities in Tanzania, accounting for approximately 3.3% of the total export value and 24% of the annual agricultural foreign export earnings (BoT, 2019; Tumaini, 2018; BoT, 2017). According to BoT (2017), the sector generated approximately USD 150 million annually over the preceding three decades, prior to 2017.

The Kilimanjaro region, home to Tanzania's first co-operative movement established in 1925, relies heavily on co-operatives for marketing smallholder farmers' coffee. Despite this historical advantage, the co-operatives face challenges such as ageing producers and trees, low productivity, and limited

profitability (Stiftung et al., 2018; TCB, 2018). Other problems include poor agronomic practices, pests, diseases, inadequate financing, and a lack of social safety nets such as insurance. Among the many challenges facing the sector, stakeholders are particularly concerned about the ageing producers and the need for urgent intervention (Stiftung et al., 2018).

Empirical literature indicates that coffee farming in Tanzania is largely dominated by older farmers (Kiwelu et al., 2021; Mhando & Mdoe, 2017; TCB, 2019), whose average age is 56 years and above. Nevertheless, despite these challenges, global demand for coffee continues to grow, driven by increasing domestic consumption and the emergence of new markets (ICO, 2018; Läderach et al., 2019; Sängler, 2018). Worldwide, coffee consumption has been increasing at an annual growth rate of 2%, representing a 50% increase since 1990 (Sängler, 2018). This growing consumption is projected to raise coffee demand from 150 million bags in 2015 to 200 million bags by 2030 (Sängler, 2018; Stiftung et al., 2018).

However, this emerging opportunity arises at a time when many youths in Tanzania are losing hope and interest in coffee farming, leading them to migrate away from coffee communities. Coffee farming is often viewed by young people as an occupation suited only for the older generation. Additionally, many youths regard involvement in coffee co-operative societies and the production process itself as tedious and unappealing career choices. As a result, the sector has been struggling to attract young talent, which is essential for ensuring the development and innovation of agricultural co-operatives. This paradox is one that coffee stakeholders in Tanzania and elsewhere are seeking to address.

The Tanzanian government, in collaboration with key Coffee-based Co-operative Supporting Organisations (CCSOs), particularly the Tanzania Coffee Research Institute (TaCRI), Tanzania Coffee Board (TCB), and the Cooperative Bank of Tanzania (CoopBank Tanzania Plc) Moshi branch (formerly the Kilimanjaro Cooperative Bank Ltd), as well as the Kilimanjaro Native Co-operative Union (KNCU), has been supporting coffee producers with training, subsidies, improved coffee varieties, and marketing resources (Njau et al., 2019; URT, 2013). Despite these efforts, few young people are joining co-operatives and engaging in coffee activities. This study aims to determine whether the low youth participation is due to insufficient production factors, a lack of innovative strategies from supporting organisations, or both. Therefore, this study fills a critical gap by moving beyond general observations of youth disengagement from agriculture to specifically investigate the structural and strategic barriers. Its contribution lies in identifying whether limited youth participation is primarily driven by limited access to production factors, inadequate innovative strategies from existing support organisations, or a combination of both, thereby offering actionable insights for revitalising youth involvement in the sector.

2. Theoretical Grounds

This study draws upon insights from Human Capital (HC) theory (Becker, 1964). HC theory posits that individuals' education, skills, and experiences constitute valuable assets that can enhance productivity and economic value. The theory highlights the significance of investing in the skills and education of individuals—specifically, youth in this study—to augment their productivity and economic contributions. HC theory was employed to examine how the organisations under study have endeavoured to promote youth engagement in agriculture and agricultural cooperatives (ACs) activities, in relation to the four factors of production and available youth-based innovation strategies. It is posited that the appropriate utilisation and activation of youth labour by CCSOs, alongside facilitation of improved land management and productivity, enhanced capital resource utilisation, and the promotion of entrepreneurial and innovative strategies, are likely to foster youth engagement in agriculture, particularly in ACs activities. HC theory is commonly associated with individual-level investments in skills and education; thus, Becker (1964) emphasised that the returns on human capital are influenced by institutional and structural contexts. In this study, it is assumed

that certain institutional and structural barriers may undermine the potential returns on youths' human capital. Consequently, HC theory elucidates why, despite potential investments in skills and innovation, youth engagement remains constrained when access to complementary factors of production, such as land and capital, is restricted.

