



Ager. Revista de Estudios sobre Despoblación y Desarrollo Rural

ISSN: 1578-7168

ISSN: 2340-4655

ager.journal@gmail.com

Centro de Estudios sobre la Despoblación y Desarrollo de
Áreas Rurales
España

Anania, Paulo; Rwekaza, Gratian C.; Bamanyisa, Justinian M.
Socio-economic benefits of agricultural marketing co-operatives and their
challenges: Evidence from Selected Cases in Moshi District Council (Tanzania)
Ager. Revista de Estudios sobre Despoblación y Desarrollo Rural, núm. 30, 2020, pp. 97-146
Centro de Estudios sobre la Despoblación y Desarrollo de Áreas Rurales
Zaragoza, España

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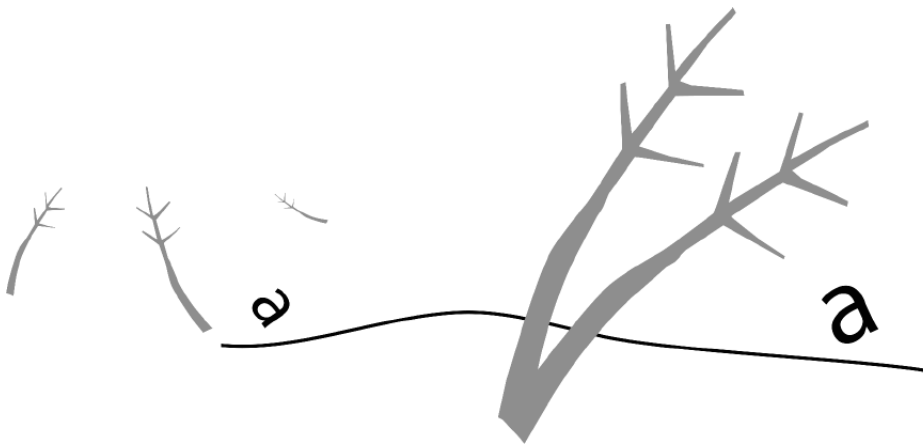
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*Socio-economic benefits of agricultural
marketing co-operatives and their
challenges: Evidence from Selected
Cases in Moshi District Council
(Tanzania)*



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DOI: 10.4422/ager.2020.07

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Revista de Estudios sobre Despoblación y Desarrollo Rural
Journal of Depopulation and Rural Development Studies

***Socio-economic benefits of agricultural marketing co-operatives and their challenges:
Evidence from Selected Cases in Moshi District Council (Tanzania)***

Highlights:

1. People with similar needs and aspirations tend to opt for collective approach to attain them through a formalized institution.
2. In rural areas, co-operatives are among best options to fulfil such intentions and promote sustainable and decent living for members.
3. As ethical and community-sensitive enterprises, co-operatives tend to expand their gains beyond members by supporting local and national development.
4. Co-operatives' intentions to develop their members and wider community are constrained by various issues which requires the best of their collective and collaborative efforts to address them.

Abstract: Studies have said a lot on co-operatives' role in development but less have been documented about agricultural marketing co-operatives engaged in coffee marketing. The paper addresses the gap with study findings which assessed role of agricultural marketing co-operatives (AMCOS) in socio-economic development and challenges they face in Moshi district council. A multiple case study design was adapted using 10 AMCOS where a total 80 respondents were involved and both quantitative and qualitative data were collected. Primary quantitative and qualitative data were collected through self-questionnaire administration and Focus Group Discussion (FGDs), respectively and secondary data were collected through documentary review. Quantitative data were analysed using multiple response analysis while qualitative data were analysed using thematic content analysis. Theoretical ground of the paper based on Cook's Life Cycle Model of Agricultural Co-operatives and Collective Action Theory.

As for the results, despite challenges faced, AMCOS found to be viable organizations for socio-economic development where they operate. They also contribute to Government revenues and finance operations of supporting institutions in coffee industry. We recommend on the need for; improved management, coffee quality, business diversification and change in the business model. In addition, AMCOS should improve; farming techniques, enhance provision of co-operative and agricultural education and training as well as forming joint enterprises.

Keywords: Socio-economic benefits, challenges, co-operatives, agricultural marketing co-operatives.

***Beneficios socioeconómicos de cooperativas de comercialización agrícola y sus desafíos:
Demostración a partir de casos seleccionados en el consejo de distrito de Moshi (Tanzania)***

Ideas clave:

1. La gente con similares necesidades y aspiraciones tiende a optar por enfoques colectivos para conseguirlas a través de una institución formalizada.

2. En áreas rurales, las cooperativas se encuentran entre las mejores opciones para satisfacer tales intenciones y promover una vida sostenible y digna para sus miembros.
3. Como empresas éticas y sensibles a la comunidad, las cooperativas tienden a expandir su mercado más allá de sus miembros, respaldando el desarrollo local y nacional.
4. Las intenciones de las cooperativas de desarrollar su número de miembros y una comunidad más amplia están limitadas por varios problemas, lo cual requiere lo mejor de su esfuerzo colectivo y colaborativo para resolverlos.

Resumen: Hay muchos estudios sobre el papel de las cooperativas en el desarrollo, pero se ha documentado menos sobre las cooperativas de comercialización agrícola dedicadas a la venta del café. En este trabajo se exponen y analizan los resultados de un estudio en el que se ha evaluado el papel de las cooperativas de comercialización agrícola (AMCOS) en el desarrollo socioeconómico, así como los desafíos que enfrentan en el consejo del distrito de Moshi (Tanzania). Se diseñó un estudio de casos múltiples, a partir de 10 AMCOS, en el que participaron un total de 80 encuestados. Se recopilaron datos tanto cuantitativos como cualitativos primarios utilizando, respectivamente, autocuestionarios y Focus Group. Por su parte, los datos secundarios se obtuvieron mediante el análisis de documentos. Los datos cuantitativos se analizaron mediante el análisis de respuestas múltiples, mientras que los datos cualitativos se analizaron mediante el análisis de contenido temático. El fundamento teórico del documento se basó en el modelo del ciclo de vida de las cooperativas agrícolas y la teoría de la acción colectiva de Cook. En cuanto a los resultados, a pesar de los retos a los que se enfrentaba, las AMCOS consideraban que eran organizaciones viables para el desarrollo socioeconómico de los lugares en los que operaban. Además, contribuyen a los ingresos del Gobierno, así como a las operaciones financieras de las instituciones de apoyo a la industria del café. En cuanto a las recomendaciones se plantea la necesidad de mejorar la gestión, la calidad del café, la diversificación empresarial y cambiar el modelo de negocio. Por último, las AMCOS deberían mejorar las técnicas de cultivo, aumentar la oferta de educación y capacitación cooperativa y agrícola, así como la formación de empresas mixtas.

Palabras clave: Beneficios socioeconómicos, desafíos, cooperativos, cooperativas de comercialización agrícola.

Received: April 2018
First revised version: March 2019
Second revised version: June 2019
Third revised version: October 2019
Accepted: April 2020

How to cite this paper: Anania, P., Rwekaza, G. C., Bamanyisa, J. M. (2020). Socio-economic benefits of agricultural marketing co-operatives and their challenges: Evidence from Selected Cases in Moshi District Council (Tanzania). *AGER: Revista de Estudios sobre Despoblación y Desarrollo Rural (Journal of Depopulation and Rural Development Studies)*, (30), 97-146. <https://doi.org/10.4422/ager.2020.07>

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1. Introduction

For centuries, people have been working together as a means to promote their local development. When the need rose to formalize such relations for inclusive and wider society development, co-operatives emerged as one of reliable models. As business organizations, co-operatives voluntarily bring together people with common needs and aspirations to promote their socio-economic development by establishing business enterprise which is collectively managed based on democratic principles (Anania and Rwekaza, 2016; ILO, 2012). The co-operative model originated from the Western countries, whereby the Rochdale Pioneers in England in the 19th C, serves as the model for modern co-operatives. Various African countries started practicing modern co-operation several decades ago, especially during the colonial era. For instance, the history of Tanzanian co-operative movement dates back from 1925 during British rule (Maghimbi, 2010). After independence, the government adapted co-operatives as key partners in promoting community development and even for implementing state policies, including Ujamaa and Self-reliance policy in late 1960s (especially after Arusha Declaration in 1967). The period of 1960s to 1970s is considered as the era of state-control in Tanzania where co-operatives were mostly operated as part of the government and partners of implementing state policies. From 1980s up to date, co-operatives operate under liberalized market environment with minimal government involvement in co-operative business (Anania and Nade, 2020).

Regardless of all these dynamics, still co-operatives are potential for local and national development. They represent one viable form of a member-owned and controlled organization that can help the poor compete in the market and bring significant social benefits and voice (ILO, 2012).

In both the two eras, various types of co-operatives have been established in different sectors such as agriculture, finance, housing, transport, fishing, dairy, industrial and others. Co-operatives have been an important part of the development of Tanzania for many years. For years in Tanzania and other African countries, co-operatives in agriculture sector have been the dominant one mainly dealing with cash crops for export such as coffee, cotton, cashew-nuts, tea and tobacco (Anania and Rwekaza, 2016). Although in past decade the country has experienced mushroom of savings and credit co-operatives (SACCOS) especially after the intervention by 4th Tanzanian government to promote microfinance sector. For many years in developing countries, agricultural co-operatives have been reliable enterprises to promote socio-economic development in rural areas (Sumelius *et al.*, 2013; Ainebyon and Tirihungwa, 2012). Despite the type or sector they belong, co-operatives help to extend various services to members and general public, despite of their challenges emanating on the dual course of delivering their service to members, especially under this era of market liberalization. The rise of free markets, made co-operatives struggle to compete with the private sector and many has not been able to provide their members with services they need. The Government has responded to this problem by introducing a new Co-operative Development Policy of 2002 to help co-operatives to regain their importance in the economic lives of the people (TFC, 2006). Also the current Co-operative Society Act of 2013 has improved the legal environment for co-operatives to operate their businesses, including the possibility for direct export without using Co-operative Unions and also business partnership with other co-operatives and private sector.

Up to date, co-operatives remain to be crucial in helping people exercise control over their economic and social lives in an ever more competitive economy. In the current environment where market access is poor and market information is inadequate, individual small farmers are left in a weak position. However, co-operatives provide solution for this (Ainebyona and Tiruhungwa, 2012). If well managed, co-operatives in rural areas have great potential to build local development and boost performance of the agricultural sector (Rwekaza and Mhihi, 2016). To date in an era where people feel powerless to change their lives, co-operatives represent a strong, vibrant and viable economic alternative where people can meet their common needs (Anania and Towo, 2016). In Tanzanian agriculture sector, agricultural marketing co-operatives (AMCOS) unite smallholder farmers where they can access

inputs and other services including storage, processing and marketing of their produce to improve their lives through increased income.

