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Agricultural Cooperatives and Their Role in Poverty Reduction in Tanzania

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Poverty is a complex phenomenon, which often requires actions to be taken by the poor to improve their situations. There have been a number of different initiatives that have brought about varied results in different areas and with different groups within populations. Successful cooperatives that function well and strive for effective, surplus-driven businesses may offer one route for the poor to increase their incomes. Cooperatives that are people-centered, democratic business organizations, may offer one approach to address poverty in the world, especially in developing countries.

Cooperatives have been used as a form of business entity worldwide. This is particularly the case in the agricultural sector, whereby cooperatives process farm produce and facilitate the marketing of agricultural products. Several examples of cooperatives that have provided good opportunities to enable their members to improve their incomes exist. What are the features of successful, efficient cooperatives? What concrete examples of such cooperatives exist? What are the factors that contribute to the success of these cooperatives, and what are the obstacles to such success? Which measures work and which do not? How could cooperatives in Tanzania be promoted in a sustainable way? These are some of the central questions this chapter tries to answer in the context of cooperatives in the United Republic of Tanzania.

Cooperative enterprises are self-help organizations that play a significant role in enabling and enhancing the socioeconomic situations of their members and the communities to which they belong. Ideally, cooperative organizations operate as people-centered businesses and also serve as catalysts for social organization and cohesion. Although cooperatives are a form of business entity, they are quite different from classic profit-maximizing firms. Cooperatives are associations of owner members that usually have divergent

objectives, some of which are contrary to one another. According to the definition given by the International Cooperative Alliance (ICA), “a cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.” This definition emphasizes that cooperatives are independent of governments and are not exclusively owned by anyone other than the members. It is worth noting in this context that experiences with government-controlled cooperatives in Sub-Saharan Africa in the 1960s and 1970s were not always successful (World Bank 2008).

Development partners and other stakeholders have supported the promotion of cooperatives at various times with controversial results for various reasons. The new focus on promoting a competitive cooperative business model generates the need to study, analyze, and recommend an appropriate policy of support for cooperatives, particularly in the agricultural and food sectors of many African countries, including Tanzania. Additionally, it is vital to establish a model as a basis for analyzing and understanding why cooperative movements have not fully succeeded in their operations in Tanzania and identifying the factors that drive successful cooperatives. The research is especially useful for Tanzania at the present stage of its development. Cooperatives in Tanzania are recognized to be vehicles that can promote sustainable development, including environmentally sound practices and, are tools for poverty alleviation. Based on the above arguments, the objectives of the study are:

1. To identify efficient successful cooperatives in Tanzania that strive for poverty reduction through a people-centered business approach.
2. To provide concrete examples that exist for effective, surplus-driven businesses that also improve the situation for the poor in Tanzania, and identify and describe the success factors and obstacles that affect these.
3. To recommend how managers of food and agribusiness cooperatives could promote businesses and create opportunities for rural actors to improve their living conditions.
4. To establish a typology of cooperatives in Tanzania with regard to their strengths, weaknesses, opportunities, and threats.

The structure of the chapter is as follows. First, we review the theoretical background for cooperative formation and the principles behind cooperatives. Second, we review published studies and give specific examples of how cooperatives improved the livelihoods of their members. Third, we provide a framework of how cooperatives can improve the livelihoods of their members based on the literature review. Fourth, we select and briefly describe some

cooperatives in Tanzania. Fifth, we present the methods and data generated from these cooperatives. Finally, we draw conclusions and give recommendations.

THEORETICAL BACKGROUND

Formation and Principles of Cooperatives

The cooperative offers a different organizational route to profit from those used by investor-oriented firms or joint-stock companies (corporations), common in many parts of the industrialized world. Profit for a cooperative is a term that is commonly referred to as surpluses. In a joint-stock company the votes are divided into shares in proportion to the levels of the investments of the shareholders. A cooperative is owned by its members who each have only one vote. The voting rights and the property structure in a cooperative are, therefore, different from those of the joint-stock company. For this reason, there is a fundamental difference between the two organizational forms. Each of them has their own benefits and weaknesses. The management approach based on the one-man, one-vote principle is different from the joint-stock company (Liu and Sumelius 2010). Certain practices of cooperatives have been criticized by Hendrikse and Veerman (2001), who claim that a marketing cooperative is neither an efficient organizational form for final-product markets nor for market-differentiated products that require sizable funds for investment at the downstream stage of production.

Cooperatives in many African countries have a very important function as marketing channels for agricultural surpluses for small- and medium-sized producers and smallholders. The cooperative business also offers one way for smallholdings and intermediate-size farms to organize the collection, processing, and marketing of their agricultural produce.

The benefits of forming cooperatives for entrepreneurs and members are derived from economies of scale in production, by selling products with added value, and buying inputs cheaper. Other benefits are achieved through a greater diversification by making the value chain longer and by the reduction of transaction costs. However, only when the benefits from lower production costs outweigh the increased organizational cost of the cooperatives will the entrepreneurial cooperative be successful (Göler von Ravensburg 2010, 55–56).

The disadvantages of cooperatives are the high administrative costs, unclear property rights, management inefficiencies, and high agency costs (Porter and Scully 1987; Vitaliano 1983; Hackman and Cook 1997).

The use of cooperatives as a system of organizing production and raising the productive forces of the peasantry is not new. Cooperatives have been

used historically by most of the northern and western European countries. Traditional societies in Africa have used different forms of cooperative movements. There are examples of cooperative movements and associations to improve the economic performance of societies in indigenous African culture (ILO 2007).

However, cooperatives have inherent contradictions as they serve both social and economic objectives. This duality of purpose has to be looked at in greater detail to enable cooperatives to be as efficient and effective as possible while satisfying social and economic objectives. Birchall and Simmons (2010) argue that before cooperatives in Tanzania can maximize their potential for reducing poverty, the prevailing policy environment they work in has to be adequate and that all vested interests including those at the highest level need to be scrutinized.

The espoused cooperative principles must be put into practice. According to the ICA (1995), these principles include: (1) voluntary and open membership; (2) democratic control; (3) economic participation of members; (4) autonomy and independence; (5) education, training, and information; (6) cooperation among cooperatives; and (7) concern for the community.