3. Methodology

The study was conducted in the Kilimanjaro region, renowned as the hub of quality Arabica coffee production in Tanzania and beyond. This attribute conferred strategic importance upon the region within the country. Consequently, most CCSOs have their headquarters in this region, including TaCRI, TCB, KNCU, and the Coop Bank (Moshi head office), which was established in 2024. These organisations are mandated by law to facilitate the growth and development of the coffee sector in Tanzania, including the Kilimanjaro region (URT, 2013).

3.1 Research design, study participants, population and data sources

The research employed a case study design incorporating multiple case studies (MCS). This approach was preferred due to its robustness and reliability in generating evidence (Baxter & Jack, 2008) compared to focusing on a single case. MCS was also selected to facilitate the identification of commonalities and discrepancies in empirical findings across various cases, thus enabling analytical generalisation (Collis & Hussey, 2014) rather than relying on statistical generalisation. Four cases were selected according to the study's scope (Yin, 2004), which yielded the necessary empirical findings. Theoretical replication was assumed, implying that the chosen cases were perceived as distinct due to differences in the supporting organisations' core roles, thus expected to yield varied results. The study focused on the CCSOs operating in Tanzania, whereby such organisations formed the study's unit of analysis. This choice was deliberate, as CCSOs are the primary institutional actors designing, implementing, and mediating youth engagement strategies in agriculture and agricultural cooperatives. As such, they hold the organisational knowledge, policies, and practices that determine how youth are mobilised, trained, and supported. Examining organisations rather than individuals allowed the study to capture systemic approaches to youth engagement, resource allocation, and innovation strategies, which are central to the key research question. This means that the participants chosen for inclusion in the study and their responses reflected the specific study cases and not individual opinions or facts. For quality data collection, participants were purposely selected from key sections within the organisations. This included heads of technical sections or departments and at least two staff members or officials from each section or department who were familiar and conversant with the subject matter under investigation.

3.3 Data collection and analysis

Data collection for the study employed a multifaceted approach, incorporating focus group discussion (FGD) guides, key informant (KI) interview guides, and observation guides. Audio recording equipment was utilised to aid in capturing responses. Informed consent was secured from all participants prior to data collection. Key informants included organisational executives and their immediate assistants. Primary data were supplemented by secondary data drawn from organisational strategic plans and relevant reports. Data validation was conducted with selected youth and leaders from primary agricultural co-operatives involved in coffee cultivation within the study area, aiming to corroborate the information gathered from CCSOs.

Eight focus group discussion (FGD) sessions were conducted, with two sessions per organisation, each consisting of six participants. This number aligns well with Stewart et al. (2007), who recommend six to twelve participants for effective FGDs, as smaller groups may provide limited discussion while larger ones can be unwieldy. The observation guide focused on evaluating physical support (if any) and specific initiatives provided by CCSOs for youth engagement in agricultural co-operatives (ACs). It also assessed innovative strategies and indicators aimed at addressing youth

disengagement in AC activities. The study employed a qualitative approach to gain in-depth insights into subjective experiences and complexities related to youth participation gaps in co-operative activities. Participants were drawn from four coffee co-operative-supporting organisations.

Yin (1994) emphasised that the choice of participants should be based on the richness of the information required. In this study, participant selection was limited to the organisations' chief executives or their immediate assistants, heads of sections and departments relating to outreach activities, a few technical staff members, and at least two staff members familiar with the study's aspects. The advantage of this selection was based on the premise that such participants possess a sufficient understanding of the subject matter. The data collection process was guided by the descriptive saturation principle for qualitative research. Data saturation was considered achieved when no new descriptive codes, categories, or themes emerged from additional FGDs and KI interviews (Tuckett, 2004). Credibility was established through triangulation of FGDs, KI interviews, observations, and secondary documents, as well as member-checking with youth and leaders from ACs. Likewise, dependability was ensured by maintaining an audit trail of data collection instruments, coding decisions, and iterative analysis procedures. Moreover, confirmability was secured through systematic documentation of analytic steps and reflexivity to minimise researcher bias, ensuring that findings were grounded in participant accounts rather than researcher predispositions.