In Tanzania, Moshi District Council consists of one of the strong co-operative existence in the country and enjoys the reputation for being a birthplace for the earliest co-operatives in the country (Anania and Rwekaza, 2016). In the district, AMCOS have existed for years, mainly dealing with production and marketing of coffee. In their operations to serve members' interests, they have been struggling to offer various services to members so as to promote their socio-economic conditions and even contributing to larger community development. The benefits of co-operatives tend to differ between types and specific areas. Such benefits are most evaluated in economic terms but some also may be social (Anania and Towo, 2016). Despite the significance to improve socio-economic conditions of their members, less has been documented on these efforts and impacts. Again, the literatures are inadequate on specific challenges facing AMCOS, especially in Moshi District Council given that nature of coffee business may not completely be the same as other cash crops in country. Therefore, this paper intends to document the socio-economic benefits brought by agricultural marketing co-operatives (AMCOS) to their members and reveals some challenges they face in such efforts to meet members needs and expectations. The paper has viewed AMCOS in the context of members and at organizational level. The specific reference has been drawn from selected AMCOS in Moshi District Council to provide picture on the benefits they bring to members and expose prevailing challenges.

It is expected that this paper can provide a clear picture to various stakeholders' in the co-operative sector including co-operatives themselves (members, leaders and staffs), Co-operative practitioners, Policy makers, non-government organizations (NGO) and government institutions responsible to have clear understanding of the socio-economic benefits of AMCOS and main challenges they face in their operations. Further, the paper is expected to promote awareness and creation of various interventions by the Government, NGO, private sector, co-operative supporting institutions and public at large in the quest to promote sustainable development through co-operatives, especially in rural areas.

In terms of organization, the current paper is organized as follows. First it starts with description of methods and materials used, followed by findings and discussion. In the discussion section it has analysed the socio-economic profile of the AMCOS, their social and economic benefits, the contributions made by selected AMCOS to government and supporting institutions and the challenges facing AMCOS. The final part is about the conclusion and recommendations and proposed areas for further studies.

2. Theoretical framework

2.1. Cook's Life Cycle Model of Agricultural Co-operatives

The Life Cycle Model was developed by Michael Cook in 1995 in his work "Future of US Agricultural Co-operatives: A Neo-Institutional Approach". The model provides the five stages of life of the agricultural co-operative enterprise i.e. from its genesis, growth and demise (Cook, 1995). In the first stage, the model describes on the justifications to form a co-operative where in most cases, two factors apply in this. First, producers need to have institutional mechanism to control their economic welfare including accessing better prices for their produce. Secondly, producers need institutional mechanisms to access opportunities and attain safety from market failure, including poor prices for their produce. Such factors also justify the type and level of the co-operative to be established to meet members' needs and long terms goals. In the second stage, the co-operative struggles to address market failure and satisfy members including setting means for their livelihood e.g. enabling market access and supply affordable inputs to members.

Provided that the co-operative succeed to survive in the second stage, it enters the third stage especially as it manages to correct or prevent severe negative effect of market failure but prices are slightly different from competitors. On the other side, at this stage, the behaviour of competitors begins to change making members scrutinize their choice to transact with the co-operative. At this stage, some problems occur in a co-operative which includes; free-riders' problem; horizon problem (due to restricted access to residual rights to members as the co-operative focus on long terms assets and limited liquidity) and portfolio problem (Cook and Burrell, 2009; Ortmann and King, 2007). The Board and staff will struggle balancing between the investments and complaints from members on incentives and also experience portfolio, control and influence costs problems. Portfolio problem occur due to equity acquisition challenge where lack of share transfer, limited liquidity and appreciation mechanisms for exchange of residual claims prevent members' ability to adjust their asset portfolio based on their preference and risk they like to take. This is because, equity contribution depends on patronage. The control problem occurs in the attempt to prevent diverging interests between members and their leaders (Board) and staff. The temptation for external

financing grows further too. Influence costs problem occurs if the co-operative start engaging to other activities apart from primary business. The decisions also tend to affect distribution of wealth and other benefits to members.

At the fourth stage, the co-operative experiences difficultness it managing business especially after the diverging interests and goals. Later decisions have to be made on either to exit, continue or make transition. At the fifth stage, if the option is to continue, the co-operative need to seek external equity capital or apply proportional approach of internal capital to support its activities, including new business. Another option is to transform into another business model which encourage share appreciation, delivery rights and decision-making power, etc. (Ortmann, and King, 2007). From this study point of view, all the AMCOS have been established to meet members' economic interests such as improved income, access farm inputs and market. The AMCOS are considered as effective tool to address market failure and tackle competition from other actors in the market. The AMCOS are seen as reliable model to protect interests of members and unfairness from liberalized market system. As the AMCOS grew large, new interests have emerged as members found to seek more benefits from the organization. There are complaints about low coffee prices by members and demand for more incentives such as timely payments and even claiming residual benefits from coffee sales. Free-riders problem is common to all AMCOS studied as some members don't want to fulfil their responsibility while still enjoy benefits generated. The residual claims have limited AMCOS capacity to retain capital to expand its equity and invest in other businesses that bring value to members; hence they are stuck in traditional business model.

The AMCOS are also forced to borrow from banks to get funds to pay for members' produce before selling them; hence they face limitation to raise internal capital. As a way to fulfil members' interests, some AMCOS have opted to initiate other business so as to create internal capital and extend services to members e.g. input supply, transport and retail business for domestic goods. Unfortunately, there is a serious reluctance among leaders and members to integrate other farm commodities to the AMCOS apart from coffee. Despite the fact that coffee is the key crop, there is a need to transform the business in the near future; otherwise natural collapse of AMCOS is possible. The increase in climate change accompanied with aging membership, low youth participation, unstable prices and decrease in coffee farms and outputs harm the sustainability of the AMCOS. Members' dissatisfaction will keep increasing if alternative commodities and business will not be included in the AMCOS. However, changes in by-laws and intensive education are needed as AMCOS transform into new business model accompanied with external equity and partnership or

delivery rights system to enhance members' supply commitment and regain AMCOS' market strengths. New model can help to regain individual members' benefits and hence commitment due to economic value to be created.

Therefore, in short, from the studied AMCOS, it is difficult to see exactly all the Cook's model features at once as there are mixtures of features as despite the size of AMCOS different features of different stages have been seen. In general, most of the studied AMCOS are mostly still under second stage where the focus is on enabling market access and inputs rather than serious market competition. During our study, we observed that some AMCOS such as Kibosho Central, Mwika North East and Uru Mruwia have somehow entered in stage three where they are focusing on improving their competitive advantages through adapting organic coffee farming and preparing to initiate central pulping units (CPUs) for wet processing to add value, compete and gain more prices in local and foreign markets. Further, all studied AMCOS are still operating purely based on democratic co-operative principles and values and none of them have moved into a serious capital-based society focusing solely on profit maximizations and capture of significant share in the foreign markets.

2.2. Collective Action Theory

The Collective Action Theory was developed by Mancur Olson based on his work titled "Logic of Collective Action" in 1965 (Olson, 1965). The theory explains reasons for individuals to cooperate in addressing social dilemma by moving from their self-interests to group. The theory assumes that individual behaviour in the group is influenced by incentives and costs to be faced by each person. Despite the fact that common goal and transaction costs are almost needed in organizing the group, yet they can't fully determine success of the collective action as individuals tend to weigh between benefits and costs associated with the group. Group of individuals with common interests are expected to act towards their common interests much as each individual is expected to act on behalf of their personal interests. Again, individual's decision to free-ride or shirk depend to the extent of personal benefits gained from the group with minimal consideration of group benefits gained. In small groups, free-riding or shirking can be prevented by existing internal control and transparency mechanisms, but difficult in large groups where new sub-structure are needed e.g. committees, Boards etc to increase efficiency.

As the group grows larger, it is likely to face problems of; limited provision of individual incentives, free-riding and low supply of collective good. On the organizational side, Olson argues that the prosperity of the organization depends much on its capacity to meet the interests of the members. In the study, agricultural marketing co-operatives (AMCOS) are established by members who had common goal to meet their socio-economic needs and aspirations. People establish AMCOS to acquire institutional mechanisms to fulfil their individual interests in collective context. The AMCOS help to advance individual interests such as market access, improved income, access to farm inputs and access to other life opportunities that are hard to get individually. The AMCOS also address social needs of members such as improved capacity access social services, improved housing, farm education, supporting community development and enhancing social capital among members. In nature, the studied AMCOS have moderately large number of members (between 130 to around 2.000 members). As proposed in the theory, the AMCOS have internal management structure to enhance governance and operational capacity i.e. the Boards, committees and staff. In addition, the size of membership is accompanied with presence of free-riders who don't commit themselves fully to the AMCOS affairs. Further, limited AMCOS capacity to fulfil members' interest such as; better coffee prices, access to inputs, agricultural education and minimizing levies and other deductions on sold coffee lead to dissatisfaction among members. Before government intervention in 2017 (that demanded all buyers to buy coffee in auctions or from AMCOS not from members), these challenges influenced side-selling to middlemen and formation of farmers' groups in attempt to address such challenges and some even accessed better prices than AMCOS e.g. *Amkeni* Coffee Farmers Group in Moshi District Council. In relation to theory, the findings proposed for immediate actions by AMCOS and other stakeholders to address existing challenges and fulfil interests of members as they opted to join the co-operative.

3. *Materials and methods*

The paper is written based on the findings collected to assess the socio-economic impacts of agricultural marketing co-operatives (AMCOS) in Moshi District Council. The choice of the district was made due to its prominence in Tanzanian co-operative movement where Moshi is the birthplace for co-operatives. Therefore, the

main question aimed to be answered by researcher was to assess if AMCOS really have sound benefits to members and what challenges still persist. A total of ten (10) AMCOS dealing with coffee business were covered and their names are given in Table 1. A Case study design was adapted in conducting the study where multiple-case approach was applied. Data were collected once in each case and mainly focused on issues related to socio-economic benefits of AMCOS to their members (see Table 2), contributions to the government and coffee supporting institutions (see Table 3) and challenges they face in their business operations (see Table 4). The design enabled the researchers to make in-depth study of the AMCOS accessed so as to give a clear picture to reflect the wider context of AMCOS in the Moshi District Council and where possible to the country at large.