According to Hannan (2014), good governance of cooperatives is a key and prerequisite component of their contribution to poverty reduction. Understanding what good governance is can support cooperative development. In addition to the seven principles above, she mentions six values that are recognized internationally.¹ Good governance could include transparent, accountable, and responsive interactions between those that run the cooperative and the membership they serve. According to this reasoning, it is essential to understand exactly *how* cooperatives are able to reduce poverty. Hannan's findings suggest that the extent of the impacts of cooperatives in reducing poverty varies in accordance with the quality of their governance. In this case, governance includes the relationships between the internal actors and the external stakeholders, which in turn has a bearing on how cooperatives carry out their activities. A number of policy implications are evident; therefore, greater acceptance of the roles cooperatives can play in helping villagers to define and direct the development of these policies is imperative. If cooperatives are considered an important vehicle for poverty reduction, then directors and staff could be effectively trained to undertake facilitating roles in achieving policy outcomes. Hannan (2014) concluded that development agencies can play an important role in supporting cooperatives. This role would require development agencies to work with cooperatives as partners and realize that the involvement of cooperative members at all levels in the decision-making is at the core of the cooperative contribution to poverty reduction.

The Finnish Development Policy Program, 2012 (Ministry of Foreign Affairs of Finland 2012) pursues a human-rights-based approach to

development that focuses on poverty reduction and on ensuring that poor people know their rights. In executing this policy, the following specific measures and principles apply: (1) democratic ownership and accountability, (2) effectiveness and impact, (3) openness, (4) policy coherence for development, the operation of cooperatives should be coherent and consistent with other forms of development policies followed by Finland, (5) focus on the least developed countries such as Tanzania, (6) promote gender equality, and (7) reduce or eliminate inequality. The effective alleviation of poverty should include and adhere to all of these principles.

The Second National Strategy for Growth and Reduction of Poverty of the United Republic of Tanzania (2010) (NSGRP II or MKUKUTA II, its Kiswahili acronym) emphasizes some central principles. We particularly mention a sharper focus on the following interventions: strengthening evidence-based planning; scaling-up the role and participation of the private sector in priority areas of growth and poverty reduction; and improving human resource capacity in terms of skills, knowledge, and efficient employment. MKUKUTA II states three interrelated outcome clusters, which should be reached: (1) "Growth for Reduction in Income Poverty," (2) "Improvement of Quality of Life and Well-Being," and (3) "Good Governance and Accountability" to ensure that the poor have access and control of natural resources for productive purposes.

The principles mentioned above are taken as a starting point for proposing recommendations vis-à-vis Tanzanian cooperatives.

Research on How Cooperatives Have Improved the Livelihood of Their Members

The literature provides several examples that describe how cooperatives have made it possible for members to increase their earnings and improve their livelihoods. The question of whether cooperatives or private enterprises offer better opportunities for farmers to increase their incomes cannot be answered unequivocally since that depends upon the background setting. We reviewed the relevant studies below.

Kwapong and Hanisch (2013) carried out a literature review on empirical research on the potential of cooperatives to reduce poverty. They found substantial evidence to support the claim that cooperatives can indeed reduce poverty. Four research perspectives on this topic were identified by them in their review: one group of researchers argued that cooperatives have a tendency to automatically reduce poverty. This view was, however, challenged by advocates of a moderate perspective, which opined that members of cooperatives have certain chances of benefiting from the activities of their cooperatives, although there is nothing automatic in the process. A third

group of researchers represented a more balanced perspective, by arguing that cooperatives have the potential to reduce poverty when their values and principles are respected and certain preconditions are met. The fourth group argued that cooperatives are the only group of institutions that have the potential to meet all the millennium development goals. A combination of all four views suggests that cooperatives have the ability to reduce poverty, but *certain preconditions need to be met*. Cooperatives provide the opportunity for the poor to work themselves out of poverty.

Conolly (2014) pointed out that Africa needs to transform from relying upon extractive industries such as mining and timber to industries that add value and that agribusiness could help effect such a transformation. Three-quarters of the African population relies upon agriculture and agribusiness and over 30 percent of national income is derived from agro-industries. Agribusiness can play a role in harvesting, storage, and postharvest storage. However, small holders have difficulties accessing markets for inputs and for marketing their food (Conolly 2014).

Hill et al. (2007) described the Ngolowindo Horticultural Cooperative Society Limited as a successful example of a cooperative that has improved food security and reduced poverty at household level through the generation of income. The goals had been achieved by upgrading the technical and human resources (training), encouraging crop diversification, and improving market access for members. The cooperative has been successful in terms of incomes, production, irrigation, and its accountancy system and marketing. Members can reach markets, have access to transport, and can afford to pay school fees for their children. Employment has increased and several new associated jobs have arisen as a spin-off of the project (Hill et al. 2007).

Vandeplas et al. (2013) studied household data that had been obtained from the state of Punjab in India and found that farmers that supplied informal channels made lower profits per dairy animal and were less efficient than cooperative members and farmers that supplied the cooperative and the multinational sectors. Farmers who supplied the multinational sector were more efficient than their counterparts who supplied the cooperatives but made the same profits. The same group of authors concluded that supplying the cooperative channel was no more beneficial for local dairy farmers than it was for supplying the multinational sector. The multinational and cooperative channels are better than informal channels at creating an environment that facilitates the offering of incentives, developing technologies, and providing support programs for commercial dairy producers. Singh et al. (2001) used a stochastic frontier analysis approach and found that cooperative dairy plants in India were more efficient than the private plants, although the difference was not significant at the 5 percent level. That group's study suggested that

efforts to encourage more private firms into Indian dairy processing may not bring any benefits.

The question as to whether smallholder farmer groups in Tanzania facilitate collective action initiatives to improve group marketing performance has been investigated by Barham and Chitemi (2009). These authors basically found that even well-organized farmer groups will have little likelihood in succeeding without a core of natural assets. Groups that are endowed with favorable agro-ecological factors, such as a reliable water source, good land and soils, and crops with inherent market potential are more likely to improve on these marketing alternatives. Creating a culture of entrepreneurship, training farmers to become more business minded, and to get farmers to think of their crops as commodities are at the heart of improving marketing performance. The organization of group activities as business enterprises and also for the farmers' groups to become less risk-averse are two other requirements for poverty alleviation and economic improvement through better marketing.

Lie et al. (2012) assessed the potential of local dairy value chains by examining a small dairy goat cooperative in Tanzania that attempted to improve smallholder livelihoods through commercialization of goat milk yogurt. They concluded that producing yogurt from raw milk added considerable value to the basic milk product, which has increased the market for milk in general. However, the marketed volumes were not large enough to involve all local goat owners although the potential for scaling-up production also existed. More aggressive marketing in local villages would have required the establishment of a mini milk-collection center and also the development of new distribution channels. The participatory farmer-led cooperative mode of organization and the cooperative governance was, in the judgment of those authors, crucial for the distribution of value and local development of the chain.