Data analysis was conducted using a thematic analysis approach, which involved systematically identifying, organising, and interpreting recurring themes within the data. Following Braun and Clarke's (2006) six stages of thematic analysis, the process began with the researchers immersing themselves in the data by thoroughly rereading and re-examining the transcripts (step 1). Initial codes were generated by reviewing the transcripts, existing literature, and guiding theory (step 2). Themes were identified by tabulating the data to visualise emerging patterns (step 3). A review process was then carried out to establish commonalities and distinctions among the themes (step 4). Each theme was clearly defined and labelled to enhance clarity and understanding (step 5). Finally, a comprehensive report was produced, documenting the research process, identified themes, interpretations, and implications (step 6). The search for patterns was guided by the study's theoretical framework and research questions (Yin, 1981). Cross-case and within-case analyses were performed to determine the significance of themes and identify similarities and differences. The Atlas.ti computer programme was utilised to facilitate the organisation and analysis of data from FGDs and KIs.

3.4 Ethical consideration

This study adhered to standard research ethics by obtaining a research permit from the relevant authorities to conduct data collection in the study area. Since the study involved human beings, ethical considerations included obtaining the necessary permits for data collection and reporting to the relevant authorities. The researcher secured informed consent from study participants prior to data collection, ensuring that participation was voluntary. Furthermore, data collection ensured the privacy, confidentiality, and anonymity of the research participants, as the names of the participants were not disclosed (Fleming & Zegwaard, 2018).

4. Presentation of Results

This section presents the findings on factors of production, innovative strategies, and youth engagement in cooperative activities. It highlights critical issues such as access to land, capital, labour, and motivational support services, alongside opportunities in entrepreneurship, innovation, and social networking among youth. Together, these dimensions provide an understanding of the structural and strategic aspects shaping youth participation in coffee-based cooperatives.

4.1 Land access among youth

The study found that youth in the study area face significant challenges regarding land access, thereby limiting their opportunities to engage in the coffee value chain. Despite these challenges, there were no deliberate efforts made by the organisations studied to facilitate youth access to land. It was found that land, the primary means of production in the study area, is predominantly owned by household heads, who are typically older men. Consequently, many young men lack land ownership, resulting in restricted access to it. Similarly, the study found that household heads, who are predominantly men, exclusively own all cash crops, including coffee and other permanent crops. This suggests that there are potential gender and age-related disparities in land and cash crop ownership, which translate into restrictions for young individuals seeking to enter the coffee farming sector.

Furthermore, the study revealed limited opportunities for land expansion due to constrained land availability. As a result, areas deemed suitable for coffee production are densely populated, exacerbating the challenges associated with land access and cultivation. Kilimanjaro is the third most densely populated region in Tanzania, with an average of 104 people per square kilometre. In the upper belt, where smallholder coffee cultivation is concentrated, the density can reach up to 650 people per square kilometre (KRP, 2009). Additionally, the region is estimated to have around 1,861,934 residents (URT, 2022), with an average household land size of 1.4 acres (Mulangu & Kraybill, 2013).

This study established that land size in the study area has continued to decline over time, primarily due to land fragmentation (Said et al., 2021; Chimilila et al., 2008), resulting from inheritance practices, population growth, and environmental degradation, which has led to decreased arable land. The study revealed that, despite the rapid decline in land availability in the study area, no substantial efforts have been made by the organisations studied to facilitate youth access to land. Nevertheless, one of the key informants said that *“land access limitation is not a big concern because we are witnessing a lot of unattended farms, with aged and dried up trees and desperate aged farmers in the study area”* (KI1, June, 2024). This suggests that despite land decline in the study area, the available land is not utilised by youth to produce coffee.