Data collected were both quantitative and qualitative where both primary and secondary methods of data collection were applied. The questionnaire administration and Focus Group Discussion (FGD) were used to collect primary data from each AMCOS while documentary review was used to collect secondary data (see data in Table 3 and Annex 1). The questionnaire was administered by researchers to 80 respondents (55 male and 25 female) who are AMCOS members (i.e. 8 respondents per AMCOS). Convenience sampling method was applied as the researchers intended to obtain a sample which can still give a picture in relation to study objective. However, criteria were developed to get the representative respondents. These included; number of years in AMCOS (at least 10 years), finishing paying shares, selling coffee to the AMCOS, active participation in meetings, understanding of co-operative business and reliant on coffee as one of main income sources. In selecting the respondents, the researchers cooperated with AMCOS leaders to get few members with most of characteristics above. A number of them were obtained then the researchers used lottery method to randomly select eight respondents with reference to both Membership registry and General meeting attendance lists in each AMCOS. The questionnaire consisted of both open and closed ended questions (see Annex 2) focusing on key study objectives. In data analysis, multiple response analysis was used in analysing socio-economic benefits and challenges. The frequencies and percentages of the multiple response data were generated and the percentages have been presented in tables.

Focus group discussion (FGD) was another method used to collect primary data. The FGD involved ten (10) participants comprised of 4 Board members, 1 employed staff and 5 ordinary members. In total three (3) FGDs were done. The FGD checklist (Annex 3) with specific themes was used to guide the discussion and data collection in the studied AMCOS. The checklist contained seven themes which broadly aimed to collect data on the; background information of the AMCOS, AMCOS social benefits to

members, AMCOS economic benefits to members, AMCOS involvement in community development activities, AMCOS contributions to government taxes and budgets of supporting institutions and challenges facing AMCOS. Content analysis has been used to analyse the qualitative data obtained from the FGDs. The qualitative data recorded were summarized into meaningful themes and then interpreted to give meaningful logics to add value to discussions of quantitative data.

Table 1.
Names of surveyed AMCOS

S/N	Name of AMCOS	Location	
		Ward	Village
1	Kindi Rural Co-operative Society	Kindi	Kindi Msasani
2	Uru North Njari AMCOS	Uru North	Njari
3	Mwika West AMCOS	Uru South	Nganyoni
4	Kibosho West AMCOS	Kibosho West	Umbwe Sinde
5	Uru Central Mawela AMCOS	Uru South	Kimanganuni
6	Kirima Boro AMCOS	Kirima	Boro
7	Mruwia Rural Co-operative Society	Uru East	Mruwia
8	Kibosho Central Rural Co-operative Society	Kibosho Central	Mloe
9	Kibosho Mweka Sungu AMCOS	Kibosho West	Mweka
10	Mwika North East AMCOS	Mwika North	Maring'a

Source: Compiled by Authors, 2017.

Documentary review method was also used to collect secondary data related to the study where documentary review protocol (see Annex 4) was used as the tool to guide review of secondary data. The researchers reviewed annual performance reports (including financial reports) and minutes of Board meetings. In addition, some secondary data were obtained from Co-operative Office of Moshi District Council. District reports on co-operative performance were reviewed then relevant data were collected. The kind of data collected includes; membership base, coffee output in past three seasons and coffee sales revenue. Other secondary data were; amount of district cess paid, number of staff, contributions to coffee sub-sector institutions, amount of farm lease revenues from investors (for AMCOS with farms) and contributions for community development.

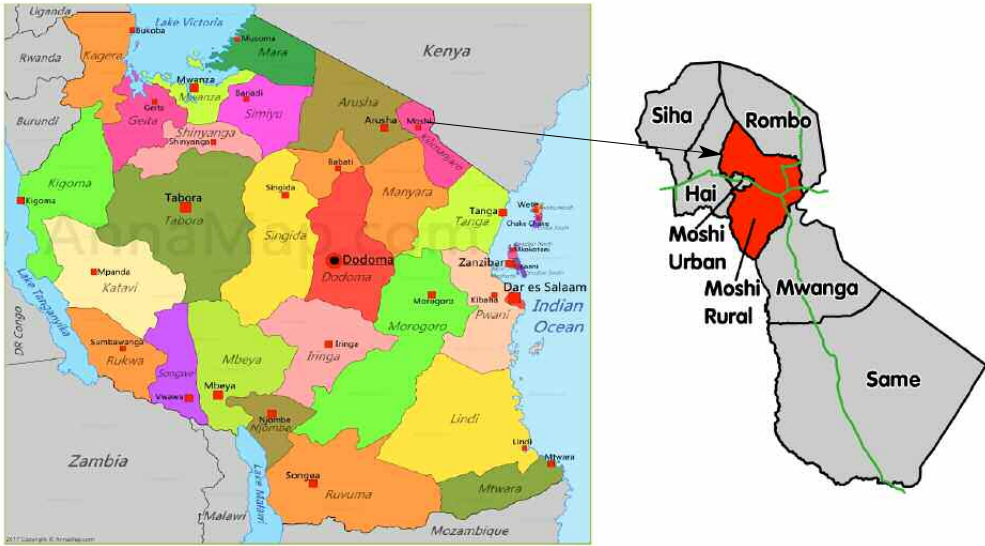
4. Findings and Discussions

4.1. Description of the Study Area

Moshi District Council (informally also known as Moshi Rural District) is found in Tanzania and is one of the seven districts of Kilimanjaro region. The district is located at longitude 37° to 38° East and latitude 2°-30'-50° south of the Equator. The district is bordering Rombo District on North; on the East it borders Kenya, on the South part it is bordering Mwanga and Simanjiro Districts while on the West side there is Hai district. Its administration is divided into four divisions, 32 wards and 157 villages (MDC, 2016). The district has a population of over 46.6737 people. Agriculture is the main economic activity contributing to local economy in the district, followed by other sectors such as tourism, trade, fishing and livestock keeping¹. Coffee is the export crop grown in the area and has for years being marketed through agricultural marketing co-operatives (AMCOS). The map of the district is provided in Figure 1. The district was chosen due to its prominence in the country in terms of co-operative development. The district has the history of being the birthplace of co-operative movement which has been active since 1925 up to date (Anania and Rwekaza, 2016). This experience makes the area more suitable in studying the benefits and challenges of the co-operatives. All the studied AMCOS are located in the district.

1• <http://www.moshidc.go.tz/>. Halmshauri ya Wilaya ya Moshi. Accessed on 25/04/2020.

Figure 1.
Map showing location of Moshi District Council



Source: Annamap.com and Wikipedia²

4.2. Socio-economic Profile of Studied Agricultural Marketing Co-operatives

The study involved a total of 80 respondents from 10 AMCOS. By sex composition, 55 respondents were men and 25 were women, indicating that majority of them were men. As argued by Anania (2017), AMCOS are mostly dominated by men in membership and numbers. This is mostly contributed by customary laws and culture limiting women ownership to land and control of wealth (including coffee). Therefore, since owning land for coffee farming is among membership criteria in AMCOS, it is

2• The two parts of map above have been combined by authors. The one of left is the map of Tanzania which has been retrieved from <https://annamap.com/tanzania/tanzania-map.jpg> while the other on right side is the map of Kilimanjaro region where Moshi District Council is located and was retrieved from https://en.wikipedia.org/wiki/Moshi_Rural_District. Both two sites were accessed on 26/04/2020.

likely the reason for low women membership. All the AMCOS studied deal with coffee marketing as main business hence have limited diversification in terms of commodities. However, some of the AMCOS also have diversified to other non-coffee business such as building rental apartments for retailers, input supply and leasing farms to foreign investors. These AMCOS include; Mruwia, Uru North Njari, Kibosho Central and Kibosho Mweka Sungu. Therefore, it may be argued that all AMCOS studies are still exercising the traditional co-operative model which is mostly characterized with; members increase, members' loyalty in marketing and use of other services, focus on traditional business and limited business diversification.

The documentary review findings indicated that in terms of members, the minimum number was 130 while the maximum was 2.181 members (including institutions and groups). Number of women members was low compared to men in all AMCOS. Output ranged widely³. The findings justify the advantage of AMCOS in collecting small quantities of coffee from members and attain economies of scale at least to compete with investor owned firms (IOFs) such as coffee estates owners. However, on average, output per members is still low. Issues such as land scarcity, unstable prices and climate change were found to contribute to unstable output as discussed in part 4.4 below.

The AMCOS coffee sales revenues ranged widely⁴. The AMCOS also contributed to part of their coffee sales revenue for district cess in seasons of 2014/2015, 2015/2016 and 2016/2017. Therefore, generally, among other things the AMCOS sustainability depends much on membership base where members contribute their individuals' coffee to be aggregated at AMCOS level to attain economies of scale. The AMCOS helps their members to market their coffee and earn revenue that brings income to members and contribute to government revenue through district cess. In terms of staffing, the AMCOS have between one to two staff (mostly volunteer staff selected from the membership) indicating lack of enough management staff to handle

3• Being the minimum output was 2.429 kg in 2014/2015, 3.269 kg in 2015/2016 and 2.014 kg in 2016/2017 while maximum output was 38.942 kg in 2014/2015, 44.200 kg in 2015/2016 and 39.579 kg in 2016/2017.

4• From a minimum of € 2.292,76 in 2014/2015, € 3.702,77 in 2015/2016 and € 2.661,45 in 2016/2017. The maximum sales revenue collected about € 36.757,71 in 2014/2015, € 50.064,94 in 2015/2016 and € 52.302,57 in 2016/2017. The average conversion rate used is 1 Euro (€) = 2.648,46 Tanzanian Shillings (TZS).

business operations. During the FGDs it was also revealed that there is a shortage of staff in AMCOS, mostly caused by limited capacity of the AMCOS to employ professional staff. Annex 1 show the findings related to membership status, coffee output levels, sales revenue and district cess paid from year 2014/2015 to 2016/2017.

4.3. Benefits of Agricultural Marketing Co-operatives to the Members

The benefits of agricultural marketing co-operatives are difficult to measure. Based on the studied AMCOS, the following social and economic benefits were identified (Table 2).