Newman and Newman (2014) report positive impacts from the decentralization of livestock cooperatives on livestock markets, which made them more profitable for producers. These authors also noted other positive impacts along the value chain that resulted from decentralization. The new decentralization law in Benin shifted responsibility from national to local government authorities.

Meskela and Teshome (2014) reported that the Oromia Coffee Farmers' Cooperative Union (OCFCU) in Ethiopia was able to expand by specializing in export markets under the fair-trade and organic coffee schemes/label/sector. Smallholder farmers in OCFCU were able to participate in these specialty export markets and reap the benefits of economies of scale with regard to the collection, processing, and marketing of coffee provided by OCFCU.

Bernard et al. (2008) found that cooperatives in Ethiopia obtained higher prices for their members collectively than what members received

individually. However, cooperatives did not obtain a significant increase in the overall share of cereal production sold commercially by their members. In particular, they found that smaller farmers tended to reduce their marketed output as a result of higher prices, whereas the opposite was true for the larger farmers. According to Holloway et al. (2000), milk groups in Ethiopia are an example of a simple agro-industrialization innovation, which appears to be a necessary first step in the process of developing more sophisticated producer-oriented cooperative organizations. Wollni and Zeller (2007) and also Valkila and Nygren (2010) found that coffee producer cooperatives in Nicaragua seem to improve price stability and lessen some of the hardships brought on by low prices in the conventional coffee sector, although they did not generally pay higher prices than the conventional private sector. Murekezi et al. (2012) compared cooperatives with private processors in Rwanda using the instrumental variable method and also evaluated which type of organizational form had benefited producers most. They found no indication that farmers who sold to cooperative factories received more benefits than those who sold to private processing plants. Milford (2014) found in a study in Chiapas in Mexico that one important reason for producers not choosing cooperatives is production requirements that follow organic production.

Verhofstadt and Maertens (2014) found that cooperative membership of rural agricultural households in Rwanda led to a change in the use of inputs, the adoption of intensification, commercialization of farm produce, higher revenues, higher labor productivity, and increased farm incomes. These authors also found that cooperatives can be important institutions that can transform a smallholder farm sector into a commercial and intensified sector, for selling lower-value staple crops such as maize and higher-value horticultural products. Cooperatives should refrain from organizing agricultural production in a communal way but should instead focus upon cooperative marketing, input supply, and land acquisition with remunerations systems that are in line with individual farm-household systems.

Moustier et al. (2010) found that farmers' associations (cooperatives) in Vietnam were able to increase the profits per kilo of produce for their members compared to traditional supply chains through supplying supermarkets directly with produce. Farmer organizations have become the preferred route for the direct supply of farm produce to supermarkets, unlike the traditional commodity chains. Retailers who are supplied by the traditional commodity chains are supplied by a chain of wholesalers and collectors that deal with farmers who sell on an individual basis. Therefore, farmers who belonged to farmer groups received a better price from supermarkets than did individual farmers for three reasons, because: of economies of scale (amounts collected, lower transaction costs, guaranteed delivery, lower cost of contracts); farmers have been trained in quality improvement; and the farmers' group made

joint investments in quality improvement, labeling, and certification possible. Public and international support for food quality improvement was decisively critical for changing farmers’ organizations in this beneficial direction.

These studies when taken as a whole provide many concrete examples of cooperatives that have been able to offer their members the opportunities to improve their livelihoods and incomes. A framework for what makes this process possible is presented in figure 4.1.

The following intervening variables determine the conditions whether cooperatives provide the means for its members to improve their livelihoods:

1. Good governance
2. Adherence to cooperative principles
3. Adequate policies
4. Favorable agro-ecological endowments
5. Culture of entrepreneurship

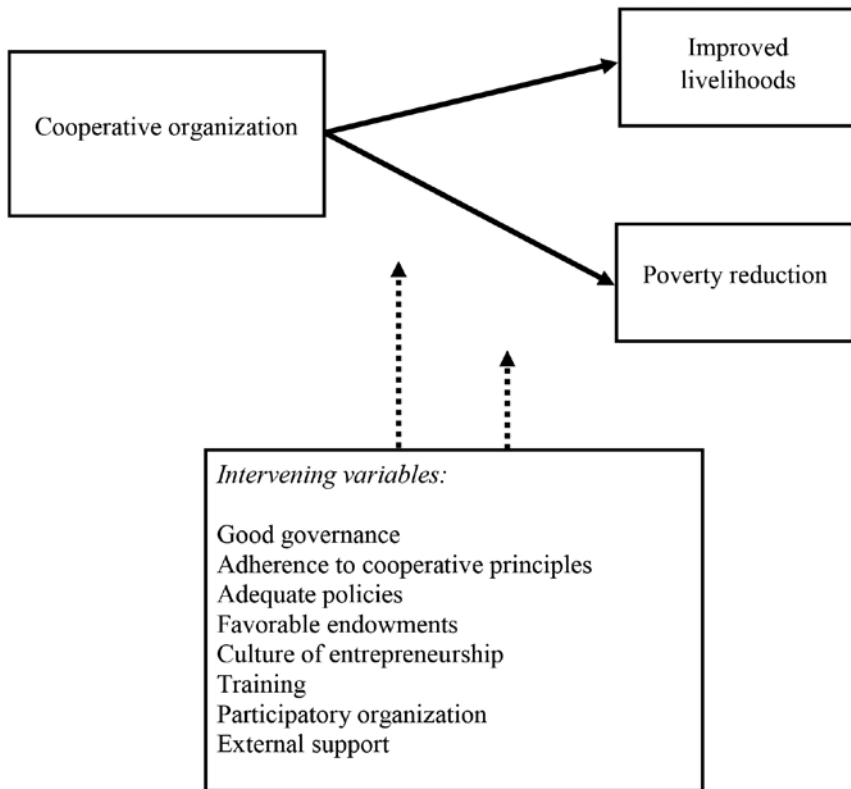


Figure 4.1 Framework Describing How Cooperatives Improve the Livelihoods of their Members. *Source: Authors.*



6. Training
7. Participatory farmer-led organization
8. Initial support from government or external agents such as development agencies and NGOs

We conclude from the literature review that the factors listed above affect the ability of cooperatives to offer improved livelihoods (and in some cases reduced poverty) for their members.

DESCRIPTION OF THE COOPERATIVES OF TANZANIA

A study was carried out in Tanzania from March to October 2013. It involved cooperative development partners in Tanzania: the selected cooperative societies/unions, the Tanzania Federation of Cooperatives (TFC) and the Government of Tanzania through the Department of Cooperative Development. Other stakeholders included the Finnish Embassy in Dar-es Salaam, the ILO Office in Dar-es Salaam, and the Dunduliza company owned by Savings and Credit Cooperative Societies (SACCOs).