4.2 Capital access among youth

The study established that coffee farming necessitates substantial inputs, particularly in acquiring improved coffee seedlings, fertilisers, pesticides, and other vital management practices. Based on this context, a question was formulated to ascertain how the CCSOs have positioned themselves in facilitating youth access to agricultural capital. A key support organisation in this regard is the Cooperative Bank of Tanzania, an institution established primarily by and for co-operatives to promote the growth of coffee co-operatives initially in the Kilimanjaro region and subsequently throughout Tanzania. The findings indicated that the bank provides a variety of financial products, including agricultural loans, to agricultural marketing co-operatives in the region, with a focus on youth participation as beneficiaries.

Additionally, it was revealed that the bank has been conducting outreach programmes aimed at raising awareness among youth regarding the importance of joining co-operatives and perceiving co-operative activities as entrepreneurial opportunities, rather than ventures exclusively for older farmers. However, there were neither statistics available on the youth who have benefited from such initiatives, nor were there specific programmes targeting youth. It was noted that while the bank encourages co-operatives to incorporate youth into their programmes, there was no specific programme or unit dedicated to overseeing youth-related aspects.

Furthermore, the bank offers youth-focused services, including access to autorickshaws, commonly known as bajaji, on a loan basis. This initiative aims to engage youth with the bank and familiarise

them with other co-operative-related services. Nonetheless, no youth were reported to have joined Agricultural Co-operatives (ACs) because of such initiatives. One of the key informants emphasised that *“many young people in the study area aren’t drawn to coffee farming and agricultural co-operatives, not because of capital constraints but due to their preference for quick returns from short-term investments”* (KI2, June, 2024). This finding indicates that youth disengagement cannot be explained solely as a supply-side constraint. Instead, it reflects a demand-side dynamic of availability without uptake, where resources such as land were sometimes accessible but remained underutilised.

Unlike the Coop Bank, the other organisations studied did not have specific arrangements for youth to access financial support for coffee farming. It was also revealed that agricultural inputs essential for coffee production, such as pesticides, fertilisers, sprayers, sieves, and other equipment, were considered prohibitively expensive for most smallholder farmers to afford. Moreover, none of the studied organisations had direct financial support services or programmes for youth, such as incubation centres, farming clubs (youth nurturing nurseries), or youth groups.

One of the key informants from the Coop Bank supported this by stating, *“We have plans in place to facilitate youth incubation services, but implementation has not yet begun”* (KI3, June, 2024). This implies a lack of initiatives to facilitate youth engagement in coffee farming and agricultural co-operative activities.

Nonetheless, some initiatives by the TCB were identified that focus on facilitating youth investment in other nodes of the coffee value chain apart from farming. These include the establishment and operation of mobile and static coffee shops, particularly in the hospitality industry in the Moshi and Arusha regions, as well as in towns and cities like Dar es Salaam and Dodoma, and higher learning institutions across Tanzania. One of the key informants from TCB emphasised that, *“given the limited land access among youth, they could still benefit from participating in other accessible nodes within the coffee sector’s value chain, such as hospitality and coffee shops”* (KI4, July, 2024).

This implies that if the efforts and intentions of coffee stakeholders are well integrated, youth are likely to benefit throughout the entire coffee value chain. It was revealed that TCB has been facilitating entrepreneurship training and skills development in the form of short courses for youth interested in operating coffee shops. Likewise, it has been running a certificate programme in Coffee Quality and Trade in collaboration with Moshi Co-operative University, aimed primarily at preparing skilled experts in coffee quality assurance and cupping.

4.3 Labour and motivational support services among youth

It was established that labour, a key factor for youth engagement, was readily available among the youth themselves. The study thus focused on establishing whether there was sufficient motivational support from the CCSOs to enable youth to direct their labour force into coffee farming and AC activities. The study revealed that some motivational support services, such as mentorship programmes, workshops on agricultural innovations, and access to success stories from young and adult farmers, were lacking in all the organisations studied. Additionally, access to financial literacy training, networking opportunities, and agricultural financing was also found to be deficient. This included a lack of specialised agricultural-based financial packages tailored to support youth investing in agriculture and ACs.