4.3.1. Social benefits of agricultural marketing co-operatives

Improved household capacity to access social services

The study found that AMCOS have enabled members to improve capacity to access to social services. From the 80 respondents, 65 of them (81 %) revealed this from the fact that improved income from coffee sales had other trickle-down effects to members. The income helped them to access services such as paying for health services, water and electricity bills and educational expenses for their children and other dependants in schools, colleges and vocational training centres. As argued by Rwekaza and Mhihi (2016), co-operatives enable income improvements to which can be used to facilitate access to education for their families. Some AMCOS have even sensitized their members to join health insurance schemes e.g. Mruwia AMCOS apportions part of coffee income to pay for insurance at Community Health Fund (CHF). Similarly, Anania and Towo (2016) and Birchall and Simmons (2009) indicated that some co-operatives independently or with other stakeholders can run low-cost insurance schemes to enable members to access health services. Although it was found that members' income also came from other sources including selling other crops, livestock keeping, dairy farming and support from other family members. The incomes from coffee had impact to enhance access to social services despite the presence of other income sources. Similarly, Olson in Collective Action Theory argued that people move from individual to group setting in order to solve social dilemma he/she faces, which are not ease to solve alone.

Improved housing conditions

With regard to improved housing conditions, 60 respondents (75 %) revealed that being in AMCOS helped to improve their housing conditions. But in one of the FGD, participants revealed that nowadays declined coffee income has somehow minimized member' capacity to construct new house or do major renovation. This means respondents attain this goal by including income from other sources like selling other crops, livestock keeping and loans from microfinance institutions including savings and credit co-operatives (SACCOS). For instance, one participant argued that... "Mostly, the coffee income is useful in repairing houses like changing roofing to put new iron sheets, painting and other decorations... building new houses was possible some years back when output and prices were high, for example from 1970s to late 1990s". This proves that income from AMCOS helps members' have better housing. Sumelius *et al.* (2013) and Birchall and Simmons (2009) support that co-operatives help to improve housing and living conditions. This includes facilitating members' access to credits for building new homes, improving condition of members' houses or facilitate members' business to get income for improved housing.

Improved access to agricultural education

The co-operative societies are like schools, they are organizations for equipping members with various skills and knowledge to use in their activities and become active members. In this aspect, 41 respondents (51 %) revealed that AMCOS have been useful to help them get access to agricultural education and other extension services. They revealed that, in cooperation with Agricultural Extension Officers and other experts, the leaders have been organizing agricultural education and training sessions especially during meetings days. It was also found that, sometimes, AMCOS leaders cooperate with private organization to offer skills and knowledge for better coffee farming. Coffee buyers like Hanns R. Newmand Stiffung have been supporting provision of coffee farming education. The non-farming education is accessed by members through providing them with training on entrepreneurship and encourage them to engage in various on-farm and off-farm rural business. However, none of the AMCOS was found to have hired any Agricultural Extension Officers and one of the reasons was limited financial resources to recruit such experts. Being in AMCOS helps members to access skills and knowledge which can be costly if they were to be accessed individually. The findings relate to Cook's Life Cycle Model in second stage where access to opportunities among members (including education relating to their business) is among the drivers

of formation of the agricultural co-operatives. Similar views on role of co-operatives in facilitating access to extension services are shared by Bolton (2019), Wossen *et al.* (2017), Bwabo *et al.* (2016) and Olabisi *et al.* (2015).

Improved food security

The agricultural marketing co-operatives (AMCOS) were found to be useful in enhancing food security in members' households as argued by 55 respondents (69 %). This was due to various reasons including income from coffee sales and continuous provision of farming education for coffee, food crops and livestock keeping. Income from coffee sales helps to buy food and farm inputs like fertilizers and pesticides for assured food production. This implies that, being in AMCOS assure members with means to have assured food security in their households. Various studies also support this e.g. ILO and ICA (2014) indicated that co-operatives contribute to food security by helping small farmers, fisher folk, livestock keepers, forest holders and other producers to solve numerous challenges that confront them in their endeavours to produce food. Generally, co-operatives are useful in addressing food security by helping members to produce food and also earn income from co-operative business that can be used to buy food for their households (Shumeta and D'Haese, 2018; Anania and Towo, 2016; Chambo, 2009).

Increase in solidarity and extending social protection

In social context, presence of AMCOS in Moshi District Council helps to strengthen solidarity and safety net among members. The study found that 62 respondents (78 %) revealed to enjoy good relations with fellow members in co-operative and other life sphere. The AMCOS membership also influences people to help each other in difficult and happy moments either individually or collectively. In FGD when commenting on this, participants appreciated the role of AMCOS in uniting them and feel themselves like one family. They have been able to work together to improve their lives within and outside the AMCOS. This means that like other co-operatives, AMCOS provide a new framework or re-enforce traditional mutual support habits which are mostly event or hazard related (FAO, 2019; Develtere *et al.*, 2008). Such good relations are mainly governed by the principles of trust and knowing each other. As argued by social capital theorists such as Putnam (1993) revealed that the networks, norms, and trust help to facilitate coordination and cooperation for mutual benefits. People cooperate in personal lives by working together in their farms, finding foods for their domestic animals, helping each in various personal and family

problems like failure to pay school fees, accidents, sickness, burial and marriage ceremonies and other good and bad moments experienced by any co-operative member. This has been possible as members have shared vision and common goals hence solidarity and spirit of helping each other are their common ways of life as true co-operators. Further based on Olson's Collective Action Theory, an individual moves to the group so as to secure some benefits or fulfil his/her interests. As an individual join the group tends to work closely with others to achieve shared benefits, provided that such benefits outweigh costs of associating.

Supporting community development initiatives

The findings identified that though in different capacity and modalities, the AMCOS fulfil the Co-operative Principle on "*Concerns for the Community*". In this aspect, 53 respondents (67 %) showed that their AMCOS are helping in development efforts of their communities. In specific example, in 2015 the reports of Mweka Sungu AMCOS revealed to have supported more than 50 secondary school students who are from impoverished families and orphans from two villages it operates (i.e. *Mweka* and *Sungu*), and some of these students include children and relatives of co-operative members. The AMCOS is also operating a business of selling affordable farm inputs to both members and non-members at similar prices. Also some AMCOS such as Uru North Njari, Mweka Sungu, Kibosho central and Mruwia have large farms leased to settlers (such as Chibo estates, now Kilimanjaro Plantations) growing coffee in plantations. The investors pay some fees to the AMCOS which part of it (60 %) is allocated to support development activities in villages where AMCOS operate and while the other portion (40 %) is for financing AMCOS activities. For instance, the reviewed report from Moshi District Council's Co-operative Office found that from 2014 to 2017, Kibosho Central AMCOS contribute a total of € 33.846,08 in supporting renovation of various social service institution like schools where it operates. This proves the significant role played by AMCOS to support local development. This relates to the studies by Anania and Towo (2016) and Maghimbi (2010) who found that AMCOS support to increase community's quality of life by building schools, water supply and health services and caring orphans. From all these evidences, AMCOS are potential partners for local development.

Table 2.
Social and economic benefits of agricultural marketing co-operatives

	Benefits	Response(s) (%)
Social Benefits	1. Improved household capacity to access social services	81 %
	2. Improved housing conditions	75 %
	3. Provision of agricultural education	51 %
	4. Improved food security	69 %
	5. Increase in solidarity and extending social protection	78 %
	6. Supporting community development initiatives	67 %
Economic benefits	1. Improving members' income	94 %
	2. Enhanced access to farm inputs	68 %
	3. Acquisition of assets by the AMCOS and their members	76 %
	4. Provision of employment	67 %
	5. Marketing of members produce	100 %

Source: Survey data, 2017.

4.3.2. Economic benefits of agricultural marketing co-operatives

Five main benefits were identified, most of them with the agreement of a high percentage of respondents (Table 2).

Improving members' income

From the study, 75 respondents (94 %) revealed that AMCOS helped in income improvement. They argued to be able to sell their produce and get income to meet their needs. In the FGD, some members revealed that, although the income from coffee sale don't flow each month, it is useful when obtained as one may address his/her needs immediately. The income was found to help members in farming activities, improving housing condition, food security and access to social services by family members. This means co-operatives have the prospects to address poverty and increase income and helps them to sustain their income generating activities (Shumeta and D'Haese, 2018; Rwekaza and Mhihi, 2016; Anania and Towo, 2016) and on average, members of agricultural co-operative have more income levels compared to non-members (Bolton, 2019). The extent to which one judges his/her income

improvement is subjective as members differs in terms of coffee output hence income difference may vary significantly if judged from coffee sales only. In average, it was found that income ranged from € 45,31 to € 906,15 (calculated from average output ranging from 30 kg to 600 kg per household at market price of € 1,51 per kg). In rare case, some leaders in FGD revealed that some few members earn up to € 1.510 and above from coffee sales. Despite these variations, still AMCOS play key role in members' income improvement. Therefore co-operatives help improving members' incomes and escape from income poverty traps. According to Cook's Life Cycle Model, people join a co-operative among other things, in order to improve their welfare, including economic status (for example, income and access to farm inputs).

Enhanced access to farm inputs

Some of the studied AMCOS found to assist members access to farm inputs as revealed by 54 respondents (68 %). Although those AMCOS not completely replaced retail input suppliers but have attempted to ease members' burden. Some AMCOS were found to establish linkage with government and other stakeholders to supply inputs like fertilizers, agrochemicals, seeds/seedlings and others. In some cases, AMCOS establish input supply wing in form of retail shops e.g. Kibosho Central AMCOS. In FGD, some AMCOS leaders revealed that they cooperate with Tanzania Coffee Research Institute (TaCRI) to acquire improved coffee seedlings which are either given to their members at low cost or given free of charge (e.g. in Mruwia AMCOS). The efforts aim to motivate and sustain coffee production among members. This shows that co-operatives help members to access required agricultural inputs to sustain production of commodities as revealed in studies by Bolton (2019), Shumeta and D'Haese (2018), Anania and Rwekaza (2016), Anania and Towo (2016) and Olabisi *et al.* (2015). Similarly as indicated in the Cook's Life Cycle Model, as agricultural co-operative proceeds to other stage (after formation) it has to make efforts to satisfy members including enabling their access to inputs and markets.

Acquisition of assets by the AMCOS and their members

Also it was found that 61 respondents (76 %) managed to acquire assets after being in AMCOS. However, asset acquisition found to exist at organizational and individual levels. At organizational level, which also was justified by leaders and staffs in the FGD, the revenue from coffee helped the AMCOS to acquire various assets to assist in serving members. Some of assets identified included; warehouses and their facilities (e.g. weighing machine, storage bags etc), office facilities and transport

facilities like tractors, trucks and minibus) in some AMCOS e.g. Mweka Sungu and Kibosho Central. Also some were found to have built commercial buildings rented to local retailers. On members' side, income from coffee sales has helped them to acquire various assets such as furniture, TVs, radio, bicycle, motorcycle and other domestic assets. None was found to have acquired long terms assets such as land exclusively from coffee income. It means AMCOS enabled acquisition of assets at both organizational and household level. Further, co-operatives create wealth and help their members acquire assets which can also be using to support their activities (ILO and ICA, 2014; Maghimbi, 2010). Generally, as argue by Olson in Collective Action Theory, the benefits acquired by people from the group including materials help to weigh their commitments to the groups in long term.