Tanzania comprises an area of 945,203 square kilometers. The country had a population of 44,929,002 in 2012. The majority of the country's population (75.9 percent) depends on agriculture (including hunting and fishing), and agriculture accounts for about 26.5 percent of the gross domestic product of mainland Tanzania (URT 2013). The drivers of economic growth in Tanzania recently have been mining, construction, communications, and financial services, whereas agriculture has been in decline (World Bank 2012). Coffee, sisal, tea, cashew nuts, and cotton constitute the main agricultural export-earning crops.

Cooperative organizations are among the important economic and social actors in Tanzania. Although traditional forms of cooperation existed even before the colonial times, the modern forms of agricultural cooperatives were established in many countries during the colonial period. After independence was achieved, cooperatives were promoted vigorously by the national government with support from various development partners, especially the Nordic and Scandinavian countries of Finland, Norway, Sweden, and Denmark. The government policies changed from market-oriented policies to state-controlled economy. The performances of cooperatives declined. Tanzania also had some experiments in forced "villagization," which were directed by the Ujamaa cooperatives in the 1960s and 1970s (Mhando 2011; Birchall and Simmons 2009, 33). In contrast, there are some recent success stories of rural entrepreneurs who successfully formed cooperatives on a voluntary basis.

In the wake of the trade liberalization of the 1990s, cooperatives were caught unprepared due to the failure of their policies to compete with multinational companies that were allowed to do business in the country. Unfortunately, the free-market economic policies, despite increasing the aggregated economic indicators, have widened the poverty gap between rich and poor, which made living conditions worse for the majority of the people.

Currently, there are several forms of cooperatives that operate in the country, which include financial, agricultural marketing, dairy and livestock, fisheries, mining, housing, irrigation, and industrial cooperatives. Table 4.1 provides a summary of forms of cooperatives in Tanzania.

The financial cooperatives (especially the SACCOs) are the dominant form of cooperatives in Tanzania and they account for 56 percent of the total members, followed by Agricultural Marketing Cooperatives (AMCOs) (36 percent), and the remaining forms of cooperatives account for 8 percent. Financial cooperatives in Tanzania include the SACCOs and two regional unit cooperative banks (Kilimanjaro Cooperative Bank or KCB, and the Kagera Farmers' Cooperative Bank or KFCB). In terms of membership, in December 2012, the total national cooperative membership stood at 1,628,457. However, cooperatives in effect serve more people. If a typical rural household size of five people is assumed, then the estimated number of people that benefit from cooperative services could actually be around 8,142,285 individuals. In addition, there are nonmembers who also use cooperative services.

Threats to the operations of most cooperatives in Tanzania include fierce competition from local processors and imported brands. The imported brands

Table 4.1 The Status of Cooperatives in Tanzania, December 2012

Type of Cooperatives	Membership			Shares (in Tanzanian Shillings)
	Men	Women	Total	
SACCOS	537,121	369,325	906,446	33,291,211,825
AMCOs	482,986	111,241	594,227	3,468,815,495
Consumer	22,184	3,338	25,522	209,326,972
Irrigation	17,912	7,631	25,543	308,973,360
Livestock	9,665	4,371	14,036	287,025,089
Industrial	4,502	1,239	5,741	449,899,000
Housing	1,725	1,360	3,085	109,163,880
Mining	409	926	5,023	96,212,000
Fisheries	4,504	1,430	5,934	376,091,810
Others	26,458	16,442	42,900	663,333,399
Total	1,11,154	517,303	1,628,457	39,260,052,830

Note: USD = 1,600 TZS, June 2013.

Source: Tanzania Cooperative Development Commission, Ministry of Agriculture, Tanzania.

are a result of the activities of multinational companies and imports from neighboring countries. Other threats include the inaccessibility of services because of long distances and having few vehicles.

Methods and Data



The present study relied on both primary and secondary data that were collected from various sources through a combination of techniques. The core of the study is based on case studies of cooperatives for which the data were obtained by semi-structured interviews in combination with a formal questionnaire. Stakes (1995) has discussed the methodology involved in the selection of cases in case study research and highlighted the differences in the quality of the data to those data obtained by sampling. Case study research is not random sampling of research and, sometimes an unusual case helps to illustrate a particular point. According to Stakes the first criterion for selecting cases should be to maximize what we can learn from each particular case. Other criteria included cases of good or optimum performance, cases of sub-optimal performance representative of selected sectors, and their accessibility. Using these same criteria enabled us to select a group of eleven cooperative organizations that represented three different regions (Kilimanjaro, Kagera, and Tanga) out of thirty existing regions in the United Republic of Tanzania. Three different categories of cooperatives were chosen (the number of cooperatives in each category is given in parentheses): dairy cooperatives (2), AMCOs (5), and financial cooperatives (4). The proper names of the cooperatives that were included in each category, the region and also the district to which they belong are listed below:

1. Dairy cooperatives (2): Tanga Dairy Cooperative Union in Tanga region, and Kalali Women Dairy Cooperative Society in Hai District in the Kilimanjaro region
2. AMCOs (5): two unions dealing in the export of coffee through the fair-trade scheme: the Kagera Cooperative Union, and the Group 32 Kilimanjaro New Cooperative Initiatives Joint Venture Enterprises Ltd (G32 KNCI_JVE Ltd); three primary AMCOs, Mwenyanjale Primary Society in the Kagera region; Karansi AMCOs (maize, soya beans) in Magadini village Siha District in Kilimanjaro region; and the MAMCS in Moshi rural district in the Kilimanjaro region
3. Financial cooperatives (4): KCB in Moshi; Mruwia SACCOS in Moshi Rural; Umoja SACCOS in Magadini; and KFCB in Kagera.

We conducted interviews with selected groups of interviewees and observed the activities undertaken by the cooperatives to obtain primary data.

Focus group discussions were used mainly for carrying out discussions with groups of members, nonmembers, and leaders of cooperatives.

The semi-structured interviews were based on a set of questions that were relevant to the research theme, and a formal questionnaire was also given to representatives of the cooperative organizations mentioned above to complete. The combined approach of interview and questionnaire accommodates the opinions and concerns expressed in the respondents' own words, which would not be the case if only a questionnaire was given.

The selected sample societies were interviewed over the June 11–20, 2013, period. The interviews were carried out by two teams of three researchers each, and this involved traveling to the regions of Kilimanjaro, Kagera, and the Tanga. Three formal questionnaires that were, respectively, appropriate for ordinary members, board members, and nonmembers were prepared in advance. A checklist of issues and topics for these interviews was also prepared. The interviews with members of the primary societies at village level were conducted in the Swahili language, whereas interviews with the managers of the primary and secondary societies and also the cooperative banks were carried out in English.