One of the key informants from a financial organisation stated, *“at present, we do not have a specific financial package to support youth participation in agriculture and ACs activities. Given the nature of our smallholder, rainfed agriculture, most financiers perceive it as a high-risk venture compared to other sectors”* (KI5, July, 2024). This suggests that youth participation in agriculture and ACs activities remains constrained due to the inadequacy of tailored financial packages from institutions, which perceive current farming practices as excessively risky for investment. Furthermore, there is a lack of

programmes designed to facilitate youth access to collective land for farming, alongside an absence of innovative agricultural practices, such as block farming systems specifically tailored for youth in regions where land access is problematic.

None of the organisations studied had established training hubs or clubs specifically aimed at motivating and encouraging youth to engage in coffee farming and agricultural cooperative (AC) activities. The study further underscored the absence of specialised youth farming initiatives targeting potential farming areas, such as AC farms and schools. Additionally, there are no programmes focused on facilitating coffee value addition and enabling youth participation in speciality coffee markets, which often present opportunities for higher prices. One of the key informants emphasised that *“the absence of specialised youth farming initiatives in schools and AC farms leaves young people without the motivation or structured pathways to engage in coffee farming and cooperative activities (KI6, July, 2024).* This highlights that, without institutionalised training hubs and tailored initiatives, youth engagement in agriculture will remain minimal.

4.4 Entrepreneurship, innovation and social networking access among youth

This study revealed a lack of serious entrepreneurship and innovation initiatives aimed at enabling youth engagement in coffee farming and AC activities within the studied organisations. None of the organisations examined had specific entrepreneurship training programmes, projects, or activities designed to enhance youth engagement in farming and AC activities. Furthermore, limited social networking opportunities, along with other digital resources specifically tailored for youth, were also identified. One key informant highlighted this concern, *“as we are living in a digital world, the internet and other digital technologies present many opportunities for young people. However, there are limited social networking or other digital platforms designed specifically for youth in cooperatives (KI7, July, 2024)”*. There was a lack of specific mechanisms for peer-to-peer support to facilitate youth involvement in coffee farming and co-operative activities. Additionally, there were no collaborative initiatives among the studied organisations regarding youth-oriented innovation, skills-sharing, modern farming practices such as precision farming and block farming, and the harmonisation of youth training needs. Furthermore, it was revealed that none of the studied organisations had policies or guidelines specifically designed to enable youth engagement in farming and co-operative activities.

5. Discussion of Findings

The findings reflect limited land access among youth, attributed to the patriarchal norms that continue to prevail in the study area. This situation results in a persistent inter-generational inequity as youth struggle to access land and own cash crops, thereby limiting the transfer of agricultural knowledge and climate change (CC) information from older to younger generations. Additionally, this scenario leads to economic exclusion for youth, constraining their opportunities to participate in income-generating activities related to coffee farming. Njau and Matto (2024) found that patriarchal norms remain strongly entrenched in certain Tanzanian communities, with positions of dominance and privilege predominantly held by men. This significantly restricts youth participation in agriculture and cooperative activities. Supporting this observation, Msangi et al. (2024) and Nchanji et al. (2024) found that the agricultural sector in developing countries is primarily dominated by older individuals, with minimal involvement from youth. This suggests that the limited participation of youth is partly a consequence of their restricted access to land.

Furthermore, population growth and land fragmentation contribute to the limitation of youth participation in cooperative activities. Empirical studies have indicated that population growth and village fragmentation typically increase the demand for land for various purposes, including agriculture, settlement, and infrastructure development (Muyanga & Jayne, 2014; Said et al., 2021). This makes land a valuable yet limited asset among youth, particularly on the upper slopes of Mount Kilimanjaro. Msangi et al. (2024) established that in many African countries, land access and tenure

insecurity present significant challenges to agriculture, particularly for youth. This implies that access to land is not only essential but also a pivotal determinant of youth engagement in agriculture and agricultural cooperatives, as it constitutes the primary factor of production. Drawing on Human Capital Theory (Becker, 1964), restricted land access undermines the returns on youth's education, skills, and innovative capacities, as human capital investments cannot achieve their full productivity without complementary factors of production such as land. Consequently, the findings highlight how structural barriers diminish the potential economic contributions of youth, despite their human capital assets.