Provision of employment

As other organizations, AMCOS generate employments. The study found that 53 respondents (67 %) indicated that AMCOS is useful in promoting employment opportunities to members and non-members who are skilled and semi-skilled. In average, the AMCOS were found to have between 2 to 4 employees varying from Managers/Accountants, Store keepers/coffee inspector and watchmen. Further, it was found that these employees were coming from among members and most of them were not salaried staff rather they are paid honoraria or wages. Some of these staff are the retired people from public sector and private organizations. E.g. during FGD, one of the AMCOS staff argued that "...I was an Accountant in one of parastatal organization for years. The AMCOS has realized my usefulness hence hired me as the Accountant. This has given me another opportunity to keep working and get my bread; otherwise I could be in difficult condition given that my pension benefit was very low". Also for AMCOS with vehicles (trucks, minibus or tractors), they were found to have recruited waged drivers. The AMCOS also provide temporary jobs to youths especially in coffee harvest seasons to load and offload coffee bags when transporting coffee to the processors or buyers and arranging bags in warehouses. Regardless of the value of jobs created, AMCOS are potential in generating local employments. Similarly, Maghimbi (2010) argued that despite the low job quality in co-operatives, still they contribute to create jobs in local communities. Globally, co-operatives have provided employments to at least 279,4 million people i.e. about 9,46 % of global employed population (Eum, 2017). Such employments help building local development in urban and rural areas. The tangible benefits of using co-operatives as a community and economic development tool include increased economic

development through income, employment opportunities, and support for essential community services (Anania and Bee, 2018; Anania and Sambuo, 2017).

Marketing of members produce

The AMCOS among other reasons are established to address market failure. Findings revealed that 80 respondents (100 %) proved that AMCOS helped their access to coffee market. The AMCOS members gain economies of scale by selling coffee through their AMCOS where they also share costs for transport and coffee processing since it act as one economic unit. In this case, AMCOS help their members increase sales volume by reaching new and bigger markets with greater bargaining power hence receive better prices and increase personal profit (Anania and Towo, 2016). Also Nembhard (2014) described that, when co-operative address market failure, they improve performance of the economic system and well-being of large group of people and improve market competitiveness. Further, Shumeta and D'Haese (2018), Olabisi *et al.* (2015) and Chambo (2009) described that co-operatives also provide assured market for commodities produced by small farmers from their areas. Similarly, Cook's Life Cycle Model, people join co-operative for purpose of addressing market failure hence ensure market security for members including better prices. Further, Olson in Collective Action Theory argues that incentives provided by the groups to members may determine their commitment to the groups. In this study, access to markets and income are among such incentives. The study further found that in all AMCOS, the non-members were also selling coffee to the AMCOS nearby. This means AMCOS are useful to access markets for produce from members and non-members.

4.3.3. Financial Contributions of Agricultural Marketing Co-operatives to the Government Authorities and Coffee Supporting Institutions

In discussing this part, four cases of Mweka Sungu, Uru North Njari, Mwika North East and Kibosho Central AMCOS have been referred. Apart from promoting socio-economic development of members and communities, agricultural marketing co-operatives (AMCOS) contribute to revenue in Coffee supporting institutions and the government. Based on the documentary review of reports from District Co-operative Office on AMCOS performance, it was found that AMCOS contribute financially through taxes and district's levies to the government. For instance, all AMCOS with leased farms (to settlers) were paying withholding taxes (10 % of lease fee) and paid taxes to Land Commissioners' office. All AMCOS were also found to be paying 5 % of coffee sale revenue as District levy. Further, all AMCOS were also

contributing funds to support operations of institutions promoting coffee industry i.e. Tanzania Coffee Research Institute (TaCRI) which does coffee research including better seedling and Tanzania Coffee Development Fund (currently abolished) under Tanzania Coffee Board (TCB). The TCB supervise coffee industry including marketing issues. All these deductions were made from gross sales of coffee. Table 3 gives summary of findings on total compulsory financial contributions made by some AMCOS to government authorities and coffee supporting institutions between years 2014/2015 to 2016/2017.

Table 3.
Total financial contributions of made by selected AMCOS to government authorities and coffee supporting institutions from 2014/2015 to 2016/2017

Financial contributions made (in Euro)		Name of Agricultural Marketing Co-operative (AMCOS)			
	Type of financial payments made	Kibosho Central	Uru North Njari	Mweka Sungu	Mwika North East
Contributions to Central government	Tax of land lease fee	€ 7,443.37	-	€ 7,621.62	-
	Land tax payable to Land Commissioner's Office	€ 120.82	-	€ 612.79	-
	Other taxes (e.g. on, vehicles, small business, VAT etc)	€ 1,941.62	-	€ 1,000.54	-
Contributions to the Local government	District Cess (5 % of coffee sales revenues)	€ 4,289.87	€ 1,185.17	€ 3,554.82	€ 5,171.99
	Other levies to the District	-	-	-	-
Contributions to Supporting institutions	Research Cess to TaCRI (0,75 % of coffee revenue)	€ 687.04	€ 347.45	€ 618.29	-
	Coffee Development Fund paid	€ 91.61	€ 46.33	€ 82.45	€ 1,611.48

Source: Compiled data from Moshi District Council's Co-operative Office, 2017⁵.

Note: Taxes related to land issues are paid only by AMCOS which have farms leased to foreign investors producing coffee or other commercial crops.

- 5• The original figures were in Tanzanian shillings (TZS). The average conversion rate used is 1 Euro (€) = TZS 2.648,56 as in December, 2017 indicative foreign exchange market rates provided by the Bank of Tanzania (BoT). Therefore original figures in TZS can be computed using this exchange rate.

The findings indicate that agricultural marketing co-operatives (AMCOS) have been contributing to increase revenues to the government and assist co-operative support institutions to proceed with their operations. In these cases, AMCOS are seen as development partners in the district, given their role in helping acquisition of funds for development by the government and supporting institutions (TaCRI and TCB). If well supported to increase their production level, resilience capacity, value addition and diversification, it is likely that AMCOS can do more than what they do currently by generating more revenues for national development. However, there has been mixed reactions concerning the deductions made for co-operative supporting institutions.

For instance, Rwekaza *et al.* (2018) argued that co-operative Board, management and members do not see the impact of the contributions made on their coffee deductions despite deductions impact on members' produce. The AMCOS are still faced with insufficient training and education to their members on co-operative governance and accountability to government actions. This has made member ownership and exercise of democratic rights to be difficult. Further, Rwekaza *et al.* (2018) and Kaleshu (2012) contended that, among the challenges in AMCOS governance is lack of representatives who safeguard interests of all members. The deduction system has not created the process of decision ownership which is democratic and taps members' decisions on amount to be deducted, amount collected, decision on its usage and the benefits obtained as all these are not at members' disposal. All these have impact on Farm Gate Price (FGP) given to members as indicative price. It may be argued that the policy and legislative processes on co-operatives in developing countries are still constraining co-operative development as their formation process is less participatory (Chambo, 2008).

4.4. Challenges Facing Agricultural Marketing Co-operatives

In this study, we have also managed to identify various challenges facing agricultural marketing co-operatives (AMCOS) specifically in Moshi District Council. The following are the challenges identified from the study area (Table 4).

Table 4:
Challenges facing agricultural marketing co-operatives

	Main challenges facing agricultural marketing co-operatives	Response(s)
1.	Decline in coffee production and quality challenges	83 %
2.	Unimproved coffee farming methods	64 %
3.	High costs related to coffee farming	75 %
4.	Price fluctuation in local and foreign markets and competitions	84 %
5.	Inadequate provision of education and training	76 %
6.	Too many deductions on members' coffee sold	51 %
7.	The "free-rider" effect	51 %
8.	Poor record keeping and accounting systems	58 %
9.	Low youth's participation and membership	84 %
10.	Limited access to quality and affordable farm inputs among members	63 %
11.	Limited innovation and business management capacity	65 %
12.	Low capital base	74 %

Source: Survey data, 2017.

Decline in coffee production and quality challenges

The accessibility of markets and better prices in agricultural marketing co-operatives depends much on the level of coffee production and its quality. The study found that 66 respondents (83 %) revealed that they faced decline in coffee outputs in their farms. It was found that, the decline in output has been the result of climate change in the district accompanied with intensive solar radiation and little rainfall, coffee diseases, limited capacity to get farm inputs at right quantity and time as well as domination of old coffee plants with low yield. In the FGD, it was found that, decrease in farm size is due to transferred ownership from parents to youth which has also decreased coffee output as youth have little interest to grow coffee. This shows that decline in coffee is due to numerous integrated factors locally, nationally and globally. Further, it was discovered during the discussion that some members have shifted to grow other crops due to price uncertainties in local and foreign markets. This relates to Olson's Collective Action Theory which reveals that as members' benefits from the groups decline, they tend to reduce their commitments and take other options to benefit. Similar challenges have also been reported in works by Otieno *et al.* (2019) and TCB (2012).

Unimproved coffee farming methods

The traditional farming system is still dominant in Moshi District Council where natives apply mixed farming system mostly due to land scarcity to grow different crops in different farms. This was revealed by 51 respondents (64 %) who argued that there is slow improvement in farming methods in their areas including modern ways to grow coffee commercially. For instance, organic coffee farming doesn't use much agrochemicals but it is hard to control in a mixed farming system where pesticides are mostly used. Despite the fact that, friendly environmental methods have created opportunity to access green markets with good prices e.g. "Fair Trade" markets and others, adapting such practices has taken a slow pace among farmers. Limited interested to modern coffee farming techniques has also been the result of uncertainties in coffee prices hence farmers are not sure if efforts and costs to adapt to new methods worth the price/benefits they will get. E.g. adapting organic farming practices that demand for reduces number of banana plants and avoid growing other crops in the same farm has not been easily adapted. Further, there is also a mentality that the traditional coffee species are better than modified ones e.g. from research institution like Tanzania Coffee Research Institute (TaCRI) hence reluctance to adapt new coffee species. For instance, one AMCOS leader revealed that some members sell the freely provided coffee seedlings from AMCOS to get money instead of planting them. In such cases, it is challenging to promote coffee quality and stable coffee output. Studies by Otieno *et al.* (2019) and TCB (2012) revealed the existence of unimproved production methods as among challenges in coffee production.