A supplementary source of data was obtained from interviews with relevant organizations and institutions that took place mainly in the capital, Dar-es-Salaam. These supplementary data were used as background formation in the initial phase June 5–7, 2013. During this period representatives of the TFC, the Department of Cooperative Development under the Ministry of Agriculture, Food Security and Cooperatives, the ILO Office for East Africa, the Managing Director of Dunduliza Company, the Embassy of Finland, and the Kepa office of Tanzania (Kepa is an umbrella organization for Finnish civil society organizations) were interviewed. Most of the interviews were recorded.

We used the framework presented in figure 4.1 to evaluate how the Tanzanian cooperatives that were studied have succeeded in improving the livelihood of their members. We grouped these cooperatives into four different categories, according to their common characteristic features, which were: (1) traditional cooperatives, (2) reforming cooperatives, (3) new cooperatives, and (4) innovative cooperatives. We described the features of each category and the success factors, failures or obstacles in creating the means and opportunities for cooperative members to increase their incomes with reference to the intervening variables of that framework (figure 4.1). We have further evaluated each category of cooperative with regard to their strengths, weaknesses, opportunities provided, and threats faced by using a SWOT analysis as the analytical tool, which is presented in table 4.2. Strengths and weaknesses represent attributes of internal origin, whereas opportunities, challenges, and threats represent attributes of external origin (Kotler et al. 2012, 112).

Table 4.2 Typology of Cooperatives in Tanzania and their Strengths, Weaknesses, Opportunities, and Threats

Type of cooperative	Strengths	Weaknesses	Opportunities/ Challenges	Threats
Traditional cooperatives	<ul style="list-style-type: none"> • Identity of people-owned business • "Democratic institution," one man, one vote • Organization of framework provides a voice for members • Original reason of foundation was sound: to remove exploitation by middlemen traders • Trusted by authorities • Would be able to mobilize some funds 	<ul style="list-style-type: none"> • Conservative institutions that are not disposed to change or innovation • Failure to practice participatory democracy • Lack of transparency • High operational costs • Lack of sensitivity to members' needs • Pervasive business relations between union and primaries • Investing in projects that have no relation with primary societies • Attitude of dependency • Coffee producers do not get fair-trade premium paid directly in the prices but as collective projects • Delivery of education and training to the members • Ability to provide innovations and value-added products • Creating management of cost-effective services to primaries • Clear and transparent cost structure of both the primaries and the union 	<ul style="list-style-type: none"> • Expanding demand on export market • Expanding relations with NGO fair-trade coffee 	<ul style="list-style-type: none"> • Low remuneration and human resource policies and development • Slow speed of adaptation to advanced technology • Lack of integration with financial services, including cooperative insurance and pension funds • Unions control assets of the primaries

<p>Reforming cooperatives</p>	<ul style="list-style-type: none"> • Business is done at primary society level (member within close proximity, cost-effective business, immediate impact of innovation can be measured) • Secondary structure facilitates supporting the members more • Timely business decisions and payments • Opportunities to introduce innovations, both of products and finance • Freedom to exercise investment in project's autonomy and independence at level of primary society • Transparency, information on how much and from where • Dissemination of information to members is fast • The voice of the members is heard better • Secondary structure facilitating entry or exit • Secondary structure deals with knowledge-information management • Secondary structure provides opportunity for diversification • Managing business negotiations • Nurturing the growth of other cooperatives and other commodities • Encouraging women's participation by owning coffee • Health insurance schemes • Continuing transformation
<ul style="list-style-type: none"> • Low level of knowledge and education; AMCOs and SACCOs are not integrated as institutions • Youth participation is low 	<ul style="list-style-type: none"> • Change is not easily accepted by government • Producers of fair-trade coffee obtain a premium paid in the prices for their product • Fair-trade coffee exports could increase
<ul style="list-style-type: none"> • Competition between primary societies will become stronger • Prices are volatile for coffee cooperatives • Funds for development are difficult to obtain • Acceptance of authorities that seem to have stronger ties to the traditional unions • The social marketing may be weak 	

(Continued)

Table 4.2 Typology of Cooperatives in Tanzania and their Strengths, Weaknesses, Opportunities, and Threats (Continued)

Type of cooperative	Strengths	Weaknesses	Opportunities/Challenges	Threats
New cooperatives	<ul style="list-style-type: none"> • Business approach is partnership between local and foreign cooperatives • High demand of products • Expanding market • Inclusion of young producers and facilitating meeting their needs • Provision of equipment and establishment of collection centers • Efficient milk collection 	<ul style="list-style-type: none"> • Weak enforcement of regulations • Capacity not fully utilized • Delay of audited accounts • Inadequate training in governance • Quality of milk difficult to maintain • Transport from farm to collection center problematical 	<ul style="list-style-type: none"> • Extension services • Increasing market shares of new brand • In major cities 	<ul style="list-style-type: none"> • Cooperative union does not own a majority of shares so is dependent • Lack of capital for expansion and promotion
Innovative cooperatives	<ul style="list-style-type: none"> • Income generation sources • Diversification • Gender-based • Empowerment of women • Collectors are processors • Goodwill from society • Network of different associations • Diversification of financial products • High degree of commitment of board members • Environmental protection 	<ul style="list-style-type: none"> • Limited geographical coverage • Limited capital for expansion and reinvestment • Lack of proper equipment, coolers, buildings, and electricity • In dairy cooperatives, poor quality of milk, inadequate hygienic handling, and poor packaging and storage • Transport facilities • Development of new products • Training in handling products and entrepreneurial skills • Extension services 	<ul style="list-style-type: none"> • How to fulfill external demand for new products 	<ul style="list-style-type: none"> • Lack of capital for expansion and promotion outside • Competition from local processors

Source: Authors.

RESULTS

Traditional Cooperatives

The evaluation of traditional cooperatives revealed that the *strength* of traditional unions is that they have an identity of a people-owned business, originally created to remove exploitation by middlemen traders. They are democratic institutions in the sense of one man, one vote and, they also provide a forum in which their members can express opinions and raise issues. Typically, this type of cooperative is found among the coffee unions.

Weaknesses



There are several weaknesses of the traditional cooperatives. They are conservative institutions that do not easily make innovative changes. They are generally characterized by a lack of good governance; in many cases, they fail to practice participatory democracy, lack transparency, and have high operational costs. It is highly questionable whether they follow the cooperative principles of democratic control, autonomy and independence, education training, and information.