In relation to access to capital, the presence of the Cooperative Bank of Tanzania (Coop Bank) is noted, which is primarily tailored to offer financial services to cooperatives in the study area. Nonetheless, while the Coop Bank provides financial products and outreach, there are no youth-specific programmes. Despite this, the bank has a general financial support initiative for local agricultural cooperatives from which youth can benefit; however, few youths have applied for this financial support. A similar scenario was established by Manirakiza et al. (2020) in Burundi, where, despite the existence of a bank specifically designed for youth (the Investment Bank for Youth) offering agricultural micro-credits, most youth were still not attracted to agricultural cooperative activities. Empirical literature indicates that cooperatives are crucial entities for accessing financial, physical, and natural capital, serving as vital fora for dialogue and empowerment for individuals in the informal economy (Godden, 2017; Manumbu, 2023; Makoye et al., 2022; Njau et al., 2019), including youth.

Moreover, the preference of youth for swift returns from short-term ventures remains prominent. This indicates that, in contrast to the longer wait for financial rewards associated with coffee farming, youth are inclined towards investments such as motorcycle and tricycle riding, vegetable production, and small business enterprises that yield quick monetary gains. This preference may also stem from a long-standing low opinion regarding rural-urban employment opportunities. Many youth perceive the agricultural sector as laborious and insufficiently rewarding. Muiderman (2016) reported challenges in engaging youth in agriculture in SSA, as the sector is frequently associated with arduous physical work, low wages, and uncertainty. This was similarly observed in the study area, where there were no youth-oriented farming insurance schemes, rendering agricultural undertakings risky and unreliable. Rolle (2018) found that limited youth participation in these activities is partly attributable to insufficient access to information, knowledge, and education. Furthermore, a decline in youth interest in farming, despite their productivity and being in their prime years, constitutes an additional concern (Som et al., 2018). The human capital theory underscores the significance of investing in the skills and education of individuals (Becker, 1964), particularly youth in this study, to enhance their productivity and economic impact. This study revealed that such investment has not yet been realised in the organisations examined.

None of the organisations studied had established youth training hubs or clubs specifically aimed at motivating and encouraging youth to engage in coffee farming and agricultural co-operative (AC) activities. Ndereyimana (2023) emphasises the necessity of engaging role models to provide young farmers with the confidence and motivation to persevere. Additionally, Tyson et al. (2022) argued that without personal, educational, or growth guidance from adult supporters, young individuals cannot fully realise their potential. The human capital theory highlights the importance of education and training (Becker, 1964), particularly in innovative farming and agricultural co-operative techniques. This is because well-trained and informed youth are more likely to adopt new technologies and practices. Scholars have noted that involving youth in co-operative activities offers significant benefits, not only to the young participants themselves but also to the co-operative institutions they engage with. Flink et al. (2018) and Hartley & Johnson (2014) emphasise that youth play a crucial role in sustaining ageing co-operatives by introducing fresh ideas and modern technology into co-operative governance.

Researchers emphasise the importance of engaging youth in value chains, entrepreneurship, and farming as a business within the co-operative model, rather than relying on traditional methods. This includes guiding youth to enhance production through value-added processing and an entrepreneurship model focused on innovation, technology adoption, effective marketing, and higher pricing to drive revenue growth (Ndereyimana, 2023; Ouko et al., 2022). However, these attributes were lacking in the organisations studied. Holden and Tilahun (2018) assert that youth require access to entrepreneurial and technical training, along with other factors of production, to perceive agriculture as a lucrative career.

Moreover, a collaborative spirit was not part of the studied organisations' culture. Studies have shown that organisational collaboration enables the sharing of risks and resources, enhances R&D, and provides access to information and solutions (Body et al., 2020; Kozuch et al., 2016; Müller et al., 2016). It also optimises the use of resources, reducing duplication of activities and minimising confusion that might arise from various actors working in isolation while serving the same clients (Njau, 2022). Furthermore, the studied organisations lacked active social networking or similar digital platforms to enhance youth collective actions in farming and marketing skills. Participation in policy dialogue forums (Godden, 2017) typically allows youth to contribute their perspectives and influence decisions that affect their communities and the agricultural sector at large. However, sadly, such potential benefits have not yet been realised by youth in the study area. Multiple factors, including limited factors of production and innovative strategies, all contributed to low youth participation in coffee-based cooperative activities. This indicates a significant gap in concerted collective initiatives among the studied organisations in attracting youth to agriculture and cooperative activities.