High costs related to coffee farming

The study found that high cost of producing coffee is another challenge facing members. This was revealed by 60 respondents (75 %). High costs of coffee production have affected members' commitment to coffee production, minimize coffee farms and even encouraged concentration to grow other crops. Despite the efforts to introduce new coffee varieties with high yield and resistant to drought and diseases, still readiness to adapt depends much on members' willingness and ability to incur the costs associated with it. It was found that there are direct and indirect costs in transforming to organic coffee farming. Some costs identified included costs for cutting and digging out old coffee plants, reduce number of banana plants to allow more space for coffee and digging pits for new coffee. The costs for pesticides and fungicides for coffee have not been easily afforded by most farmers. This has even affected the output and quality. Members also revealed of getting low return of such

investment as prices hardly exceed much the costs used hence low profit margins. In relation to this, Olson in Collective Action Theory indicated that people's behaviours are influenced by the costs they incur and incentives they gain. Therefore, as costs of coffee production increase while prices/income from it slightly changes, it is likely to affect members' commitment in production, quality improvements and prevent shirking in AMCOS affairs.

Price fluctuation in local and foreign markets and competitions

From the study 67 respondents (84 %) indicated that coffee prices fluctuation in both local and foreign markets is a challenge. This was also found to discourage their commitment to coffee production. During the FGD, when asked on measures taken to deal with price fluctuation, some participants indicated that members have opted to shift into other crops, keeping livestock and engage in small businesses. It was found that low prices lead to unstable income flow (and sometime losses) to members and hardly cover production costs such as paid labour, picking coffee beans and buying farm inputs (like fertilizers, agrochemicals and storage facilities) etc. The low prices were found to be the result of; inadequate quality of their produce, world coffee market saturation and even limited bargaining capacity by the AMCOS or Union leaders in coffee auctions. The situation causes farmers to always face uncertainty in marketing their produces hence fail to make proper planning of the production and other farm investments. Anania and Rwekaza (2016) and revealed that coffee farmers are exposed to global economy and suffer from export price fluctuations determined by foreign markets which are out of their control. Further, this relates to Cook's Life Cycle Model, where as the co-operative enters in third stage it starts to experience serious challenges including competition from investor owned firms (IOFs) and price of good becomes almost the same, hence quality matters to secure high prices. The FGD further revealed that, the co-operatives face competition from other large coffee producers and buyers. The large producers (with coffee plantations) have large volume of coffee and have achieved quality control hence they are able to negotiate for higher prices in the market. Also before government orders to sell all coffee through AMCOS in 2017, middlemen and large buyers used to buy coffee directly from farmers, including members hence reduce volume of coffee collected by AMCOS. Therefore, more efforts are needed to strengthen competitive power of coffee producers (including those in AMCOS) to face the free market (Otieno *et al.*, 2019). Since they operate in same environment with other business, co-operatives need to establish strong mechanism to operate in modern business environment (Anania and Towo, 2016). This includes hiring qualified and experienced

employees, who could meet the new challenge of competition with other businesses, as suggested by Baka (2013).

Inadequate provision of education and training

The study found presence of limited provision of education and training in co-operatives as revealed by 61 respondents (76 %). During the FGD, participants argued that education and training is highly needed to members especially on co-operative business issues, farming and diversification of their business. It was further found that members have limited access to such learning opportunities compared to Board members and staff, who mostly benefit from budget allocations for such purpose. Low revenue from coffee sales and limited diversification lead to low financial power in AMCOS hence failure to effectively implementing education and training programmes. Co-operative education is necessary for developing enlightened and responsible co-operative leaders who can maintain co-operative values and operate efficient business enterprises, improve the management, business and entrepreneurial skills of co-operative employees and committee members and ensure that co-operative members are informed and aware of the nature of co-operative economic activities, their duties and responsibilities and the benefits co-operative membership brings (TFC, 2006). But as main decision makers, members need to be trained and be well sensitized on key issues to enable them make informed decisions (Anania and Rwekaza, 2018). With financial constraints, educating, training and re-training of members in general, and the leaders and staff in particular, are always a challenge to co-operatives especially in developing countries (Ainebyona and Tiruhungwa, 2012).

Many deductions on members' coffee sold

Further, 41 respondents (51 %) indicated to be affected by too many deductions on coffee sold. These include: deductions for Coffee Research Institute (TaCRI), Tanzania Coffee Board, cost of transport and escorting coffee to the curing machine, insurance charges, and empty bag fees. Other charges include; processing fees at coffee curing machine, union and primary societies' levies, Moshi District Council's levies (cess), overpayment charges, price stabilization fund and bank charges and loan interest etc. During the FGD, participants revealed being uncomfortable with the deduction and argued that such actions give burden to farmers, discouraged production and reduce income hence even some decided to sell to private buyers. The democratic process of deciding tax and levy as well as cess in primary AMCOS had not been effective and was not participatory. Other studies also noted the same that these

deductions on AMCOS members' produce are determined by the Government authorities, and thus primary AMCOS members had no influence on deciding the percentages of deductions (Seimu, 2017; Rwekaza and Nnko, 2012; Maghimbi, 2010). The co-operative stakeholders and government are responsible for reforming the co-operative sector to respond to members' objectives in their efforts to make primary AMCOS drive the agricultural sector that captures the majority of citizens (Rwekaza *et al.*, 2018; Magigi, 2016; Zheng *et al.*, 2012). Such costs shifts to members tend to overburden them and with costs increase while benefits gained in slightly increasing then it is likely members' opt for other business and affect their commitment to their organizations as theorized in Collective Action Theory. However, the recent decision of the Government in 2017 to reduce most of deductions in cash crops including coffee are expected to reduce the burden to the AMCOS members and possibly get better prices from coffee sales.

The "free-rider" effect

Free riding was found to be another challenge in AMCOS as indicated by 41 respondents (51 %). They are basically dormant co-operative members who have not yet paid the minimum required number of shares and other contributions and also include non-members not interested to join but still sell their coffee to the AMCOS and enjoy other benefits like access to subsidized farm inputs (e.g. fertilizers, storage facilities and agrochemicals) for coffee production and even get education and other services when opportunities arise. Free riders make AMCOS to have dormant members, lose revenues due to unpaid fees and other contributions. Being opportunistic and escaping risks, free riders also tend to sell their coffee to private buyers in case of low price in AMCOS. Also they reduce close relations with other members and use resources freely. Similarly, Cook's Life Cycle Model revealed that free-riding is among the challenges as the co-operative enters in second stage of its growth. People start to free-ride as the co-operative grows bigger hence become opportunists and take advantages of loose structure of accountability to gain benefits without much incurring costs. The studies by Bonroy *et al.* (2019) and Giannakas *et al.* (2016) have indicated free riding as among key challenges in co-operatives including those in agriculture. Generally, mostly people tend to free-ride as they want to take advantage of others and where conditions to access some services are not much strict hence they benefit without contributing fairly to the process. Co-operatives need to establish effective management systems to depress the free-riders, where as argued by Olson in Collective Action Theory, this includes having governance sub-structures such as strong boards and committees. The theory further reveals that free riding and shirk

tend to increase as people find other ways to benefit from group without incurring costs needed to fulfil goals in that group. In our views, the current decision by Tanzanian government to remove private buyers from buying coffee (and other cash crops) directly from farmers will also minimize side selling and remove middlemen as all coffee should be channelled to the market/auction through co-operatives

Poor record keeping and accounting systems

Other challenges found in this study were poor system of keeping records and handling financial information. From the study, 46 respondents (58 %) of respondents indicated that they felt that records are not properly kept in the AMCOS and transactions are still handled manually. It may be argued that just like other businesses, performance of the AMCOS may be judged by its capacity to properly keep the records e.g. membership, business (including sales), contracts and financial information (e.g. income and expenditures). During documentary review of some financial reports, it was found that financial information are not kept properly including following better financial reporting standards. This is mainly attributed by the presence of few skilled staff with competence of accounting issues e.g. accountants, managers and others. However, some AMCOS such as Mruwia and Kibosho Central indicated good progress in financial record keeping. Again, application of computerized accounting and management systems were not available to all studied AMCOS. Inadequate competence and supportive environment for staff to operate creates a risk of poor financial management and accounting capacity, especially when existing co-operative business expands or if diversifications happen. For effective management and decision making, financial management capacity should exist including control of possibility for asset misuses, fraudulent financial reports and other misconduct (Sebhatu *et al.*, 2020; Anania and Rwekaza, 2016). Poor accounting systems and lack of proper records keeping mechanism in co-operatives can lead to loss of financial resources and poor performance (Masuku *et al.*, 2016). Further, there is a challenge of performance reports and audited accounts not being presented regularly or timely in co-operative's Annual General Meetings (TFC, 2006).

Low youth's participation and membership

Apart from other things, achievements in co-operatives depend on the level of participation and membership of the youth and women. The study found that 67 respondents (84 %) indicated presence of low youth participation in AMCOS. Similarly, the participants in the FGD indicated that their AMCOS are dominated by adult men

compared to women, while number of youth is very low. For instance one participant argued that *"...most of us have been members for many years. Some have even been leaders for many years. As you can see, in our Board it is full of more aged people. The youngest is in early 40 years old. So it is like we don't have any young person in our Board as it is hard to find them joining the co-operative. Also they don't want take responsibilities including leadership..."*. Some of the identified reasons for low youth participation included; customary land ownership which prevent ease access to land among youths and women hence limit their active involvement in coffee production and AMCOS membership. But, although old male members control land, they heavily rely on women and youth in household as source of labour while their involvement become active during coffee sales and collection of the money from AMCOS. As argued by Ainebyona and Tiruhungwa (2012), women participation both in membership and leadership of primary co-operatives' activities in Kilimanjaro region is limited. Youths are also few in membership and in leadership positions. Their participation is limited by land ownership pattern, domination of elder male members in household and AMCOS decision making, long production cycle of coffee and emerging income opportunities in other agricultural activities, rural-urban migration, limited interest on coffee farming and low co-operative education among youths as argued by Anania and Kimaro (2016). As argued by Olson in Collective Action Theory, before joining to the group, people do cost-benefit analysis on what cost they will incur in relation to benefits to be acquired. Also behaviour of group members influences one's decision to join or leave the group. Hence where one feels the group's interests are not matching with his/her interest it affects the decision to join. Such scenarios depict the explanations on low membership of youth (and women) in AMCOS.