One particular union the researchers visited had surprisingly little information available about its primary societies and could not readily produce basic data such as the number of female versus male members. One primary society of this union confirmed that services related to the provision and dissemination of information had been scrapped. This included the abolition of an information department, no dissemination of information about price changes, and no information about important decisions that were to be or had been taken. That union seemed not to follow the participatory farmer-led organization paradigm. Provision of the most important inputs had ceased and very little training seemed to be given. Services given to primary organizations seemed not to be cost-effective although collection and processing of products was taking place. The primaries could obtain a greater share of the final price paid by the buyer for processing their products. However, a large part of processing incomes generated by the processing plant seemed to stay at the union level, which is not in accordance with democratic principles of the community as a whole.

Although a certain union that handled a range of products could play a role in taking care of the processing and marketing of products, it is not clear how the primary producers of one product, coffee, would benefit from these activities. It appears that any added value accrued on coffee was for the benefit of the union, not the producers. It should be stated, however, that this union declared it had used fair-trade money from coffee sales to improve roads and offices, schools and subsidized school fees in the primary societies. We also

note that adding value or the processing of products was not mentioned as a success either in the union or in the primary societies. We, therefore, conclude although the collection and processing is taken care of by the unions, it could be managed in a far more expansive and dynamic business-like way. The culture of entrepreneurship is lacking in such traditional cooperatives. In general, it seems to us that this type of union is quite common in the traditional secondary cooperatives (unions) in Tanzania.

Opportunities and Challenges



Traditional cooperatives have the opportunities or challenges to become more competitive to compete against world market prices and expand on them.

Threats



The threats relate to not being able to compete successfully against international companies. The speed of adapting advanced technology is faster outside the traditional cooperatives, that is, in the external world. The perspective of the primary societies was that the control of some of the assets by the unions effectively amounts to an external threat. One may conclude that traditional cooperatives do not comply with many of the intervening variables listed in the framework (figure 4.1).

REFORMING COOPERATIVES



Reforming cooperatives are characterized by the fact that most of the intervening variables listed in the framework (figure 4.1) are realized in these cooperatives.

Strengths



The strengths of this category of cooperatives are that they offer good opportunities for their members to improve their living conditions. Reforming cooperatives are often primary societies that adhere closely to cooperative principles and practices of good governance by having efficient coordination mechanisms. A typical feature of these cooperatives is that they have a participatory farmer-led organization, which entails that most business activities are carried out at primary-society level. The financial services offered by credit cooperative societies, agricultural marketing services, cooperative banks, and cooperative insurance companies are close to the members of the

primary society. The activities of the cooperative are cost-effective and the impact of innovation can be measured immediately.

The secondary structure is more active in supporting the members and also supports entrepreneurship. The business decisions and payments are timely. Training is included in the activities the cooperatives offer. There are opportunities to introduce innovations, such as new products and financial investment for this type of cooperative. There is non-exclusivity for producers to sell their products; thus, the primary cooperatives have the freedom to sell to other buyers rather than to the secondary structure alone. The cooperatives invest in a project's autonomy and independence at all levels of the primary society. The cooperatives are transparent, and freely provide information on prices, quantities of products, and their sources. Dissemination of information to the membership is fast. The opinions and viewpoints of the membership are taken into cognizance better than in the traditional cooperatives. The secondary structure facilitates entry or exit of primary societies, deals with knowledge management, and provides opportunities for diversification. It manages business negotiations, nurtures the growth of other cooperatives and the development of other commodities. Women's participation is encouraged through the ownership of their produce. In one particular case one-third of the coffee was sold as fair-trade coffee to Japan. The structure of these cooperatives allows the development of health insurance schemes for the primary member cooperatives in the villages. One particular opportunity for coffee-producing cooperatives is that producers of fair-trade coffee must obtain a premium paid directly for the coffee they produce and that fair-trade coffee exports could increase.

Weaknesses



The weaknesses of many of these reforming cooperatives include a low level of knowledge and/or education, shortage of funding, the AMCO and SACCO institutions are not yet integrated with the cooperatives, and youth participation is low.



Threats

One threat facing these cooperatives is how to be accepted by government authorities that are used to dealing with traditional cooperatives. Other threats include the competition from other more established cooperatives, volatile coffee prices, and weak social marketing. As a whole, this category of cooperatives possesses most of the features in the framework shown in figure 4.1.

New Cooperatives

New cooperatives are relatively recent developments.

Strengths

Some strengths of this category are that their business approach is their partnership between local and foreign cooperatives and that they meet high demands of products and operate in an expanding market. This cooperation seems to strengthen good governance, underpins cooperative principles, and creates a favorable atmosphere for entrepreneurship. Interestingly, these cooperatives have been able to include young producers and facilitate their needs. Thus, new cooperatives have been able to improve the employment situation in their localities. Members have been provided with equipment and collection centers for milk. New cooperatives face high demand for their products and also have expanding markets. They, therefore, conform to several of the features listed in our framework in figure 4.1.

Weaknesses

A few weaknesses are that the capacities of these new cooperatives are not fully used, regulation is weak, and the quality of dairy products may also be low because of inadequate training and poor transport to the collection centers.

Challenges and Opportunities

The challenges and opportunities facing new cooperatives include the provision of extension services and inadequate product development.

Threats

A major threat is that the cooperative union does not own a majority of shares so there is an overdependency on a foreign collaborator. Another threat is the lack of capital for expansion and promotion.

INNOVATIVE COOPERATIVES**Strengths**

The strengths of innovative cooperatives are their gender-based category, that is, they empower women, they create income-generating sources and a diversification of products, and they protect the environment. The collectors are the processors, and they enjoy goodwill in the community. There is a network of different associations and a high degree of commitment to each cooperative from the members of its board, which enables the organization to be producer based.



Weaknesses

The weaknesses of innovative cooperatives are that they are restricted by limited geographical coverage, they have limited capital for expansion, have low levels of reinvestment, and lack proper equipment, coolers, buildings, and electricity. They also lack training, and the packaging, storage and hygiene (of milk) is currently poor.

Challenges and Opportunities



External challenges and opportunities are how to deal with and meet the demands of producing or processing new products.

Threats



Threats include a lack of external funds for development and strong competition from local processors and imported brands.

Innovative cooperatives have some desirable features such as a participatory farmer-led organization and support from external agencies but lack others such as proper governance and training. Thus, only some of the items in figure 4.1 apply.

CONCLUSION

The cooperatives that deliver benefits to their members and provide opportunities that improve the incomes of members also seem to be the organizations that are successful in reducing poverty. We, therefore, conclude that the poverty-reducing cooperatives basically are those cooperatives that support their members in an adequate and effective way, that is, they function well and are efficiently run. It is important that managers of food and agribusiness firms both in Tanzania and also personnel from cooperatives from other countries that collaborate with Tanzanian cooperatives keep this conclusion in mind.