5.1 Limitations and directions for future research

This study was confined to the Kilimanjaro region, which, while strategically significant as Tanzania's hub of arabica coffee production, limits the generalisability of the findings to other coffee-producing areas. Future research should encompass additional coffee-producing regions, thereby enhancing the generalisability and comparative value of the results. Furthermore, the evidence for this study was predominantly sourced from cooperative supporting organisations, indicating that youth perspectives were captured indirectly through validation rather than directly as primary data sources. Although this methodological choice was deliberate, considering that the support organisations serve as the key institutional actors responsible for designing, implementing, and mediating youth engagement strategies in agriculture and agricultural cooperatives, it remains imperative to conduct a more comprehensive study that directly solicits youth perspectives on their participation in agricultural and cooperative activities.

6. Conclusions and Recommendations

This study confirms the persistent limited engagement of youth in coffee farming and agricultural co-operative activities within the study area. It was determined that the constraints and deficiencies of existing CCSOs have contributed to the low levels of youth involvement. It is concluded that the limited participation of youth in agricultural co-operatives in the study area results from both restricted access to essential factors of production, such as land and financial capital, and the absence of innovative strategies and supportive programmes designed to effectively engage and motivate youth.

The study revealed that limited access to land, primarily controlled by older males and inherited through male lineage, impedes youth participation in agricultural co-operative activities. Furthermore, no significant initiatives were identified within the studied organisations to facilitate youth access to land, whether individually, through youth groups, or through co-operatives. The lack of specialised youth training hubs, collective land access programmes, and targeted farming

initiatives indicates deficiencies in current co-operative support. Additionally, although financial support from the Cooperative Bank is available, it does not include youth-specific programmes and suffers from inadequate outreach and support structures.

Moreover, despite the availability of labour among youth, they have not been able to fully engage with and benefit from the coffee value chain. This is attributable to the absence of comprehensive support structures from the studied CCSOs that would enable youth to recognise the value of participating in co-operative activities. This finding aligns with human capital theory, which highlights the necessity for targeted investment in education and training to enhance youth participation and productivity. Similarly, entrepreneurship and motivational support services for youth, including mentorship, financial literacy training, and innovative agricultural practices, are notably lacking from the CCSOs. This deficiency can largely be attributed to a lack of targeted initiatives and insufficient focus on addressing the specific needs of youth.

Based on the major study findings, this study recommends the following. The CCSOs should develop and implement collaborative initiatives to facilitate youth access to land, including collective land access. The study found that specialised youth farming initiatives focusing on potential farming areas, such as ACs, farms, and schools, were lacking. These areas are considered potential because land is available and more accessible for collective actions compared to individual household land. As such, limited resources, including land, finance, manpower, and physical resources, can easily be pooled together towards such collaborative and collective initiatives. It is also recommended that CCSOs invest in block farming (a collective system where smallholder farmers cultivate their lands in a coordinated manner) to encourage youth to engage in coffee farming and agricultural co-operative activities.

Additionally, it is recommended that support organisations create specialised training hubs and clubs whereby youth can collectively access education on coffee farming and co-operative practices. In doing so, youth may benefit in the form of skills and knowledge sharing, risk sharing, access to mentorship and innovation support, coffee value chain management, improved efficiency, marketing access, and bargaining power.

There is also a need for CCSOs to design and promote financial support programmes specifically tailored for youth, including grants, loans, and mentorship opportunities, to improve outreach and support structures and services. Likewise, there is a need to introduce and support innovative farming techniques, entrepreneurial, and digital initiatives within co-operatives. This should be in line with the provision of mentorship and motivational support to engage and retain youth in the coffee value chain. However, this calls for an innovative and forward-thinking approach from all stakeholders, one that embraces creativity and encourages thinking beyond conventional boundaries.

7. Declarations

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