Inadequate supply of affordable farm inputs to members on time

The study found that 50 respondents (63 %) reported to face limited capacity to access affordable and quality farms inputs. Among the main reasons for establishing co-operatives is to maximize crop production including coffee. The AMCOS are formed to carter the needs of members which includes easy access to timely, affordable and quality farm inputs e.g. fertilizers, agrochemicals (pesticides and fungicides etc), storage facilities, seeds and other farm equipment. This has further been cemented in the Cook's Life Cycle Model which indicates that once the agricultural co-operative is formed it has to make efforts to enhance access to inputs and markets as among the efforts to satisfy members. The study revealed that the AMCOS have limited capacity to supply members with adequate farm inputs that

meet their demand on time. The FGD revealed that in over two (2) decades ago, AMCOS used to portion part of their revenues to buy farm inputs and sell them to members at subsidized prices but this is no longer done due to decline in coffee revenues, which is attributed by various reasons including decline in output and price instability. However, some AMCOS were found to have initiatives to reduce the problem. E.g. Mruwia AMCOS has agro-credit scheme where members get credits to buy farm inputs then repay without interest rate. Also Kibosho Central AMCOS has farm input retail shop serving both members and non-members. As costs of farm inputs remain high and their access remain limited then most of famers cannot afford hence affect coffee output (Anania and Rwekaza, 2016).

Limited innovation and business management capacity

Proper management practices and capacity are essential in bringing achievement in co-operative societies. From the study, 52 respondents (65 %) indicated that presence of limited capacity of their staff to manage co-operative business. It is obvious that poor management capacity can lead to failure of various goals, lack of vision and even weak management of funds. Some members revealed that they wish to see their leaders and staff become more innovative in coming up with good strategies to promote coffee production and new business to increase revenue in the AMCOS. This is likely to be true as in all AMCOS; still coffee is the key business and no significant diversifications to other commodities. For AMCOS which initiated new activities such as transport business, farm input supply shops and rental business rooms for local retails have all been focusing to generate revenue to support coffee production. There are prospects to engage in other high-pay commodities like horticulture, fish farming and beekeeping through AMCOS but there is reluctance to move into such investments. Other management challenges identified included; poor recording keeping and failure to influence changes among members (including adapting organic coffee farming). The AMCOS were also found to have no clear business and strategic plans and some even had no well structured annual action plans. This means AMCOS business is run in a "business-as-usual" style. Also with limited management capacity and innovative leadership, it is difficult to expand value chain of coffee and other commodities to add value to members and meet their needs and aspirations. The entrepreneurial mindset is still missing in most of AMCOS. In Cook' Life Cycle Model, at third growth stage co-operatives start to experience management problems. Members' interests start to differ, competition increases while strong management capacity is needed to save the business from competition and diverse members' interests.

Low capital base

The study has also revealed that the AMCOS face financial shortage to run their activities. In this study, 59 respondents (74 %) indicated that their AMCOS experience low financial capacity to meet their goals. Financial deficit makes it difficult for AMCOS to diversify to other commodities or businesses and meet their medium and long term goals. Among other things, shortage of funds has mostly been due to overdependence on levies from sales of members' coffee, limited diversification and innovation. Previously, presence of free riders such as those who sold coffee to private buyers reduced AMCOS revenue. Further, as indicated by Cook's Life Cycle Model, there is a point when co-operative start experiencing serious shortage of funding for its operations. Members also become unwilling to contribute seriously to build internal capital (limited patronage). Therefore, as a way to survive, the Board and management will have to secure external financing to sustain the business and serve interests of members. In this study, limited capital influenced the AMCOS to rely on bank loans almost each season so as to give advanced payments to members and other farmers once they collect coffee. This is because members are less willing to wait for their leaders to pay them once they finish collecting and selling their coffee. Therefore, bank loans become option to retain members and their loyalty to transact with the AMCOS. In similar view, Zeuli and Radel (2005) indicated that members should own a portion of their organization but equity constraints challenges all co-operatives. As capital constraints increases and governance become ineffective, frictions are likely to happen in the co-operative (Cook, 2018).

Other challenges

The other challenges identified by this study include; presence of Union leaders who were not serving interests of co-operative members hence lead to high debt burden in AMCOS; lack of entrepreneurial skills among co-operative leader, staff and members; resistance to change among members and decrease in land size due to transferred ownership to youth people and need of space for building houses and other social needs. Also there is inadequate understanding of co-operative laws and policies, members do not understand well their rights and responsibilities and low educational levels of leaders (e.g. committees and Board members). Further, there is limited capacity of the co-operatives to employ professional staffs.

5. *Main conclusions and recommendations*

5.1. **Conclusions**

The AMCOS studied are still in development stage, mostly practicing the traditional co-operative business model with emphasis on membership increase, loyalty in marketing produce through AMCOS, few commodities focused and limited business diversification. Despite their traditional way of operating business, yet the AMCOS are crucial in aggregating and searching markets for members' produce. They help in boosting members, income and government revenue through coffee sales revenues. In reflection to the Cook's Life Cycle Model, the studied AMCOS are in their intermediate growth between stage two and three as they still struggle to maintain their position to correct market failure including prices, stiff competition, price fluctuation while free riding behaviour, limited patronage and need for external financing and exist.

Regardless of the operational stage in their life cycle, it is evident that agricultural marketing co-operatives (AMCOS) in Moshi District Council have been useful in transforming socio-economic status in rural areas. Socially, they helped in enhancing access to social services, improve housing conditions, access to agricultural educations, and promote food security and solidarity. They have also been useful in supporting community development efforts in areas they operate. The AMCOS have also assisted in building household economies by contributing to; income, access to farm inputs, increase in assets, employments and markets for members' produce. Although co-operatives have been useful in socio-economic development, still they face numerous challenges in their operations. These include; decline in output, old farming system, high production costs, price fluctuation, inadequate education and training and others. They have been useful in contributing to national revenue in form of taxes and levies to the government authorities. Further, the AMCOS have been supportive in financing activities of various institutions in the coffee industry. The AMCOS impact on socio-economic development could be higher provided that they develop capacity to address such challenges. Despite the challenges, they remain to be the best option towards wider change of people's livelihood, especially in grassroots communities given that they can strategize their operations well, compete and work as per members' expectations. Like other types of co-operatives, AMCOS can be a

useful model for local sustainable development and building resilience capacity in local communities. The AMCOS are therefore important partners in socio-economic development given that they are empowered to cope with changing business environment including capacity to address challenges they face.

5.2. Recommendations

The discussions above have indicated various social and economic benefits of agricultural marketing co-operatives in Moshi District Council and challenges they face. Based on the above discussion, with emphasis on identified challenges, the study proposes the following issues to be considered in order to improve their potential in operations and performance:

- a. The AMCOS need to control quality of members produce in whole coffee chain. This includes emphasize on improved farming techniques, quality of inputs applied and storage facilities. Establishing a centralized pulping unit in AMCOS (wet processing) can help to control quality at early stage hence increase chances for better prices.
- b. The AMCOS need to find alternative resources and means to ensure availability of quality and affordable farm inputs to members. This can be through borrowing funds from financial institutions and supply inputs to farmers. They can also join state-run subsidized input supply schemes where AMCOS can be an agent to distribute inputs to members and non-members. These have value to members, community and revenue stream of the AMCOS. The studied AMCOS can also adapt "integrated co-operative model" where it establishes linkage with savings and credit co-operative (SACCOS) and warehouse where members can use warehouse receipts as collateral to secure SACCOS loans to access inputs and other needs on time.
- c. The AMCOS leaders and staff and other actors such as extension officers need to sensitize members on the need to adapt better farming methods including organic farming with high price produce and friendly to environment due to low use of agro-chemicals. This should be the same to other commodities they will diversify/concentrate as part of expanding AMCOS business.
- d. The AMCOS leaders and staff in consultation with members need to adapt entrepreneurial model and establish partnership with private sector instead

of the current traditional model with limited activities, commodities and value addition. They need to venture into other agricultural-based business/commodities to spread price risks and reliance on one commodity. Venturing into alternative farming like horticulture, beekeeping, fish farming and even marketing banana via AMCOS can help to extend business types, volume and chain activities. The diversification needs also to reflect the need of young members who should be the present and future of the AMCOS. They need to be monitored and integrated to AMCOS business to ensure sustainability and long terms commitment. The diversifications also need to focus on supply of quality and affordable farms inputs, centralized processing and credits to members. In medium and long run, new businesses will help to address financial deficit in AMCOS. Competent staffs are needed also to ensure sound business decision for diversification and partnership are made and value chains are extended to add value to members and their AMCOS.

- e. Education, training and other extension services need to be aggressively provided to the co-operatives. The AMCOS leaders and staff should adhere to legal requirements to allocate portion of budget for education and training to themselves and members. Such education and training have to focus on emerging needs among in the AMCOS and coffee industry. The institutions responsible for education and training like Moshi Co-operative University (MoCU), Co-operative and Agricultural offices at district and regional levels and other actors need to integrate their efforts for capacity building so as to systematically address revealed gaps in skills, knowledge and practices. Other issues such as record keeping and accounting systems, business and strategic planning, actions planning, diversification, entrepreneurship and financial management and business management need to be emphasized in such education and training programmes. All these will help to professionalize the staff and other leaders. Members and community education be given to increase commitment and responsibility among members and address free-riding and same time attract more new members to the AMCOS.
- f. The AMCOS leaders, members and staff need to work closely to address socio-cultural issues hindering effective youth and women participation. This should include; sensitizing adult male to give land to youth and integrate youth to the AMCOS so they can produce commodities that can be channelled through it. Women should also get access to land and

together with youth; they should be empowered to take active part in AMCOS leadership.

- g. Establishing Second-degree co-operatives need to be emphasized and established in the study areas. The secondary societies can take various forms which include co-operative joint venture or joint enterprise. This can help nearby AMCOS to share costs, technical capabilities and other resources for various operations e.g. centralized pulping, storage, transportation, semi-processing and marketing. In medium and long run, they can use the joint enterprises for value addition and manufacturing finished products from coffee.
- h. The intervention of the government is needed to strengthen the AMCOS. There should be more supportive business environment including policies and laws to enable co-operatives to flourish. For instance, co-operatives should be supported to access foreign markets, engage in value addition, and access investment capital. With the current intention for a semi-industrialized economy by 2025, the government needs to support AMCOS to take active part in the industrial process. Government need to support AMCOS with seed capital, technically and through legislative measures to protect them against unfair competition in free market, misuse of resources and help their access to better produce prices. The current Government decision which demand cash crops including coffee to be collected and sold by co-operative shades some light for sustainability of AMCOS in liberalized market. Financing sources should be available to help co-operative business to grow such as strengthening co-operative and agricultural banks. Revised Co-operative development policy and other sector-level policies and regulations should be in place and friendly to enable AMCOS to prosper and become more competitive.