Efficient and successful cooperatives in Tanzania can be described as adhering to the principles of good governance of cooperatives. Some central features of these principles include the following: (1) The organizations are based on strong primary cooperative societies that work as the driving force of a culture of entrepreneurship, business promotion, job creation, and training, all of which provide the members an opportunity to improve their own living conditions and to raise their incomes. The members, thus, have control of their cooperative. (2) Appropriate financial services, that is, services offered by the various financial actors are close to the members of the primary society. (3) Members receive adequate and transparent information; they have the freedom

to exercise and know their rights, and know how to run a cooperative efficiently, while being able to maintain independence from external pressures. (4) The secondary-level organization (unions or similar) are light. Members are free to sell their products through other channels when it suits them. (5) The secondary structure carries out business negotiations with both foreign and domestic buyers. (6) When the cooperative is expanding and market oriented, it seems beneficial to collaborate with a foreign investor cooperative.

Concrete examples of effective, profit-driven businesses that offer opportunities for cooperative members to improve their situation can be found in the close cooperation between AMOCs and SACCOs. The primary societies market their coffee through an AMCO and obtain financial services from a SACCO. Members receive higher prices, more timely payments, and the transparency of the organization is better than the traditional union that works in that locality. A large part of the coffee is sold as fair-trade coffee directly overseas to Japan.

On the whole, the members of the village cooperatives seem to have been able to increase their incomes and to create a successful business concept. A decisive factor is that the members of a cooperative decide upon all critical business activities and take care of the physical production of a product in addition to the cash transactions. Another critical condition is that the secondary-level organizations should only have a few employees, whose tasks are mainly to facilitate entry or exit, deal with knowledge management, disseminate information, and manage business negotiations with buyers. Such model partnerships are in accordance with the principles stated in the Finnish Development Policy Program 2012 and the NSGRP II-MKUKUTA II. We wish to underline that the Finnish Development Policy Program principles can provide guidelines and examples of successful partnerships that promote competitive cooperative business models as part of the Finnish government's objective of assisting in the reduction of poverty in Tanzania.

Some cooperatives, specifically the coffee unions, do not seem to be able to create conditions that nurture good governance and accountability, nor have they created dynamic conditions for improving the livelihoods for their members. The procedures they follow do not completely correspond to those qualities espoused by the MKUKUTA II, cluster III first goal. Cluster III was designed to ensure systems and structures of governance, uphold the rule of law democratically, and be effective, accountable, predictable, transparent, inclusive, and corruption-free at all levels.

The Cooperative Societies Act, 2013, of the United Republic of Tanzania recognizes two structures only: the primary society at the local level and the federation at the national level. This allows greater flexibility and space for primary societies to exercise freedom and autonomy for making choices on business development for their members. The Act is clear. The existence of a policy implementation framework called the

Cooperative Reform and Modernization Programme allows cooperatives to pursue opportunities offered by the government for achieving their own business objectives.

RECOMMENDATIONS AND FURTHER RESEARCH

Managers of food and agribusiness cooperatives (including the secondary cooperatives) in Tanzania should promote businesses and create opportunities for rural actors to improve their living conditions in the following ways:

1. Ensure that primary societies have the freedom to meet and make decisions at the member level.
2. Develop cooperative actions at village level to empower farmers to seek other opportunities to address risks, gain access to financial services, encounter more economic opportunities, and improve the democratization processes.
3. Help the system that delivers and disseminates information to primary societies to make them more effective and informative for the members through empowerment measures and inclusivity.
4. Women and youth's participation in cooperatives should be encouraged and enhanced. The role of women as landowners should be emphasized when coffee is traded, that is, with appropriate regard to gender participation.
5. More professional management of cooperative businesses is needed (human capital in cooperative management) at all levels.
6. Primary societies should have reserve funds to stabilize product prices, especially coffee prices. The Government of Tanzania could support this objective by ensuring that the officials of the secondary structure work with cooperative banks or other banks to create stabilization funds for this purpose. Furthermore, the Government of Tanzania should also guarantee that these officials also have enough knowledge and competence for creating such stabilization funds.
7. Financial services points/branches should be in close proximity and easily available to the members of the cooperatives and to the cooperatives themselves. The Government of Tanzania should give more support to those independent and efficient/successful SACCOs that are characterized by good governance.
8. Professional management of cooperative businesses is needed (human capital in cooperative management). Managers in agribusiness may support this objective by providing training for managers of primary societies. Training of secondary cooperatives in management issues is another area that should be supported.

Further research could focus on how cooperatives in the agriculture and food sectors in Tanzania have been able to improve the livelihoods and incomes of their members. This aim could be realized by using more quantitative data than those presented in the current study. Research on how well the Cooperatives Act, 2013, has been implemented is also needed.

NOTE


1. Self-help, responsibility, democracy, equality, solidarity, and equity.

REFERENCES

- Barham, James, and Clarence Chitemi. "Collective Action Initiatives to Improve Marketing Performance: Lessons from Farmer Groups in Tanzania." *Food Policy* 34, no. 1 (2009): 53–59.
- Bernard, Tanguy, Alemayehu S. Taffesseb, and Eleni Gabre-Madhina. "Impact of Co-operatives on Smallholders' Commercialization Behavior: Evidence from Ethiopia." *Agricultural Economics* 39, no. 2 (2008): 147–61.
- Birchall, Jonhston, and Richard Simmons. *Co-operatives and Poverty Reduction: Evidence from Sri Lanka and Tanzania*. Manchester: The Co-operative College, 2009.
- Birchall, Johnston and Richard Simmons. *The Co-operative Reform Process in Tanzania and Sri Lanka*. Manchester: The Co-operative College, 2010.
- Conolly, Aidan J. "A Glimpse into the Future. A Lens through which Considering Africa's Future." *International Food and Agribusiness Management Review* 17, special issue B (2014): 9–18.
- Göler von Ravensburg, N. *Economic and Other Benefits of the Entrepreneurs' Co-operative as a Specific Form of Enterprise Cluster*. Dar es Salaam: International Labour Office, 2010.
- Hackman, Deanne L., and Michael L. Cook. "The Transition to New Cooperative Organizational Forms: Public Policy Issues." In *Cooperatives: Their Importance in the Future Food and Agricultural System*, edited by M. Cook et al., 105–12. Washington, DC: Food and Agricultural Marketing Consortium, 1997.
- Hannan, Rowshan. "Good Co-operative Governance: The Elephant in the Room with Rural Poverty Reduction." *Journal of International Development* 26, no. 5 (2014): 701–12.
- Hendrikse, George W. J., and Cees P. Veerman. "Marketing Cooperatives and Financial Structure: A Transaction Costs Economic Analysis." *Agricultural Economics* 26, no. 3 (2001): 205–16.
- Hill, Trevor R., Etienne L. Nel, and Peter Illgner. "Partnership for Success: Community-Based Economic Development: A Case Study of Ngolowindo Cooperative, Malawi." *Environment and Planning C: Government and Policy* 200, no. 25 (2007): 573–90.