6. Areas for further studies

Our work provides the foundation towards understanding the socio-economic benefits created by co-operatives and the challenges they face with particular focus on agricultural marketing co-operatives (AMCOS) in Moshi District Council. We believe

that the co-operatives' benefits and challenges are not always uniform across the types of co-operatives and countries' context and level of development of the co-operative movement may further bring more differences on the role of co-operatives in development. In these regards, we invite more scholarship in researching other issues beyond this study. We propose to the scholars in Tanzania and elsewhere to take further look on various issues as follows. First, there is a need to study socio-economic benefits of co-operatives in other (sub) sectors such as dairy, microfinance, housing, transport, industrial, dairy, fishing and others and where possible sector-based comparative studies on the same issue can be done. Second, the socio-economic benefits revealed the general status of wellbeing of the members due to co-operative effect. We believe that to some extent, the level of benefits (one' wellbeing) attained is subjective. Therefore, we propose future scholars to investigate on how AMCOS and other types of co-operatives contribute to subjective wellbeing of their members. Third, provided that AMCOS face different challenges as identified by this paper, then studying the adaptive or coping strategies applied by AMCOS in addressing various challenges can worth further scholarship as a means to give a picture on why and how such organizations keep surviving in contemporary competitive business environment. Finally, despite many years of operations still the studied AMCOS have not matured into strong and well developed or complex enterprises if compared to investor-owned firms (IoFs). There is a need to study the issues constraining rapid growth of AMCOS and other co-operatives in Tanzania and elsewhere, factors limiting their competitive power in global markets. These should also be looked from membership, leadership, managerial capacity and competitive capacity points of views.

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Authors' contribution

ITEM	Paulo Anania	Gratian C. Rwekaza	Justinian M. Bamanyisa
Conceptualization	40 %	30 %	30 %
Data curation	50 %	30 %	20 %
Formal analysis	50 %	30 %	20%
Funding acquisition	60 %	10 %	30%
Investigation	40 %	40 %	20%
Methodology	40 %	30 %	30%
Project administration	100 %	0 %	0 %
Resources	100 %	0 %	0 %
Software	0 %	0 %	0 %
Supervision	0 %	0 %	0 %
Validation	40 %	40 %	20 %
Visualization	40 %	30 %	30 %
Writing – original draft	60 %	20 %	20 %
Writing – review & editing	40 %	30 %	30 %

For more information, CRediT: <https://casrai.org/credit/>

Annex 1: Socio-economic details of studied AMCOS

S/N	Name of AMCOS	Socio-Economic aspects considered												
		Membership			No. of staff	Year 2014/2015			Year 2015/2016			Year 2016/2017		
		Male	Female	Total		Output (in kgs)	Sales (in Euro)	District Cess (in Euro)	Output (in kgs)	Sales (in Euro)	District Cess (in Euro)	Output (in kgs)	Sales (in Euro)	District Cess (in Euro)
1	Kindi	1.121	15	4	1.140	1	7.322	€ 6,911,30	€ 276,45	€ 20,671,61	€ 826,95	15.401	€ 20,352,00	€ 677,15
2	Uru North Njari	806	98	3	907	2	14.905	€ 14,068,97	€ 562,76	€ 20,671,61	€ 826,95	15.000	€ 19,822,09	€ 793,23
3	Mwika West	594	89	3	685	1	10.787	€ 10,181,95	€ 407,28	€ 17,232,76	€ 689,31	-	-	-
4	Kibosho West	511	18		529	1	2.429	€ 2,292,76	€ 91,71	-	-	2.014	€ 2,661,45	€ 106,46
5	Uru Central Mawela	2.137	44		2.181	1	17.211	€ 16,245,62	€ 649,82	€ 10,714,12	€ 428,56	17.828	€ 24,905,46	€ 828,35
6	Kirima Boro	119	11		130	1	8.808	€ 8,313,96	-	€ 3,702,77	€ 111,85	9.665	€ 12,772,03	€ 325,58
7	Mruwua	473	199		672	2	20.334	€ 19,193,45	€ 767,74	€ 25,222,95	€ 1,008,92	24.530	€ 32,415,73	€ 1,296,63
8	Kibosho Central	1.635	61		1.696	2	16.256	€ 18,412,75	€ 736,52	€ 28,344,46	€ 1,133,78	36.885	€ 62,668,96	€ 2,087,32
9	Kibosho Mwaka Sungu	527	248		775	2	12.124	€ 11,443,95	€ 457,76	€ 28,600,45	€ 1,144,02	15.787	€ 2,0862,09	€ 784,16
10	Mwika North East	1.618	80	2	1.700	2	38.942	€ 36,757,71	€ 1,470,31	€ 50,064,94	€ 2,002,59	39.579	€ 52,302,57	€ 2,092,10
	TOTAL	9.541	863	12	10.416	2								

* Others= institutions and group-based membership

Source: Compiled based of District co-operative data on output, sales and district cess 2014/215 to 2016/2017 for Moshi District Council⁶.

6• The original figures were in Tanzanian shillings (TZS). The average conversion rate used is 1 Euro (€) = TZS 2,648,56 as in December, 2017 indicative foreign exchange market rates provided by the Bank of Tanzania (BoT). Therefore original figures in TZS can be computed using this exchange rate.

Annex 2. Questionnaire

Hallo, we are researchers from Moshi Co-operative University (MoCU). We are researching on the contribution of agricultural marketing co-operatives in socio-economic development and challenges they face in Moshi District Council. We are honored to have you in this study. Therefore, through this questionnaire we request your honest response to the questions below at the best of your knowledge so we may achieve our study objectives. We assure you that your responses and identity will be kept highly confidential and will be used for purpose of this study only not otherwise. You are welcome.

Are you willing to participate in this study? YES NO

Socio-demographic data

1. Name of AMCOS
2. Location (Ward/Village) Registration N^o
3. Contact details
4. Number of years in AMCOS membership
5. Total number of shares Total shared paid so far
6. Sex Age
7. Number years in AMCOS membership
8. Main commodity produced
9. Other commodities
10. Educational levels
11. Position in AMCOS

Questions for study objectives

12. Number of AMCOS membersMaleFemaleOthers
 13. What is the average coffee output from members' farm (in kg)
 14. What is the average coffee price per kg?
 15. Members average income from coffee in past 3 years?
 16. Have you experienced any benefit for being a member of AMCOS? YESNO
- If YES, please tick appropriate benefits acquired in questions 17 to 18 below

17. What social benefits you got after joining the AMCOS? (you may tick more than one)

S/N	Response item	Tick
1	Improved household capacity to access social services	
2	Improved housing conditions	
3	Provision of agricultural education	
4	Improved food security	
5	Increase in solidarity and extending social protection	
6	Supporting community development initiatives	
7	Others (please specify)	

18. What economic benefits you got after joining the AMCOS? (you may tick more than one)

S/N	Response item	Tick
1	Improving members' income	
2	Enhanced access to farm inputs	
3	Acquisition of assets by the AMCOS and their members	
4	Provision of employment	
5	Marketing of members produce	
6	Others (please specify)	

19. Are there any challenges facing you in the AMCOS? YES..... NO.....

If YES, please tick the challenges you face in your AMCOS (you may tick more than one)

S/N	Response item	Tick
1	Decline in coffee production and quality challenges	
2	Unimproved coffee farming methods	
3	High costs o f related to coffee farming	
4	Price fluctuation in local and foreign markets and competitions	
5	Inadequate provision of education and training	
6	Too many deductions on members' coffee sold	
7	The "free-rider" effect	
8	Poor record keeping and accounting systems	
9	Low youth's participation and membership	
10	Limited access to quality and affordable farm inputs among members	
11	Limited innovation and business management capacity	
12	Low capital base	
13	Others (please specify)	

20. How many tons/kg of coffee collected by your AMCOS produce in past 3 years?

.....

.....

.....

21. How much was earned by the AMCOS after selling coffee in past 3 seasons?

.....
.....
.....

22. Does your AMCOS contribute to support community development activities? YES ... NO ...

23. If YES, how much has your AMCOS spent for community development activities in previous years? Show activities financed too.

.....
.....
.....

24. Is the AMCOS paying levies to local government or nay other taxes? YES NO

25. If YES, show the amounts paid in at least past 3 years

.....
.....
.....

26. Are there any institutions working with coffee producers that your co-operating/? YES ... NO ...

27. If, YES, what are they?

28. Does your AMCOS contribution anything to those institutions? YESNO
If YES, how much does it contribute and for what purpose?

.....
.....
.....

Thank your honest response

Annex 3. Guide for Focus Group Discussions

Introduction

Hallo, we are researchers from Moshi Co-operative University (MoCU). We are researching on the contribution of agricultural marketing co-operatives in socio-economic development and challenges they face in Moshi District Council. We are honored to have you in this study. Therefore, through this checklist we request your opinions in relation to the themes to be discussed. Kindly give us response to the best of your knowledge. We assure you that your responses and identity will be kept highly confidential and will be used for purpose of this study only not otherwise. You are welcome.

Participants' consent to be interviewed

Do you are all agree to be interviewed and communicate positively in near future if the need arise?

Details of FGD participants

Name (option)
Contacts: PhoneEmail
SexAge
Name of organization
Year in the organization/experience with co-operatives

Themes for discussion

Background of your AMCOS (brief history, registration, membership and business done etc)
Social benefits of AMCOS to members

Economic benefits of AMCOS to members
 AMCOS involvement in community development activities and amount spent
 AMCOS contributions to government taxes
 AMCOS contributions in supporting institutions
 Key challenges facing AMCOS

Thank you for participating

Annex 4. Documentary Review Protocol (checklist)

S/N	Theme/issues	Document reviewed	Source/origin (Co-op Office/AMCOS)	Data obtained
1	Number and composition of members			
2	Number of staff			
3	Coffee output in least past 3 years			
4	Coffee sales revenues			
5	Amount of District cess (levies) paid			
6	Revenues from farms leased to foreign investors			
7	Amount contributed for community development			
8	Amount paid to support other institutions in the co-operative sub-sector			
9	Other related issues			