- Holloway, Garth, Charles F. Nicholson, Chris Delgado, Steven J. Staal, and Simeon Ehui. "Agroindustrialization through Institutional Innovation Transaction Costs, Cooperatives and Milk-Market Development in the East-African Highlands." *Agricultural Economics* 23, no. 3 (2000): 279–288.
- International Co-operative Alliance (ICA). *Cooperative Identity, Values and Principles*, 2015. <http://ica.coop/en/what-co-op/co-operative-identity-values-principles>.
- International Labour Office. *Cooperatives & Rural Development*. COOP Sheet No. 1, 2007.
- Kotler, Phillip, Kevin L. Keller, Malread Brady, Malcolm Goodman, and Torben Hansen. *Marketing Management*, 2nd ed. Essex: Pearson, 2012.
- Kwapong, Nana A., and Markus Hanisch. "Cooperatives and Poverty Reduction: A Literature Review." *Journal of Rural Cooperation* 41, no. 2 (2013): 114–146.
- Lie, Helen, Karl M. Rich, Lusato R. Kurwajira, and Anne M. Jervell. "Improving Smallholder Livelihoods through Local Value Chain Development: A Case Study of Goat Milk Yogurt in Tanzania." *International Food and Agribusiness Management Review* 15, no. 3 (2012): 55–85.
- Liu, Y., and John Sumelius. "Analysis of the Factors of Farmers' Participation in Co-operative Management in Finland." *Journal of Rural Cooperation* 38, no. 2 (2010): 1534–54.
- Meskela, Tadess, and Yalem Teshome. "From Economic Vulnerability to Sustainable Livelihood; the Case of Oromia Coffee Farmers Cooperatives Union (OCFCU) in Ethiopia." *International Food and Agribusiness Management Review* 17, special issue B (2014): 103–108.
- Mhando, Linda. "Tanzania and the Geo-Politics of Rural Development: The Return of Neoliberalism." *Journal of Emerging Knowledge on Emerging Markets* 3, art. 26 (2011): 455–72.
- Milford, Anna B. "Co-operative or Coyote? Producers' Choice between Intermediary Purchaser and Fairtrade and Organic Co-operatives in Chiapas." *Agriculture and Human Values* 31, no. 4 (2014): 577–91.
- Ministry of Foreign Affairs of Finland. *Finnish Development Policy Programme, 2012*. Unit for Development Communications, 2012.
- Moustier, Paule, Phan Thi Giac Tam, Dao The Anh, Vu Trong Binh, and Nguyen Thi Tan Loc. "The Role of Farmer Organizations in Supplying Supermarkets with Quality Food in Vietnam." *Food Policy* 35, no. 1 (2010): 69–78.
- Murekezi, Abdoul, Songqing Jin, and Scott Loveridge. "Do Organisational Forms of the Coffee Supply Chain Matter in Poverty Reduction?" *Development in Practice* 22, no. 7 (Sept 7, 2012): 962–77.
- Newman, Eric, and Mark Newman. "Building a Better Livestock Market in Benin and a Safer, More Reliable Food Supply." *International Food and Agribusiness Management Association* 17(B) (2014): 89–101.
- Porter, Phillip K., and Gerald W. Scully. "Economic Efficiency in Cooperatives." *Journal of Law and Economics* 30, no. 2 (1987): 489–51.
- Singh, Satbir, Tim Coelli, and Euan Flemming. "Performance of Dairy Plants in the Cooperative and Private Dairy Sectors in India." *Annals of Public and Cooperative Economics* 72, no. 4 (2001): 453–79.



- United Republic of Tanzania.** *Cooperative Reform and Modernization Programme (CRMP) (2005–2015)*. Dodoma, Tanzania, 2005.
- Stakes, Robert E. *The Art of Case Study Research*. London: Sage Publications, 1995.
- United Republic of Tanzania. *Tanzania in Figures. National Bureau of Statistics*. Dar es Salaam: Ministry of Finance, June 2013.
- United Republic of Tanzania. *Cooperative Societies Act, 2013*. Dar es Salaam: Tanzania Cooperative Development Commission, 2013.
- United Republic of Tanzania. *Second National Strategy for Growth and Reduction of Poverty, NSGRP II, MKUTAI II*. Dar es Salaam: Ministry of Finance and Foreign Affairs, 2010.
- Valkila, Joni, and Anja Nygren. “Impacts of Fair-Trade Certification on Coffee Farmers, Cooperatives and Laborers in Nicaragua.” *Agriculture and Human Values* 27, no. 3 (2010): 321–33.
- Vandeplass, Anneleen, Bart Minten, and Johan Swinnen. “Multinationals versus Cooperatives: The Income and Efficiency Effects of Supply Chain Governance in India.” *Journal of Agricultural Economics* 64, no. 1 (2013): 217–44.
- Verhofstadt, Ellen, and Miet Maertens (2014) “Smallholder Cooperatives and Agricultural Performance in Rwanda: Do Organizational Differences Matter?” *Agricultural Economics*. 45, no. S1 (November, 2014): 39–52.
- Vitaliano, Peter. “Cooperative Enterprise: An Alternative Conceptual Basis for Analysing a Complex Institution.” *American Journal of Agricultural Economics* 65, no. 5 (1983): 1078–83.
- Wollni, Meike, and Manfred Zeller. “Do Farmers Benefit from Participating in Specialty Markets and Co-Operatives? The Case of Coffee Marketing in Costa Rica.” *Agricultural Economics* 37, no. 2 (2007): 243–48.
- World Bank. *Agriculture for Development. World Development Report 2008*. Washington, DC: World Bank, 2008. 
- World Bank Poverty Reduction and Economic Management Unit Africa Region. *Tanzania Economic Update. Spreading the Wings: From Growth to Shared Prosperity*. Washington, DC: World Bank, 2012.
- Xiang, L. Y., and John Sumelius. “Analysis of the Factors of Farmers’ Participation in Co-operative Management in Finland.” *Journal of Rural Cooperation* 38, no. 2 (2010): 1–22.